



مجموعه خلاصه مقالات کنگره بین المللی فرآورده‌های طبیعی شفابخش

به انضمام خلاصه سخنرانی‌های جامع، چکیده کارگاه‌ها و گزیده‌ی اسناد تاریخی مرتبط



The International Congress of Natural Remedial Products

کنگره بین المللی طیف‌بخش فرآورده‌های طبیعی



دانشگاه اصفهان

۲۰ و ۲۱ اردیبهشت ماه ۱۴۰۲

کد اختصاصی کنگره: ۳۹۱۳۴-۰۲۲۲۰



تقديم به:

تلاشگران و جهادگران عرصه‌های آموزش، پژوهش، پیشگیری و
تولید در حوزه ی بهداشت، سلامت و درمان در راستای نیل به
حیات طیبه و سبک زندگی سالم



مجموعه‌ی خلاصه مقالات



دانشگاه اصفهان - ۲۰ و ۲۱ اردیبهشت ماه ۱۴۰۲



برگزارکنندگان

مرکز پژوهشی فرآورده‌های طبیعی و زیستی دارویی و دانشکده علوم و فناوری‌های زیستی دانشگاه اصفهان
با مشارکت دانشگاه علوم پزشکی و خدمات بهداشتی، درمانی استان اصفهان: دانشکده داروسازی و علوم دارویی و گروه طب ایرانی
با همکاری انجمن علمی زیست‌شناسی دانشگاه اصفهان



شناسنامه کتاب کنگره:

عنوان: مجموعه خلاصه مقالات کنگره بین‌المللی فرآورده‌های طبیعی شفاعش

به انضمام خلاصه سخنرانی‌های جامع، چکیده کارگاه‌ها و گزیده‌ی اسناد تاریخی مرتبط

جمع‌آوری، تنظیم و صفحه‌آرایی: سیده رحمانه اطمیابی

تدوین و شورای نظارت بر مجموعه مقالات: دکتر محمد ربانی، دکتر اصغر طاهری، دکتر محمد مظاهری

طرح جلد: احسان زمانی

محل انتشار: دانشگاه اصفهان

تاریخ انتشار: اردیبهشت ماه ۱۴۰۲

"مسئولیت محتوای مقالات به‌عهده نویسندگان آن است"

خواهشمندیم، پیش از انتشار، عوامل کنگره را در جریان بگذارید

فهرست مطالب کتاب کنگره

شماره صفحه

عنوان مطلب

ح کارگروه علمی کنگره

خ شورای سیاست گذاری کنگره

خ تیم اجرایی کنگره

د پیشگفتار

ذ معرفی و محورهای کنگره

ز فهرست خلاصه مقالات

ق فهرست خلاصه سخنرانی های کلیدی

ق فهرست ایده ها

۱۴۲ کارگاه ها

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کارگروه علمی کنگره



نام و نام خانوادگی	دانشگاه / موسسه	نام و نام خانوادگی	دانشگاه / موسسه
دکتر الهام اختری	دانشگاه علوم پزشکی ایران	دکتر امیر مهدی طالب	وزارت بهداشت، درمان و آموزش پزشکی-تهران
دکتر پیمان ادیبی	دانشگاه علوم پزشکی اصفهان	دکتر اصغر طاهری کفرانی	دانشگاه اصفهان
دکتر مجید اصغری	دانشگاه علوم پزشکی قم	دکتر رضا طاهری تهرانی	دانشگاه اصفهان
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دکتر مجید امتیازی	دانشگاه علوم پزشکی یزد	دکتر سید مهدی غضنفری	دانشگاه علوم پزشکی ارتش
دکتر مریم ایرانزاد اصل	دانشگاه شاهد	دکتر رضا غیاثوند	دانشگاه علوم پزشکی اصفهان
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دکتر بابک بیک زاده	دانشگاه اصفهان	دکتر محمد حسین فرزایی	دانشگاه علوم پزشکی کرمانشاه
دکتر مژگان تن ساز	دانشگاه علوم پزشکی شهید بهشتی	دکتر زهرا فقیه ایمانی	دانشگاه علوم پزشکی اصفهان
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دکتر شیما جزایری	دانشگاه علوم پزشکی اصفهان	دکتر نرجس گرجی	دانشگاه علوم پزشکی بابل
دکتر امیر محمد جلادت	دانشگاه علوم پزشکی شیراز	دکتر امیر هومن کاظمی	دانشگاه علوم پزشکی تهران
دکتر محمد حسن جوانبخت	دانشگاه علوم پزشکی تهران	دکتر ام البنین کافشانی	دانشگاه علوم پزشکی اصفهان
دکتر نفیسه حسینی یکتا	دانشگاه علوم پزشکی ارتش	دکتر مسعود کثیری	دانشگاه اصفهان
دکتر محمود خدادوست	دانشگاه علوم پزشکی شهید بهشتی	دکتر مهرداد کریمی	دانشگاه علوم پزشکی اصفهان
دکتر بهزاد ذوالفقاری	دانشگاه علوم پزشکی اصفهان	دکتر رویا کلیشادی	دانشگاه علوم پزشکی اصفهان
دکتر محمد ربانی خوراسگانی	دانشگاه اصفهان	دکتر محمود لطیفی	دانشگاه علوم پزشکی اراک
دکتر مهدی رحیم ملک	دانشگاه صنعتی اصفهان	دکتر مرتضی مجاهدی	دانشگاه علوم پزشکی بابل
دکتر روجا رحیمی	دانشگاه علوم پزشکی تهران	دکتر سید احمد محمودیان	دانشگاه علوم پزشکی اصفهان
دکتر حسین رضایی زاده	دانشگاه علوم پزشکی تهران	دکتر سید ابوالفضل مصطفوی	دانشگاه علوم پزشکی اصفهان
دکتر محمود رفیعیان	دانشگاه علوم پزشکی شهرکرد	دکتر محمد مظاهری	دانشگاه علوم پزشکی اصفهان
دکتر سید محمد حسین روحانی	دانشگاه علوم پزشکی اصفهان	دکتر سید علی مظفر پور	دانشگاه علوم پزشکی بابل
دکتر آرمان زرگران	دانشگاه علوم پزشکی تهران	دکتر روشنگر مکبری نژاد	دانشگاه علوم پزشکی شهید بهشتی
دکتر مریم رنجبر	دانشگاه علوم پزشکی اصفهان	دکتر معصومه ملک	دانشگاه تهران
دکتر رامین سامی	دانشگاه علوم پزشکی اصفهان	دکتر محسن ناصری	دانشگاه شاهد
دکتر محمد ستایش	دانشگاه علوم پزشکی کرمان	دکتر مریم نواب زاده	دانشگاه علوم پزشکی بیرجند
دکتر نور الدین سلطانیان	دانشگاه علوم پزشکی اصفهان	دکتر فاطمه نوجوان	دانشگاه علوم پزشکی قم
دکتر مرضیه بیگم سیاهپوش	انجمن علمی طب ایرانی قزوین	دکتر سید حمید نوربخش	پسا دکترا دانشگاه اصفهان
دکتر احمدرضا شریفی	دانشگاه علوم پزشکی بقیه الله	دکتر حسن نیلی	دانشگاه شیراز
دکتر محمدرضا شمس اردکانی	دانشگاه علوم پزشکی تهران	دکتر مجید نیمروزی	دانشگاه علوم پزشکی شیراز
دکتر لیلا شیربیگی	دانشگاه علوم پزشکی تهران	دکتر محبوبه والیانی	دانشگاه علوم پزشکی اصفهان
دکتر امید صادقیپور	دانشگاه علوم پزشکی ایران	دکتر مامک هاشمی حبیب آبادی	دانشگاه علوم پزشکی همدان
دکتر مسعود صادقی دینانی	دانشگاه علوم پزشکی اصفهان	دکتر افسانه یکدانه	دانشگاه علوم پزشکی اصفهان
دکتر محمد مهدی صالحی سورمقی	دانشگاه علوم پزشکی تهران	دکتر سیده صدیقه یوسفی	دانشگاه علوم پزشکی بابل
دکتر مسیح صدیق	دانشگاه علوم پزشکی فسا	دکتر مهدی یوسفی	دانشگاه علوم پزشکی مشهد
دکتر سید مرتضی صفوی	دانشگاه علوم پزشکی اصفهان		





شورای سیاست‌گذاری کنگره

نام و نام خانوادگی	سمت
دکتر محمد ربانی	عضو هیات علمی دانشکده علوم و فناوری های زیستی دانشگاه اصفهان
دکتر رضا طاهری تهرانی	دبیر اجرایی کنگره
دکتر اصغر طاهری	دبیر علمی کنگره و عضو هیات علمی دانشکده علوم و فناوری های زیستی دانشگاه اصفهان
دکتر محمد مظاهری	دبیر علمی کنگره و عضو هیات علمی گروه طب ایرانی دانشگاه علوم پزشکی اصفهان
دکتر حمید نوربخش	پسا دکترا دانشگاه اصفهان
مهدی کمالی	عضو هیات علمی دانشگاه اصفهان



نام و نام خانوادگی	سمت	نام و نام خانوادگی	سمت
سیده رحمانه اطیابی	مسئول سایت و انتشارات	علیرضا برات پور	عضو کمیته اجرایی دانشجویی
نیلوفر کاظمی	مسئول روابط عمومی	رویا دانش آذری	عضو کمیته اجرایی دانشجویی
سعید احمدی مجد	مسئول دبیرخانه	فاطمه زارعی	عضو کمیته اجرایی دانشجویی
حامد امینی	مسئول کارگاه ها	محمد رضا شمس	عضو کمیته اجرایی دانشجویی
سمیرا سادات حسینی بهشتیان	مسئول طراحی	نوید شهنام	عضو کمیته اجرایی دانشجویی
نرجس رضوانی	مسئول طراحی	پرдіس السادات طبیبیان	عضو کمیته اجرایی دانشجویی
احسان زمانی	مسئول طراحی	نسرین فرجاد	عضو کمیته اجرایی دانشجویی
متین سادات اصلاحی	مسئول نمایشگاه اسناد تاریخی	المیرا فیاضی	عضو کمیته اجرایی دانشجویی
مهشید سادات اصلاحی	مسئول نمایشگاه اسناد تاریخی	امیرحسین نقش نیلچی	عضو کمیته اجرایی دانشجویی
حورا اخوان فرید	عضو کمیته اجرایی دانشجویی	ثنا یوسفیان	عضو کمیته اجرایی دانشجویی

preface

The use of natural products for prevention and treatment dates back thousands of years, because infections and diseases have caused many problems for humans throughout history, and some of them have caused severe economic, social and political crises. Although the consumption of these products is not only for health and treatment, many of these products have the role of food supply, product protection and wide application in various industries. Natural products include a wide range of products and many of their application potentials remain unknown and neglected. With a look at medical books and other scientific sources, it can be found the importance of consuming these products for the medical and pharmaceutical experts in two past decades.

Today, by using natural products and expanding the science related to their production, it is possible to provide preventive, medicinal and therapeutic services to human societies in a more appropriate way. For this purpose, this congress tried to present scientific and experimental experts related to natural remedial products and to improve the production and consumption of these products. Considering the importance of the issue, University of Isfahan held the "International Congress of Natural Remedial Products" on May 10 and 11, 2023. All intellectuals, researchers, university professors, post-graduate students and those with knowledge and experience related to the conference topics are invited from all over the world to participate in this congress and contribute to the promotion of knowledge, research, employment and productivity in this strategic field. This conference includes both lecture and poster presentation sessions, covering the latest findings across many topics in natural remedial products including:

Natural products include:

Plant products, Animal products, Microbial products, Mineral products.

Headlines: Health and healing in cultures, history and civilizations, Introducing new formulation products, Local and international marketing of products, Local Products in different countries, Consumption of natural products (challenge and perspective), Other related subjects.

Also four scientific workshops in the related fields will go on in parallel to the main event. We hope that this congress can create a forum for useful dialogues between researchers committed to natural remedial products sciences.

Scientific Chairs

Dr. Mohammad Mazaheri

Dr. Asghar Taheri-Kafrani



معرفی کنگره

الکون که به یاری این دو متعال کنگره بین المللی فرآورده های طبیعی شناختش در تاریخ ۲۰ و ۲۱ اردیبهشت ماه ۱۴۰۲ در دانشگاه اصفهان برگزار می شود فرصت را مغتنم شمرده و به نیات از دست اندرکاران کنگره که ثمرات تلاش چندماهه خود را به انظار نشسته اندنگاتی خدمت میهمانان کرامتقدر، اساتید، پژوهشگران، دانشجویان، صاحبان حرفه های مرتبط، مسئولان محترم و همه علاقمندان و دلسوزان این بستر مهم دانش، فناوری، بهداشت و درمان و نیز عرصه مهم سبک زندگی، یادآوری می نویسم.

قدست استفاده ی بشر از فرآورده های طبیعی به منظور میکسکیری و درمان به هزاران سال می رسد، زیرا عذفوت و ییاری با طول تاریخ، زمینه ساز مشکلات فراوان برای انسان بوده و برخی از آن با باعث بحران های شدید اقتصادی، اجتماعی و سیاسی شدند، اگرچه مصرف این محصولات تنها جنبه ی بهداشتی و درمانی نداشته؛ بلکه بسیاری از این فرآورده ها نقش تئاین غذا، حفاظت محصولات و کاربرد وسیعی در صنایع مختلف داشته اند. فرآورده های طبیعی کسره ی وسیعی از محصولات راشال می شود و بسیاری از تائیل های کاربرد ی آنها بجمول و بسیاری مغفول مانده است. بانجایی اجایی به کتب پژوهشی و دیگر موارد علمی می توان به میزان اهمیت مصرف این محصولات برای صاحبان حرف پژوهشی و داروسازی در دو قرن اخیر و حکماء اطباء ی گذشته و حتی آحاد جامعه مردم پی برد.

علی رغم تلاش های کسره به منظور دستیابی به درمان با و میکسکیری موثر برای مقابله با عذفوت با و ییاری های مختلف، دنیای امروز بچنان درگیر این ییاری با و عوارض ناشی از مصرف فرآورده های مصنوعی است و علاوه بر تلاش های ارزنده طب نوین در زمینه تولید و به کارگیری داروهای موثر علیه ییاری های مختلف، می توان از کچینه طب سنتی و مکاتب دیگر سلامت محور با توجه به کسره ی وسیع تاریخی و جغرافیایی مصرف فرآورده های طبیعی، نیز بهره برد. امروزه با بهره گیری از فرآورده های طبیعی و کسترش علوم مرتبط با تولید آنها، می توان خدمات میکسکیری، دارویی و درمانی مناسب تری به جامعه بشری ارائه کرد.

در پیلان فرصت را غنیمت شمرده و مقدم بچکان را در کنگره بین المللی فرآورده های طبیعی شناختش کرامی داشته و پیشاپیش بابت کاسی های احتمالی عذر خواهی می نمایم. بچنین، بر خود لازم میدانیم از اساتید و متخصصان دانشگاه و افراد حقیقی و حقوقی مرتبط که به روش های مختلف ما را در برگزاری این کنگره ییاری نمودند تشکر و قدردانی نمایم. از خداوند متعال، موفقیت هر چه بیشتر اسکنونه رویداد های ارزشمند علمی و فرهنگی و انعکاس مطلوب یافته های آنها در عرصه زندگی مردم را خواهانیم.



گنگره بین المللی فرآورده های طبیعی شگفتی باکد اختصاصی ۳۹۱۳۴-۰۲۲۲۰ در پایگاه استنادی علوم جهان اسلام (ISC) ثبت و با مشارکت سایت اساتید و پژوهشگران دانشگاه ها، پژوهشگاه ها، دانشجویان و نهادهای اجرایی و فعالین بخش خصوصی در دانشگاه اصفهان با موضوعات ذیل برگزار شد. در این گنگره از بین مقالات رسیده پس از طی مراحل داوری، تعداد ۱۵ خلاصه مقاله و ۳ ایده پذیرفته شد که در این مجموعه، خلاصه مقالات به انضمام، خلاصه سخنرانی های جامع، چکیده کارگاه ها به همراه گزیده ای اسناد تاریخی مرتبط، ارائه گردیده است.

امید است این گنگره بتواند بستری مناسب در راستای ارتقای دانش و پژوهش و بهره گیری از ظرفیت های ارزشمند عرصه ی فرآورده های طبیعی و ارتقای بهداشت، سلامت و درمان همه جانبه جهانی در جهت دستیابی به حیات طیبه به ویژه در زمینه میکسری، بهداشت و سلامت باشد.

محورهای گنگره: فرآورده های طبیعی شامل: فرآورده های گیاهی، جانوری، میکروبی، معدنی

محورهای اصلی:

♣ سلامت و شفا در آینه فرهنگ، تاریخ و تمدن

♣ معرفی فرآورده های جدید

♣ فرمولاسیون فرآورده ها

♣ اقتصاد و تجاری سازی فرآورده ها

♣ تنوع فرآورده ها در اقوام و ملل

♣ آینده نگری مصرف فرآورده های طبیعی (چالش و چشم انداز)





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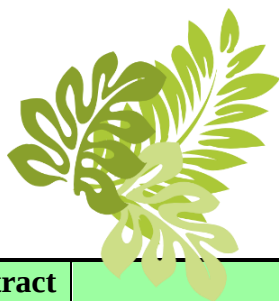


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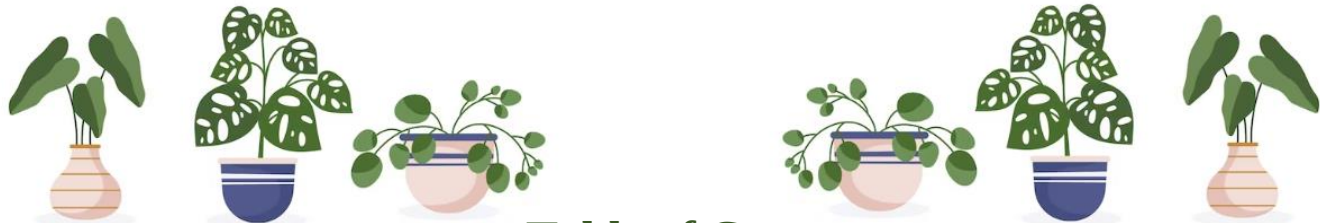


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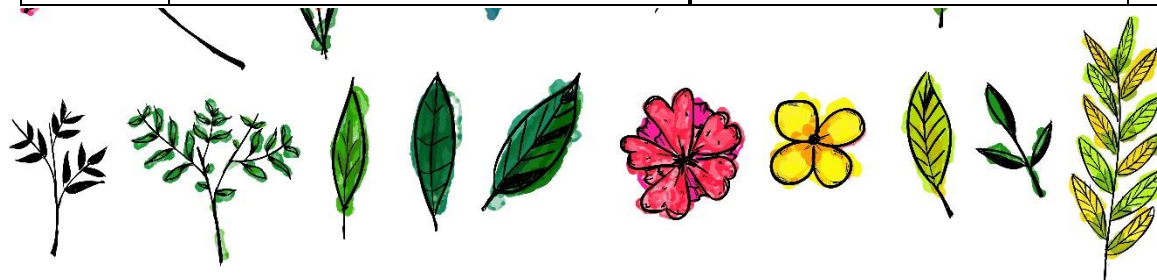


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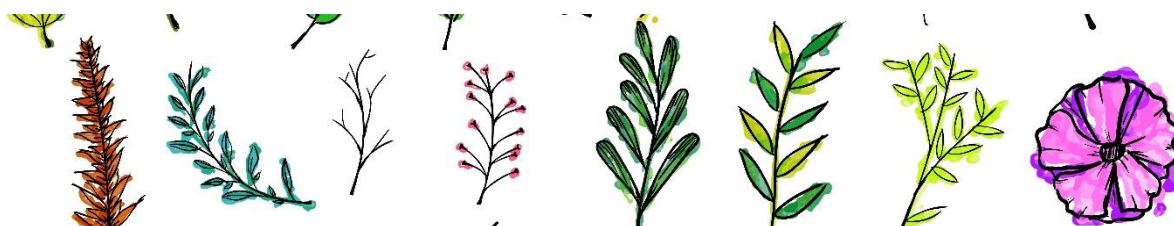


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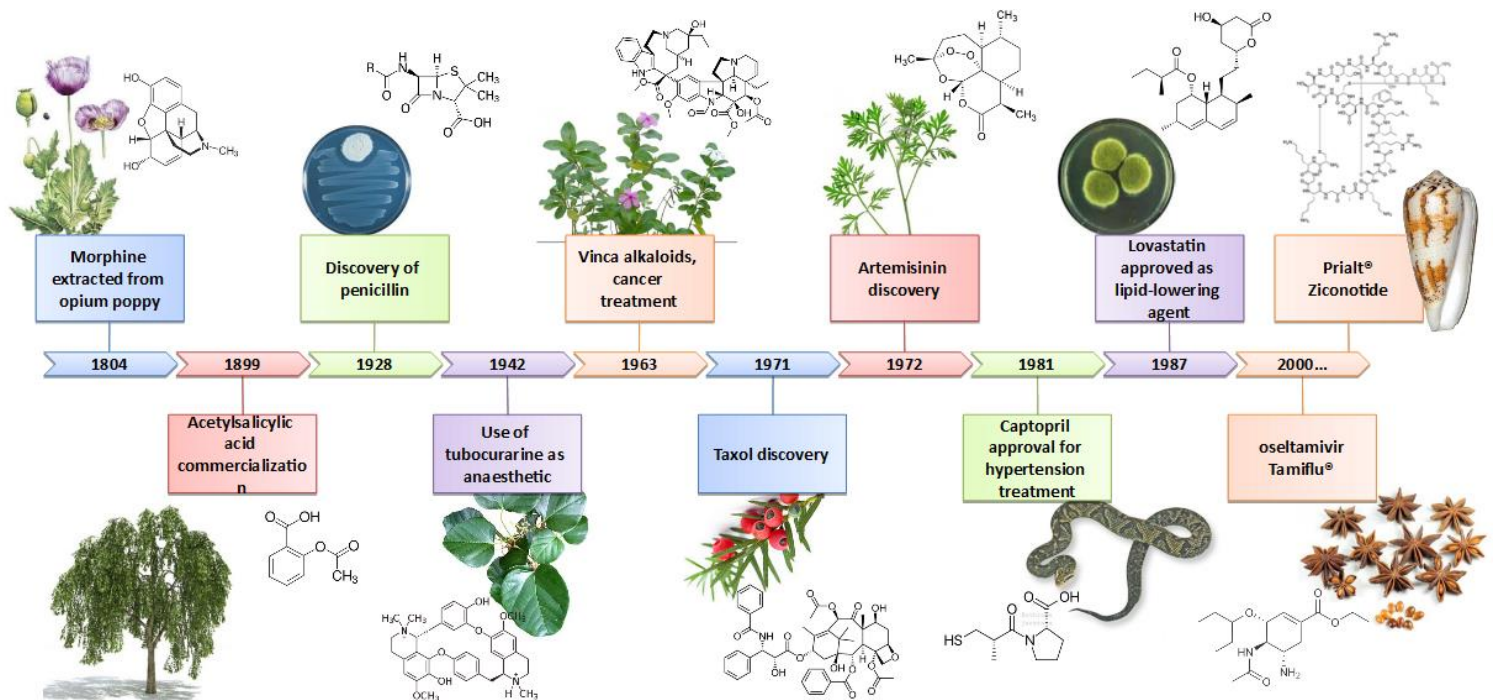


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Healing crystals for health



Clear Quartz

A clear crystal considered a master healer and believed to support the entire energetic system.



Jasper

A nurturing stone said to provide support during times of stress.



Obsidian

Believed to help process emotions and experiences and aid in letting go.



Amethyst

Used for healing, purifying, and enhancing willpower.



Bloodstone

Improve circulation and provide support to blood-related issues.

خلاصه مقالات





The antimicrobial compound Produced by filamentous fungi

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Secondary metabolites produced by filamentous fungi have attracted attention. One of the most important secondary metabolites of filamentous fungi is a new-generation antibiotic. At the first time, Alexander Fleming discovered the antibiotic penicillin in 1928. The increase in multi-drug resistance (MDR) causes a great need for new-generation antibiotics. *Enterobacteriaceae*, vancomycin-resistant enterococci, and methicillin-resistant *Staphylococcus aureus* (MRSA) are an example of resistant bacteria and are difficult to treat. Mycelium and culture fluid of filamentous fungi contain antibiotics. Cephalosporin and penicillin are common antibiotics that are derived from *A. chrysogenum* and *Penicillium chrysogenum*. Respectively Cyclosporin A and Griseofulvin are produced from *Tolypocladium inflatum* and *Penicillium patulum*. Lindgomycin was produced by marine and terrestrial filamentous fungi of the *Lindgomycetaceae* family, which have antibacterial and antiviral properties and is against *Candida albicans* and MRSA. The purpose of this research is to investigate the secondary metabolites of filamentous fungi that have antimicrobial properties. To prepare for this research, the keywords of filamentous fungi, pharmaceutical, secondary metabolites, antibiotic, and antiviral were searched in the Google Scholar and PubMed databases.

Filamentous fungi contain novel cluster genes that express new bioactivities compounds such as antibacterial, antiviral, and antifungal compounds. According to filamentous fungi, they have a lot of decomposition enzymes and grow on a lot of cheap substrates, and they are very cheap to cultivate. In the environment, there are new filamentous fungi with new valuable metabolites that must be further researched.

Keywords: Filamentous fungi, Pharmaceutical, Secondary metabolites, Antibiotic, Antiviral.



Application of microbial pigments in the food industry

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Synthetic pigments have low safety and cause some risks to human health. Today, the Food and pharmaceutical industries need new pigments strongly, which must be natural, safe, and healthy pigments. Natural pigments are produced from microbes, plants, and microalgae. Natural pigments such as carotenoid, azaphilone, anthraquinone, phycoerythrin, lutein, zeaxanthin, isorenieratene. Microorganisms that produce pigments such as *Agrobacterium* spp, *Serratia marcescens*, *Cyanobacteria* spp, *Penicillium oxalicum*, *Plasmodium* spp. Carotenoids, naphthoquinone, and Violacein have antioxidant activity. *Streptomycin* produces colored natural antibiotics against human pathogenic microorganisms. aquatic *cyanobacteria* produce an Anti-cancer agent called Scytonemin, a yellow-green pigment that inhibits the proliferative cell. carotenoids produced by microorganisms enhance immune response. The purpose of this research was to review recent studies on the production and properties of microbial pigment.

In this research, the keywords of natural colors, microbial pigments, safety, and food were searched in Google Scholar, PubMed, etc. A summary of the obtained information was compiled and expressed.

According to the properties of the microbial pigment such as natural, eco-friendly, and healthy compounds, antimicrobial, anticancer, immunoregulation, and anti-inflammatory, the production of microbial pigment has been considered. The production of microbial pigments in optimal bioreactors with low-cost substrates is very suitable and cheaper than chemical methods. In the future, more microbial pigments will be discovered, which will focus more on their beneficial and structural properties of microbial pigments.

Keywords: Microbial pigments, antioxidant, Antimicrobial, Safety, Food.



Commercialization of phage products: An aperture to new opportunities

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Statement of Problem: In recent years, the prevalence of antibiotic-resistant bacteria became a major issue in medicine. Therefore, alternative therapeutics like lytic bacteriophages have been commenced to tackle this trouble.

Research Purpose: This study has been focused on overviewing the commercialization status of single phage formula *versus* phage cocktails and phage encapsulation in medicine and industry.

Data Collection: Google Scholar, PubMed, and Google patent have been overviewed and FDA-approved encapsulated phage cocktails discussed here.

Results and Conclusion: In spite of single phage, phage cocktails destroy a wide range of pathogens, improve therapy, reduce the probability of emerging phage-resistant mutant bacteria, and increase the success in phage therapy. Technically, the encapsulation of bacteriophages in the pharmaceutical industry provides optimal posology, protects bacteriophages against the gastric acidic pH, and improves their stabilization and long-term storage. In this line, the accrual production of commercial products around the world made the Food and Drug Administration (FDA), and United States Environmental Protection Agency (USEPA), provide a regulatory pathway for the production of products containing phage cocktails and the use of lytic bacteriophage encapsulation techniques. In this context, a cocktail phage (SalmoFresh[®], American company Intralytix) approved against pathogenic *Salmonella* serotypes in food products. Phagex company in Ukraine has offered products containing phage cocktails (Pyofag[®] and Intestifag[®]) to treat enteric diseases. In addition, an encapsulated bacteriophage (Mediphage[®], Aziya Immuno-preparat Co. Uzbekistan) against *Shigella* has been marketed. Accordingly, phage encapsulation in the pharmaceutical industry and edible solid products maximizes the oral potency of grafting high-performance phages in patients and leads to bioconservation of gut microbiota in health and diseases.

Keywords: Bacteriophage, phage cocktail, encapsulation, commercialization



The use of encapsulation technique in the formulation of bacteriophages

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Statement of Problem: The emergence of multi-drug resistant bacteria through random mutation and genetic transfer is an evolving phenomenon with wide-reaching consequences. Therefore, new strategies, including the potential use of lytic bacteriophages, have been considered for targeting bacterial infections.

Research Purpose: Recently, several phase I and II clinical trials of phage therapy have succeeded. With the progress of phage therapy toward phase III clinical trials, several strategies based on the encapsulation of bacteriophages to produce phage formulations have been considered.

Research Method: The research method involved searching the Science Direct, PubMed, and Google Scholar databases.

Results and Conclusion: The formulation of bacteriophages, encapsulated by spray and freeze-dried powders, emulsions and liposomes, leads to the use of phages in semi-solid, edible products, and improvements in phage stability during the formulation process. Based on the experiments, the lytic activity of bacteriophage k against *Staphylococcus aureus* in the form of nano-emulsion leads to the use of topical formulations to improve skin infections caused by *Staphylococcus aureus*. Also, the stability of bacteriophages PEV2 and PEV4 against *Pseudomonas* using the Spray-Drying technique showed a 1-log drop in titer after one year at 20 °C. Moreover, the formulation of bacteriophages using cationic hydrogels, liposomes, and alginate polysaccharide causes the penetration of phages into bacterial biofilms and the release of active phage particles to reach the site of infection in the long term and prevents inactivation by the acidic pH of the stomach. As a result, more research on the formulation of bacteriophages requires serious attention in terms of the ease of increasing production and alternatives to antibiotics.

Keywords: Antibiotic Resistance, Bacteriophage Therapy, Phage Formulation, Encapsulation



Phages Applications and Types as Alternative therapy

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Statement of Problem: Phage is a type of virus that infects many types of life forms. Phages are the most common biological entities. They can be found in soil, seawater, oceans, terrestrial surfaces, extreme environments, hospitals, animal and human bodies. Phages have been used since the late 20th century as a possible therapy against multi-drug-resistant strains of many organisms in some countries without any negative effect on human or animals.

Research Purpose: This study is focused on an overview of the types of phages and their applications, since the use of phages has been proposed as an alternative method to control and prevent infections with pathogens.

Research Method: Related data were searched (Google Scholar and PubMed) and overviewed.

Results and Conclusion: Phages types are categorized as, Zoophages: Viral parasites on animals, Phytophages: Viruses as parasites of plants, Phycophages: Algae serve as the host of this type of viruses, Cyanophages: Cyanobacteria serve as the host of this type of viruses, Fungivory or Mycophages: Fungi are the host for this type of viruses, Zymophages: Viral parasites of yeast, Bacteriophages: Viruses as parasites of bacteria including Coliphages: *E. coli* are the host for this type of viruses, Archaeal phages: Viruses that infect Archaea.

The potential use of phages in a broad spectrum of applications is very promising. Phages have many applications such as diagnostics, antimicrobial drug discovery and phage display. They also used for controlling or presentation contamination of the foods (Food safety), prevention and control of different types of infections in different hosts infected with the related organisms.

Keywords: Virus, Phage, Bacteriophage



Investigation of Lipinski parameters and antiparasitic properties of compound derived from plant flavonoid pinostrobin

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Statement of Problem: Leishmania parasite has a vital enzyme N-myristoyl transferase, which plays a role and importance in the biological mechanisms of this parasite and causes the transfer of saturated fatty acid myristate from myristoyl-coA to the amino glycine end at the protein binding site. Antiparasitic drugs target their specific parasites, the bioactive flavonoid pinostrobin has attracted attention due to its outstanding medicinal properties. In this research, Lipinski's parameters and the antiparasitic properties of the compound derived from pinostrobin in inhibiting the enzyme N - Myristoyl transferase is checked.

Research Purpose: In this study, to check the hydrogen bonds and energy level, the chemical structure of the investigated molecule was first determined, and after energy optimization, docking studies and analysis of physicochemical properties and Lipinski parameters were performed using online servers.

Research Method: In many researches to control Leishmania, N-myristoyl transferase enzyme has been targeted, the results of docking ligand with N-myristoyl transferase enzyme showed that the energy level of the desired compound is -185.48. The dissolution rate of the compound in water is high and it has a high gastric absorption.

Results and Conclusion: According to the acceptable results of docking, physicochemical and pharmacokinetic properties of 5-O-Acetyl-7-methyl-pinostrobin molecule, this compound can be targeted and evaluated for further laboratory investigations.

Keywords: Antiparasitic, Leishmania, enzyme inhibition, Lipinski parameters, pinostrobin



The role of scientists of Islamic civilization in the development of knowledge of medicinal plants

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Statement of Problem: Attention to medicinal plants and efforts to discover and use them have been made at the same time as the first days of the formation of civilization. According to the researches, in Greece BC, a scientist named Theophrastus wrote a book titled "Inquiry in Plants" and three centuries BC, a person named Diocles and after him and in the first century BC another scientist named Cratius has works in this field. Meanwhile, the only remaining work from that time is "Kitab al-Hashaish" by Dioscorides, which was the reference book of Greeks and Romans regarding herbal medicine for many years. These works, however, were not directly transmitted to the scientists of the Western civilization, and in the meantime, the scientists of the Islamic civilization played a significant and important role in preserving and developing the knowledge of medicinal plants. Based on this, a significant part of the existing knowledge in this field is the result of the transfer of their knowledge to Western scientists.

Research Purpose: The purpose of this article is to represent and explain the role of thinkers in the field of Islamic civilization in preserving, developing and transmitting various information and knowledge in the identification, classification and application of medicinal plants.

Research Method: This article, based on the descriptive method, tries to reveal the efforts made by the scientists in the field of Islamic civilization in regard to medicinal plants. In this direction, the efforts and actions of people such as Ibn Samjun, Ibn Sina, Abu Hanifa Dinivari, Ibn Jaljal and Al-Ghafiqi in compiling and classifying medicinal plants and recording their effects have been mentioned. In addition, the efforts and practical experiences of people like Razi in using medicinal plants to treat gout have also been mentioned. Also, Andalusia and its role in the development of this knowledge have been considered.

Results and Conclusion: As a result, it should be mentioned that the scientific efforts and practical experiences of the thinkers of Islamic civilization, in the field of medicinal plants, have caused the preservation of the treasures of the predecessors, their expansion and also the transmission of this knowledge in the history of human civilization. Without these efforts, a significant part of the findings related to healing plants would have been out of the reach of the scientific community.

Keywords: Medicinal Plants, The scientists of Islamic civilization, The transmission of knowledge



Improvement effects of combined supplementation of low fructose diet with α -lipoic acid on Adiponectin-leptin ratio in high-fat diet-induced non-alcoholic fatty liver disease Rat model

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Statement of Problem: Non-alcoholic fatty liver disease (NAFLD) is one of the most common liver diseases which could lead to fibrosis and cirrhosis. Insulin resistance often associates with NAFLD and progression of it. The adiponectin/leptin ratio has been suggested as a maker of adipose tissue dysfunction and this emerging biomarker correlates with insulin resistance. Previous studies have reported that low-fructose diet and α -lipoic acid could prevent insulin resistance.

Research Purpose: In this study, a low fructose diet combined with α -lipoic acid was used to evaluate its effect on hepatic steatosis, insulin resistance and adiponectin/leptin ratio of NAFLD due to high fat diet in the Sprague-Dawley rats.

Research Method: Male rats (n=40) were divided into five group (n=8). Normal control group (NC), high fat diet group (HFD), fructose group (Fru), α -lipoic acid group (Lip) and fructose plus α -lipoic acid group (Fru+Lip). The high fat control group was orally treated with the high fat emulsion diet (HFD), fructose group orally treated with the HFD plus fructose (1g/kg), α -lipoic acid group orally treated with the HFD plus α -lipoic acid (60g/kg) and fructose plus α -lipoic acid group orally treated with the HFD plus fructose (1g/kg) combined with α -lipoic acid (60g/kg) once per day via gavage for six weeks. After this time, the rats were sacrificed. Serum and liver were collected for measurement of biochemical parameters, ELISA analyses and liver tissue staining with H&E. Adipose tissue was collected for measurement of PGC-1 α gene expression by Real-time PCR.

Results and Conclusion: After six weeks, the plasma level of glucose, lipid profile, insulin resistance (HOMA-IR), TNF- α , leptin, hepatic content of malondialdehyde (MDA), triglyceride (TG) significantly increased ($P<0/05$), the plasma level of adiponectin, Adiponectin-leptin ratio, PGC-1 α gene expression in adipose tissue significantly decreased ($P<0/05$) and hepatic steatosis was observed in HFD group compared to the NC group. In fructose group, serum glucose, insulin resistance (HOMA-IR), serum lipid profile, and hepatic malondialdehyde content significantly decreased and PGC-1 α gene expression significantly increased compared to the HFD group ($P<0/05$). In fructose plus α -lipoic acid group, these parameters significantly decreased and Adiponectin-leptin ratio significantly increased ($P<0/01$) compared to the fructose group. This study showed that low fructose diet combined with α -lipoic acid has high improvement effect on Adiponectin-leptin ratio as a feature of nonalcoholic fatty liver disease (NAFLD) compared to the low fructose diet alone. On the base of this study, a low fructose diet combined with α -lipoic acid supplementation might provide a beneficial natural remedial product for improvement of NAFLD parameters.

Keywords: Insulin resistance, Adiponectin-leptin ratio, Non-alcoholic fatty liver disease



Application of medicinal plants in intestinal treatment

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Statement of Problem: Patients with inflammatory bowel diseases often use herbal products as supplements or alternative drugs to current drug therapies and obtain information on them mainly through the Internet, social media or medical doctors. Therefore, clinical professionals should play a more active role and be aware of the mechanisms of action and potential drug interactions of herbal medicines for which there is evidence of effectiveness. In this area, it is required that the researchers of the agricultural research group, phytochemistry and clinical experts have a special cooperation regarding the use of medicinal plants in the treatment of various diseases.

Research Purpose: This review article shows the role of bioactive compounds in the treatment of intestinal inflammation.

Research Method: The databases Web of Science, Science Direct Scientific Information Database (Iranian database which contains both English and Persian articles), Google Scholar were searched for the terms “some medicinal plants to January 24 2023. Articles related to application of medicinal plants in treatments of inflammatory bowel diseases were excluded and then categorized and presented in two groups as phytochemical and pharmacological findings.

Results and Conclusion:

Since the existing analgesic and anti-inflammatory drugs cause a wide range of side effects, finding a wide range of new analgesic compounds is the first step for researchers (Kundu et al., 2017). Compounds isolated from medicinal plants are a reliable source of natural bioactive compounds that have antibacterial, antiviral, antifungal and anti-inflammatory activities. According to the Committee on Herbal Medicinal Products, valuable medicinal plants that are registered for the treatment of digestive disorders include peppermint, chamomile, centaurii, origanum, malvae, althaea, arctium, sage, camellia, licorice, Artemisia, artichoke, Rubia, ginger, cinnamon, Fumaria and common balm.



Also by European Medicines Agency compounds (secondary metabolites) have been identified in these plants (Thumanna et al., 2019; Peterson et al., 2018a,b; Wang et al.2019). Apart from pure essential oils, numerous medicinal plants containing considerable amounts of volatile oil are traditionally used in the European Union to treat gastrointestinal conditions like mild dyspeptic or spasmodic gastrointestinal complaints, bloating and flatulence. Among the medicinal herbs used for these indications are e.g anise fruit, caraway fruit, lemon balm leaf, peppermint leaf, sage leaf oregano herb, majoram herb, wormwood, chamomile flower, cinnamon bark, ginger root, and turmeric root (Thumanna et al., 2019). Two further medicinal herbs rich in volatile oil and used to treat gastrointestinal diseases according to the EMA monographs are the rhizomes of the two turmeric species *Curcuma longa* L. (turmeric) and *Curcuma zanthorrhiza* Roxb. (Javanese turmeric). The rhizomes of both species mainly contain volatile oil rich in sesquiterpenes, polysaccharides as well as yellow compounds with a dicinnamoylmethane structure called curcuminoids (HMPC, 2018a, 2014a).

In addition, drugs rich in tannins and anthocyanins interact intensively with gut microbiota, since these compounds reach the colon at high levels in unchanged form. Tannins and anthocyanins are intensively metabolized by certain gut bacteria, leading to the generation of small, bioavailable and potentially bioactive metabolites. Moreover, interaction with these compounds may exert a prebiotic-like effect on gut microbiota Gut microbial metabolization has also been shown for certain licorice constituents, but their potential effects on gut microbiota still need to be investigated in detail. Only a limited amount of studies investigated the interactions of essential oil- and secoiridoid-containing drugs with human gut microbiota. However, other constituents present in some of these drugs, like curcumin (curcuma), shogaol (ginger), and rosmarinic acid have been shown to be metabolized by human gut microbiota, and preliminary data also indicate potential gut microbiome modulatory effects (Thumanna et al., 2019). An increasing number of gut microbial metabolites has been recently described. But for many of them, no information on their in vivo pharmacokinetics and their pharmacological relevance is available to date. Therefore, more studies in this respect would be desirable for the future.

Keywords: medicinal plant, intestinal treatment, secondary metabolites, inflammatory.



An integrative review on chamomile medicinal plant as an effective medicine

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Statement of Problem: Research and study about the pharmacological effects of plants have recently attracted the attention of many researchers. Chamomile plant is one of the oldest medicinal plants. It is known by humans and its use dates back to ancient Greece. In this article, we will review the studies conducted on the medicinal effects of chamomile. The most important and challenging issue regarding the use of medicinal plants is to investigate more about compounds and secondary metabolites for treatment and identify them more by humans.

Research Purpose: This review article shows the role of bioactive compounds in the treatment of various diseases.

Research Method: Science Direct, Springer, Scientific Information Database (Iranian database which contains both English and Persian articles), Google Scholar were searched for the terms “some medicinal plants to January 28 2023. Articles related to chamomile medicinal plant as an effective medicine in treatments of different disease. Then characterized and obtainable in two groups as bioactive compounds and pharmacological findings.

Results and Conclusion: Laboratory analyzes and pharmacological assays show that the main ingredients of chamomile essential oil contain terpenoids alpha-bisabolol and its oxides and azulenes, including chamazulene. Chamomile has moderate antioxidant and antimicrobial activities, and significant antiplatelet activity in vitro. Animal model studies indicate potent antiinflammatory action, some antimutagenic and cholesterol-lowering activities, as well as antispasmodic and anxiolytic effects (McKay and Blumberg, 2006). Today, despite the use of different methods for preservation food safety, food poisoning is an important concern for consumers and the food industry.



Today growing use of natural antibacterial products there is food preservation, such as herbal extracts and spices Antimicrobial activity of Chamomile extract and essential oil disc diffusion method as well as the minimum concentration inhibition method. (MIC) was examined and the results showed a concentration of 20 grams on the disk is the best concentration as antimicrobial activity. Chamomile extract against all tested bacterial species especially against gram-positive bacteria, anti-activity (Roby et al., 2013). On the other hand, anti-inflammatory effects of chamomile alcoholic extract by inhibiting serum protein coagulation was investigated and the results showed chamomile plant has strong anti-inflammatory effects. This plant has terpenoid compounds and flavonoids are abundant, which have strong anti-inflammatory effects (Sadighara et al., 2013). In a study of the activity of antioxidant of chamomile essential oil was investigated by alpha-carotene test method. The results of this study show that chamomile essential oil is able to from 120 minutes, it shows the most inhibitory effect on free radicals with a rate of 82.5%. A review of past studies shows that the chamomile plant it contains flavonoids, coumarins and terpenoids, and its antioxidant and antimicrobial properties have been proven. This plant has protective effects on the digestive system, nervous system and the effects are anti-diabetic, analgesic and anti-cancer.

Keywords: Medicinal plant, chamomile, chamazulene, bioactive compounds, antioxidant activity.



Application of antifungal agents as paclitaxel boosters in *Alternaria alternata* isolate MSh *Taxus* strain in submerged fermentation

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Statement of Problem: Despite the fact that paclitaxel is a natural, effective anticancer agent approved by the FDA and included in the WHO's essential medicines list (EML), it is not widely available due to uneconomical and unsustainable industrial production based on low-growth and low-yielding *Taxus* trees. The fact is that endophytic paclitaxel-producing fungi will be a cheap and environmentally benign way to scale up industrial production through production enhancements.

Research Purpose: Increasing paclitaxel production in an endophytic fungus, *Alternaria alternata* isolate MSh *Taxus* strain isolated from *Taxus baccata*, by employing antifungal agents as fungal envelop destabilizers to leak paclitaxel end products from the cell and reduce feed-back inhibition for paclitaxel production.

Research Method: Antifungal agents such as clotrimazole and cinnamon methanol extract were added to 5-day-old cultures of *Alternaria alternata* isolate MSh *Taxus* strain in submerged fermentation using modified YPD media and incubated for 5 days at standard conditions. The amounts of paclitaxel produced were then determined using an HPLC instrument.

Results and Conclusion: Cinnamon extract at a concentration of 15 mg/ml raised paclitaxel production from 715.46 mg/l to 1944.78 mg/l, whereas clotrimazole at a concentration of 2µg/ml boosted paclitaxel production from 759.40 mg/l to 1012.09 mg/l. Therefore, treating fungal culture with cinnamon extract will pave the way for microbial industrial production.

Keywords: Paclitaxel, Endophytic fungi, Antifungal agent, Natural product.



Evaluation of essential oil percentage diversity of Peppermint (*Mentha piperita* L.) accessions in Iran

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Statement of Problem: Medicinal plants are one of the rich sources of important compounds from ancient to the present; it has found a special place in the treatment of many diseases and has become an important reason for many studies on medicinal plants.

Research Purpose: The purpose of this study is the effects of different drying methods (shade and oven) on the essential oil (fifty percent flowering stage) of *Mentha piperita* L.

Research Method: Peppermint (*Mentha piperita* L.) from Lamiaceae family is one of the most widely used herbs that has many therapeutic effects. In this research, different accessions of *Mentha piperita* L. were collected from different regions of Iran. In the current investigation, we have examined the effects of different drying methods on the essential oil in peppermint under field conditions. The experiment was carried out in the randomized complete block design (RCBD).

Results and Conclusion:

One-way analysis of variance (ANOVA) results indicated significant differences between the 12 accessions of *M. piperita* in both drying methods. Mean comparison among the studied accessions also showed that the highest amount of essential oil content of 2.12% was obtained by an oven drying method. Also, the highest amount of essential oil content (2.12%) was belonged to Tabriz, and the minimum amount (0.52%) was belonged to Firoozabad. In contrast, the highest (2.06%) and lowest (0.44%) of essential oil content, Firoozabad and Tabriz, were obtained in oven drying method, respectively. The results confirmed that there is a considerable genetic variation among *M. piperita* accessions in Iran.

Keywords: Drying method, Essential oil, *Mentha piperita* L.



Analysis of genetic variation in *Lepidium sativum* as an important medicinal source

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Statement of Problem: Seeds of *Lepidium sativum* as a fast growing annual herb are rich source of proteins, dietary fiber, omega-3 fatty acids, iron, other essential nutrients and phytochemicals. It is used in folk medicine for the treatment of hyperactive airways disorders, such as asthma, bronchitis and cough. Trait profiles of genotypes and trait relations are influenced by genotypic as well as environmental factors.

Research Purpose: A little is known about trait relations of *Lepidium sativum* and the objectives of this investigation were to evaluate the performance of some genotypes, reveal the interrelationship among traits, and compare among genotypes on the basis of multiple traits, which can be candidate for future breeding of *Lepidium sativum*.

Research Method: Seventy-seven accessions of *Lepidium sativum* were obtained from Genebank Department of Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) in Gatersleben, Germany and four accessions were Iranian accessions named as Birjand, Tabriz, Kerman and Shiraz. The height of first branch (HFB), height of first silique (HFS), main axis length (MAL), number of lateral branches (NLB), number of silique per lateral branches (NSL), number of siliques per main axis (NSM), number of siliques per plant (NSP), number of seeds per silique of lateral branches (SLB), number of seeds per silique of main axis (SMA), number of seeds of silique per plant (NSSP) and plant height (PH). Also, days to emergence (DE), emergence percent (EP), days to flowering (DF), flowering period (FP) and days to maturing (DM) were recorded as well as days to flowering and thousand-seed weight (TSW). The middle rows were harvested to determine biological yield and seed yield. The genotype by trait biplot method was used to display the genotype by trait two-way data using the software

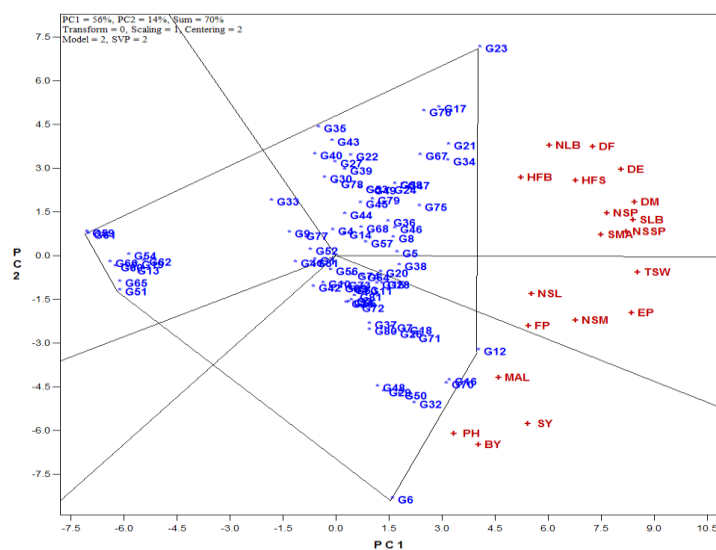


Figure 1. Polygon-view option of biplot representing the “which-won-where pattern of traits and genotypes.

Results and Conclusion: The polygon-view of the genotype by trait biplot is the best way to visualize the structure of relations between genotypes and traits. Figure 1 represents the mentioned biplot generated from data on morphologic traits of *Lepidium sativum* genotypes. The following information can be seen from this figure: the vertex genotypes for the first year are G23, G59, G61, G51, G6 and G12, and the trait fell into the sectors of G23 and G12 in the first year. Therefore, genotype G12 had the highest values of plant height (PH), main axis length (MAL), seed yield (SY) and biological yield (BY) traits; and genotype G23 had the highest values of the other remained traits (Figure 1). Therefore, there are two vertex genotypes in Figure 1 which were favorable for some traits but the rest of them (four vertex genotypes) were not favorable for any garden cress traits. An analysis of variance confirmed results of the genotype by trait biplot that there was significant genotype $\times$ trait interactions in most of measured traits. This means that *Lepidium sativum* genotypes may produce high seed yield only in some genotypes and the traits are not stable across genotypes. In the testing of different interactions for significance, one of the common practices is the tendency to apply multiple mean comparisons while these comparisons do not give extra information about the nature of interactions such as positive or negative interactions. Therefore, the genotype by trait biplot procedure, gives the same information as analysis of variance as well as additional information of multiple mean comparisons (Dehghani et al., 2008). However, genotypes G12, G20, G23, G32 and G53 as the vertex genotypes were the most favorable genotypes in the most important studied traits of *Lepidium sativum* in each two years. On the other hand, genotype by trait biplot explained most of the variation (70 %) due to *Lepidium sativum* genotypes main effects plus genotype $\times$ trait interaction effects. It can be said that almost all information contained ANOVA and multiple comparisons of genotype means is graphically displayed in a genotype by trait biplot. Ma et al. (2004) in *Triticum aestivum*, and Dehghani et al. (2008) in *Brassica napus*, also reported similar findings in the studying of effects of genotype, environment, treatment, trait and their interactions. Finally, the biplot shows a complete picture of the interrelationships among genotypes and traits (Yan and Rajcan, 2002). For above mentioned reasons we prefer the use of genotype by trait biplot model for analyzing in *Lepidium sativum* dataset. Similar reports demonstrated that the genotype by trait biplots were an excellent tool for visualizing genotype $\times$ trait dataset and revealing the interrelationships among different traits (Rubio et al., 2004).

Keywords: biplot analysis, germplasm collection, traits association.



Evaluation of foliar application of salicylic acid on quantity and quality of *Cynara scolymus* as a medicinal source

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Statement of Problem: Among the herbal medicines the *Cynara scolymus* used in treatment of hepatic/biliar diseases, gastrointestinal disorders. It is source of Ca, K, Mg, Na, P, Cu, Fe, Mn, Se, and Zn. Trait profiles under salicylic acid application and trait relations are influenced by genotypic as well as environmental factors.

Research Purpose: A little is known about trait relations of *Cynara scolymus* and the objectives of this investigation were to evaluate its performance under salicylic acid application, reveal the interrelationship among traits, and compare among genotypes on the basis of multiple traits, which can be candidate for next improvement of *Cynara scolymus*.

Research Method: The experimental trial was conducted in randomized complete block design using factorial arrangement with three replicates. The first factor was consisting on three planting dates spaced at about 19 April, 5 and 20 May while the second factor was consisting on three salicylic acid concentrations (0, 700 and 1400 μ M). Salicylic acid (SA) was dissolved in absolute ethanol then added drop-wise to water (ethanol/water: 1/1000, v/v). Salicylic acid was applied on the foliage of plants with a hand sprayer on 45 days' plants at the five-leaf stage). A control group of plants was grown sprayed with deionized water. Chlorophyll content was measured on ten leaves of a plant at each plot, using a portable chlorophyll meter. The relative water content (RWC) was determined. Leaf area, leaf number per plant, plant fresh forage yield, dry matter and forage quality were recorded. Dry matter yield was determined through the weighting the dried plants at 70°C for 24 h. Primary statistical analyses were performed using the Anderson-Darling normality test and Levene homogeneity test. Homogeneity of residual variance was determined by Bartlett's homogeneity test. To explore treatment by trait interaction variability, the SREG model was used presented by Yan and Rajcan (2002). To visualize correlations between traits, a vector view biplot was made. These graphic analyses were done using the GGEbiplot software.

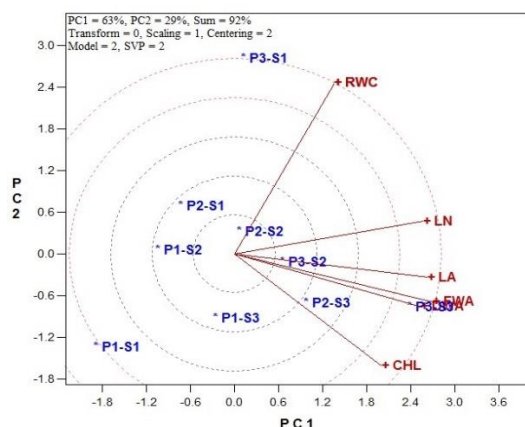


Figure 1. Vector-view option of biplot representing the relationships pattern of traits.

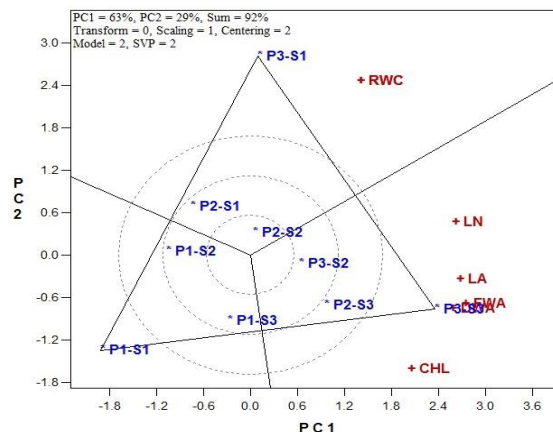


Figure 2. Polygon-view option of biplot representing the "which-won-where" pattern.

Results and Conclusion: The treatment by trait biplot explained 63 and 29% of the total variation of the standardized data, respectively (Figure 1). This high percentage reflects the ability of biplot model to modeling the relationships among the measured traits of *Cynara scolymus*. The fundamental structures among the traits should be captured by the biplots. In the treatment by trait biplot, a vector is drawn from the biplot origin to each of the traits to facilitate visualization of the relationships among traits; and the correlation coefficient between any two traits is approximated by the cosine of the angle between their vectors. In other word, provided that the biplot explained a sufficient amount ($\geq 50\%$) of the total variation, two traits are positively correlated if the angle between their vectors is $< 90^\circ$, negatively correlated if the angle is $> 90^\circ$, independent if the angle is 90° (Rubio et al., 2004). Also, traits with longer vectors are more responsive to the genotypes; traits with shorter vectors are less responsive to the treatment genotypes; and those located at the biplot origin are not responsive at all. The most prominent relations revealed by vector-view biplot (Figure 1) are: a positive association between FWA and DWA and in lower step among LA, LN FWA and DWA as indicated by the acute angles (Figure 1). There were near zero coloration between RWC and Chl as indicated by the 90° angle while we did not found any negative association among traits sue to the large obtuse angles between vectors of the traits. The polygon-view of the treatment by trait biplot is the best way to visualize the structure of relations between treatments and traits. Figure 2 shows the mentioned biplot generated from data on traits of *Cynara scolymus*. The following information can be seen from this figure: the vertex treatments are P1-S3, P3-S1 and P3-S3, and most traits fell into the sector of P3-S3. Therefore, treatment P3-S3 had the highest values of all traits except relative water content (RWC) which was felt in sector of treatment P3-S1 (Figure 1). Therefore, there are two vertex treatments in Figure 1 which were favorable for some traits but the rest of them (one vertex treatment as P1-S3) were not favorable for any garden cress traits. It seems that application of salicylic acid in high magnitudes with delay planting can increase the performance of most traits in *Cynara scolymus*. Our results showed that spraying salicylic acid on the *Cynara scolymus* plants enhanced plant growth especially in high concentration while sowing date influences its growth, development and yield depending on salicylic acid concentrations due to observing the interaction effects between two factors. Although, the meaningful difference was not observed between second and third sowing dates in analysis of variance, but the treatment by trait biplot identified the P3-S3 (sowing 20 May and spaying salicylic acid at concentration $1400 \mu\text{M}$) treatment combination as the best. It was shown that foliar application of acid salicylic on plants under normal growth conditions provided protection against stresses. Besides, the obvious visual symptom, this conclusion was confirmed by chlorophyll fluorescence parameters and electrolyte leakage measurements from the leaves (Hosseinzadeh et al. 2013).

Keywords: SREG analysis, sowing date collection, traits coloration.



Genetic variation of medicinal herb *Spinacia oleracea* using biplot analysis

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Statement of Problem: *Spinacia oleracea* is an edible plant from the Amaranthaceae is native to central and Southwestern Asia and a rich source of various vitamins (A, C, E, K, B6 and B2), magnesium, manganese, folate, betaine, iron, calcium, potassium, folic acid, copper, protein, phosphorous, zinc, niacin, selenium and omega-3 fatty acids. *Spinacia oleracea* packed with a number of anti-oxidants like polyphenols, flavonoids and carotinoids which are shown to possess anti-inflammatory effects, antimutagenic potential, anti-neoplastic effects as well as chemo-preventive activates.

Research Purpose: Various activities of *Spinacia oleracea* have been reported and various secondary have been reported from this plant while a little is known about trait relations of *Spinacia oleracea* and the objectives of this research were to evaluate the performance of some genotypes, reveal the interrelationship among traits, and compare among genotypes on the basis of multiple traits, which can be candidate for future breeding of *Spinacia oleracea*.

Research Method: Sixteen *Spinacia oleracea* germplasm were evaluated in a randomized complete block design with four replication times. Each plot contained six 3 m long rows with 25 cm between rows and plot size was 4.5 m². Control by hand weeding was carried out twice when the weed density was high, in the pre-flowering and post-flowering stages. Several quantitative traits consist on leaf length (LL), leaf width (LW), petiole length (PL), petiole diameter (PD), leaf area (LA), leaf numbers in flowering (LN), days to flowering (DF), female plants percent (FP), fresh yield (FY) and dry yield (DY) were measured. The datasets were first tested for normality by Anderson and Darling normality test. The genotype × trait biplot model (Yan and Fréreau-Reid, 2018) was used to show the two-way pattern of *Spinacia oleracea* landraces' traits in a biplot model. All biplots presented in this study were generated using the software GGEbiplot package. Up-to-date information on GGE biplot and new version of GGEbiplot package are available at <http://www.ggebiplot.com>.

Results and Conclusion: The genotype × trait biplot explained 68 and 11% of the total variation. This relatively moderate percentage reflects the complexity of the relationships among the measured traits. The mean effects of the measured across genotypes were examined by defining an average tester coordinate axis and an average or virtual genotype is indicated by a circle and shows the positive end of the axis. Ideal genotype is it that should have large PC1 scores (high traits' means) and small (absolute) PC2 scores (low variability). Genotypes with above average means was selected, whereas the rest were discarded, thus genotype C7, C8, C11, C13, C15 and C16 were the most favorable genotypes regarding all of the measured traits due to its low distance from horizontal axis (Figure 1). According to ideal tester (trait), leaf area was the most representativeness one and had the most discriminating ability for detection differences among genotypes. Ranking of the best traits based on the ideal tester was PD> DF=PL=DY=FY> LN=LW > LL > FP (Figure 1). The polygon view of the GT biplot helps identify genotypes with the highest values for one or more traits and provides the best way for visualizing the interaction patterns between genotypes and traits and to effectively interpret a biplot.

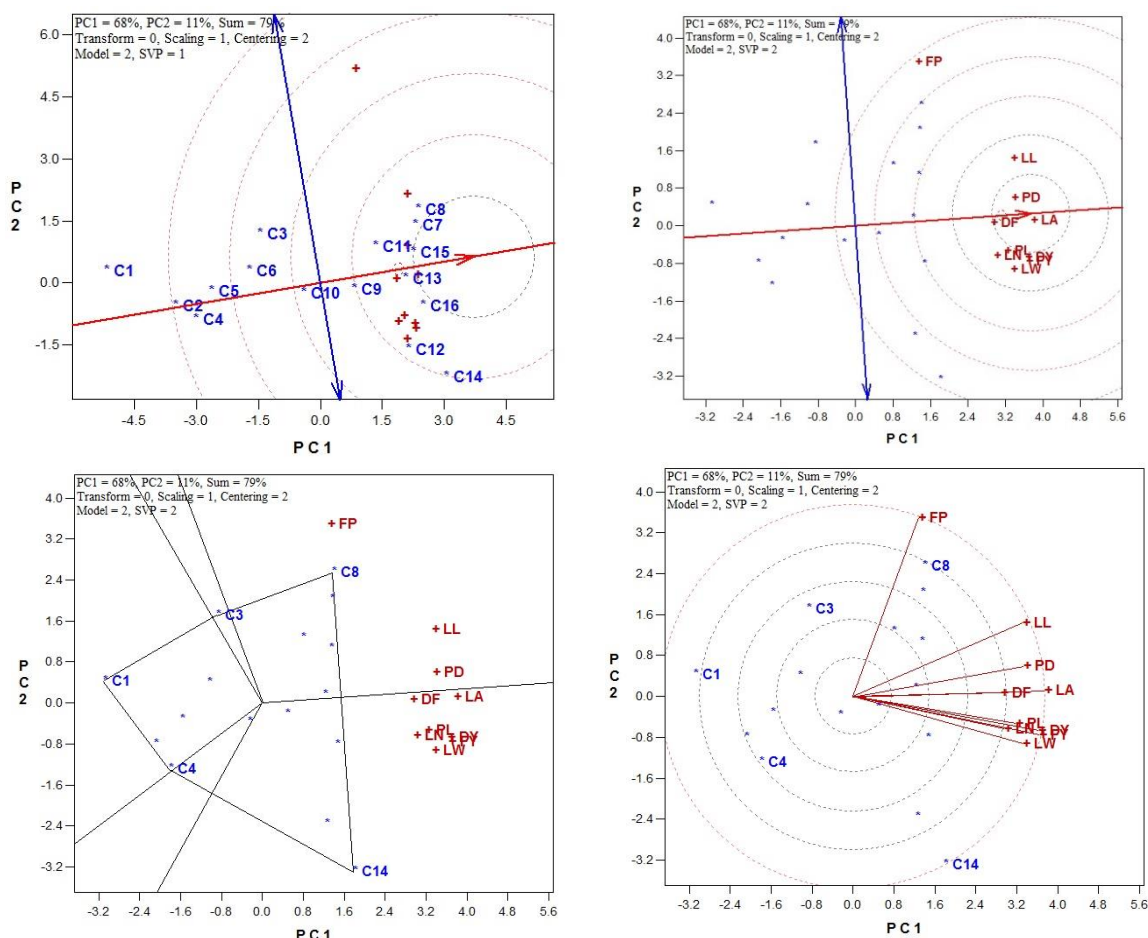


Figure 1. The genotype $\times$ trait biplot model (up-left) ideal genotype, (up-right) ideal trait, (down-left) polygon-view, and (down-right) tester view.

The biplot Figure 1, as polygon view, presents data of 16 *Spinacia oleracea* landraces in ten traits and the following information can be understood: the vertex landraces or genotypes in this investigation are C1, C3, C4, C8 and C14. These landraces are the best or the poorest landraces in some or all of the traits since they had the longest distance from the origin of biplot (Ebadi-Segheloo et al., 2014). Therefore, it seems that C14 had the highest values for traits leaf width (LW), petiole length (PL), leaf area (LA), leaf numbers in flowering (LN), days to flowering (DF), fresh yield (FY) and dry yield (DY). This genotype (C14) and the other genotypes of this sector had good amounts of above mentioned traits. The vertex landrace C8 and its related genotypes which fall in its sector were good for petiole diameter (PD), leaf length (LL) and female plants percent (FP). Therefore, there are two vertex genotypes in Figure 1 which were favorable for some traits but the rest of them (four vertex genotypes) were not favorable for any *Spinacia oleracea* traits. Finally, the biplot shows a complete picture of the interrelationships among genotypes and traits (Sabaghnia et al., 2016). The petiole diameter (PD), days to flowering (DF) and leaf area (LA) were positively associated with each other while petiole diameter (PD), days to flowering (DF), and leaf area (LA) were positively correlated with each other (Figure 1). The female plants percent (FP) did not show any positive or negative association with the petiole diameter (PD), days to flowering (DF) and leaf area (LA). For above mentioned reasons we prefer the use of genotype by trait biplot model for analyzing in *Spinacia oleracea* dataset. Similar reports demonstrated that the genotype by trait biplots were an excellent tool for representing genotype $\times$ trait dataset (Yan and Fréreau-Reid, 2018).

Keywords: Germplasm collection, site-regression analysis, traits association.



"DARMO" a Pharmaceutical product; an Ethnobotanical study

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Statement of Problem: The subject of Ethnobotany is especially plants, because plants form an important part of human economic and cultural life. The study of Ethnobotany can lead to the expansion of health and treatment, increasing the food security factor, and also by helping industry and pharmaceuticals and developing tourism, it can help alleviate poverty and grow sustainable income in developing countries.

Research Purpose: This research has been carried out to identify ethnobotanical knowledge of Pharmaceutical product from a medicinal plants "DARMO" in Lamerd of Fars province in Iran.

Research Method: This research was conducted in the field and referring to the Lamerd of Fars province. During this research, while observing the processing of the DARMO product, information on how to use it has also been gathered by interviewing.

Results and Conclusion: To prepare DARMO, whole meal flour is fried, then oil is added and mixed. Then ginger, coriander, cardamom, pepper, cumin, fennel, cinnamon, black seeds are added and stirred vigorously, and then the sugar water solution is added and stirred again until the color turns brown. This medicine is used to treat back pain, knee pain and menstrual pain and to strengthen women. It is not recommended to use this medicine during diarrhea.

Keywords: DARMO, Ethnobotanical.



Pharmaceutical product of *Ephedra procera*; an Ethnobotanical study

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Statement of Problem: There are various medicinal plants in nature that by studying their medicinal properties, new horizons have emerged for researchers of different fields and have provided the basis for the production of new drugs and treatment of diseases with these plants. In many areas, there are medicinal species that, although botanically, may not be new, but they are locally used for pharmaceutical purposes that are unknown to pharmaceutical and medical science.

Research Purpose: This research has been carried out to identify ethnobotanical knowledge of Pharmaceutical product from a medicinal plant "*Ephedra procera*" in part of Fars province in Iran.

Research Method: This research was conducted in the field and referring to the eastern cities of Fars province. During this research, while observing the stages of collection and processing of the ephedra plant product, information on how to use it has also been gathered by interviewing.

Results and Conclusion: In the spring, the roots of this plant are collected and dried, then the roots are washed and left in water for a while, after which the remaining water is filtered and boiled until it thickens, the product is prepared in the form of small tablets and dried. This drug is used to reduce blood sugar and also to open blood vessels. This medicine should not be used in people with high blood pressure, and its excessive use can cause seizures

Keywords: *Ephedra procera*, Ethnobotanical.



Ethnobotany, a new scientific branch in Quran Research

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Statement of Problem: During the past years, various topics in the field of Quranic studies have been investigated by researchers, one of them has been the Quranic plants, almost all the researchers conducted in this field have focused on the mentioned plants in the Quran, and most of that research are on The therapeutic or nutritional properties of Quranic plants, and a few have studied the botany and more detailed analysis of some doubtful plants, but Ethnobotanical aspect has not been considered at all, in the sense of which tribes were used that plants in history and whether there was a special processing and use of them at that time that has been forgotten, ethnobotanical science is related to the cultures, It deals with plants and is a combination of botany, history and social sciences, which can be used in Quran studies.

Research Purpose: Trying to draw the attention of researchers in the field of Quranic sciences to a new branch of the Quran Research, which can be a new horizon for the study of sciences in the Quran, is the main purpose of this investigation.

Research Method: Analyzed and mapped the production of the Quranic sciences in Food, Botanical and Medicinal field at the international level indexed in the WoS, ISC, SID and Magiran database during the period 2000 to 2022 using the VOSviewer software to illustrate the results. Descriptive - analytical method used to achieve the research purpose.

Results and Conclusion: the result show, there was not any investigation on Ethnobotanical science, according to this result, Quranic researchers are suggested to pay attention to the field of ethnobotany in future research.

Keywords: Ethnobotany, Quran.



Studying the word "Healing" in the verses of the Qur'an

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Statement of Problem: The ultimate goal of any type of treatment, including modern medicine, traditional medicine, acupuncture, homeopathy, aromatherapy, psychotherapy, etc., is the complete recovery of patients. In comparing the word "treatment" with the word "healing", it is clear that "healing" has a metaphysical nature compared to the word "treatment" in the same way as "healing" in popular usage means complete and even sudden treatment of a disease, especially if that disease is incurable. For this reason, it is important to examine the word "healing" in the Qur'an.

Research Purpose: The purpose of this research is to investigate the general and statistical nature of the physical or metaphysical of the word "healing" in the verses of the Qur'an.

Research Method: the Quranic verses in which the word "healing" is present were identified and then these verses were evaluated and analyzed using different interpretation books.

Results and Conclusion: According to the results of this research, 6 verses out of 6 surah of the Quran contain the word healing; Nahl (69), Asra (82), Shoara (80), Foslal (44), Yunus (57) and Towbah (14). In examining the meaning and interpretation of these verses, it is clear that only verse 69 of Surah Nahl mentions the therapeutic and physical nature of healing, while in the other five verses the emphasis is on the metaphysical nature of the word healing. Therefore, based on this research, it can be said that more than 80% of the meaning of the word healing in the Quran was based on the metaphysical meaning of this word.

Keywords: Healing, Qur'an



An overview of the benefits of royal jelly in veterinary medicine

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Abstract: Royal jelly (RJ) has long been one of the most commonly used natural products in medicine. RJ is secreted from worker bees' hypopharyngeal and mandibular glands, serving as a food source for the queen bee and larval growth. This product shows an astonishing complexity in terms of composition, including carbohydrates, lipids, proteins, polyphenols, hormones and vitamins. Many biological and remedial properties are considered for RJ, including neurotrophic, antioxidant, antidiabetic, antihypercholesterolemic, hepatoprotective, antibiotic, antitumor, anti-inflammatory, immunomodulatory, antiallergic and antiaging activities. It is also a blood pressure regulator and antiseptic. This review highlights the various benefits of RJ as an alternative medicine agent in animal health and welfare. Although considerable research has been done on RJ, much remains to be learned about its biology and biochemistry, as well as its application in modern veterinary medicine.

Keywords: Biological activity, Honeybee, Natural remedy.



Ameliorative role of turmeric curcumin as a natural antioxidant on phenol-mediated renal toxicity in rats

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Statement of Problem: The increasing role of phenol in many industries and its broad range of medicinal applications increase its potential toxic impacts. Also, its detrimental effect on the rat kidney has been investigated in a number of studies. On the other hand, curcumin is active ingredient of *C. longa* and has protective effects against a wide range of toxic agents.

Research Purpose: This study was conducted to examine the probable ameliorative impact of curcumin in attenuating phenol toxicity in rat kidney.

Research Method: Thirty-two animals were divided into four groups; control groups, curcumin group orally received curcumin 200 mg/kg bw, phenol group orally gavaged 180 mg/kg bw phenol and combined group orally gavaged curcumin and phenol. Treatment was given for 2 weeks. Blood samples were taken for biochemical analysis. Renal tissue samples were also collected to histopathological examinations.

Results and Conclusion: Administration of phenol revealed elevation in serum creatinine and blood urea nitrogen levels, elevated renal injury as well as malondialdehyde levels and decreased superoxide dismutase activity. Combination use of curcumin and phenol improved most of the side effects in rats treated with phenol regarding oxidative stress and histological parameters in kidney. This study shows that curcumin treatment ameliorates the toxicity in the kidney of phenol-treated rats through its antioxidant properties.

Keywords: Curcumin, Phenol, Renal toxicity, Histology, Rat.



Mitigation of arsenic driven ovarian toxicity by VenoVine[®] (*Vitis vinifera* L. extract) administration

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Statement of Problem: VenoVine[®], as a mitigation agent, contains dry extract of red grape leaves and is a natural agent of increasing interest in the treatment of toxic compounds. On the other hand, arsenic, a toxic metallic element widespread in the environment, mediated female reproductive dysfunctions.

Research Purpose: This study aimed to examine the remedial potential of VenoVine[®] against arsenic-instigated ovotoxicity in adult female rats.

Research Method: To do this study, Wistar rats (N=28) were randomly allocated into four groups: control group, arsenic (10 mg/kg) group, VenoVine[®] (100 mg/kg) + arsenic (10 mg/kg) group, and VenoVine[®] (100 mg/kg) group. After 45 days of treatment, biochemical assay, estrogen, progesterone, and LH levels, and also histopathological profile of ovarian architecture were estimated.

Results and Conclusion: Arsenic intoxicated group exhibited detrimental changes in the ovarian histo-morphology and also remarkable increase in the levels of estrogen and LH. Arsenic intoxication also accomplished with significant increase in the malondialdehyde along with decreases in the catalase and superoxide dismutase activities. Otherwise, VenoVine[®] treatment exerted its positive action against arsenic intoxication by decrease of malondialdehyde, increase of superoxide dismutase activity, and restoration of estrogen levels. These results confirm protective effects of VenoVine[®] against arsenic.

Keywords: VenoVine[®] (*Vitis vinifera* L. extract), Arsenic, Ovary, Histology.



Introduction of Kahali and surgery manuscripts (diagnosis and treatment of eye diseases) in the Safavid period

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Statement of Problem: Manuscripts are one of the important sources that, in addition to the cultural support of a nation, can open the way for medical and treatment history research. In the Safavid era, due to the existence of natural products, most of the diseases were treated in this way, and the sages and doctors, according to their experiences and using the traditional medicine books of the previous periods, wrote numerous treatises on They dealt with the field of diagnosis and treatment. The Kahali and Surgery manuscript is one of the treatises on the diagnosis and treatment of eye diseases written by Muhammad Baqir Ibn Imaduddin Mahmood al-Tabib Shirazi, one of the doctors of the period of Shah Abbas I (996-1038 A.H.) during the Shah's military campaign to conquer Tabriz and Nakhjavan fortresses in Azerbaijan and Baz. Its withdrawal from the Ottoman Turks has been written for the quick treatment of the eye diseases of the soldiers .The contents of this manuscript in two articles include: 1. In Ain spice (5 chapters) 2. It is collected in ointments and spices for sores (5 chapters).

Research Purpose: The aim of the present research is to introduce and identify medicinal plants and products and how to use them to diagnose and treat eye diseases, which are very important in traditional medicine.

Research Method: The research method is descriptive-analytical.

Results and Conclusion: The results of the research show that during the Safavid era, doctors used natural plants to treat eye diseases. The experience and skill of the doctors in using herbs and spices for eye diseases caused the troops to continue their conquests. In fact, the reason for its use was to speed up the recovery process when necessary.

Keywords: Safavid period, Shah Abbas I, medicinal plants, eye diseases, army.



Documentary narrative of medicinal plant trade of Khosrowshah Jahanian trade in the Qajar period, Case study: Isfahan

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Statement of Problem: Medicinal plants have always played an important role in boosting production and increasing trade in Iran's economy. During the Qajar period, medicinal plants played an important role in trade by numerous merchants in various cities. Shah Jahanian Trading House, one of the most important trading houses in the economy of Iran during the Qajar period, was established in Yazd in 1312 AH/1894 AD by five brothers named Khosrow Shahjahan, Parviz, Rostam, Guderz, and Bahram, who were the owners of the city. Khosrow Shah Jahanian's trading house turned from agriculture to trade and exchange. The work of this trading house was to export cotton at first, but later it led to exchange and banking. Among the activities of this trading house were accepting deposits against Bijek Fund, moving money around the country, buying and selling foreign currency and remittances, accepting government taxes to the center and facilitating government treasury affairs in exchange for wages. Due to the extensive activities of Tejarat Khaneh branches in the cities of Yazd, Tehran, Isfahan, Shiraz, Kerman, Bandar Abbas and Rafsanjan, it also had representatives in the cities of Mumbai (India), London (England) and New York (USA). One of the fields of activity of this trading house was buying and selling medicinal plants in different cities, which was a profitable business for them. In the documents and correspondences of this business, there are names of spices and herbs such as cardamom, nutmeg, saffron, black seed and cloves.

Research Purpose: Identification and introduction of medicinal plant lists sent from different cities of Iran from Khosrow Shah Jahanian and Brothers trading house in Isfahan, as well as checking the production status, trading of medicinal plants and recognizing the strengths and weaknesses of these medicinal plants.

Research Method: This research has been using library sources, archival documents and examining the location of an old bill of lading (Isfahan), then the data has been collected with a descriptive-analytical approach.

Results and Conclusion: The results of this research indicate that medicinal plants were traded in Isfahan during the Qajar period by numerous trade houses, including the trade house of Khosrow Shah Jahanian and Brothers, and these trade items of medicinal plants between different cities were profitable for them. The reason for this profitability was the general community's use of medicinal plants for treatment.

Keywords: Isfahan, Qajar, Medicinal Herbs Trade, Khosrowshah Jahanian and Brothers Trading.



Chemical assessment of *Salvia syriaca* (Lamiaceae) in Zagros, Iran

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Statement of Problem: The genus *Salvia* L., belonging to the family Lamiaceae, is one of the most important medicinal genera. This genus is well known for the treatment of different diseases and rich source of secondary metabolites. Regarding to the approved documents, a high chemical diversity of flavonoid-based compounds has been reported in some *Salvia* species.

Research Purpose: There has been no report about chemical assessment at infra specific levels of *Salvia syriaca* L. using LC-MS/MS method. Therefore, the current research was conducted to develop a metabolomic approach, assess different compounds and their diversity in different chemotypes.

Research Method: Several accessions were collected from different natural habitats in the center and south-west of Zagros regions, Iran. The dried aerial parts of each sample (50gr) were subjected to ultrasonic homogenizer with 98% methanol. MS/MS analysis was performed using QTRAP mass spectrometer, conducted in negative ionization mode. A comprehensive platform for metabolomics data was applied using library matching and GNPS-Molecular Network.

Results and Conclusion: The analysis revealed 92 metabolites with remarkable diversity. Molecular networks depicted specific compounds in each chemotype. The presented metabolomes mostly included fatty acids, terpenoids, flavonoids, phenolic acids, coumarins, and alkaloids. Consequently, the datasets are valuable for pharmaceutical purposes.

Keywords: Lamiaceae, metabolome, *Salvia*.



Satureja bachtiarica Bung: A valuable native species in Zagros highlands

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Statement of Problem: Today, the importance of medicinal plants for the treatment of diseases and economic development is not hidden from anyone. *Satureja bachtiarica* Bung. is also one of the important and valuable medicinal plants of Zagros, and due to its important and valuable features, it is important to recognize and use this plant in the treatment and economic sector of the country.

Research Purpose: The present study was designed with the aim of a systematic review of this species.

Research Method: This research has been carried out in a library form and is considered to be methodologically, analytically and qualitatively. For this purpose, information was collected through searching in articles and various scientific databases, including Google Scholar, SID, etc., and books on medicinal plants, limited to Persian and English, and the results were not limited by using keywords.

Results and Conclusion: Because this plant is effective in the treatment of infectious diseases, diarrhea, indigestion, muscle pains, memory disorders, and in addition, the native uses of this plant include: use as a spice and seasoning and to flavor meat, as well as use as It is brewed and boiled for the treatment of colds and disinfectants and painkillers, as a result, the recognition and preservation and cultivation of this plant as a native and valuable species in the Zagros highlands should be considered.

Keywords: *Satureja bachtiarica* Bung., Zagros, Lamiaceae, Treatment, Traditional use



The effect of honey, royal jelly and propolis on Alzheimer's disease

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Statement of Problem: Alzheimer's disease is the most common cause of dementia. This disease is related to the involvement of the central nervous system and causes disturbances in nervous features such as memory, cognitive defects and behavioral abnormalities. Cognitive abnormalities caused by Alzheimer's are related to extracellular accumulations of amyloid beta plaques and neurofibrillary tangles consisting of intracellular hyper-phosphorylated tau proteins. Due to the lack of successful treatment and prevention of Alzheimer's disease with drugs, extensive efforts have been made to find new alternative ways for prevention, control and treatment this disease. Protective and preventive measures for Alzheimer's disease include social-intellectual activities, use of probiotics and foods containing bioactive molecules.

Research Purpose: The purpose of this study is to evaluate scientific reports about the effects of honey, royal jelly and propolis on the power of memory and learning in Alzheimer's patients.

Research Method: This study is based on the review of several articles.

Results and Conclusion: The evaluation of many scientific documents indicates that honey, royal jelly and propolis as suitable natural products that are produced by bees have short-chain fatty acids, flavonoids, phenolic compounds, antibacterial compounds and other useful compounds that play a role in maintaining human health, regulating immunity and memory. Some of these compounds, have anti-inflammatory, antioxidant properties that improve the memory by exerting positive effects on neurological functions. By treating or preventing some neurological disorders, can improve cognitive processes and cause significant improvement in learning and memory in Alzheimer's patients. Besides anti-inflammatory and antioxidant properties, which all three products produced by honey bees have, royal jelly also has neuroprotective and anti-neurodegenerative properties in Alzheimer's disease. So, it can be more useful in improving the memory in patients with Alzheimer's disease.

Keywords: honey, royal jelly, propolis, Alzheimer's disease.



Antibacterial activity of *Tribulus terrestris* on the pathogenic genes expression of *Enterobacter* spp

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Introduction: With the emergence of multidrug resistance (MDR) bacteria, it is necessary to find novel antimicrobial agents for treating such bacteria. Natural products are a rich source of bioactive compounds. *Tribulus terrestris* L. (*Zygophyllaceae*) is a popular plant in traditional European and Chinese folk medicine. Considering the importance of herbal products as treatments for infectious diseases, the antimicrobial activity of aqueous and ethanolic extracts of the *Tribulus terrestris* from Guilan province, Iran on MDR *Enterobacter* isolates from patients suffering from UTI were examined in the current.

Material and methods: Aqueous and alcoholic extracts of *Tribulus terrestris* were prepared using conventional methods. Bacteria were isolated from urine samples of patients with urinary tract infections (UTIs). Antimicrobial activity was evaluated by well diffusion method, MIC determination, antibiofilm assay. After observing the antimicrobial effect of the extracts, the effect of the extracts was analyzed on pathogenesis genes expression of *Enterobacter* using Real Time PCR. All the tests were repeated three times and the data were reported as mean $\pm$ SD. The data were statistically analyzed using One-way analysis of variance (ANOVA) and differences among the means were determined at $P \leq 0.01$.

Results: The antimicrobial tests showed that the extracts have significant antimicrobial effects. Also, molecular analysis was confirmed that medium to high concentrations of extracts significantly reduce the expression of pathogenic genes.

Conclusion: The extracts of *T. terrestris* (TT) are good candidates to use in the treatment of UTI due to MDREnterobacter; although they need more investigation.

Key word: *Tribulus terrestris*, antimicrobial, *Enterobacter*



Bioinformatic studies of antiviral effects of thiadiazolylcurcumin on covid-19

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Statement of Problem: There is increasing evidence about the antiviral ability of herbal compounds. Treatment and control of viral diseases using plant compounds and derivatives is important because of less side effect. The coronavirus disease is a type of viral pneumonia that broke out in Wuhan, China in December 2019. This disease is a new virus that originated from the family of coronaviruses. The covid-19 disease starts with the initial symptoms of fever, cough, shortness of breath and fatigue, it infects the lungs and causes acute respiratory distress syndrome. The structure of the coronavirus includes various proteins, one of which is the Mpro protein. Mpro protein is essential for virus replication and host infection, Mpro has been an important target for coronavirus inhibitors.

Research Purpose: The purpose of this project is to investigate the inhibitory potential and binding site of thiadiazolylcurcumin with the main protease of the covid-19.

Research Method: In this research, Pubchem and Drugbank databases were used to find Ligands derived from curcumin. To investigate how the compounds bind to the protease active site, energy optimization, docking studies, and final analyzes were performed with Hyperchem, AutoDockTools, and DS Visualizer software, respectively.

Results and Conclusion: thiadiazolylcurcumin with a binding energy of -5.60 kcal/mol, was selected as the best compound. In order to confirm the obtained results, it is recommended to use them for clinical trials, along with further investigations. Amino acids involved in the hydrogen bond of histidine 41, glutamic acid 166, cysteine 145, threonine 26 and amino acids involved in the hydrophobic bond of threonine 25, methionine 49, glycine 143, asparagine 142, histidine 164, methionine 165, proline 168, glutamine 189, leucine. 167, arginine 188, glutamine 192, threonine 190.

Keywords: Bioinformatic, antiviral effects, thiadiazolylcurcumin, covid-19



The effect of Green tea extract (*camellia sinensis*) on reproductive function in adult male rats

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Statement of Problem: Green tea (*Camellia Sinensis*) is one of the most consumed herbal beverages all over the world. The natural chemical called polyphenols in green tea is what is thought to provide its anti-inflammatory and anti-cancer effects. Green tea with the scientific name of *camellia sinensis* has many medicinal properties in reproductive system, so the aim of this study was to investigate the effect of the extract.

Research Purpose: The aim of this experimental study was to investigate the effects of green tea extract on the reproductive performance of male rats. After this stage, 2 mL blood was collected from the jugular vein of the rats and testosterone, luteinizing hormone (LH), follicle stimulating hormone (FSH), oxidant and antioxidant parameters containing glutathione peroxidase (GPX), superoxide dismutase (SOD), total antioxidant capacity (TAC) and lipid peroxidation (LPO) were assayed.

Research Method: In this experimental study, 32 adults male wistar rats were divided into 4 groups (n=8) and green tea extract it was gavaged as follows for four weeks. The first group (control), the second group (5 gr/100 cc of the extract), the third group (10 gr/100 cc) and the fourth group (20 gr/100 cc).

Results and Conclusion: Green tea extract significantly increased serum testosterone, SOD, GPX, LPO, TAC levels and decreased LH levels ($P < 0.05$), but had not significant effect on serum FSH levels. The results showed that a level of 20 grams per 100 cc of green tea had the best effect on it had measured factors. The use of green tea extract had positive effects on the function of the reproductive system.

Keywords: Green tea, sexual hormones, reproductive function, Rat



Analysis of the economic priorities of the medicinal value chain of saffron in Iran

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Statement of Problem: In terms of production, price and quality of agricultural products, Iran has a privileged position among developing countries. The climatic conditions of Iran have caused the quality of agricultural products and the flavor of some products, including the famous saffron, to be special and common. The various uses of saffron in edible uses and the known effect of this medicinal plant in traditional medicine and finally the emergence of adaptability and flexibility of this plant, especially in modern medicine and pharmaceutical science, are not hidden from anyone.

Research Purpose: In this research, it has been tried to find a proper prioritization for investing in selected chains by examining the value chains of saffron products in the pharmaceutical field and completing the questionnaire by experts in the year 2021. For this purpose, the Analytical Network Process (ANP) approach has been used.

Research Method: This study seeks to select the best option according to the criteria related to the processing loop with the approach of network analysis process (ANP). The Analytical Network Process (ANP) considers each topic and problem as a "network" of criteria, sub-criteria, and options that are clustered together.

Results and Conclusion: In this research, the use of experts' opinions was used to identify and rank saffron value chains with different and significant uses. For this purpose, paired comparison questionnaires were prepared and completed by experts.

Keywords: Drug, value chain, saffron, network analysis process.



The effect of an oral product containing Amla fruit (*Phyllanthus emblica* L.) on female androgenetic alopecia: a randomized controlled trial

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Statement of Problem: Androgenetic alopecia is one of the most common causes of non-scarring hair loss in women. Amla (*Phyllanthus emblica*) fruit is a remedy that has been emphasized as a hair strengthener in traditional Persian medicine (TPM) and recommended for hair loss.

Research Purpose: The aim of this study was to investigate the effect of an oral product containing Amla fruit on female androgenetic alopecia (FAGA).

Research Method: This study was designed as a triple-blind randomized controlled clinical trial. Sixty women with FAGA were randomly assigned into two groups of thirty. The intervention group was received 10 cc Amla syrup, three times a day for 12 weeks. The control group received placebo with the same dose and duration. Hair growth parameters were analyzed using TrichoScan before and after 12 weeks of intervention. Physician and patient satisfaction were assessed using the CGI-I and PGI-I questionnaires, respectively.

Results and Conclusion: Twenty-seven participants in the intervention group and 25 in the control group completed the trial. Based on our findings, the anagen-to-telogen ratio increased significantly in the intervention group compared with the control group who received placebo ($F=10.4$, $P=0.002$). Physician and patient satisfaction increased in amla group compared with placebo at 12th weeks of intervention ($P<0.001$), ($P<0.001$). The formula had no remarkable side effect. Only one case of mild constipation was reported in one of the participants after one month of consuming Amla syrup.

Keywords: Gooseberry, Traditional Persian Medicine, herbal medicine, hair loss, androgenic alopecia



Fetus preservation drugs from the perspective of Persian medicine

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Statement of Problem & Research Purpose: Miscarriage is a common complication of pregnancy and means the termination of pregnancy before the 20th week, either spontaneously or intentionally, before the fetus has reached sufficient development to continue life. In all kinds of complementary medicine, there are many methods to prevent this complication, including the methods mentioned in authentic books of Persian medicine, to preserve pregnancy and fetus and prevent abortion, which in this study, introduced herbal medicines, which preserve the fetus and prevent abortion, have been discussed.

Research Method: This study is a review study with reference to the authentic texts of Persian medicine, such as Ibn Sina's The Canon of medicine, Teb Akbari, Al-Shamil fi sanaat tebbia, Tohfa Al-Mominin, Elixir Azam, Makhzan Al-Adwieh, etc.

Results and Conclusion: In the sources of Iranian medicine, a variety of treatments, including single or combined drugs, and how to use them to prevent abortion and preserve the fetus are mentioned. Some items available in Iranian medical books (for each person according to her temperament or the causes of previous abortions) Indicated orally, are grapes, unripe grapes sauce, quince (in the form of jam and decoction), pear, pomegranate, raisins, almond gum, oud wood and topically sitting in the decoction of some drugs such as *Myrtus communis*, *Punica granatum*, lentils and Vaginal use of lapis lazuli along with olive oil is mentioned. Also, there are many combined drugs that prevent miscarriage, such as apple syrup with *Citrus medica*, various types of mufarrah drugs, a combination of rose and rose water, the compounds containing pearls and mastic, etc.

By taking advantage of the tadabir and medicines that are widely mentioned in Persian medicine, it is possible to guarantee the health of the uterus and then the health of the fetus and the prevention of abortion.

Keywords: Preservation of abortion, Persian medicine.



Analysis of the importance and consumption of cumin medicinal plant

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Cumin is a plant, a shrub and an herb that has many properties and has medicinal, food, cosmetic and health uses. The main and most important compound in cumin essential oil is aldehyde called cuminal or cumin aldehyde. This substance is about sixty percent of cumin essential oil. constitutes Countries such as India, Syria, Turkey and the UAE are the largest exporters of cumin in the world; despite this, Iran is one of the largest producers of cumin in the world, but the majority of Iranian cumin is sold under the brand of other countries such as the UAE. The main centers of cumin cultivation in the country of Khorasan, Razavi, Isfahan and Kerman. In the present research, different aspects of the uses of cumin have been analyzed. In terms of its medicinal properties, cumin is anti-flatulent, anti-stomach, anti-spasmodic, analgesic and stimulant. It is also very effective in the treatment of severe colic in children. For that reason, it is also used to prepare grapefruit syrup for heartache in babies. The use of cumin is also effective in increasing breast milk. Cumin, having immunomodulatory properties, can be effective in many inflammatory and immunological diseases; it can also be used as an agent in the treatment of tumors or as an auxiliary drug. The most important effect of cumin in traditional medicine is its anticonvulsant and antiepileptic effects, in addition, it is used as a painkiller and anti-inflammatory in traditional medicine. Cumin extract has antibacterial, antidiabetic and insecticidal properties. Cumin is also used in the combination of laxatives, medicines related to eye diseases, and as an expectorant. Among the other effects of cumin, we can mention the property of removing bile, its antioxidant and anti-disinfectant properties. In some countries, cumin essential oil is used to disinfect sutures. The combination of cumin essential oil with cumin makes it spread better. Cumin oil is an excellent oil to support digestive health and can relieve digestive discomfort. help. Cumin is very effective as a warming oil and helps to relieve muscle pain and arthritis. It is tonic for the nervous system and has an effect on headaches, migraines and nervous fatigue. Cumin seeds are an excellent source of zinc and are useful for strengthening bones. Bone health is recommended.

Cumin has been used as a spice in all kinds of foods since the past. In addition, cumin essential oil is also used in the canning and soft drink industries. Cumin flour contains fiber and protein and is useful for feeding livestock.

Cumin essential oil can be used as a fragrance in cosmetics such as creams, perfumes and lotions. It is also used to prepare perfumes and colognes, shampoos and soaps. It also protects the skin against fungal and microbial infections. In addition, it may be effective in reducing signs of premature aging, such as wrinkles and maintaining bone health. , aging spots and sagging skin are useful. These effects could be due to the presence of vitamin E in cumin, which acts as a strong antioxidant and fights free radicals.

In general, considering the properties and high effectiveness of cumin in the treatment of many diseases, its numerous uses, as well as the high capacity of the country in the production of cumin, it is possible to provide job opportunities for the people of Iran by processing it under the process of extracting and extracting oil. The manufacture of medicine and cosmetic products is one of the main uses of cumin, which Iran's climatic capabilities require researchers and industrialists to enter.

Keywords: Cumin, immunological



A review of the therapeutic application of honey bee products in history

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Statement of Problem: The term Apitherapy was created after knowing the role of bee products to increasing health and curing the illness. Before it, people thought apitherapy is just using bee venom but after 17th centuries the scientist described new world on applications of bee products.

Research Purpose: since past till now apitherpy is the used of all bee products solo or in combination with together for increasing human health. In this article, properties and history of important products of honey bee including honey, royal jelly, propolis, bee pollen and bee venom were described.

Research Method: In this study, which is a library and review, the therapeutic role of honey bee products based on the data from scientific sources has been investigated.

Results and Conclusion :It has been confirmed in the references of traditional medicine and religious cultures that honey bee products have been used widely in the ancients; it shows how the product of this insect were valuable for human since past to present.

Keywords honey bee, apitherapy, honey, royal jelly, propolis



The concept of treatment and cure from the past to present time

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Introduction: Today, the treatment of diseases is often based on eliminating or reducing the symptoms of the disease, and the treatment does not lead to healing. The disease lasts for a long time only with relief of symptoms and the patient will have to take medicine and bear its side effects and expenses. In a paradigm shift, holistic methods such as Persian medicine can be used, in which case the treatment will be more likely to be associated with healing or cure.

The purpose of this article is to compare the two therapeutic perspectives of Persian and conventional medicine.

Data collection: The data of this article has been compiled by studying Persian medicine books and scientific articles from reliable databases.

Findings: The treatment method in conventional medicine is mostly based on reducing the symptoms and since it does not deal with the etiology of the disease, it does not lead to healing and does not cure the disease. In other words, for every sign there is an anti. The therapeutic approach of Persian medicine is to find and remove the cause of the disease, in which case the disease will be removed by removing the cause, thus, the symptoms of the disease and its pathological process are eliminated. But in the first model only the symptoms of the disease are alleviated and the pathological pathways and reactions are still active in the body.

Conclusion: It is necessary to diagnose and treat diseases by using the theories of conventional and Persian medicine in the form of a comprehensive medicine to increase the possibility of healing and cure.

Key words: Conventional medicine, Cure, Persian medicine, Treatment



The effects of date and date seed powder on blood biomarkers, a crossover study

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The blood biomarkers were measured at baseline and after consuming 30 g date seed powder or 50g seedless date fruit daily for 28 days. The PLS-DA model separated participants into two groups (date seed powder as X variable and timepoint as Y variable; model parameters $R^2Y = 0.77$, $Q^2Y = 0.61$, Cross-Validated-ANOVA $p = 0.0002$). The Variable Importance in Projection (VIP) discriminative variables, including TG, CRP, FBS, RBC, and RDW, were analyzed using univariate data analysis and found to be significantly different before and after date seed powder intervention ($p < 0.05$). The results showed a significant reduction in TG, CRP, and FBS and an increase in RBC and RDW ($p < 0.05$). None of the fitted models for date fruit intervention was significant regarding R^2Y , Q^2Y , or CV-ANOVA.

In the current study, date seed powder as a high polysaccharide content source led to a significant reduction in CRP concentration. It implies that date seed polysaccharides reduced colon pH by higher production of SCFAs and improved the growth of beneficial microorganisms in the intestine, reducing inflammation. Although date seed powder significantly ($p < 0.05$) reduced blood TG, more investigation is needed to elucidate the exact TG reduction mechanism of DSP. High FBS (≥ 126 mg/dl) is one of the most important biomarkers for the diagnosis of diabetes. Although, in the current study, the participants' FBS level was in the typical medical range (84 to 99 mg/dl), a significant reduction was observed after DSP intervention. An increase in RBC after date seed powder intervention could be described by the anti-erythrocytes' hemolysis effect of polysaccharides due to date seed powder antioxidant activity. Consequently, the date seed intervention significantly reduced TG, CRP, FBS, and erythrocyte hemolysis.

Keywords: Phoenix dactylifera L.; Three glyceride, CRP, Clinical trial, Inflammation



Effective herbal medicine (*Artemisia.vulgaris*) in the treatment of Leukemia disease

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Statement of Problem: Leukemia is a group of blood cancers that usually begin in the bone marrow and result in high numbers of abnormal blood cells. The cause of leukemia is unknown, but some factors put people at higher risk. Treatment methods include radiation therapy, chemotherapy treatment, immunotherapy, stem cell therapy, etc. In the studies have been done on several extracts of different plants, it was found that the aerial parts of *Artemisia.vulgaris* have been able to suppress the growth of leukemia cells.

Research Purpose: The purpose of this study is to review the studies conducted on the effective herbal medicine (*Artemisia.vulgaris*) in the treatment of leukemia.

Research Method: The review method is to search in Pubmed and Google Scholar

Results and Conclusion: the aerial parts of *Artemisia.vulgaris* are being used as an anthelmintic, an antiseptic, an antispasmodic, and a tonic for vital organs and for disorders including hepatitis. They are able to suppress the growth of leukemia cells. Screening shows that 1, 8 Cineol (Eucalyptol) extracted from *A.vulgaris* kills leukemia cells in vitro. In the other study the results demonstrated that the essential oil-induced apoptosis in HL-60 leukemic cell line was mediated by caspase-dependent pathways, involving caspase-3, -9, and -8, which were initiated by Bcl-2/ Bax /Bid-dependent. The results recommended that *A.vulgaris* might be a promising source of new anticancer agents.

Keywords: Herbal medicines, Leukemia, HL-60, *Artemisia.vulgaris*



Galbanic acid inhibits migration and adhesion of melanoma cancer cells by repression of matrix metalloproteinases 2 and 9 activity

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Statement of Problem: Melanoma is the most aggressive form of skin cancer and cell metastasis is the primary cause of patient death. Natural products are increasingly looked upon as a valuable alternative or a support for synthetic drugs in cancer chemoprevention and therapy. Galbanic acid (GA) is a sesquiterpene coumarin, with several pharmacological effects such as cancer treatment and prevention.

Research Purpose: In this study, for the first time, we investigated the anticancer and antimetastatic activity of GA in B16F10 melanoma cells

Research Method: The effects of GA on the survival rate of B16F10 cell line was measured using the AlamarBlue assay. Wound healing migration assay and adhesion assay were determined the effect of GA on migration and cell adhesion, respectively. MMP-2 and MMP-9 activities were analyzed by gelatin zymography assay.

Results and Conclusion: Galbanic acid indicated cytotoxic activity toward melanoma cancer cells with no effect on normal mouse fibroblast L929 cells. The results also showed GA inhibited in vitro migration and adhesion of melanoma cells after 24- and 48-hours incubation. Furthermore, the results of gelatin zymography indicated that GA suppressed MMP-2 and MMP-9 enzymatic activity. In conclusion, Galbanic acid inhibited migration and adhesion of melanoma cancer cells by possibly inhibitory effects on MMP-2 and MMP-9 activity.

Keywords: Adhesion, Galbanic acid, Matrix metalloproteinase, Melanoma cancer, Migration



The Effect of Natural Products on the Treatment of Infectious Diseases in the Qajar Period Treatise on Solving the Riddle (on the Occurrence of Cholera)

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Statement of Problem: Haqk Nazar Hakim Bashi, a Hebrew physician in the days when cholera spread, collected his experiences and ideas in the form of a treatise called Solving the Riddle (on the manners of cholera) which was copied by Muhammad Hasan son of Muhammad Hamdani in the 13th century. The author first investigates the astrological cause of this disease by mixing four elements in the temperaments and then takes help from natural products to treat this disease. Hakim Bashi advises to give him warm water and almond oil in order to speed up the cure of this disease and then make him vomit. After that, they feed him oxymel and warm water and he vomits again. To quench thirst, water of fleawort, sour oxymel and squeezed lemon juice are useful. After the vomiting is stopped with fleawort water, marshmallow flower and almond oil, chalk and purslane eggs are given to him for several days in a row so that recovery can be achieved sooner. Hakim Bashi further states that the patient should avoid spicy spices because it increases the severity of the disease. At the end, there is a prayer from Imam Sadiq along with a narration to protect against cholera at the end of the copy. This manuscript is kept in the National Archives and Library.

Research Purpose: The aim of the research is to investigate and identify the cholera disease and how to treat this disease using natural healing products in the Qajar period

Research Method: Research method and method: This research is based on library sources and is done in a descriptive-analytical way.

Results and Conclusion: Findings and conclusion: The results of the research show that natural products were used abundantly in the treatment of cholera during the Qajar period. Therefore, study and research in this field is very important.

Keywords: Manuscript, treatise on solving riddles, infectious diseases, cholera, natural products, Hakim Bashi.



Introduction of some plant sources of linalool available in the country

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Linalool is a valuable monoterpene alcohol with many medicinal, food and health uses, which is of great commercial interest. This compound plays a key role in the industrial production of vitamins A and B and aromatic compounds such as geraniol, nerol and citrate. Linalool is produced in more than 200 species of flowering and spice plants. There are written reports on the effects of linalool on the nervous system of humans and insects. In this study, the plants whose compounds have been identified in recent decades were screened based on the linalool substance and the most important available sources of this substance in Iran were introduced. Based on the results, linalool is significantly present in plants such as native and imported types of coriander, some citrus fruits, lavender, bay leaf, lemon grass, and native and foreign types of basil. According to the research conducted by the author, the amount of linalool in the essential oil extracted from the types of native coriander (population of Malayer) and foreign improved coriander (of German origin) that were grown in the central region of the country was 70%. The amount of essential oil in the indigenous population was 1.5% and in the improved European variety was more than 3%.

Key words: linalool, indigenous plants, commercial value, aroma



The need to identify different sources of natural products according to climate change

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In the review of the old prescriptions presented in the therapeutic culture of different nations and nations for the treatment of a specific disease, it can be seen that doctors used different substances (or different plants) for a specific purpose, depending on its accessibility. In other words, each doctor took the desired effective substance from a different source, but the treatment results were similar. With climate change and the occurrence of changes such as temperature increase, occurrence of drought and salinization of lands and waters, it is necessary to seriously consider the possibility of continuing the production of effective substances in new climatic conditions by identifying this variety of sources. The occurrence of drought and salinization of lands and waters, it is necessary to give serious attention to the possibility of continuing the production of effective substances in the new climatic conditions by identifying this variety of sources. For example, by screening different types of medicinal plants with the aim of providing geraniol composition, it is determined that plants such as geraniol, lemon grass, lemon, lemongrass and lemongrass can be a source of this substance, but these plants are compatible with different climatic conditions. Rosemary is resistant to severe cold, drought and to some extent to salt, while lemon balm is sensitive to cold and does not tolerate salt. Lemongrass tolerates temperatures above 40 degrees Celsius and is suitable for tropical regions of the country. Also, to supply thymol, different plants such as Danai thyme, Shirazi thyme and Zenian can be introduced. , has shown dry and salty. This issue can be screened in the case of other valuable natural compounds as well, after determining what medicinal compound we should produce.

Key words: screening, geraniol, thymol, climate change, foresight



A brief review on life style and natural remedies on chemoradiotherapy induced oral mucositis based on Persian Medicine

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Introduction: Oral mucositis is a red and ulcerated lesion of the oral cavity, which is considered a complication of solid tumor chemotherapy and head and neck radiotherapy in cancer patients. Following oral mucositis, pain and inability to eat, nausea and vomiting, weight loss, quality of life impairment, and secondary infection can occur, which ultimately leads to the possibility of changing the treatment plan. This complication is divided into zero to four grades based on the classification of the World Health Organization, and the ability to swallow decreases as the grade increases. Currently, supportive measures are being taken for those suffering from this condition. Among these measures are pain control with local anesthetics and ice and anti-inflammatories, improving the condition of saliva and eliminating dry mouth, maintaining oral hygiene, nutritional support, and controlling oral bleeding. Nutritional support includes soft and liquid foods and in cases of severe mucositis, the use of a gastrostomy tube.

Methodology: In this qualitative study, first the reliable sources of Persian medicine were selected, and then the data was classified into different information formats. In the next step, content analysis was done based on the information. Also, the obtained information was compared with new studies using different databases.

Results: In Persian medicine, mucositis or mouth sores are included under the category of Ghola- damavi, Bosur-moteghareh-seghar and heat & dryness are the main causes of its occurrence.

The prevention and treatment of Persian medicine begins with lifestyle modification and continues with prescribing food and then medications with herbal, mineral, or animal origin, and if necessary, it deals with manual treatments to improve patients. A moisturizing lifestyle includes measures to eat and drink (barley water, rice milk, fresh fish, pumpkin and spinach, purslane, fruits such as almonds and peaches, and avoiding spicy spices, pickles. the consumption of lentils and sumac in addition to enough sleep and rest, lack of activity and decreased intense exercise especially in hot weather, as well as relief of emotional symptoms and mental and psychological stress such as anger, sadness and fear, and finally making smooth defecation and cleansing the body also seem to help. In addition, the humidity of the environment helps to improve the patient's condition. Herbs used in oral mucositis can be prescribed in topical forms such as gargle, or orally. Among them, Cold and dry herbal medicines with astringent properties such as Plantago major, warm and dry herbal remedies such as licorice with ability to dissolve of substances and their purification and anti-inflammatory and antioxidant properties, mucilage such as malva with the anti-inflammatory and restorative properties could help in treatment.

Key words: Nutrition, Persian Medicine, Mucositis



The performance of probiotics in the management of periodontal diseases

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Statement of Problem: Periodontitis is one of the important problems of public health and one of the most common diseases all over the world. In the early stages, it causes inflammation of the gingival, which begins with bleeding when touching or brushing teeth. Also, periodontitis is an important risk factor for many systemic diseases in the later years of life. Along with other periodontitis treatments and as an alternative to antibiotics, the use of probiotic bacteria has been suggested. Probiotics may helpful for prevention of oral infectious diseases or microbial dysbiosis, and periodontal diseases may be a suitable target for such treatments .

Research Purpose: In the study, we evaluate the current state of research on probiotic species that support periodontal health and their regulatory effects, also the performance of probiotics in the management of periodontal diseases is discussed.

Research Method: The search in reputable scientific sites and journals with suitable keywords.

Results and Conclusion: Taken together, the use of probiotics is a promising approach for prevention and treatment periodontal diseases. Studies show that probiotics can inhibit periodontitis through different mechanisms including modulating effects on host immune response and periodontal microbiota. In general, the best inhibitor of periodontal pathogens in recent studies was *Lactobacillus reuteri* ATCC PTA 5289. Studies have shown a significant reduction in several indicators of periodontitis, such as periodontal pocket depth (PPD) after adjunctive treatment with this bacterium. Nevertheless, their practical use for periodontal health needs further research.

Keywords: probiotics, periodontitis, periodontopathogen, immunoregulation



A reading on the manuscript of "MerkabatShahieh"

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Statement of Problem: Preservation and preservation of manuscripts and valuing them, in addition to recognizing and transferring constructive experiences, will be effective in various fields. The manuscript of "Shahiye Compounds" by Bahadur Khan SafaviTabib is one of the valuable works that was written in the field of treating diseases with emphasis on natural substances during the Safavid era. After studying various sciences and many medical books, Bahadur Khan, a Safavi doctor, wrote a comprehensive book in both scientific and practical parts of diseases. And she explained the words and citrus fruits and presented these "comprehensive relatives of all the authentic citrus fruits" to Shah Tahmasab I (930-983 AH) under the name of "Shahiyeh Complexes". This treatise deals with the treatment of diseases through natural products in 1 "Introduction" and 25 "Chapters" and each in several "Chapters".

Research Purpose: The purpose of the research is to introduce this version to identify the natural substances used for treatment.

Research Method: The research method is descriptive-analytical and based on sources of traditional medicine of the Safavid period.

Results and Conclusion: The results of the research show that during the Safavid era, doctors treated various diseases using natural substances found in nature and this factor caused most common diseases to be treated in the same way during the Safavid era.

Keywords: Safavid period, manuscripts, citrus fruits, diseases, Traditional medicine.



Brain-friendly metabolites from microscopic world

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For thousands of years natural products have been used as remedies to improve health and treat diseases. These are compounds with various chemical structures and a wide range of effects from different sources. The common sources are terrestrial plants, marine organisms and microorganisms from different niches. The introduction of metabolites of microbial origin dates back to the discovery of penicillin from *Penicillium notatum* by Alexander Fleming. Then many other substances were found with health promoting effects and in recent years were used in bio-therapeutics technology. One major source of metabolites with beneficial effects on brain health and protective effects against neurodegenerative disease are probiotics. Probiotics as a whole are described as live microorganisms which when administered in adequate amounts confer a health benefit on the host. Some of the probiotic products include surface components such as proteins from outer membrane, exo-polysaccharides and bacteriocins. Among versatile beneficial properties, their neuroprotective role is of great importance. To be able to confer their effect on neurons, these metabolites must interact with blood brain barrier (BBB) whose integrity is affected in turn mainly by the gut microbial products. Probiotics send signals to the CNS through producing compounds such as gamma aminobutyric acid (GABA) and tryptophan products with specific role in regulating their communication pathway, the gut brain axis. Based on these interrelationships between probiotic metabolites and body organs including brain, many research works have focused on finding the best single or consortia of probiotics with the most effects on preventing inflammation, improving immunity and neuroprotection. Several experiments have confirmed these beneficial roles in cell culture and mouse models as well as in human. Probiotic formulas with benefits for mental health and metabolic function, alleviating symptoms of neurodegeneration and cognitive disorders, protecting neurons from oxidative stress and apoptosis are the goal of investigations. The results are promising but more research is needed on the effector molecules produced by these beneficial microorganisms and their interactions with the central nervous system.

Keywords: neurodegenerative disease; dysbiosis; probiotics; neuroprotective; effector molecules; gut- brain axis; gut microbiota.



Common healing products in Makran coastal area

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Statement of Problem: Today, according to the World Health Organization, 25% of common medicines are of herbal origin. The import of medicinal plants (not including aromatic plants) in developed countries has increased from 355 million dollars in 1976 to 5.51 billion dollars in 2002, to 18 billion dollars in 2016. Also, this amount will reach to 5 trillion dollars by 2050. Despite the existing capacities in the Makran region, the production and export of medicinal plants are much lower than expected.

Research Purpose: Identifying the capacities of the Makran region to produce as many natural products as possible, especially medicinal plants, exploiting and commercializing products and exporting them to other countries through e-commerce are the most important goals of this research.

Research Method: Collect information through reading books, sites, etc.

Results and Conclusion: The most important species of medicinal plants are: *Ziziphus spina-christi*, Cedar (whose leaves are used in the pharmaceutical and detergent industries), *Tamarindus indica*, *Ricinus communis*, *Terminalia catappa*, *Alhagi persarum*, *Avicennia marina*, *Calotropis procera*, *Salvadora persica*, *Lawsonia inermis*, *Isatis tinctoria*. Many other medicinal plants that have medicinal and industrial value and are considered precious treasures also justify the establishment of pharmaceutical factories and processing industries in this region. Promotion of production to commercialization is a basic way to revive agriculture and medicinal plants in the coasts of the Makran. The trade of medicinal plant products is the most important factor in increasing the gross domestic product and plays a vital role in the social and economic development on the Makran coasts.

Keywords: Makran, Medicinal plants, pharmaceutical industry, E-commerce.



Wheat storage based on the model advised by Holly Quran

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Statement of Problem: Keeping and storing wheat is a complex and active process, due to the fact that even after harvesting, wheat grain can perform all outward vital functions such as respiration, metabolism and growth as a living organism and is subject to biochemical changes such as reduction of Namely power (The power that causes growth and development), increase of acidity, weakening of gluten, enzymatic decomposition, loss of nutrients and changes in appearance such as breakage and perforation and sprouting.

Research Purpose: The purpose of the research is to investigate the model suggested by God in verse 47 of Surah Yusuf (So keep what you reaped in its cluster, except for the little that you eat) for wheat storage.

Research Method: Collecting information through reading the Quran, interpretation, narrations, books, websites, etc.

Results and Conclusion: Wheat spike is the head part of grass plants where the seed is formed. The wheat ear consists of a number of ears and the wheat grain is placed inside two covers called palea and lemma in each ear. In this way, the wheat cluster can be considered a natural packaging for the protection of wheat grains. Storage time, storage temperature and grain moisture are the most important factors affecting the quality of ensiled wheat. Reports indicate that these factors have the ability to cause significant changes in the nutritional value and functional characteristics of stored non-eared wheat grains. While there is a lot of information about storing wheat in the form of grains, there is little information about storing wheat in the form of clusters.

Keywords: Wheat spike, Surah Yusuf, natural packaging, palea and lemma



Encapsulation of eucalyptus essential oil using β -cyclodextrin and evaluation of its water solubility

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Statement of Problem: Eucalyptus is a flowering tree from the Myrtle family. It is native to Australia that has widespread applications in timber and pulpwood industries. Eucalyptus essential oil (EEO) is used as an abundant remedy in traditional medicine because of its multiple biological activities like anti-bacterial, anti-oxidant, disinfectant, chemotherapy, respiratory, and gastric. Water insolubility is one of the disadvantages of essential oils for medical usage. Cyclodextrins (CDs) play an important role in the drug encapsulation field as host molecules. They have hydrophobic cavities and hydrophilic exteriors. This ability of CDs increases the water solubility of various molecules.

Research Purpose: In the present study, we prepared an encapsulation of EEO as a guest and β -CD as a host molecule using the co-precipitation method to increase the solubility of EEO.

Research Method: For this purpose, 0.5 mL of EEO was added to 10 mL of hydroalcoholic solution β -CD. The mixture was put in an ultrasonic bath for 30 min. The residue was centrifuged and dried in a freeze drier. The water solubility of the product (EEO/ β -CD) was evaluated with different concentrations and checked by UV-Vis. spectrophotometer.

Results and Conclusion: According to the UV-Vis. spectra, the presence of peaks at 289 and 294 nm confirmed the formation of the product. Furthermore, A concentration increase in water solubility of EEO/ β -CD was observed by UV-Vis. spectroscopy analysis.

In conclusion, the solubility of eucalyptus essential oil was increased by the preparation of an inclusion complex using β -cyclodextrin.

Keywords: β -cyclodextrin; Eucalyptus; solubility



***Ferulago angulata*: a natural source of antioxidant activity in the Apiaceae family**

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Statement of the Problem: The activity of certain free radicals in the body can lead to various types of cancer, diabetes, heart failure, brain damage, premature aging, and overall weakness of the body's immune system. The use of natural antioxidants can be considered the main way to combat free radicals and regenerate damaged cells because they increase the efficiency of the body's immune system against various diseases.

Research Purpose: *Ferulago angulata* (Schltdl.) Boiss. is a plant with antioxidant properties, and the effects of its effective compounds on free radicals have been proven. In this brief summary, we will provide an overview of the botanical characteristics of this species, its compounds, and the mechanisms of action that make it an effective antioxidant.

Research Method: Our research primarily involved reviewing available reliable sources and scientific papers. We focused on identifying and analyzing the characteristics, compounds, and mechanisms of action of the plant as an antioxidant.

Results and Conclusion: *Ferulago angulata* (Schltdl.) Boiss., also known as Chavil in Persian, is a plant from the Apiaceae family that grows mostly in the Zagros highlands of Iran, northern Iraq, and Turkey. It is a monocarpic and aromatic perennial plant with a thick, erect, and sulcate stem, basal leaves, and small yellowish flowers that bloom between late May and late July. The results confirm that the extract of *F. angulata* has antioxidant properties, which have been demonstrated through animal models. The extract can help to strengthen the body's immune system by applying antioxidant activity in the blood serum, making it a potential natural antioxidant supplement for the pharmaceutical industry. The antioxidant activity of *F. angulata* is attributed to the presence of phenolic compounds, flavonoids, and certain monoterpenes such as α -pinene, β -pinene, cis-ocimene, and borneol acetate. Phenolic compounds' ability to donate electrons is the reason for their antioxidant properties, which trap and eliminate free radicals, thereby preventing chain reactions.

Keywords: antioxidant, *Ferulago angulata*, herbal medicine, immune system, Umbelliferae



Gum tragacanth of *Astragalus*: a natural substance with potential medicinal properties

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Statement of Problem: Gum tragacanth extracted from *Astragalus* spp. has a long history of use in traditional medicine. It has been used to treat a variety of conditions, including coughs, sore throats, diarrhea, and even snake bites. Its therapeutic properties are thought to be due to its ability to form a protective coating on the mucous membranes, which can help to soothe inflammation and irritation. One of the most well-known uses of gum tragacanth in traditional medicine is to treat respiratory conditions such as coughs and bronchitis. It is believed to soothe inflammation in the respiratory tract and reduce coughing. Additionally, gum tragacanth is sometimes used to treat sore throats and other throat irritations. Gum tragacanth has also been used as a natural remedy for diarrhea. Its ability to form a protective layer on the intestinal lining can help to soothe inflammation and reduce the frequency of bowel movements. However, it's important to note that more research is needed to fully understand its effectiveness for this purpose. Preliminary research has suggested that gum tragacanth may have potential as an anti-inflammatory and anti-cancer agent. Nevertheless, further studies are necessary to confirm these findings and determine the appropriate dosage and safety profile.

Research Purpose: The aim of the overview summary, which is to identify and list the *Astragalus* species that produce gum tragacanth in Iran while highlighting their medicinal properties in traditional and modern medicine.

Research Method: To identify the *Astragalus* species that produce gum tragacanth in Iran and their medicinal properties, we conducted a literature search using scientific papers, books, and local knowledge. The sources we consulted allowed us to compile a list of the most well-known producers of gum tragacanth in Iran.

Results and Conclusion: *Astragalus* L. (Fabaceae) is the world's largest genus of flowering plants, comprising approximately 3000 species. With over 800 species, Iran is one of the most important centers of diversity for this genus, especially in high-elevation areas with harsh climates. These species exhibit thorny or herbaceous characteristics, and more than 550 of them are endemic to Iran. The genus is mainly distributed in the Iranian-Turanian region, including the Zagros, Alborz, and Azerbaijan mountains, as well as scattered elevations throughout central Iran. Some thorny *Astragalus* taxa produce gum tragacanth, which is known as white and yellow gum tragacanth and is popular in Iran and among consumers. In particular, the *Platonychium*, *Rhacophorus* and *Brachycalyx* sections includes several well-known gum tragacanth-producing species. While gum tragacanth has a long history of use in traditional medicine, there is still much to be explored in terms of its potential medicinal and therapeutic properties. Research into the properties of this natural gum has shown promise in areas such as wound healing, anti-inflammatory effects, and as a prebiotic for gut health. Additionally, gum tragacanth has been found to have potential applications in the food and pharmaceutical industries, such as in the formulation of drug delivery systems and as a stabilizing agent in food products. With continued research, the full extent of the benefits of gum tragacanth may be further uncovered, offering potential opportunities for its use in various fields.

Keywords: *Astragalus*, Fabaceae, gum tragacanth, Iran, traditional medicine.



***Allium akaka*: a review of its phytochemical characteristics and traditional medicinal uses in Iran**

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Statement of Problem: *Allium akaka* S.G. Gmelin ex Schult. & Schult. f., locally known as "Vaalak," is a medicinal plant that belongs to the Amaryllidaceae family. It is endemic to Iran and listed as endangered due to over collection. Many diseases may be treated effectively using this plant as a herbal medication

Research Purpose: The purpose of this review summary is to investigate an endemic species of the genus *Allium* in Iran, with an emphasis on its phytochemical characteristics and potential medicinal properties as described in the literature

Research Method: To investigate the use of wild *Allium* species in Iran, data from various sources were collected. Based on the available literature, information on the traditional uses of *Allium akaka* in Iran was gathered.

Results and Conclusion: In traditional medicine, *Allium* species have been used for blood purification, digestion problems, blood pressure reduction, headache, liver diseases, diarrhea, and arthritis. The sulfur compounds present in *Allium* plants are highly reactive, giving them strong antimicrobial effects. *Allium akaka* is a plant species used in Iranian traditional medicine for its potential wound healing, antibacterial, and anthelmintic properties. The plant is consumed as food and medicine, and young to flowering plants are eaten as a vegetable. It has been found to be beneficial for the treatment of cholera, tuberculosis, skin diseases, and rheumatism. The different parts of this species have been used in folk medicine for the treatment of infectious diseases, kidney stones, and cough. Additionally, the plant has therapeutic effects on diabetes, reducing the risk of atherosclerosis, and preventing hypertension caused by diabetes. The available literature suggests a link between the chemical content of *Allium akaka* and its therapeutic effects in traditional medicine. Thus, this plant has potential as a herbal medication for the mentioned ailments. However, more research is needed to confirm its effectiveness.

Keywords: *Allium akaka*, chemical content, Iran, medicinal properties, Vaalak.



An Overview of The Probiotic Industry in Iran

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Statement of Problem: The increase in population and the development of the process of industrialization of societies, despite the creation of many facilities, especially in urban life, can have a negative effect on reducing the level of health of society. inappropriate diets and improper and arbitrary use of antibiotics by disrupting the microbial order of the body are the causes of many diseases.

Research Purpose: Modifying the lifestyle is the best and most important way to increase improve the quality of life in people. A proper diet is an important part of a healthy lifestyle. Therefore, studies to achieve a suitable dietary guideline have always been of interest, but due to individual, cultural and geographical differences in different regions of the world, it will not be possible to implement a common guideline for all people. Based on this, it is very important to find new ways to produce healthy and nutritious foods that can be effective on people's health in addition to providing energy.

Research Method: Library study and analysis and findings.

Results and Conclusion: Currently, 4 large companies producing probiotics are active in Iran. The most common commercial strains produced by them include Lactobacilli and Bifidobacteria, some species of Bacillus and yeast. These strains are produced as single or multi-strain products and in the form of products such as food additives and starters, medicinal supplements (different ages, special products for women), additives for products Cosmetics (types of gels, cosmetics), livestock and poultry supplements, supplements suitable for horses and pets (such as ornamental birds, cats and dogs), sports and non-sports supplements, they are Available in, capsule, drops and powder form. Considering the growing market of probiotic products, creating the necessary infrastructure to produce diverse products can be a profitable investment for countries active in this field, such as Iran.

Keywords: Probiotic industry, Food Supplements, Beneficial Food Combinations



The effect of vermicompost on the growth characteristics and essential oil of chamomile (*Matricaria chamomilla* L.)

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Statement of Problem: Chamomile plant with effective botanicals such as kamazolen is important in various pharmaceutical and health industries. In this plant, organic nutrition improving the absorption an important role in increasing the performance and quality of essential oil. Based on the use of organic fertilizers in order maintain the health of the product and the environment, it is considered an important in today's agriculture.

Research Purpose: The effect of vermicompost on the growth characteristics and essential oil of chamomile.

Research Method: In this research, vermicompost was used at five levels (0, 5, 10, 15, and 20 tons per hectare). The experiment was carried out as a factorial with a basic design of randomized complete blocks with three replications. Finally, the growth characteristics such as the length and dry weight of the plant, the number of flowers, the amount of essential oil were measured.

Results and Conclusion: The results show that the use of vermicompost has increased plant growth, stem length and dry weight have increased also with the increase in the number of stems, the number of flowers has increased. The highest growth was observed at 15 tons per hectare. There is the lowest amount of growth in the treatment without vermicompost. There is no statistical difference between the treatment of 15 and 20 tons per hectare, but there is a statistical difference with other treatments.

Keywords: Chamomile, essential oil, organic fertilizer, vermicompost.



The effect of cotton plant extract in the treatment of leishmaniasis

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Statement of Problem: Leishmaniasis is one of the 10 most important diseases of the World Health Organization with health problems in more than 90 countries. The present human study was performed to evaluate the therapeutic effect of cotton plant on cutaneous leishmaniasis lesion.

Research Purpose: evaluate the therapeutic effect of cotton on cutaneous leishmaniasis.

Research Method: This double-blind randomized controlled clinical trial was performed on 88 cases of leishmaniasis wounds between the ages of 6 and 60 years. Patients were randomly divided into two groups of 44 cases. two groups received conventional treatment. In addition to the usual treatment (glucantime), the first group received cotton and the second group or control group received placebo. Glucantime treatment was performed according to national instructions and treatment with cotton plant extract was performed twice a day topically. Clinical evaluation of wound surface was measured in weeks 1 to 4, 8 and 12 and the effect of these topical products was evaluated by statistical tests.

Results and Conclusion: The results of the present study showed that the surface of lesion before the intervention and in the first to fourth weeks after the intervention was not significantly different between the two groups ($P\text{-value} > 0.05$). But the surface of lesion in the Intervention group in the eighth and twelfth weeks was lower than the control group ($P\text{-value} < 0.05$). This study showed that the improvement of leishmaniasis lesion using topical cotton plant mark in the eighth and twelfth weeks after the intervention was significantly more than the control group . However, studies with a longer period and with a larger sample size and better treatment formulation are needed for better treatment.

Keywords: Leishmaniasis, Cotton plant, Iranian traditional medicine.



Investigation of water solubility of encapsulated rosemary essential oil in β -cyclodextrin

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Statement of Problem: *Salvia rosmarinus* (rosemary) is a fragrant evergreen flowering shrub which is belonged to the mint family. Rosemary essential oil (REO) is widely used in the pharmaceutical, traditional medicine, and food industries. Even though REO has many biological activities like anti-oxidant, anti-inflammatory, and anti-depressant, it is insoluble in water. Cyclodextrins (CDs) are chemical substances with natural resources. They have a cyclic truncated cone shape with a hydrophobic cavity and hydrophilic exterior. This distinguished structure allows the insertion of organic compounds into the cavity forming an inclusion complex to increase their water solubility.

Research Purpose: In this research, we tend to encapsulate REO with β -cyclodextrin to stabilize the REO and evaluate its water solubility.

Research Method: Briefly, 0.1 gr of β -CD was completely dissolved in a solvent mixture of water and ethanol (10ml, v/v= 4:1). Then, 0.5 ml of REO was added to the mixture and sonicated for 28 minutes at RT. Finally, the mixture was dried at RT. A UV-Vis spectrometer method is adopted to assess the water solubility of the product (REO / β -CD).

Results and Conclusion: the formation of the inclusion complex was approved by the presence of a band at 1649 cm^{-1} in the FT-IR spectrum. Also, some characteristic peaks of β -CD are shifted due to the formation of the product. The UV-Vis. spectroscopy exhibited an increase in the water solubility of REO / β -CD to 1.5%.

Our findings revealed the medical applications of REO will be increased and suited in aqueous media by preparing an encapsulate by β -CD due to the increasing water solubility.

Keywords: β -cyclodextrin; encapsulation; *Salvia rosmarinus*



Mango (*Mangifera indica* L.) Leaves: Phytochemical Profile, and Health-Promoting Bioactivities

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Mango leaves are excellent in balancing blood sugar levels in diabetic patients. Those leaves contain tannins called anthocyanidins that may help in treating early diabetes. It also contains 3beta taraxerol and ethyl acetate, which help treat hyperglycemia (increased blood sugar levels).

Mangifera indica L. belongs to the family of Anacardiaceae and is an important fruit from South and Southeast Asia. India, China, Thailand, Indonesia, Pakistan, Mexico, Brazil, Bangladesh, Nigeria, and the Philippines are among the top mango producer countries. Leaves of the mango plant have been studied for their health benefits, which are attributed to a plethora of phytochemicals such as mangiferin, followed by phenolic acids, benzophenones, and other antioxidants such as flavonoids, ascorbic acid, carotenoids, and tocopherols. The extracts from mango leaves (MLs) have been studied for their biological activities, including anti-cancer, anti-diabetic, anti-oxidant, anti-microbial, anti-obesity, lipid-lowering, hepato-protection, and anti-diarrheal. In the present review, we have elaborated on the nutritional and phytochemical profile of the MLs. Further, various bioactivities of the ML extracts are also critically discussed. Considering the phytochemical profile and beneficial effects of the MLs, they can be used as a potential ingredient for the development of functional foods and pharmaceutical drugs. However, more detailed clinical trials still needed to be conducted for establishing the actual efficacy of the ML extracts.

Keywords: mango leaves, biological activities, phenolic bioactives, polysaccharides, health promoting effects



Microbial and Chemical Properties of Mahyaveh, a traditional Iranian fish sauce, and optimization of production conditions to decrease microbial load Review

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Statement of Problem: *Mahyaveh* is a traditional fermented Iranian fish sauce. The taste, smell, preservation time and healthiness of *Mahyaveh* are affected by its microbiota. According to these populations, this fermented sauce can be one of the foodborne diseases source; to overcome this problem and have healthier *Mahyaveh*, some research was done and stated.

Research Purpose: Here some articles are presented; the aims of these studies were measuring the microbiota and some chemical conditions of *Mahyaveh*, detecting and counting pathogens to compare with standards, and also figuring out the best condition of production to produce safe and healthier *Mahyaveh* with low microbiota, and prevent possible foodborne diseases.

Research Method: Factors such as the type of the fish, the concentration of the salt, and the fermentation time affect the microbiota; 15 treatments were designed in a project to find out the optimum condition of production of *Mahyaveh* to decrease the microbiota. *Mesophilic acidophilic bacteria*, *Coagulase Positive Staphylococci*, mould, yeast, and *Lactic acid bacteria* were counted, the PH of the samples was measured and compared with Food and Agriculture Organization (FAO) standards.

Results and Conclusion: The optimum condition was obtained at the time of 103.63 days of fermentation with *Sardine* fish and at a salt concentration of 29.38%. The maximum number of *Mesophilic acidophilic bacteria*, *Coagulase Positive Staphylococci*, Mould and yeast, and *Lactic acid bacteria* were reported, 7.99, 5.64, 3.40, 7.50 log CFU/gr respectively. The average PH was measured around 6. The number of *Coagulase Positive Staphylococci* in 58.33% of samples was more than permitted limit.

Keywords: *Mahyaveh*, Microbiota, Fish sauce, Iran, Foodborne disease]



Preparation of vegetable oils-based tissue adhesives for wound closure

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Statement of Problem: Tissue adhesives provide many advantages for reconnection of the injured tissues compared to traditional invasive surgical closure techniques like sutures and staples.

Research Purpose: This work aimed to develop UV-curable non-isocyanate polyurethane tissue adhesives composed of vegetable oils functionalized through click chemistry.

Research Method: Soybean-oil was selected as the starting material. By performing mild synthetic steps methacrylated quaternary ammonium version of this material linked through urethane bonds (MAQMSO) was prepared. Mixture of MAQMSO, limonene as reactive diluent, TPO as UV-initiator, and PETMP a multifunctional thiol crosslinker were put into thiol-ene photopolymerization condition and applied as tissue adhesive after injection and irradiation by UV light (365 nm).

Results and Conclusion: The prepared tissue adhesives with the pleasant mild smell of lemon peel represents high gel content, good adhesion strength and surface energy, proper biocompatibility towards fibroblast cells, homogeneous distribution of quaternary ammonium groups in the structure, and glass transition temperature lower than the body temperature.

Keywords: Tissue adhesive, Soybean oil, Limonene, click chemistry.



Synthesis and evaluation of a tannin derived tissue adhesive

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Statement of Problem: Compared with traditional wound closure methods, tissue adhesives are less likely to damage the tissues and can promote wound healing without scare marks.

Research Purpose: This work aims to synthesize and evaluate a novel tannin-based UV-curable tissue adhesive.

Research Method: Tannic acid, a natural polyphenol with potential antibacterial activity was selected as an adhesion promoter and combined with an unsaturated non-isocyanate urethane prepolymer prepared from soybean oil, itaconic acid, and CO₂ gas. Proper formulations of these materials and multifunctional thiols were utilized as a high-performance tissue adhesive.

Results and Conclusion: This bio-based tissue adhesive represents desirable properties such as good adhesion strength, proper biocompatibility towards fibroblast cells, fast and effective curing process toward UV irradiation, and acceptable swelling ratio.

Keywords: Tannic acid, itaconic acid, tissue adhesive, soybean oil, Non-isocyanate PU.



Investigating the therapeutic and healing effects of tragacanth

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Statement of Problem: Biopolymers due to their different properties and bioactivity effects such as non-toxicity, biodegradability, biocompatibility, cost-effectiveness and easy access have been used in the various industries. Biopolymers are divided into different types based on their subunits, including polysaccharides, polypeptides, and polynucleotides. One of the most important polysaccharides with great therapeutic potential is Tragacanth, which is a complex, heterogeneous and anionic carbohydrate. This polysaccharide has many medicinal uses for the treatment of diabetes, cancer and constipation due to excellent physical, chemical and biological properties. Also, in traditional Iranian medicine, Tragacanth is used as a painkiller to treat sore throat and hair loss caused by oily skin.

Research Purpose: In this review, the therapeutic and healing effects of Tragacanth are investigated in the medical and pharmaceutical field.

Research Method: Related studies published in Google Scholar and Web of Science sites were searched and reviewed. Studies were reviewed in which only the uses and properties of katira were reported. Finally, the results were analyzed using the required software.

Results and Conclusion: In the present study, the benefits of Tragacanth and its effect in the treatment of diseases were investigated. In general, this natural polysaccharide is used for diarrhea and constipation. Tragacanth is effective in wound regeneration and healing due to its ability to bind to fibroblast. The active ingredients in Tragacanth (Tragacanthin and Basorin) quickly help collagen production and wound healing. In addition to wound healing and antimicrobial properties, Tragacanth has the ability to control drug releases from drug delivery systems. This natural polysaccharide has also shown good results in drug encapsulation. Therefore, taking into account that Tragacanth plant has many properties and uses and the polysaccharide is safe, its use is recommended.

Keywords: Tragacanth, Wound healing, Antimicrobial, Biopolymer.



Quorum sensing impression of *Rhodococcus erythropolis* on Enhancement of (IPS) production from *Ganoderma lucidum*

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Statement of Problem: Coculture is an effective culture-based strategy for discovering novel bioactive secondary metabolites from bacteria and fungi by mimicking the environmental habitat where microorganisms continuously interact with nearby residents. Co-cultivation of microorganisms has been introduced as a promising strategy for inducing gene activation that produces much more diverse chemical and biological compounds than previously known. So far, many VOCs have been characterized in bacterial and fungal species. Researchers have reported that these compounds act as Quorum-sensing molecules (QSMs).

Research Purpose: This study -for the first time- attempts to investigate the effect of co-culture Medicinal mushroom *Ganoderma lucidum* with bacteria as a Model for Evaluating Quorum-Sensing quenching Interactions in the enhancement of intracellular polysaccharide (IPS). This study performed with the aim to produce function foods, novel (IPS) -producing, in order to ameliorate an individual's immune system response toward pathogens.

Research Method: A novel submerged volatile co-culture system was constructed to study the effect of VOCs of 6 bacteria strains on IPS production in *Ganoderma lucidum*.

Results and Conclusion: The most increase in the intracellular polysaccharide (IPS) of *Ganoderma lucidum* fungus was under the influence of *Rhodococcus erythropolis* VOCs. The results demonstrated at least a 40% increase in intracellular polysaccharide.

Keywords: *Ganoderma lucidum*; submerged volatile co-culture system; Quorum-sensing; IPS, *Rhodococcus erythropolis*.



Ethnobotanical study of *Heracleum persicum* Desf. ex Fisch., C.A.Mey. & Avé-Lall, in Iran

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Statement of Problem: Ethnobotanical studies lead to the documentation of a large number of useful plants, medicinal plants or used in food. *Heracleum persicum* Desf. ex Fisch., C.A.Mey. & Avé-Lall is one of the most important species native to Iran. In traditional medicine, it is used as an anthelmintic, antifatulent, appetite suppressant, antiseptic, diuretic and pain reliever. Traditionally, the root and fruit of this plant are used to treat epilepsy in Iran.

Research Purpose: The current study was designed with the aim of investigating the native and traditional use of this species in different regions of Iran.

Research Method: This research was conducted in a library and review form and is analytical and qualitative in terms of methodology. For this purpose, the data were collected through searching in articles and various scientific databases such as Google Scholar, SID, etc. using the keywords ethnobotany, *Heracleum persicum*, Iran, traditional usage

Results and Conclusion: In Iran, the people of Ahar city of East Azerbaijan use from the seeds and leaves of this plant to remove heartburn. The people of northeastern Khuzestan use from its fruit and leaves to treat heartburn and heartburn and diarrhea, anticonvulsants and pain, Easy and soothing digestion and the people of Lorestan from its leaves and seeds as a spice and food in internal use as an antimicrobial, heart tonic, anti-flatulence, diaphoretic, diuretic, excretion of intestinal parasites, memory enhancement, and as an external use for the treatment of pimples, abscesses, boils.

Keywords: *Heracleum persicum*, Native to Iran, Traditional use, Anti flatulence.



***Galium Verum* L.: A Golden Perennial Herb with Traditional Medicinal and Cultural Significance**

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Galium verum L. is a widely-distributed herbaceous perennial plant with golden yellow flowers, found in various habitats ranging from dry-sand fields to seashores, and growing up to 1800 m above sea level. Its stems are 60-120 cm long and frequently root when they touch soil, while its leaves are linear needle-like, dark green, and grouped in whorls of eight to twelve. The plant blooms between July and September, producing fragrant yellow flowers in dense panicles, which later give way to black schizocarps. Lady's bedstraw is a well-known species of the *Rubiaceae* family, which has traditional uses in various fields. For instance, its foliage was used in the past to stuff mattresses due to its coumarin scent, which acted as a flea killer, and its flowers have been employed to coagulate milk, and as a natural dye for wool and cheese. In addition, *Galium verum* has various medicinal uses, particularly as a diuretic, choleretic, spasmolytic, diaphoretic, and for external treatment of skin injury. Its beneficial effects on nervousness, phobias, cardiovascular diseases, and liver disorders have also been suggested. The present study provides an overview of the botanical, chemical, and pharmacological properties of *Galium verum*, with a particular emphasis on its traditional uses and potential therapeutic applications.

Keywords: *Galium Verum*, Herbal Medicine, Lady's bedstraw, Yoghurt.



In vitro evaluation of the effect of ethanolic extract of *Terminalia chebula* retz fruit on human coagulation indices

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Statement of Problem: *Terminalia chebula* retz belongs to the *Combretaceae* family, which grows natively in India and Asia and is traditionally used to treat various diseases. In addition, it is an evergreen tree with a height of 20 meters, whose leaves are egg-shaped and its flowers are small and white in spike inflorescence. Its fruit is egg-long, yellow-brown in color. This plant is native to India and Pakistan and is imported to Iran. Laboratory studies have shown that this plant is effective in treating nosebleeds and hemorrhoids.

Research Purpose: This study was designed and implemented with the aim of measuring the effect of the ethanolic extract of the fruit of this plant on human coagulation parameters in a laboratory environment.

Research Method: Dry fruits of *Terminalia chebula* retz were ground in Porcelain Mortar, fruit powder was extracted in 80% ethanol for 48 hours. The alcohol of the extract was evaporated with the help of a rotary evaporator at a temperature of 50 degrees Celsius and the remaining water was removed in the oven at a temperature of 40 degrees Celsius. The obtained dry plant extract was prepared with different concentrations in Chlorine buffer and its effect on the coagulation indices of prothrombin time (PT), Activated Partial Thromboplastin Time (APTT) and Clotting Time (CT) was investigated and the results were analyzed by t-test.

Results and Conclusion: The results of this study showed that the ethanolic extract of this plant increased the Activated Partial Thromboplastin Time (APTT) and prothrombin time (PT) and significantly decreased the Clotting Time (CT) using the initial (undiluted) concentration. The findings of this study indicate the coagulation effect of the ethanolic extract of *Terminalia chebula* retz. However, in order to carry out additional research, it seems necessary to study more on animal and human models.

Keywords: *Terminalia chebula* retz, prothrombin time, activated partial thromboplastin time, clotting time.



In vitro evaluation of the effect of ethanolic extract of *Terminalia belerica roxb* fruit on human coagulation indices

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Statement of Problem: *Terminalia belerica roxb* is the fruit of a tree from Combretaceae family, which is called Bahera in Indian, its leaves are wider than mango leaves and its fruit is slightly long, ovoid and its head is narrow and its skin is dusty yellow and thinner than the skin of *Terminalia chebula retz*. This tree grows in most of the humid forests of India and its nature is a bit cold and dry. Laboratory studies have shown that *Terminalia belerica roxb* is also effective in treating nosebleeds.

Research Purpose: This study was designed and implemented with the aim of measuring the effect of the ethanolic extract of the fruit of this plant on human coagulation parameters in a laboratory environment.

Research Method: Dry fruits of *Terminalia belerica roxb* were ground in Porcelain Mortar, fruit powder was extracted in 80% ethanol for 48 hours. The alcohol of the extract was evaporated with the help of a rotary evaporator at a temperature of 50 degrees Celsius and the remaining water was removed in the oven at a temperature of 40 degrees Celsius. The obtained dry plant extract was prepared with different concentrations in Chlorine buffer and its effect on the coagulation indices of prothrombin time (PT), Activated Partial Thromboplastin Time (APTT) and Clotting Time (CT) was investigated and the results were analyzed by t-test.

Results and Conclusion: The results of this study showed that the ethanolic extract of *Terminalia belerica roxb* decreased Activated Partial Thromboplastin Time (APTT) and prothrombin time (PT), and no significant effect was observed for Clotting Time (CT) using the initial (undiluted) concentration of the extract solution. The findings of this study indicate the coagulation effect of the ethanolic extract of *Terminalia belerica roxb*. However, in order to carry out additional research, it seems necessary to study more on animal and human models.

Keywords: *Terminalia belerica roxb*, prothrombin time, activated partial thromboplastin time, clotting time.



Isolation and identification of lytic bacteriophage against *Streptococcus mutans* isolated from dental caries plaque

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Statement of Problem: Dental caries is a common infectious inflammatory disease worldwide caused by the colonization of many bacteria, especially *Streptococcus mutans*. Increasing resistance of oral pathogens to antibiotics has led to the use of alternative methods to overcome microbial resistance. Bacteriophages are an effective tool to deal with microbial agents.

Research Purpose: The aim of this study was isolated and identified lytic bacteriophage against *Streptococcus mutans* isolated from people with dental caries and determined of biological characteristics.

Research Method: In this study, dental plaque samples were collected for the isolated of *Streptococcus mutans* and cultivated in Mitis Salivarius agar medium. Suspected *Streptococcus mutans* isolates were confirmed by biochemical tests and PCR. A lytic bacteriophage against *Streptococcus mutans* was isolated from Isfahan city urban wastewater. The effects of temperature, pH values, NaCl concentrations and host range were investigated on the bacteriophage. The bacteriophage stability was evaluated at 37, 22 and 4 °C for 1 month. Data were analyzed by GraphPad Prism version 8.0 software (GraphPad Software Inc., USA) using one-way analysis of variance (ANOVA).

Results and Conclusion: The bacteriophage was able to kill 80% of *Streptococcus mutans* isolated and stabled in an almost wide range of temperature (-20–50 °C), pH values (6-10), and NaCl concentrations (1-10%). Also, the bacteriophage was resistance to the mentioned temperatures for 1 month. Based on the physiological properties investigated, the bacteriophage can be used as a suitable choice for genomic studies in preparation for commercialization in the direction of phage therapy.

Keywords: Bacteriophage, Dental caries, *Streptococcus mutans*



Antibacterial effects of jujube extract against *Staphylococcus aureus*

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Statement of Problem: Plants have great importance in our lives because they fulfill our basic needs. Recently, people have used herbs to treat different diseases because they are cheap and effective. Medicinal plants can provide a wealth of antimicrobial agents, and hundreds have been investigated for biological activities. Anthocyanins are a group of polyphenolic secondary metabolites, also referred to as flavonoids, that are frequently found in human diets in the form of plants, fruits, and vegetables. Anthocyanin has been shown to exhibit a variety of biological functions, including anti-oxidant, immune-modulatory, anti-tumor, anti-inflammatory, and anti-bacterial effects. Anthocyanins are water-soluble pigments that give several fruits and vegetables, including red cabbage, beans, onions, radishes, jujube, berries, grapes, and pomegranates, their blue, purple, and red colors.

For checked antibacterial effects of anthocyanin in pathogen bacteria we invested *Staphylococcus aureus*. *S.aureus* is the bacterium commonly responsible for all major bone and joint infections; it can also cause a wide range of illnesses, from sepsis and deadly pneumonia to moderately severe skin infections. HA-MRSA, or MRSA, is a type of methicillin-resistant *Staphylococcus aureus* infection and is most frequently found in hospitals. This bacterium has another community-acquired strain known as CA-MRSA.

Research Purpose: Recent studies have investigated the antibiotic effects of anthocyanins, so in this study we investigated the antibiotic effect of jujube extract that contains anthocyanin against the pathogen *S.aureus*. For this reason, in this study, the alcohol-water method was used to extract jujube extract. Then, we evaluated the antibacterial activity of jujube extract using a disc diffusion method in LB agar medium.

Research Method: We used the homogenize, water, and ethanol techniques to extract the anthocyanin-containing extract in order to examine the anthocyanin's properties. *Escherichia coli* and *Bacillus subtilis* were used in the antibacterial assay of barberry extract products. We use Luria-Bertani Agar medium for this experiment, which contains 1.5 g of agar, 0.5 g of yeast, 1 g of NaCl, 1 g of tryptone, and 100 ml of distilled water. The diameter of the growth inhibition zone of products containing barberry extract was determined following an 18-hour incubation period in bacterial culture. An uncontaminated area around the bacterium shows that the antibiotic therapy has successfully stopped or inhibited microbial growth.

Results and Conclusion: The inhibition zones were 19 and 25 mm for two concentrations (7 and 14 μ M) of jujube extract against *S.aureus*, respectively, implying that jujube extract can inhibit *S.aureus* growth effectively.

Keywords: natural molecules, antimicrobial, Luria-Bertani Agar, barberry, *Escherichia coli*, *Bacillus subtilis*



Visual arts and medicine and health

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Statement of Problem: Artistic expression grew in lockstep with human cultural development and has long played an integral part in how we teach, learn, communicate and heal. Since our earliest ancestors began telling stories to make sense of the world, we have evolved to learn from narrative, be it through visual media, song or performance. The arts are uniquely suited to help us understand and communicate concepts and emotions by drawing on all our senses and capacity for empathy. In recent decades, we have come to understand the intrinsic health benefits to artistic and leisure activities. Art can help us to emotionally navigate the journey of battling an illness or injury, to process difficult emotions in times of emergency and challenging events. The creation and enjoyment of the arts helps promote holistic wellness and can be a motivating factor in recovery. Including the arts in health care delivery has been shown to support positive clinical outcomes for patients while also supporting other stakeholders, including health care providers, the patient's loved ones and the wider community. Benefits are seen across several markers, including health promotion, the management of health conditions and illness, and disease prevention.

Research Purpose: By examining visual art works, especially historical works, you can understand the value of health and healing in all eras

Research Method: The information of the article has been collected by analyzing the visual artworks and examining the depicted symbols and the background of the paintings.

Results and Conclusion: In this article, a number of works of art have been examined and analyzed, which beautifully show the human effort and ingenuity to save, ensure survival and improve the quality of life in terms of health and hygiene. Visual arts, including the works of painters such as Luis Jimenez Aranda , Luciano Nezzo , Jacques-Fabien Gautier D`Agoty, Trophime Bigot It has been verified that the focus of most of the analysis is the works of Robert Alan Thom, who was an American illustrator. Specializing in depicting historical scenes for commercial clients. He is famous for his collection of 45 paintings depicting the history of medicine.

Keywords: visual arts, health, historical works of art, healing, Robert Alan Thom



Anthocyanin extraction from barberry and check the antibacterial effect of its on the gram positive and negative bacterial

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Statement of Problem: Natural products are an important source of new drugs or serve as templates for the development of new synthetic drugs, from anticancer therapies to antibiotics. Due to the increasing prevalence of life-threatening bacterial, fungal, and viral infections and the ability of these human pathogens to develop resistance to current treatment strategies, there is a great need to find and develop new compounds to combat them. These molecules must have low toxicity, specific activity, and high bioavailability. The most suitable compounds for this task are usually derived from natural sources. The different results show that among the antibacterial compounds studied, anthocyanins have significant inhibitory activity against various types of bacteria. Anthocyanins are water-soluble pigments that give numerous fruits and vegetables their blue, purple, and red hues. Antioxidant and anti-inflammatory properties are shared by anthocyanins.

Research Purpose: For this reason, in this paper, we examine the antibacterial effect of barberry extract on gram-positive and gram-negative bacteria. According to the studies done, gram-positive and gram-negative bacteria have been identified, and they play a significant role in genitourinary, digestive, and hospital infections.

Research Method: In order to test the anthocyanin's characteristics, we extracted the anthocyanin-containing extract with homogenize, water, and ethanol methods. The antibacterial assay of barberry extract products was performed against *Escherichia coli* and *Bacillus subtilis*. For this test, we utilize Luria-Bertani Agar medium that contains 1.5 g of agar, 0.5 g of yeast, 1 g of NaCl, 1 g of tryptone, and 100 ml of distilled water. Concentrations studied, 1, 3 and 5 μ M concentrations of the anthocyanin-containing extract are prepared and placed on discs. After 24 h incubation in bacterial culture, the diameter of the growth inhibition zone of barberry extract products was measured. A clear zone surrounding bacteria indicates that the antimicrobial treatment has effectively stopped or prevented microbial development.

Results and Conclusion: The antibacterial effects of barberry anthocyanin are therefore indicated by halos of lack of growth surrounding the disc. The minimum inhibitory concentration, or MIC, in microbiology is the lowest concentration of a chemical that can stop a particular type of bacterium from growing visibly. The lowest concentration of anthocyanin solution, which prevents bacterial growth in this test, is 5 μ M. The clear zone size was 19 mm for *Escherichia coli* and 14 mm for *Bacillus subtilis*.

Keywords: natural molecules, antimicrobial, Luria-Bertani Agar, barberry, *Escherichia coli*, *Bacillus subtilis*



The therapeutic role of Gingerenone A as a herbal supplement in cancer and various diseases

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Statement of Problem: Long-term or intermittent use of chemical drugs can lead to side effects such as drug resistance. In contrast, herbal medicines are gaining popularity due to their potential to combat drug resistance without causing significant side effects. Gingerenone A (GA) is a known bioactive derivative of ginger root which may mimic or even amplify some of the therapeutic characteristics of ginger in clinic.

Research Purpose: The aim of this article is to collect information on the biological properties of GA and its possible therapeutic effects in various diseases.

Research Method: All the academic articles and research papers published from 1990 to 2022 regarding GA were collected from PubMed, Google scholar and JSTOR and meticulously studied.

Results and Conclusion: GA shows strong and selective toxicity towards certain types of cancer cells, suppressing their growth and survival in vivo. Recent studies indicate that GA promotes antiproliferation and senescence of breast cancer cells induced by oxidative stress. Moreover, this derivative destroys senescent cells with high preference, giving it a therapeutic property for diseases with high accumulation of aging cells. Alternatively, GA may be used for the treatment of obesity through suppressing adipose expansion and inflammation. Furthermore, GA overcomes insulin resistance hence introduced as a new antidiabetic agent. Additionally, the anticoccidial activity of GA and its antifungal activity against *Pyricularia oryzae* is confirmed. GA may exert its antibacterial and antiviral properties by inhibiting ATP synthase and JAK2, respectively. Intriguingly, GA is introduced as an anti-COVID phyto drug by its high affinity binding to 3CLpro and preventing its activity. In conclusion, this study confirms the therapeutic and anticancer value of GA and its beneficial supplementary use in treating cancer and multiple diseases.

Keywords: Gingerenone A(GA), ginger, pharmaceuticals



Methods to modify and improvement of bacterial cellulose properties for versatile applications

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Statement of Problem: Nowadays, due to the importance of green materials using bio-products or bio-based products such as biopolymers has attracted much attentions. These biomaterials have many applications in food industry, drug delivery, tissue engineering, and wound dressing and etc. Among all the biopolymers, bacterial cellulose (BC) is one of the most important candidates for such versatile usage. Chemical stability, high degree of polymerization, purity, renewability, high water holding capacity, tensile strength, and nontoxicity are important properties that make it an excellent choice for such applications.

Research Purpose: BC needs to be mixed with other biological or nonbiological material to be used in industries. But it has low affinity to these materials. Therefore, we need to find new ways to modify BC to improve its affinity.

Research Method: In this research related publications were extracted from various sources like Google scholar, PubMed, and Web of science based on key words like cellulose surface modification and bacterial cellulose.

Results and Conclusion: According to our investigation, different ways have been reported to improve the affinity of BC to other compounds, polymers such as chitosan can be crosslinked with BC and donate strength and high water holding capacity to BC for food preservation, functionalizing with nanoparticles and biomolecules, making BC an interesting material for biosensor application, BC can be used as a drug delivery system and wound dressing to deliver antibacterial and antiseptic agents to limit bacterial growth. As an example, it has been used to control the delivery of curcumin to improve tissue granulation, in addition to its antifungal, anticancer, antibacterial and antioxidant properties. It has been used to deliver lidocaine to promote tissue repair in third degree burns in rats. Also, BC is considered generally recognize as safe by Food and Drug Administration since 1992 and can be used as a dietary fiber.

Keywords: Bacterial cellulose, Biopolymers, cellulose modification



The role of phytopharmaceuticals and reactive oxygen species (ROS) in cancer therapy

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Statement of Problem: Phytochemicals are widely used in combination with chemotherapy drugs in order to reduce their diverse side effects. Increased cytotoxic levels of ROS induce different signaling pathways contributing to cell cycle arrest and cell death. Phytochemicals may destroy cancer cells by possibly generating intracellular ROS.

Research Purpose: The aim of this study was to introduce several phytopharmaceuticals which may be potentially considered in cancer therapy by inducing ROS in the malignant cells.

Research Method: All the related academic articles and research papers published from 1990 to 2022 were collected and precisely reviewed from PubMed, Google scholar and ScienceDirect.

Results and Conclusion: 6-Shogaol, a ginger plant derivative, induces p53 activation in leukemic cells, leading to apoptosis and cell-cycle arrest. Moreover, 6-Shogaol generates ROS and downregulates fatty acid synthase. Luteolin is a flavonoid which promotes ROS and cause cell cycle arrest by suppressing CDK2 in melanoma and colorectal cancer cells. Moreover, luteolin may restrain the proliferation and expression of p-STAT3, p-EGFR, p-Akt, and p-Erk1/2 in breast cancer cells. Resveratrol, a dietary phytophenol, generates ROS and ER stress in melanoma. Elevated ROS production leads to the phosphorylation of p38 MAPK and cell cycle arrest by activating p53 and preventing cyclinB expression. Resveratrol may then accelerate apoptosis by inhibiting Bcl-2 and upregulating Bax. Curcumin, a food flavoring phenolic compound enhances ROS by inducing JNK and ERK1/2 pathways and potentiates p53-mediated apoptosis in choriocarcinoma cells. ROS may also activate PTEN, constrain PI3K/Akt pathway and upregulate NF- κ B activity in different cancer cells. In conclusion, a growing body of evidence shows that plant medicines may increase the intracellular levels of ROS in cancer cells contributing to cell death. The present study may help selecting new cancer therapeutic strategies by using plant medicines as herbal supplements in cancer treatment.

Keywords: Phytopharmaceuticals, reactive oxygen species, cancer therapy.



Probiotic Manufacturing Process

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Probiotics are living microorganisms that, when consumed in sufficient quantities, provide health benefits to the host. This definition highlights the following five critical points: are microorganisms that must be alive, delivered in adequate quantities, and provide health advantages. Several requirements must be satisfied in order to properly convey probiotic advantages to the customer. We explore the often-overlooked challenges of producing the strains and putting them into consumer items that supply the needed dosage at the end of shelf life. A complex manufacturing procedure is necessary to achieve high yield and stability, as well as to fulfill requirements such as the lack of certain allergies, which limits some apparent culture medium elements. Reproducibility is essential for maintaining consistently high performance and quality. To achieve this, quality control is required throughout the whole manufacturing process, from raw materials to the finished product, as well as documentation of this quality control. Probiotic lactic acid bacteria and bifidobacteria have traditionally been added to fermented dairy products with a short shelf life and refrigerated storage. Probiotics can now be found in dietary supplements and other "dry" food matrices that are predicted to last up to 24 months at room temperature and humidity. With the correct production method, product formulation, and strains, high-quality probiotics may be effectively integrated in a broad range of delivery forms to meet the needs of consumers.

Keywords: probiotics; Lactobacillus; Bifidobacterium; manufacturing; strain stability



Medicinal Herbs in Alzheimer's disease: Properties and Mechanisms of Action

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Statement of Problem: Alzheimer's disease (AD) is the most common type of dementia with high prevalence among the elderly. Although the exact cause of Alzheimer's is still unknown, it is understood that multiple molecular mechanisms are involved in pathogenesis of this disease. The complexities of the neuronal changes in Alzheimer's makes it very hard for any single conventional drug to target every aspect of the disease. The best strategy, therefore, is to simultaneously target multiple underlying causes, instead of focusing on any single mechanism. Natural herbs, usually contain several active ingredients that could affect multiple targets at the same time. Knowing how these plants do affect the brain function could help immensely with the development of new drugs.

Research Purpose: In this review, we have summarized the pharmacological properties of the most important herbal medicines in Alzheimer's and also elaborated on their possible mechanism(s) of action.

Research Method: A critically exhaustive literature survey related to research on Alzheimer's disease and medicinal plants was carried out. Research papers, review articles and book chapters served as sources of data collection for this review article. Several online (NCBI, Scopus, Science Direct, webpages and conference proceedings, Traditional Chinese Medicine Database and Indian Medicinal Plant Database) and offline resources were used. Google scholar and PubMed were employed for literature searching using the following keywords: Alzheimer's disease, medicinal plants, medicinal herbs, traditional medicine, nootropic plants, neuropharmacognosy, natural compound, Cognitive enhancers, phytopharmacology, phytotherapy, β -amyloid ($A\beta$), acetylcholinesterase (AChE).

Results and Conclusion: It is generally believed that β -amyloid and Tau proteins are the main causes of AD. However, many studies have shown other mechanisms for the diseases. As AD is a multi-factorial disease, it is important to discover multi-target drugs for AD treatment. Research findings have revealed the potential of several species of plants in AD. Medicinal plants target a wide range of therapeutic mechanisms and have diverse biological effects on the brain because of their various active constituents. Therefore, studying these plants can lead us to multi-target drug discovery for AD treatment. Further studies are required to completely understand the mechanisms of herbal compounds from the gene expression and molecular basis up to the reflection on the clinical state.

Keywords: Alzheimer's disease (AD), Medicinal plants, natural compound, Cognitive enhancers, β -amyloid ($A\beta$).



Investigating the natural drug compounds on cancer treatment based on their mechanism of action and introducing the signal transduction pathways related to these compounds

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Statement of Problem: A cellular signal transduction scheme: a complex signaling network that orchestrates key biological processes in cells, and cancer cells regularly exhibit changes in signaling pathways. This makes them have the ability to target only one, as they lead to failure in cancer treatment.

Research Purpose: Introduction of bioactive compounds with high therapeutic efficacy against cancer and introduction of message transmission pathways related to them.

Research Method: NCBI and Scopus databases were searched for key words of natural products, cell signaling pathways and cancer. Information articles were linked and after reading, they were categorized and summarized

Results and Conclusion: Anti-cancer properties of various plant chemicals found in nature. Based on these results, anticancer drugs approved by the Food and Drug Administration (FDA) with natural ingredients improve the effectiveness of treatment. The effective results of natural compounds against all types of cancer have reached the stage of clinical trials. Natural compounds inhibit the proliferation, development and metastasis of cancer cells by inducing cell cycle arrest, activating intrinsic and extrinsic apoptotic pathways, producing reactive species (ROS) and downregulating active signaling pathways. These pathways include NF-B, Akt, MAPK, Wnt, Notch, p53, AR and ER. Consequently, non-toxic “natural medicines” drawn from nature's bounty can be detrimental to human tumor progression and/or histochemistry, either alone or in combination with conventional therapies. In summary, preclinical and clinical findings on cancer suggest that natural compounds have anticancer efficacy.

Keywords: cancer, natural compounds, therapeutic efficacy, active types, metastasis



Green synthesis of Ag nanoparticles using *Cyperus rotundus* aqueous extract

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Statement of Problem: Silver nanoparticles are considering famous nanoparticles because of their antibiotic activity against viruses, bacteria, fungi, cancers and parasites. *Cyperus rotundus* Linn has wide range of medicinal and pharmacological applications. 3,4-Dihydropyrimidine-2-(1*H*)-ones (DHPMs) have pharmacological properties and can be prepared by the Biginelli reaction. Synthesis of silver nanoparticles and DHPMs is difficult.

Research Purpose: Due to the medical and pharmaceutical applications of metallic silver nanoparticles and 3,4-dihydropyrimidin-2(1*H*)-(thi)one derivatives, in this study we are looking for the green synthesis of these products.

Research Method: The aqueous extract of *C. rotundus* was mixed with a solution of AgNO₃ and stirred at 70 °C for 15 minutes. During the reaction time, the dark brown of AgNPs was formed. AgNPs were used as the catalyst in Biginelli reaction. benzaldehyde, urea, ethyl acetoacetate and catalyst were refluxed for 20 minutes at 100 °C.

Results and Conclusion: The XRD peaks at 38.27, 44.46, 64.72 and 77.65 correspond to the (111), (200), (220) and (311) plane (Figure A). The presence of the bands at 3100 -3300 (N-H), 1720 (C=O) and 1100-1200 (C-O) in the FT-IR spectrum confirm the synthesis of 3,4-dihydropyrimidin-2(1*H*)- one (Figure B).

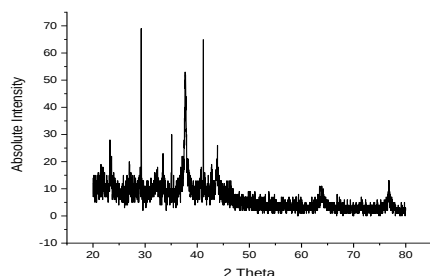


Figure A

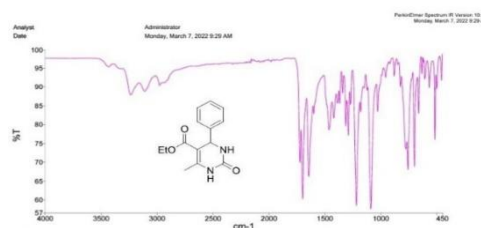


Figure B

Keywords: Ag nanoparticles, *Cyperus rotundus*, Biginelli reaction.



Microbial levan and its healing effects

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Statement of Problem: In recent years, several researches have been conducted for the bioproduction of microbial extracellular polysaccharides and their role in the ecosystem for more environmentally responsible products. In turn, this has prompted manufacturers to seek renewable raw materials with a good safety profile. Levan is one of microbial extracellular polysaccharides. Microbial levan has a wide range of applications in the food, pharmaceutical, cosmetic and commercial industrial sectors.

Research Purpose: Investigating the production of microbial levan as a bioactive compound and its healing effects.

Research Method: This research has been done in a systematic way.

Results and Conclusion: Levan is a fascinating β -(2,6)-linked fructose polymer. In nature, a variety of microorganisms and a limited number of plant species have the ability to produce levan from sucrose. Low intrinsic viscosity, high adhesive strength, ability to dissolve in water and biodegradability are distinctive features of levan which allow this extracellular polysaccharide to be widely used. A few applications of levan are described in this study e. g. anti-inflammatory, anti-AIDS, anti-tumor, anti-bacterial and antiviral effects. Levan also shows prebiotic effects. Industrially unfeasible downstream steps of fermenting levan make levan scaling-up difficult. Improvement of levan production has also been investigated.

Keywords: Levan, Exopolysaccharide, Polyfructane, Biopolymer.



An introduction to the effect of ginger derivatives on COVID-19

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Statement of Problem: Throughout human history, pandemics has always been considered as a leading cause of death. In 2019, with the emergence of COVID-19, many researchers attention was directed toward using natural products as a treasure trove of bioactive compounds for drug development and disease treatment. Ginger, "*Zingiber officinale*," is one of those plants which has a prominent place in traditional and modern medicine.

Research Purpose: Considering the favorable effects of ginger extracts in various inflammatory and viral diseases, the aim of this study was to examine the performance of the constituents of this remedial plant in the face of the COVID-19 pandemic.

Research Method: All the scientific reports and academic manuscripts regarding ginger derivatives and their role in COVID-19, published from 2018-2023, were collected from PubMed and diligently classified.

Results and Conclusion: Studies indicate that ginger has more than 400 chemical structures, such as phenolic compounds and terpenes, with a wide range of activities. Considering the critical role of oxidative stress and inflammation in the progression of COVID-19, ginger derivatives can indirectly affect the reduction and treatment of the disease. Among them 6-shogaol is of great importance according to its antioxidant and anti-inflammatory properties. On the other hand, *In silico* studies have shown direct interactions between some ginger constituents and different components of COVID-19. Gingerenone A, with its high affinity binding to the D614G SARS-CoV-2 spike protein, and 8 or 10-gingerol showing substantial arrangements at the dynamic site of the SARS-CoV-2 main protease receptor, are derivatives which may directly intercept the virus by its neutralization. In conclusion, ginger constituents may both directly and indirectly block the pathologic activities of the coronavirus. These data may help developing new anti-viral therapeutic strategies against COVID-19.

Keywords: COVID-19, Ginger, Anti-inflammatory



The Effect of *Plantago major* on Wound Healing: A Review

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Statement of Problem: Wound healing is a complex pathophysiological process, which itself involves cellular and biochemical influences such as the pattern, structure, and deposition of collagen.

Research Purpose: To investigate the effectiveness of the topical use of P major in healing skin wounds in animal models.

Research Method: A systematic review was conducted using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Guidelines. Five (5) electronic databases (public/publisher Medline, Scopus, Web of Science, Embase and CAB Direct) were searched for controlled trials published in English from January 2015 to March 2023.

Results and Conclusion: Results indicating efficacious and accelerated healing process using P. major topical treatment have been described in the literature. Even though efficiencies of this plant species in cutaneous healing process is not yet clear. Healing rates will be evaluated in cutaneous wounds that received P. major topical treatment compared with wounds that received placebo/vehicle treatment. P. major extract concentration, best response, time of use, and cell markers that can be modulated by the treatment are important variables to assess treatment effectiveness.

Keywords: *Plantago major*, Wound Healing, animal models.



The effects of *Urtica dioica* L. on sexual disorders from the perspective of Persian and classic medicine: A review study

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Statement of Problem: Nettle (*Urtica dioica* L.) is one of the plants that has been used in the treatment of many disorders since ancient times.

Research Purpose: The purpose of this study was to investigate the specific effects of nettle (*Urtica dioica* L.) on libido disorders from the perspective of Persian medicine and its evidence in classical medicine.

Research Method: In this review study, books in the field of Persian medicine and classic medicine databases were explored. Information was collected by searching Persian medicine books, in field of Libido disorders and nettle plant. Also, a systematic and comprehensive search was conducted in PubMed, Science Direct, and Google Scholar databases with related keywords.

Results and Conclusion: Nettle is one of the widely used plants in traditional Iranian medicine. Based on Text books of Persian medicine, the nature of this plant is hot and dry. In most of the reference texts of traditional medicine, the strong effect of this plant on sexual desire has been emphasized. In text books of Al-Adawieh, Al-Shalim, Qanun and Al-Abniyyah is referred that oral consumption of nettle is extremely Increased libido. In addition, the local consumption of this plant and the use of its oil have been considered effective in this regard. However, with a comprehensive search in classical medicine databases, it was found any study that conducted in this field. it seems that Conducting research in this field is useful to investigate this topic.

Keywords: Herbal medicine, Nettle, sexual dysfunction, Persian medicine



Managing Alzheimer's disease based on Persian medicine, a new aspect of prevention & treatment

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Statement of Problem: Alzheimer's disease (AD) is a chronic age-related neurodegenerative disease that causes memory loss. One of the probable mechanisms is the accumulation of a specific protein called amyloid beta ($A\beta$) around nerve cells, which affects their ability to communicate with each other effectively within the brain.

While there is no proven effective treatment or prevention for AD, in general, a healthy lifestyle can help combat associated risk factors such as smoking, poor diet, and inactivity.

Centuries ago, Persian medicine presented "Nesian", which is almost the same as Alzheimer's. Persian scholars have used lifestyle modification methods to treat "Nesian", including adjustments to diet, exercise, and sleep, as well as the properties of certain herbs including *Curcuma longa*, *Coriandrum sativum*, *Valeriana officinalis*, *Zingiber officinale*, Cinnamon, *Lavandula angustifolia*, *Boswellia carterii*, and *Melissa officinalis* which are confirmed by modern research.

Research Purpose: The aim of this review is to highlight Persian medicine's potential therapeutic prescriptions for the prevention and treatment of AD.

Research Method: We searched databases Google Scholar, Pubmed, Scopus, SID, and Magiran with the keywords of Alzheimer's disease, Herbal medications, diet, sleep disorders, Nesian, and Persian Medicine, and investigated Persian medicine reference books including Ibne Sina's Qanoon, Exir-e Azam of Hakim Azam Khan Chashti, and Razi's Al-Havi.

Results and Conclusion: Many of Persian medicine's recommendations for the prevention and treatment of AD have been proven in the new research.

Sleep disturbances might enhance the risk of AD by increasing $A\beta$ burden and exercise may lower the risk of AD by increasing brain blood flow. Diet regimens can prevent, and slow the progression of AD by modulating inflammation. In addition, there are remarkable properties in plant-based compounds that have significant value in treating AD. For example, Curcumin, the active ingredient of *Curcuma longa*, decreases $A\beta$ production and aggregation.

All prescriptions for prevention or treatment of "Nesian" vary based on the brain temperament.

Keywords: Alzheimer's disease, Nesian, medicinal herbs, Persian Medicine.



Body detoxification with Honey Lemon Water, a recipe from traditional Persian medicine to modern-day knowledge

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Statement of Problem: Detoxification is the act of purifying the body by removing unwanted toxins, usually through the liver. Unprocessed toxins can lead to a wide range of symptoms including fatigue, depression, weight gain, indigestion, foul body odor, and skin problems. Many methods, both scientific and traditional, are suggested for detox, one of which is to use honey, lemon, and water as a drink. Honey lemon water is packed with antioxidants and helps the liver neutralize toxins, while its diuretic qualities promote their excretion in the urine. In Persian medicine, the combination of honey and lukewarm water, known as "Ma'al Asal," has been used for eliminating toxins from organs, treating respiratory issues, bolstering the immune system, relieving intestinal discomfort, and facilitating weight loss. Other substances, such as lemon, can be included to boost its efficiency.

Research Purpose: This review investigated the effectiveness of Honey lemon water as an available detox agent and indicated its properties as Ma'al Asal in Persian medicine.

Research Method: For assessment of the efficiency of Honey lemon water as a widely available detoxifying agent and to investigate its status as Ma'al Asal in Persian medicine, databases such as PubMed, Scopus, SID, Magiran, and Google Scholar were consulted, along with major Persian medicine reference books in pharmacology including "Makhzan-al-advieh" and "Qarabadin Kabir".

Results and Conclusion: An invigorating combination of honey and lemon as an antioxidant-rich drink can help support cell regeneration, and provide essential vitamins to the body. Studies suggest it can help with fat burning and cleansing of toxins from the body, likely due to the low pH, hydrogen peroxide content, and antimicrobial properties. It is also known to be helpful in controlling glucose and lipid metabolism.

Because of the beneficial properties of honey lemony water, we believe it could be a safe and appropriate alternative to harmful soft drinks in the beverage industry going forward.

Keywords: Detoxification, Honey lemon water, Ma'al Asal, Persian medicine.



Induction of programmed cell death with natural products: a promising method for breast cancer treatment

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Statement of Problem: Breast cancer (BC) is one of the malignant cancers associated with mortality in women worldwide and one of the main approaches to breast cancer treatment is chemotherapy. Breast tumors initially respond to drugs, but eventually develop resistance, and the tumor usually relapses after 5 years. Natural products have been widely used in breast cancer research and treatment in recent years due to the clear toxic effects of chemotherapy drugs.

Research Purpose: This review categorizes and summarizes studies on the role of natural products in the apoptosis of breast cancer cells.

Research Method: A review of related articles was conducted using the keywords breast cancer treatment and natural products in NCBI and SCOPUS databases. Related studies were reviewed, categorized and summarized, and the final text was prepared.

Results and Conclusion: Programmed cell death or apoptosis is a natural cellular process that controls cell growth and death. Apoptosis induction is an important strategy to stop the excessive proliferation of breast cancer cells. Many evidences show that natural products can play a role in breast cancer treatment by suppressing cell apoptosis. Related mechanisms including the role of mitochondria, FasL/Fas proteins, PI3K/AKT, reactive oxygen species, and mitogen-activated protein kinase pathway have been introduced as cellular targets of natural products.

Keywords: breast cancer, apoptosis, natural products.



The role of natural products and targeted approaches in the treatment of solid tumors

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Statement of Problem: Treatment of multifactorial diseases, such as cancer, with agents that target a single target may lead to limited success and, in many cases, unsatisfactory results. Natural products play an important role in the discovery and development of numerous drugs for the treatment of various types of cancer. Most of the medicinal substances available today originate from natural sources; but regardless of the current achievements, the development of bioactive compounds and drugs from natural products still remains challenging.

Research Purpose: In comparison to the high cost and side effects of most modern drugs, medical plants have demonstrated significant therapeutic potential with minimal side effects and low cost, and we tried to introduce these agents briefly in this study.

Research Method: A review of related articles in the NCBI and SCOPUS databases was conducted using the keywords solid tumor and phytochemicals. The final text was prepared after reviewing, categorizing, and summarizing related studies.

Results and Conclusion: For the treatment of cancer, various natural substances are applied in preclinical and clinical settings. Various epidemiological studies have shown that regular consumption of fruits and vegetables is strongly associated with a reduced risk of cancer. The majority of natural medicines typically have an impact on multiple pathways (e.g., by inducing apoptosis or reducing cell proliferation, etc.). Natural products' multitarget capability enables them to effectively counteract the biological complication in cancer and provide helpful resources for cancer chemoprevention.

Keywords: natural products; Phytochemicals, solid cancer.



Comparing the Effect of a Herbal-based Laxative (Goleghand®) and Polyethylene Glycol on Functional Constipation among Children: A Randomized Controlled Trial

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Objective: This study aimed to evaluate the effectiveness, safety, and document the reported adverse effect of a herbal-based laxative (Goleghand®) for the maintenance treatment of functional constipation in young children. **Methods:** We conducted a randomized clinical trial from April 2019 to September 2020. Children aged 2–15 years with functional constipation defined according to the Rome IV criteria were eligible for study inclusion. Eligible children were randomly allocated to receive polyethylene glycol (PEG) or Goleghand®. The number and consistency of stools per day, painful defecation, abdominal pain, and fecal incontinence were reported weekly by parents. The statistical analyses were performed by determining means and standard deviations, t-test, Chi-square test, ANOVA repeated measures and Fisher's exact test, with significance, accepted at the 5% level. **Findings** Sixty patients have been enrolled in the study. Parental satisfaction scores did not change significantly in either group or over the follow-up period. Our results showed that the effect of time ($P < 0.001$) and also the effect of group type ($P = 0.01$) on the number of fecal defecations was significant. The mean number of defecations increased first and then decreased significantly over time but this decrease was more significant in the PEG group than in the Goleghand®, group ($P = 0.001$). Furthermore, the effect of time on the fecal consistency score was significant ($P = 0.047$). The mean score of fecal consistency in both groups decreased over time. **Conclusion:** Goleghand® was similar in efficacy to PEG for 8 weeks of pediatric functional constipation treatment in this randomized clinical trial. Goleghand® can be considered as a new herbal laxative drug for pediatric functional constipation

Keywords: Child, Constipation, Herbal-based Laxative, Polyethylene glycol



Naziphen; The Herbal Pill for Abnormal Uterine Bleeding

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Statement of Problem: Abnormal uterine bleeding is a symptom and sign of a hormonal or female reproductive system disorder. Generally, abnormal uterine bleeding patterns can be seen in several women's diseases, such as menorrhagia, metrorrhagia, polymenorrhoea in the absence of ovulation, uterine cancer, cervical cancer, uterine masses, uterine polyps, coagulation disorders, hormonal disorders, and Pregnancy complications are seen.

Research Purpose: In some cases, the patient is treated for a more extended period due to hormonal disorders during the treatment process or is forced to undergo surgery. If herbal medicines are used, these problems and complications will not exist. Calendula can eliminate hormonal disorders and keep the bleeding within a normal range.

Research Method: In this clinical trial, the effect of the herbal medicine silymarin in comparison with a placebo will be investigated on 60 patients with abnormal bleeding who were treated with standard medical methods for 12 months. Patients of the two groups before and after 12 months of drug and placebo administration will be compared with each other regarding improvement in clinical symptoms.

Results and Conclusion: Calendula is used to regulate menstruation due to the inhibition of cyclooxygenase two enzyme from the synthesis of prostaglandin, and it causes regular menstruation. Calendula (Naziphen) pills are used for premenstrual syndrome or premenstrual pains and problems and their relief, and its effective ingredient is helenalin. This substance inhibits the factor $TNF\alpha$ which is caused by macrophages. In addition to inhibiting the mentioned factors, inhibiting the cyclooxygenase two enzyme prevents the synthesis of prostaglandins that are effective in causing inflammation. For this reason, it can be effective in premenstrual syndrome. Menstrual pains become effective, and the client experiences periods without or with pain relief. Due to the inhibition of prostaglandins, this drug can be effective on mood disorders that occur before or during menstruation. Naziphen is available as an oral pill and is given to the help-seekers once daily. Due to their anti-itching and anti-fungal properties, Naziphen can treat anti-fungal infections during stress or menstrual pain.

Keywords: Herbal medicine - Naziphen - traditional medicine - uterine bleeding – relief



The role of guarana plant extract in cancer treatment

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Statement of Problem: Patients with breast cancer (BC) frequently undergo systemic chemotherapy, which can cause cancer-related fatigue and have a negative impact on the patients' quality of life.

Research Purpose: To treat fatigue in BC patients after chemotherapy was tested using guarana (*Paullinia cupana*) extract as a stimulant.

Description of the problem: It is unclear whether guarana extract could help BC patients feel less tired, and it would be interesting to learn more about how it works.

Results and Conclusion: When guarana dry extract was administered orally in doses of 30, 100, and 300 mg/kg, the serum level of Interleukin 1 (IL-1) was found to have significantly decreased. The level of Interleukin 6 (IL-6) did not change significantly at the same time. It's interesting to note that guarana extract treatment significantly reduced the brain levels of IL-6 and tumour necrosis factor (TNF) mRNA that were elevated in stimulated animals. The expression of cyclooxygenase 2 (COX2) and nuclear factor kappa-light chain-enhancer of activated B cells (NF-κB) in brain tissue was later found to be significantly reduced by guarana extract, according to data. Guarana therefore has anti-inflammatory properties, which may account for its anti-fatigue effects. Guarana may also help with additional cancer-related symptoms that are brought on by an imbalance in the expression of anti-inflammatory cytokines. In conclusion, after using the guarana plant to treat their cancer-related fatigue, breast cancer survivors have reported a noticeable reduction in the frequency and intensity of hot flashes. For BC patients receiving temporary chemotherapy, guarana is an alternative, cost-effective, and secure treatment option.

Keywords: breast cancer, guarana, fatigue



Breast cancer treatment using natural drug with potential drug named BERBERINE

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Statement of Problem: There are many methods for treating breast cancer, but the approach of treating this cancer using natural drugs is affordable and has less risk for patients and environment.

Research Purpose: Among different cancers, the treatment of breast cancer has been considered due to its high prevalence and mortality

Description of the problem: The plant alkaloid berberine has potential therapeutic applications for breast cancer, although a better understanding of the genes and cellular pathways regulated by this compound is needed to define its mechanism of action in cancer treatment.

Results and Conclusion: Berberine has antioxidant properties and plays a protective role in preventing oxidative damage to cellulose. Also, a relationship between berberine and apoptosis has been found suggesting that berberine induces apoptosis by increasing the level of reactive oxygen species and some signaling pathways related to reactive oxygen species such as JNK/P38 MAPK, calcium, and apoptosis. Berberine also reduces the expression epidermal growth factor receptor and another signaling pathway under the influence of berberine is closely related to cell adhesion. Oral administration of berberine can inhibit the G1 phase of cell cycle in cancer cells by increasing p53 levels. Berberine can also suppress the activation of the Wnt/ β -catenin signaling pathway while increasing its amount.

Keywords: breast cancer, Berberine, natural-product



Ziziphus: A Promising Plant with Potential Health Benefits

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Problem Statement: Chronic diseases such as cancer, heart disease, and Alzheimer's disease are on the rise, and finding natural remedies to prevent and treat these diseases is essential. *Ziziphus*, a plant used in traditional medicine, has been shown to have various health benefits. However, more investigation is needed to fully understand its effects on human health.

Research Purpose: The purpose of this short summary is to review the current research on *Ziziphus* and its potential health benefits, including its antioxidant, anti-inflammatory, sleep aid, digestive aid, immune-boosting, and potential anti-cancer properties.

Research Method: A literature review was conducted to identify relevant studies on *Ziziphus* and its health benefits. PubMed, Science Direct, and Google Scholar were used to search for articles published in the last ten years. The search terms included "*Ziziphus*," "health benefits," "antioxidant," "anti-inflammatory," "sleep aid," "digestive aid," "immune-boosting," and "anti-cancer."

Results and Conclusion: *Ziziphus* is a genus of trees and shrubs belonging to the Rhamnaceae family, with approximately 40 taxa found worldwide. In Iran, there are approximately five species of *Ziziphus*, each possessing distinct properties and uses. The most species of *Ziziphus* are found in temperate and cold temperate regions, while other species, such as *Ziziphus spina-christii* L., *Ziziphus anchor* Boiss, *Ziziphus lotus* L., *Ziziphus mauritiana* Lam, and *Ziziphus nummularia* Burm, are specific to hot and humid regions of southern Iran. These species have been used in traditional medicine for centuries and recent research has shown that they have various health benefits.

Other uses of this plant: Due to the appealing appearance of its leaves and tree trunks, young *Ziziphus* species are cultivated as ornamental plants in parks. *Ziziphus* leaves possess detergent properties; when a small, fresh leaf is crushed in one's palms, it creates a lather with water that can be utilized in lieu of soap. Certain *Ziziphus* trees, which can reach a height of up to eight meters, are cultivated for their attractive wood.

Chemical composition: The *Ziziphus* fruit tissue is highly abundant in vitamins, especially vitamin C. *Ziziphus* varieties typically possess a sugar content of 20-30%, protein content ranging from 0.8% to 19.2%, ash content between 0.4-0.73%, and fat content ranging from 0.1-0.3%. Fresh *Ziziphus* fruit contains 76.9% moisture, 1.6% protein, and 4.20% sugar, and is commonly consumed in its dried form. The moisture, sugar, raw protein, and ash content in dried *Ziziphus* are 7.25%, 960.4%, and 7.4%, respectively. *Ziziphus* has been used in traditional medicine for centuries and recent research has shown that it has various health benefits. One of the most significant benefits of *Ziziphus* is its antioxidant properties. *Ziziphus* contains flavonoids and phenolics, which have antioxidant properties. Antioxidants are essential to protect the body against free radicals that can cause inflammation and chronic diseases like cancer, heart disease, and Alzheimer's disease.

Keywords: *Ziziphus*, antioxidant, anti-inflammatory, anti-cancer, traditional medicine, flavonoids.



Royal jelly and pollen as functional foods for human

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Bee pollen and RJ is currently used as a functional food or supplementary nutrition in some countries including, China, Chile, Portugal, Australia, South Africa, Brazil and the Sonoran Desert, USA. Royal jelly (RJ) is a bee product secreted from the hypopharyngeal and mandibular glands of young worker honeybees (*Apis mellifera*) and involved in their sexual determination. Royal jelly is one of the most interesting natural products. Pollen has been used as a “perfect health food” for many centuries due to its abundance of nutrimental constituents and bioactive compounds. Pollen is the male gametophyte of flowers. The protein content of pollen is believed to be one of the best indicators for nutritive quality. RJ and pollen contains bioactive compounds with health-promoting properties. They are promoted as a health food with a wide range of nutritional and therapeutic properties.

Functional properties of RJ and pollen include the following: antioxidative activity, Insulin-like action, antitumoral action, neurotrophic action, antibiotic effect, anti-inflammatory action and wound healing effect, hypotensive and blood regulatory actions, anti-aging effect and skin protection, effects on the reproductive system and fertility, fortifying and tonic action and immunomodulatory and anti-allergic activity. Though in Iran there are not insufficient studies in this area.

The purpose of the current research is to determine the main components, physico-chemical properties and healing properties of RJ and pollen and their application as functional and nutraceutical food.

Keywords: Royal jelly, pollen, functional food, Human.



Investigation of physico-chemical and medicinal properties of purslane

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Statement of Problem: Purslane is a common weed that grows all over the world and is one of the most widespread weed species in summer crops. However, it has great potential to develop as a new crop since its identification as one of the best plant sources of α -linolenic acid, ω -3 fatty acid, as well as some antioxidants such as ascorbic acid, α -tocopherol, β -carotene, and glutathione.

Research Purpose: Purslane is an herbaceous plant consumed in Iran, Italy, the United Kingdom, Greece, Spain, Turkey, China, Malaysia, North Africa, the Philippines, Australia, the United States, Mexico, and Brazil. Purslane provides considerable contributions of polysaccharides, minerals, proteins, fatty acids, terpenoids, alkaloids, phenols, sterols, flavonoids, and vitamins, which together or individually create antioxidant, neuroprotective, antimicrobial, anti-inflammatory, antidiabetic, anticancer, antiulcerogenic, and anticholinesterase properties.

Research Method: New phytochemical compounds have been recognized in purslane through gas chromatography-mass spectrometry (GC-MS), high-performance liquid chromatographic (HPLC), spectroscopic methods, nuclear magnetic resonance (NMR), and etc.

Results and Conclusion: Purslane cultivation is a production alternative as it shows many expectations given its nutritional and nutraceutical properties, low production costs, and high productivity. Therefore, the consumption of the plant in human diets is recommended.

Keywords: Purslane, Physico-chemical, Medicinal properties.



Medicinal plants of Sistan and Baluchestan province

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Statement of Problem: Medicinal plants usually have been frequency used as drug source for human and also animals. Traditional botany offers valuable methods for finding new medicinal plants and herbal medicines. However, medicinal plants grow in certain areas. In the present study, medicinal plants of Sistan and Baluchestan province are studied.

Research Purpose: The purpose of the paper is introduction, identification and investigation of the medicinal plants of Sistan and Baluchestan province. Using the compounds can be reduced negative effects of chemical drugs.

Research Method: Medicinal plants have a key role in health supply for both cure and prevention of diseases. The purpose of this research is identification and investigation of some pharmaceutical plants in Sistan and Baluchestan which is applied widely by local people to treat and prevent diseases. This study was carried out on the basis of field survey, information of local people, and documentary research.

Results and Conclusion: in the present study, some pharmaceutical plant species were investigated. Some of these plants that contains fennel, colocynth, ajwain, eucalyptus and etc. was recognized by many people and their therapeutic properties was mentioned. Most of local plants identified in traditional medicine, were applied as diuretic, stomach tonic and wound healing.

Keywords: Medicinal plants, Sistan and Baluchestan province, Diseases.



Chemical and therapeutic properties of *Mentha piperita*

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Statement of Problem: Today, chemical drugs are used for treatment of various diseases. However, using of chemical drugs causes negative effects on health human and environment. Therefore, using of medicinal plants can be solved the problems.

Research Purpose: Herbal medicinal compounds are applied all over the world as the most natural way to intake of phytochemicals. Today, application of natural products is growing due to their bioactive molecules and antioxidant properties. The properties capable the compounds for neutralizing free radicals slowing the progress of many chronic diseases associated with oxidative stress.

Research Method: Among the different medicinal plants, *Mentha piperita* is one of the herbs most broadly used worldwide due to their medicinal preparations. Its leaf is applied as a remedy for common cold, pharynx, inflammation of the mouth, liver, as well as disorders in the gastrointestinal tract such as vomiting, nausea, cramps, diarrhea, flatulence and dyspepsia. The paper is based on the literature which applied experimental studies for investigation of chemical and therapeutic properties of *Mentha piperita*.

Results and Conclusion: Studies about *Mentha piperita* has confirmed the presence of a wide variety of bioactive compounds causes the plant shows an important role as anti-oxidant, antinociceptive, antimicrobial, antiviral, antitumorigenic and etc. demonstrating its utility in the prevention or treatment of several diseases.

Keywords: *Mentha piperita*, Therapeutic properties, Anti-oxidant, Anti-tumorigenic.



Fortification of Skimmed Milk with Vitamin B₁₂ with Formation of Double Emulsions using Ultrasound

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Statement of Problem: Vitamins and antioxidants are necessary elements for a healthy body that helps body cell's growth as well as maintaining a proper mental statue. According to the latest WHO records, Vitamin B₁₂ is going to be epidemic around the globe and it's probably the most prevalent malnutrition in the future. B₁₂ is a vital co-enzyme for cell growth and diminishing the B₁₂ level in the body leads to weakness, diarrhea, weight reduction, anemia and fatigue. Consumption of enriched food supplements is the best method to prevent health risks caused by diminishing B₁₂ in the body. Moreover, B₁₂ is an indicator of the water phase in emulsion therefore it could be used as an indicator of double emulsions in encapsulations of bioactive compounds.

Research Purpose: The current study evaluated variation of PGPR concentration used in oil phase, the formula of primary and secondary emulsion, and emulsion sonication period to determine optimized primary emulsion formula as well as double emulsion optimized formula. Additionally, particle size, polydispersity index and precipitation Index of primary and secondary emulsions as well as the efficiency of encapsulation were determined. Moreover, optimized formulas were evaluated in terms of variation of different characteristics.



Research Method: The internal aqueous dispersed phase (W_1) was formulated by dissolving 0.001 M phosphate buffer (pH 6.8) containing 0.1 M NaCl to balance the osmotic pressure between aqueous phases, sodium azide (0.02%, w/v) as microbial inhibitor and Vitamin B₁₂ (0.2% w/v) as water-soluble vitamin. Oil phase was consisted of sunflower oil containing (6-10%) PGPR as a lipophilic surfactant. For preparing W_1/O emulsion, premixed the W_1 phase (10-30%) with the O phase was done through a magnetic stirrer (RET basic, Germany) at 1000 rpm for 10 min. Then the mixture was emulsified by using a prob ultrasound homogenizer (Parsonic, Daneshpajouh Ltd., Iran) operating at a frequency of 20 KHz with amplitude of 70% (3 s on; 3 s off) for various time (4-6 min) inside a 15 mL test tube to form W_1/O emulsion. The primary emulsions were used immediately to prepare the double emulsions or maintained at room temperature for further analysis. Double emulsions were formulated by adding W_1/O emulsion (5-25 % w/w) into skimmed milk as an external aqueous phase (W_2). For this purpose, the mentioned prob ultrasound homogenizer (Parsonic, Daneshpajouh Ltd., Iran, 20 KHz, 3mm, microtip ultrasonic horn) was applied at a frequency of 20 KHz and amplitude of 70% (3 s on; 3 s off) for various time (1-5 min) inside a 15 mL test tube. The double emulsions were stored at room temperature and analyzed immediately. (Regulating the composition of W_1/O and $W_1/O/W_2$ emulsions was done.)

Results and Conclusion: Since Vitamin B₁₂ is an important bioavailable component for human health, efficient encapsulation of vitamin B₁₂ is investigated in the current study. The main purpose of this investigation was optimization of primary and double emulsion containing vitamin B₁₂ in internal water phase. Formula of primary and double emulsion was determined according to diameter of droplets, Polydispersity index, diameter of double emulsion droplets, and efficiency of encapsulated double emulsion using RSM method. Encapsulation of vitamin B₁₂ was reported to be 97 percent. Finally, results showed that optimized criteria for primary emulsions were 9% PGPR, 20% inner water phase in primary emulsion and 6 minutes sonication time as well as 12% primary emulsion in outer water phase and 1 minute sonication time and 10% primary emulsion in outer water phase and 2 minutes sonication of double emulsion.

Keywords: Ultrasound, Double emulsion, Vitamin B₁₂, Skim milk, Encapsulation



Investigating the state of medical science and treatment in the Safavid period

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The Safavid era is one of the most important and influential periods in the history of Iran. In this period, due to the emergence of factors such as the establishment of national unity through the formalization of Shiism in Iran, the creation of security and the growth of trade and communication with other countries, a significant change occurred in the social life of Iran. As a result of these developments, the ground was provided for the growth and prosperity of many different sciences and industries in Iran. This research is based on library sources and in a descriptive and analytical way, in order to answer the main question: What was the state of medical science and treatment in the Safavid period? The summary findings of this research confirm that in this period, as in the previous periods, medical science and doctors had special respect. In this period, the treatment of many diseases was still based on the use of medicinal plants and the continuation of the traditions of the past periods. However, this period also witnessed the emergence of some outstanding doctors and written compilations in the field of medicine and pharmacy, some of these books were written by Iranian immigrant doctors to the courts of neighboring countries, especially the Gurganian courts of India.

Keywords: medicine, Safavid, herbal medicines, treatment.



Effects of dates on health during pregnancy and childbirth

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Statement of Problem: In many verses of the Quran, are mentioned to different part of dates as a heavenly fruit. In medical, dates are very valuable. This article tries to investigate the effect of dates on childbirth based on Quranic-scientific interpretation

Research Purpose: One of the important issues is the childbearing of the Holy Mary, which is also mentioned in the Quran. Consideration and analysis of that, will show the benefits of dates more. The purpose of this article is investigation about benefits and effects of dates on health during pregnancy and childbirth in Iranian medicine and modern medicine.

Research Method: In this review article, Quran verses, websites, books, texts and articles have been reviewed. Also, in this article, an attempt has been made to use the opinions of sages and masters of traditional medicine about the benefits of dates.

Results and Conclusion: What is obtained by studying the benefits of dates shows the nutritional and therapeutic effects of this Quranic fruit .Consuming dates during pregnancy is a healthy diet and is also useful for postpartum. Dates cause the expansion of the uterus, for this reason, its use near childbirth, cause strengthens the muscles of the uterus and reduces postpartum bleeding. The use of dates and palm pollen will help in a healthy delivery; Because it reduces pain by secretion endorphins as a pain inhibitor. Also, its consumption during the breastfeeding period causes sufficient growth and creation of necessary food reserves in mother and child. Therefore, it can be used to prevent many diseases according to the person's temperament and the nature of the type of date.

Keywords: Quran, Date, Pregnancy, childbirth



Exploring the dynamics of microbial community during traditional apple cider vinegar production

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Statement of Problem: Traditional fermentative food products including vinegar, dairy product and ... contain a variety of microbial populations. In Iran, a large quantity of apple cider vinegar is produced annually by traditional methods, however, its microbiota has not been investigated yet. In addition, there is still no deep insight into the effect of physicochemical conditions on the dynamics of microbiota during apple cider vinegar production.

Research Purpose: To get an insight into the dynamics of microbiota during apple cider vinegar production, we enumerated different kinds of microorganisms such as yeasts, molds, and bacteria.

Research Method: in this research, we produced apple cider vinegar under controlled conditions at 30°C. In addition, good manufacturing practice (GMP) was used. At certain intervals of time, samples were collected. Then, acetic acid bacteria (AAB), lactic acid bacteria (LAB) and yeasts were enumerated using various culture media. In addition, some of the most important metabolites such as ethanol, acetic acid, glucose and the profile of amino acids were determined. The microbial isolates were identified based on a combination of phenotypic, biochemical and molecular methods including 16S rRNA gene sequencing. **Results and**

Conclusion: In this study, it was revealed that a great population dynamics exists during vinegar production. Different species of LAB are appeared and identified during different stages of production. Some of them may have probiotic characteristics.

Keywords: Apple cider vinegar, Lactic acid bacteria, Microbiota, Population dynamics



Exploring the dynamics of some pathogenic bacteria during apple cider vinegar production

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Statement of Problem: In Iran, a large quantity of apple cider vinegar is produced annually by traditional methods, however, the presence of some important pathogenic bacteria such as spore-forming bacteria and *Enterobacteriaceae* during different production steps has not been investigated yet. In addition, there is still no deep insight into the effect of physicochemical conditions on the dynamics of pathogenic bacteria during apple cider vinegar production.

Research Purpose: In Iran, a large quantity of apple cider vinegar is produced annually by traditional methods, however, the presence of some important pathogenic bacteria such as spore-forming bacteria and *Enterobacteriaceae* during different production steps has not been investigated yet. In addition, there is still no deep insight into the effect of physicochemical conditions on the dynamics of pathogenic bacteria during apple cider vinegar production.

Research Method: In this research, we produced apple cider vinegar under controlled conditions at 30°C. In addition, good manufacturing practice (GMP) was used. At certain intervals of time, samples were collected under aseptic conditions. Then, the most probable number of coliforms was determined by various culture media.

Results and Conclusion. Based on the obtained results, it was revealed that coliforms are just present during the first step of fermentation. During the first month, *Klebsiella* spp. and *Citrobacter* spp. were detectable by MPN method. However, the number of these bacteria abruptly decreased after 45 days. It seems the pH drop and increase in total organic acid concentration may cause the death of coliforms.

Keywords: Apple cider vinegar, *Enterobacteriaceae*, Microbiota, Population dynamics



The role of honey consumption habit in human health

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Statement of Problem: The habit of simply speaking is a simple form of learning; The change in behavior that is made because of our experiences. It is much easier to say that a habit is like an automatic response to certain situations that is created by repetition and learning. When our behaviors are completely automatic and without awareness, then we can say that it is a habit. One of the important issues that plays a fundamental role in the health of the human body and soul is healthy nutrition which unfortunately has undergone very complex physical and chemical changes in the last century. There is a growing interest in searching for natural foods with therapeutic and preventive functions.

Research Purpose: The purpose of writing this article is to investigate the beneficial effects of honey consumption in the treatment of many diseases that the habit of consuming this natural substance can make people benefit from these results. Honey is a healthy nutritional product produced by bees. Honey has high nutritional and therapeutic value, which mainly depends on phytochemical compounds, flower source, type of honey and type of bee.

Research Method: In the current review research, studies published in databases until 2023 were searched using the keywords honey, habit, behavior change, human health, and among the studies conducted, studies that met the conditions for entering the research were selected. The selected studies were reviewed by 3 authors and finally 10 studies were selected and reviewed.

Results and Conclusion: According to the very useful properties proposed for this substance, such as strong anti-inflammatory, antibacterial and antifungal effects, and most importantly, stimulating the immune system that can prevent many diseases, it seems that the habit of consuming this substance can have very positive effects, which requires future investigations.

Keywords: habit, honey, human health, behavior change.



Investigating the antifungal effect of aqueous and alcoholic extracts of *Myrtus communis* leaves against aflatoxin-producing *Aspergillus flavus*

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Statement of Problem: *Myrtus communis* is a shrub and evergreen plant that grows in the plains of Asian countries including Iran and Mediterranean countries. Previous studies show the presence of antifungal compounds in various plant extracts.

Research Purpose: The aim of this study was to investigate the antifungal activity of the aqueous and alcoholic extracts of this plant against *Aspergillus flavus*, which produces aflatoxin.

Research Method: The soaking method was used to prepare the aqueous extract of this plant. The antifungal activity of the aqueous and alcoholic extracts of the plant was determined by macrodilution and determination of MIC and MFC. The antioxidant properties of the plant extracts were determined by DPPH method.

Results and Conclusion: The minimum inhibitory concentration (MIC) of the alcoholic extract on *A. flavus* was 3.12 mg/ml and the MIC of the aqueous extract was 6.25 mg/ml. Also, the minimum fungicidal concentration (MFC) of the alcoholic extract on *A. flavus* was 6.25 mg/ml and the MFC of the aqueous extract was 12.5 mg/ml. These results show that the alcoholic extract has better antifungal activity than the aqueous extract at both concentrations tested. The mean diameter of the non-growth halo of the extracts on *A. flavus* was smaller than the mean diameter of the non-growth halo of the antibiotic nystatin. The study of the antioxidant properties of the plant extracts using the DPPH method and the IC₅₀ of ascorbic acid as a positive control showed that the IC₅₀ value was 0.2 mg/ml for ascorbic acid and 3.6 mg/ml for the alcoholic extract and 4.71 mg/ml for the aqueous extract. By demonstrating the efficacy of the aqueous and alcoholic extracts of *Myrtus communis* against the strain of *A. flavus*, we can hope that in the future, by purifying the active substance of *Myrtus communis* and conducting further research, we will obtain combined herbal medicines with acceptable antifungal effects and low side effects. The identification and use of medicinal plant extracts may be useful in combating pathogens, especially fungi.

Keywords: *Myrtus communis*, antifungal effect, *Aspergillus flavus*, aflatoxin.



Therapeutic and medicinal properties of Pichkeh (*Allium longisepalum*) plant in Iranian traditional medicine

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Statement of Problem: Traditional medicine demonstrate an important and often underestimated part of healthcare around the world. The ethnomedical practices derive from the experience of local people who have developed remedies against a wide range of diseases and handing down the knowledge over the centuries. Iran has a traditional rich medicine which deeply rooted in the history that goes back to the Aryan civilizations. One of the most important medicinal plants in Iranian traditional medicine, which has been known for many years (especially in the west of the country), is the Pichkeh (*Allium longisepalum*) plant.

Research Purpose: Pichkeh is a type of wild garlic with a taste similar to raw chives, which grows on the hillside of the Zagros mountains in the spring and is used in foods such as the local Kalaneh bread. In this study, we aim to investigate the therapeutic and medicinal properties of this plant using related articles and previous studies.

Results and Conclusion: Pichkeh has narrow leaves like a leek plant and its decoction is used to remove stomach acid and bitterness in the mouth. This plant is very spicy and it causes runny nose when crushed. Consumption of leaf extract is effective in relieving asthma by increasing the oxygen intake in the lungs. In addition, it has anti-inflammatory properties and is useful for treating chronic bronchitis. Also, consuming its decoction relieves cough and relieves rheumatism pain and bone and joint inflammation.

The local people of Kermanshah and Kurdistan use it in a local bread called Kalane, which is a complete meal and is named as the oldest fast food in the world. With Emphasizing on vitamins and beneficial compounds rich, this study advises readers to include this plant in their meals and benefit from its health benefits.

Keywords: Pichkeh, *Allium longisepalum*, Medicinal plants, Traditional medicine



Investigating the therapeutic properties and nutritional value of spirulina

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Statement of Problem: Spirulina refers to the dried biomass of *Arthrospira platensis*, an oxygenic photosynthetic Cyanobacteria found worldwide in fresh and marine waters. This alga represents an important staple diet in humans and has been used as a source of protein and vitamin supplement in humans without any significant side-effects. Many toxicological studies have proven Spirulina's safety. It has a long history of use as food and it has been reported that it has been used during the Aztec civilization. Spirulina contains functional compounds, such as phenolics, phycocyanins, and polysaccharides, with antioxidant, anti-inflammatory, and immunostimulating effects.

Research Purpose: The aims of this review are to summarize the mechanisms of action, highlight the potential effects of this alga in humans and address current and possible future clinical applications

Research Method: We systematically searched online databases including: PubMed-Medline, Embase, ISI Web of Science and Cochrane Central Register of Controlled Trials. Two independent authors extracted data and assessed the quality of included articles

Results and Conclusion: In the present studies, the benefits of using spirulina and its effect on the treatment of diseases were investigated. Some of its potential uses include: 1. Immune system support: Spirulina contains antioxidants and anti-inflammatory compounds that may help boost the immune system. 2. Allergy relief: Some studies suggest that spirulina may help reduce symptoms of allergic rhinitis, such as nasal congestion and itching. 3. Blood sugar control: Spirulina may help improve insulin sensitivity and lower blood sugar levels, making it potentially useful for people with diabetes. 4. Lowering cholesterol: Spirulina may help reduce levels of LDL (bad) cholesterol and triglycerides, while increasing levels of HDL (good) cholesterol. 5. Anti-cancer effects: Some preliminary studies suggest that spirulina may have anti-cancer properties, although more research is needed in this area. 6. Muscle recovery: Spirulina contains high levels of protein and amino acids, which may help promote muscle growth and recovery after exercise. 7. Detoxification: Spirulina may help remove heavy metals and other toxins from the body, potentially reducing the risk of certain health problems. Overall, spirulina shows promise as a natural supplement with a variety of potential health benefits. However, more research is needed to fully understand its effects and determine optimal dosages for different uses. As with any supplement, it's important to speak with a healthcare provider before starting to take spirulina.

Keywords: Spirulina, treatment.



Obstacles and Strategies to Advance the Development of the Economy of Medicinal plants

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Statement of Problem: Iran, Due to its climatic diversity and having 11 out of 13 climates known in the topographic and edaphic world, historical age, being in a special geographical position and different environmental stresses governing different plant habitats, Iran has a rich flora, so that it has about 8,000 plant species, most of which are unique both in terms of the type of species and the number of effective substances. The volume of the world trade in medicinal plants is more than 43 billion dollars, about 225% of the world's pharmaceutical market in 1996, with an approximate value of 250 A billion dollars have been allocated to drugs derived from medicinal plants, Iran's share of the world pharmaceutical market was 60 million dollars, the majority of which is saffron, which is about 24 million dollars if we exclude saffron.

Research Purpose and Method: While pointing to the macro goals and quantitatively justifying the need for the development of medicinal-industrial plants, the wide range of applications, opportunities, threats and influential factors and stakeholders, problems, solutions and suggestions have been presented in order to Increasing awareness about the importance and problems of expanding the production and processing of medicinal-industrial plants as soon as possible, sustainable planning should be done in this regard.

Results and Conclusion: The obtained results showed that the peak efficiency of a successful marketing is when culture building and increasing consumption at the public level is done through promotion and not advertising. Domestication of useful medicinal plants, protecting and revitalizing existing plant sites and sites, reducing the trade chain of medicinal plants, targeting research in this field, and strengthening and implementing laws for harvesting these species can be solutions for domestic development. And of course, the development of exports abroad should be investigated.

Keywords: export development, medicinal plant processing, cultivation and development obstacles, industrial medicinal plants



Methods of Production Medicinal Compounds in Iranian Traditional Medicine

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Statement of Problem: Calcination is a term in material science and chemistry that refers to heating materials for pyrolysis, removing moisture, forming intermediate compounds, performing solid state reactions, and permeation. In pharmaceuticals, it is used for edible and absorbable minerals and metals.

Research Purpose and Method: In alchemy, the process of forming an oxide of a metal or additional compounds as a result of heating the metal in the vicinity of air is called calcination. This knowledge teaches us how to make substances that cannot be digested and absorbed in the human body or are detrimental to the body digestible and absorbed by the body and remove their harmful effects. In other words, we cannot use iron ore itself, consequently we have to process it and then powder it with a very fine mesh at the micro and nano level and then use it in our medicines.

Results and Conclusion:

The most significant and the most problematic terms are the calcination of metals or the first category, since in most metals, chemical changes must be achieved, that is, its natural form must be modified, and hence we must perform this chemical process with different plant extracts, and then the metal Turn the hard with heat and special chemical reactions into a soft and absorbable powder in the intestines. But in the case of mineral extracts, the most important item that is completed in its processing is calcination, in addition to combining it with other extracts, it must be heated so that the calcination process can be done efficiently.

Keywords: Calcination, medicinal compounds, traditional medicine, Iranian medicine



Isfhana's Godakhteh, the Concoction and its Use in Traditional Medicine

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Statement of Problem: A kind of concoction that is served hot, it is prepared from the combination of ground nuts and Anacardium Occidental. Since this plant is very useful for back pain, it is called a backpain pill. These pills have two models, male and female, which must be taken at the same time to have a better effect. It is suitable for women who have just given birth and is very appropriate for strengthening the bones. It has a warm nature that it creates warmth inside the body like molten iron and relieves pain.

Research Purpose and Method: Godakhateh spice is prepared from the combination of warm spices such as ginger, cinnamon, saffron, cardamom, etc. and has many properties for the human body. Godakhateh spice is one of the hottest ingredients in spices. This spice is cooked as Isfahanian food and mostly to strengthen people with a short stature and pregnant women and women who have just given birth. The use of stature spices has a great impact because of its taste, aroma and rich ingredients.

Results and Conclusion: Studies have shown that Godakhateh is very useful for increasing sexual power and eliminating sexual weakness. The scientific support for this issue is mostly traditional medicine, and traditional medicine experts have been using honey and dates for the treatment of sexual impotence for a long time. In 2006, Shiraz University researchers studied the effect of dates mixed with Godakhateh and its juice on sexual performance and found that the high amount of estradiol and flavonoids in dates increases the number of sperm and sexual stimulation, and also increases the size and weight of the testicles

Keywords: Traditional Medicine, Godakhateh, Medicine, Concoction



Investigation of antimicrobial activities of *Monascus purpureus* pigment against pathogenic bacteria

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Statement of Problem: Natural pigments are prepared from two important sources: plants and microorganisms. The colors produced from fungi have many applications in the nutrition and economy of human society, and in the industry they are able to have a business of about 30 billion dollars in profit per year. *Monascus purpureus* fungi is of special interest due to its high ability to produce different pigments in terms of color and chemical stability. This fungi belongs to the category of ascomycetes, it has many properties and uses, including coloring, flavoring, and food preservative and cholesterol reducer

Research Purpose: according to some benefits of this pigments against some disease, Investigation of antimicrobial activities of *Monascus purpureus* pigment against pathogenic bacteria

Research Method: *Monascus purpureus* was cultured on PDA at 30 C for 7 days, Extraction of pigments was determined with ethanol 70% A volume was extracted and the optical density was measured at a wavelength of 510 nm. Antimicrobial activity of the fungi pigments against pathogenic bacteria *E.coli*, *S.aureus* and *Pseudomonas aeruginosa* was examined by disc diffusion and well diffusion methods. The minimum inhibitory concentrations (MIC) and the minimum bactericidal concentrations (MBC) was determined.

Results and Conclusion: The results showed that the pigments of this fungi had an effect only on *S. aureus*, which is a gram-positive bacteria, and the zone of inhibition was 22 mm, MIC was 0.64 mg/ml, and MBC was 0.64 mg/ml. The pigment had no significant antimicrobial effect on gram-negatives. And as a result, it is possible to produce a product from this fungi using cheap carbon sources, which has beneficial effects in the food and pharmaceutical industries and also has an antimicrobial effect on the bacteria causing food poisoning.

Keywords *Monascus purpureus*, Antibacterial activity, pigment, fungus



Medicinal and nutritional properties of honey from the perspective of medical science and traditional Medicine-Islamic texts

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Statement of Problem: For centuries, honey has been used as a natural medicine to treat a wide range of diseases, in ancient Egypt and Greece, in Chinese, Indian and Islamic medicine and as a complementary medicine.

Research Purpose: The purpose of this research is to investigate the medicinal and nutritional properties of honey in common clinical diseases in modern medicine and traditional medicine and to review Islamic texts. **Research Method:**

In this review study, selected texts of Islamic traditional medicine, medical traditions and all articles registered in reliable scientific databases including Quran, Makhzan-Al-Advieh, Google Scholar, PubMed, Ovid and Magiran during the years 2010 to 2021 in human clinical trials and Common diseases (wound, gastrointestinal inflammation, cancer, brain and women) were searched and investigated in modern medicine and Traditional-Islamic medicine. 115 articles were selected in this work and among the selected articles; A total of 74 articles were used on wound, inflammation-digestive-cancer, brain and women's diseases.

Results and Conclusion: Due to the many properties of honey, this substance is recommended in the healing of wounds, cancers, cancer, brain and women in modern medicine and traditional Islamic medicine. The results of this research show that antioxidant properties such as flavonoids and polyphenols are essential for human health and a healthy lifestyle. It acts as a strong antibiotic against.

Keywords: Inflammation, cancer, wounds, women and the brain, honey, medical traditions, Islamic texts.



The antimicrobial effect of Lavandula essential oil and two probiotic *Lactobacillus casei* and *Sacharomyces bulardii* on pathogenic bacteria and investigating their synergistic effect

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Statement of Problem: Recent years, there has been an increased interest in the use of natural antimicrobial agents. The effective compounds in plant extracts cause their therapeutic properties. Lavandula is one of the native plants of Iran.

Research Purpose: In this research, the antibacterial effect of Lavandula essential oil on the on pathogenic bacteria was measured, and the synergism effect of two probiotic, *Lactobacillus casei* and *Sacharomyces boulardi* was investigated with this essential oil among other things.

Research Method: Lavandula essential oil was prepared with a Clevenger. Antimicrobial activity was investigated by disc diffusion and well plate methods. The minimum bacterial inhibitory concentration (MIC) and the minimum bactericidal concentration (MBC) were determined by microdilution method.

Results and Conclusion: The results showed that Lavandula essential oil created zone of inhibition of 25, 18 and 20 mm and MIC of 6.25, 3.12 and 3.12 on *Staphylococcus aureus* 25923 ATCC, *Pseudomonas aeruginosa* 27853 ATCC and *Escherichia coli* 15223 ATC and each two probiotics also had an antimicrobial effect on bacteria. The synergism effect on *Staphylococcus aureus* was significant. As a result, the effect of this essential oil on Gram positive bacteria was more and a significant synergistic effect was observed with probiotics.

Keywords: Lavandula essential oil, Antibacterial activity, Probiotic, MIC



The role of herbal products and probiotics in Multiple Sclerosis

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Statement of Problem: Multiple sclerosis (MS) is a chronic autoimmune and inflammatory neurodegenerative disease of the central nervous system (CNS). MS attacks myelinated axons in the CNS, destroying myelin and axons with varying degrees of damage. Approximately 2.5 million people worldwide have MS. Epidemiological studies have shown that women are more likely to develop MS than men. Various drugs are available to treat MS, including oral (fingolimod), injectable (interferons), and monoclonal antibodies (natalizumab). Some drugs are not safe after long-term use because they cause severe side effects.

Research Purpose: Herbal remedies and probiotic supplements seem to be more effective in treating MS. Herbs reduce neuroinflammation and improve sleep quality, reduce muscle stiffness, and improve bladder problems. Probiotics also have significant functions in overcoming autoimmune disorders and intestinal dysbiosis. For this reason, the use of probiotics and herbal medicines can reduce central nervous system (CNS) inflammation without severe side effects.

Research Method: The search in reputable scientific sites and journals with suitable key word.

Results and Conclusion: It is possible to effectively treat the common symptoms of MS using herbal medicines that have anti-inflammatory and antioxidant properties to prevent the destruction of the myelin sheath without side effects. Phytochemicals are very active biological compounds that exist naturally in plants and act as prebiotics. For example, *cannabis* extract reduces pain and spasm-related challenges in MS. Probiotics can modulate the host organism's immune responses by producing antimicrobial agents such as bacteriocins. The gut microbiome is altered in MS. Probiotics can naturally stimulate an anti-inflammatory environmental immune response in MS patients. Modulation of the gut microbiome using probiotics is beneficial for the treatment of MS. *Lactobacillus reuteri* treatment of MS alters gut microbiota and modulates Th1 and Th17 and their associated cytokines.

Keywords: probiotic, Multiple sclerosis, Herbal therapies, auto-immune disorder.



Comparison of different SARS CoV-2 vaccines available in Isfahan province in producing high level of neutralizing antibodies in bovine colostrum

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Statement of Problem: Massive immunization is one the key elements in successful control of pandemic caused by infectious organisms. Although vaccination is very well recognized method in dealing with pandemic caused by infectious viruses, using milk containing neutralizing antibodies against the circulating organism is getting more attention in recent years as an immunological and nutritional supplement.

Research Purpose: Antibodies and bioactive compounds found in hyper immune bovine colostrum, not only increase the immunity level thorough out the gastrointestinal system, but also have many different beneficial bio activities related to human health in the gastrointestinal system and for the whole body.

Research Method: Using hyper-immunization protocol, specific diet and implementation of certain management procedures in the late gestation period of dairy cows, the level of antibodies and bioactive molecules in bovine colostrum can be increased. Efficacy of different SARS CoV-2 vaccines available in Isfahan at the time of project conduction, for neutralizing antibody production were compared in late gestation period in pregnant dairy cows in one of the isolated dairy farms in Isfahan.

Results and Conclusion: -Vaccine number one showed the highest capacity in producing high level of neutralizing antibodies level.

Keywords: hyper immunization, bovine colostrum, Neutralizing antibodies, SARS CoV-2



Chamomile: A suitable alternative to chemical painkillers

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Introduction: Menstrual disorders including menorrhagia are one of the common problems in girls and young women. The most common treatments used to control and reduce menstrual bleeding in modern medicine are the use of anti-prostaglandin pills and drugs such as mefenamic acid and ibuprofen to prevent pregnancy. Chamomile is a herbal medicine that has many clinical values in traditional and modern medicine. The results of a study showed that the consumption of chamomile extract reduces the amount of menstrual bleeding in women. It has been shown that the consumption of chamomile extract is the same as mefenamic acid medicine the symptoms and pains of premenstrual syndrome improve.

Aim: This study was conducted with the aim of investigating the effect of chamomile consumption on the intensity of menstrual bleeding, the amount of pain caused by postpartum depression in women.

Result: Usually, 30 to 60 ml of blood is lost during each menstrual cycle. If the amount of this bleeding reaches 80 ml or more, it is called menorrhagia. In this case, the complications of bleeding are more than uterine limits and have a chance to appear. The earliest complication is excessive uterine bleeding and anemia.

Conclusion: Taking chamomile capsules can effectively reduce the severity of primary dysmenorrhea. Chamomile has an effect on improving the three symptoms of abdominal and pelvic pain, as well as depression and irritability of premenstrual syndrome and dysmenorrhea. Chamomile and selenium, both of which have antioxidant activity, improve the symptoms of postpartum depression induced by the hormone progesterone. The use of chamomile flower extract is able to improve the symptoms of polycystic ovary and strengthen the endometrial wall of the uterus.

Key words: Chamomile, uterine lining, period bleeding, postpartum bleeding



Exploring the Potential Medicinal Value of *Orchis coriophora* and *Orchis palustris* in the Management of Diabetes

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Problem Statement: Medicinal plants have been used since ancient times, and their usage has increased due to the need for inexpensive treatments in developing countries and concerns about the side effects of synthetic drugs. The advantage of herbal drugs is that they have multiple effects, while synthetic compounds have a single effect. Orchids, which are among the oldest flowering plant families, have medicinal uses and are often used as ornamental plants due to their elegant and complicated flowers. Orchids have diversified into epiphytes, geophytes, and saprophytes and have developed different pollination strategies using mimicry. The importance of medicinal plants has increased in recent years, and studies are being conducted to investigate local formulas or recipes with these plants.

Research Purpose: The purpose of this study is to explore the potential use of *Orchis palustris* Jacq. and *Orchis coriophora* L., two species of orchids traditionally used for medicinal purposes, in the management of diabetes. The study aims to investigate the anti-diabetic, antioxidant, anti-inflammatory, renal protective, and wound healing properties of these plants, as well as their chemical composition, to better understand their potential medicinal value for treating diabetes.

Research Method: Research Method: The study will involve a comprehensive review of the available literature on *Orchis palustris* Jacq. and *Orchis coriophora* L. and their potential medicinal properties for treating diabetes. The search will be conducted using various academic databases such as PubMed, Scopus, and Google Scholar.

Results and Conclusion: *Orchis palustris* and *Orchis coriophora* is a species of orchid that has been traditionally used in some cultures for medicinal purposes, including the treatment of diabetes. However, there is limited scientific evidence on the effectiveness of this plant for managing diabetes. Here are some properties of *Orchis coriophora* and *Orchis palustris* that may be relevant to its potential use in the treatment of diabetes:

Anti-diabetic activity: Some studies have suggested that extracts of *Orchis coriophora* and *Orchis palustris* have anti-diabetic activity, meaning they may help to reduce blood sugar levels in people with diabetes.

Antioxidant properties: *Orchis coriophora* and *Orchis palustris* is rich in antioxidants, which can help to protect cells from damage caused by free radicals. This may be beneficial for people with diabetes, as they are at increased risk of oxidative stress.

Anti-inflammatory properties: *Orchis coriophora* and *Orchis palustris* has been shown to have anti-inflammatory properties, which could help to reduce inflammation in people with diabetes. Chronic inflammation is a contributing factor to the development of diabetes-related complications.

Renal protective effects: Some animal studies have suggested that *Orchis coriophora* and *Orchis palustris* may have protective effects on the kidneys, which are often affected by diabetes-related complications.



Hypoglycemic activity: *Orchis coriophora* and *Orchis palustris* has been shown to have hypoglycemic activity, which means it may help to lower blood sugar levels in people with diabetes. Some studies have suggested that this effect is due to the plant's ability to increase insulin secretion or improve insulin sensitivity.

Renal protective effects: Diabetes is a leading cause of kidney disease, and some animal studies have suggested that *Orchis coriophora* and *Orchis palustris* may have protective effects on the kidneys. This could be beneficial for people with diabetes who are at increased risk of developing diabetic nephropathy.

Wound healing properties: People with diabetes are at increased risk of developing slow-healing wounds, and some studies have suggested that *Orchis coriophora* and *Orchis palustris* may have wound-healing properties. This could be beneficial for people with diabetes who are prone to foot ulcers and other types of wounds.

Chemical composition: In the case of plants like *Orchis coriophora* and *Orchis palustris*, the chemical composition can vary depending on various factors, such as the plant's growing conditions, age, and part of the plant being used. The chemical composition of *Orchis coriophora* and *Orchis palustris* includes various classes of compounds, such as phenolic compounds, flavonoids, alkaloids, and terpenoids. Some of the specific compounds found in this plant include: Catechins: These are a type of flavonoid that has antioxidant properties. Vanillic acid: This is a phenolic compound that has anti-inflammatory properties. Orchinol: This is an alkaloid that has been shown to have anti-cancer properties. β -Sitosterol: This is a type of plant sterol that has been shown to have cholesterol-lowering properties. Terpenoids: *Orchis coriophora* and *Orchis palustris* contains various terpenoids, which are organic compounds that contribute to the plant's fragrance and flavor. Some terpenoids have also been shown to have anti-inflammatory, anti-microbial, and antioxidant properties. The chemical composition of *Orchis coriophora* and *Orchis palustris* may contribute to its potential medicinal properties for treating diabetes, such as its hypoglycemic and antioxidant activities. However, more research is needed to fully understand how specific compounds in the plant may affect the body and to determine optimal doses for therapeutic use.

Keywords: Medicinal, plants, Diabetes, Anti-diabetic, Chemical activity, Renal composition, protective effects, *Orchis palustris*, *Orchis coriophora*



A brief review on the effect of *Silybum marianum* on different cancers

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Statement of Problem: More than 8 million people die from cancer each year, making it the second most common cause of death in the world. Chemotherapy, radiation therapy, and surgery are frequently used in cancer treatment. Although these treatments have the potential to kill cancer cells and stop the disease from spreading, they can also have a number of negative side effects. For ages, people have been using the plant species *Silybum marianum*, also referred to as milk thistle, for therapeutic purposes. The health advantages of milk thistle are well recognized, especially for liver function, but there is now some evidence that it may have anti-cancer effect, especially in its active component.

Research Purpose: This brief review aims to examine the most recent studies on *Silybum marianum* and its potential effect on cancer treatment, enhancing the effectiveness of some conventional treatments, reducing their side effects and improving quality of life in patients.

Research Method: A literature review was conducted to identify relevant studies on *Silybum marianum* effects on cancer treatment. For articles published during the previous ten years, searches were carried out using PubMed, Science Direct, and Google Scholar. Search terms that were used include “*Silybum marianum*,” “cancer,” “cancer treatment,” “neoplasm,” “Silymarin,” and “anti-cancer effect”

Results and Conclusion: *Silybum marianum*, popularly known as milk thistle, is a plant that has been utilized for its therapeutic benefits for many years. Some potential health benefits of *Silybum marianum* are liver health, lowering cholesterol levels in the blood, improving insulin sensitivity and reducing blood sugar levels in people with type 2 diabetes, enhancing skin health and cancer. Silymarin, a flavonoid known to have antioxidant and anti-inflammatory properties, is the active component of milk thistle. Silymarin has been found to have anti-cancer properties in various types of cancer. Recent research has demonstrated that silymarin inhibits the growth of cancer cells, promotes cancer cell death, and reduces the side effect of chemotherapy and radiation therapy. Studies have examined how silymarin affects several types of cancer, including the liver, breast, prostate, pancreas, colorectal, melanoma, lung, ovarian, and bladder. For example, it inhibits pancreatic cancer cell proliferation and migration through downregulating PLK1 expression. According to another study silymarin inhibits the progression of ovarian cancer cells by regulating long non-coding RNA H19. It also has a negative effect on the growth of human liver cancer cells via suppression of mitochondrial biogenesis and cell cycle arrest. Other evidence suggests a prevention of cell proliferation and migration in bladder cancer by regulating miR-182-5p. To fully comprehend the efficacy and safety of employing *Silybum marianum* in the treatment of cancer, more research is still required. It is important to understand, before adopting any natural cancer treatments, it's crucial to speak with a medical professional.

Keywords: *Silybum marianum*, cancer, neoplasm, milk thistle, Silymarin.



Evaluation of antibacterial effects of Anbarnasara's condensed smoke on some skin infection bacteria

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Statement of Problem: Although antimicrobial agents have rescued many people from death, the frequent use of these agents has caused stress in microorganisms and, as a result, resistance to antibiotics. Resistance to antimicrobial agents is one of the most important global problems and the reason for the increase in infections. Multi-drug resistance in many gram-positive and gram-negative bacteria leads to incurable infections. Unfortunately, after more than half a century in the pharmaceutical industry, a very small number of antimicrobial agents have been made and replaced by ineffective antimicrobial agents.

Research Purpose: In Persian traditional medicine manuscripts, the dung of various animals (e.g., horse, dog, fox, donkey, crocodile, etc.) has been mentioned for the treatment of various ailments. The smoke produced by burning donkey dung, "Anbarnasara," has strange therapeutic effects, including strong antimicrobial and anti-allergic activities, and could be an alternative to antibiotics.

Research Method: Dried powder of Anbarnasara in a metal holder was heated to burn. The raised smoke was cooled by the condenser and turned into a liquid. The antibacterial properties of the liquid obtained from the smoke of Anbarnasara in amounts of 10 and 30 μ l were investigated against the pathogenic bacteria *Escherichia coli*, *Staphylococcus aureus*, and *Staphylococcus epidermidis*. There are various substances in the extract obtained from the condensate of smoke resulting from the burning of Anbarnasara, which were evaluated using the gas chromatography-mass spectrometer method.

Results and Conclusion: The diameter of the haloes of non-growth of bacteria observed in the plates was 10–15 mm, which indicates the antibacterial properties of the obtained extract. Syringol is the most prevalent component in the extract derived from the condensate of the smoke obtained from burning Anbarnasara.

Keywords: Antibacterial, Donkey dung, Traditional medicine



Natural products and healthy lifestyle

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Introduction: In 2016, non-communicable diseases were responsible for 71% of deaths in the world. 15 million of these deaths were premature (deaths between the ages of 30 and 70). Behavioral and metabolic risk factors are the main cause of these diseases, so a healthy lifestyle is important and plays a vital role in the prevention and treatment of diseases. One of the most important lifestyle components is nutritional behavior (dietary habits). In this research, the role of food and natural products in the prevention and treatment of diseases will be explained

Data collection: This article is the result of a review of Iranian medical texts and authentic articles from multiple databases.

Findings: From the point of view of Persian medicine, a multicomponent healthy lifestyle should be considered for the prevention and treatment of diseases. Razi believed that medicine should not be prescribed until the patient is cured with food, and Ibn Sina said modifying the lifestyle and diet is the first step in the treatment of diseases.

Today we are aware of that many toxic substances enter the body through air pollution, food additives and drinks and also as a result of food metabolism, reactive oxidative species are produced in the body, and the accumulation of these substances in the body is pathogenic and can cause many diseases.

In both paradigms of modern and Persian medicine, it is admitted that functional foods and foods with antidote properties help to eliminate waste from the body. Adding the right amount of food seasonings, in addition to eliminating harmful substances from the body, also helps in better digestion of food.

Conclusion: Balanced use of functional foods such as grains, vegetables, fruits and food seasonings containing natural products is recommended for the prevention and treatment of diseases.

Key words: Healthy Lifestyle, Modern medicine, Natural Products, Persian Medicine



Cosmeceuticals made by natural ingredients

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Cosmeceuticals are products that are used for both cosmetic and therapeutic purposes. They are becoming increasingly popular as people seek more natural and organic alternatives to traditional skincare products. Natural ingredients, such as plant extracts and oils, are commonly used in cosmeceuticals due to their therapeutic properties.

Natural ingredients can provide a wide range of benefits to the skin. For example, tea tree oil is a popular ingredient in cosmeceuticals due to its antibacterial properties, which can help to reduce acne breakouts. Another popular natural ingredient is aloe vera, which can help to soothe and hydrate the skin, making it a great choice for people with dry or sensitive skin.

One of the main advantages of cosmeceuticals made from natural ingredients is that they are often gentler on the skin than products containing synthetic chemicals. Natural ingredients are less likely to cause irritation, making them a great choice for people with sensitive skin or allergies.

Natural ingredients can also provide a more sustainable and environmentally friendly option. Many synthetic chemicals used in traditional skincare products are harmful to the environment and can cause pollution. Natural ingredients are often sourced from sustainable and eco-friendly sources, making them a more environmentally responsible choice.

When choosing cosmeceuticals made from natural ingredients, it is important to look for products that have been certified as organic or natural. This can help to ensure that the ingredients have been ethically sourced and that the product does not contain harmful chemicals or synthetic additives.

In conclusion, cosmeceuticals made from natural ingredients can provide a range of benefits to the skin, including therapeutic properties and a more sustainable and environmentally friendly option. As the demand for natural and organic skincare products continues to grow, it is likely that we will see more cosmeceuticals using natural ingredients in the future.



Sleep disorders in Persian medicine

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Introduction: sleep can be affected by genetic, age, environmental temperature, medication, and diseases. Sleep disorders are among the common complaints of patients. Insomnia as a sleep disorder causes a decrease in alertness, an increase in the likelihood of accidents, emotional and mood disorders and is associated with high blood pressure, weight gain, diabetes, and immune system disorders.

Methodology: In this qualitative study, first the reliable sources of Persian medicine (PM) were selected, and then the data were classified in the form of different information. In the next step, content analysis was done based on the information.

Findings: In PM, sleep disorders can occur due to dystemperament or other causes like trauma, etc. Fear (faza) due to an external factor or digestive problems, Tamalmol (a state between sleep and wakefulness that constantly jumps out of sleep), disturbed sleep (Nightmares) and Kaboos (feeling of heaviness on the chest and shortness of breath with reduced movement power), Sahar (insomnia) and Sobat(hypersomnia), are among sleep disorders. the causes of hypersomnia (Sobat) are related to brain dystemperaments (Coldness plus humidity, sanguine and its concentration) or secondary to digestive problems, body weakness, and head trauma. On the other hand, insomnia (Sahar) causes include brain dystemperament phynotypes (Hotness, dryness, abnormal humidity) or secondary to digestive problems, pain and swelling. Sahar has consequences such as weakness of the brain & whole body and natural body dysfunctions, especially digestion. The stages of treating any disease, including insomnia in PM, include lifestyle modification (climate, sleep and wakefulness, disposal of waste materials and retention of essential body substances, nutrition, movement and stillness balance, and control of emotions). The next stage is treatment with natural medicines and the last one is using manipulation.

Conclusion:Individual phenotype therapy, with any of moisturizing, narcotic, hypnotic, sedative medications, variety of treatment application like oral, different nasal drug delivery (NDD) methods (inhalation, fumigation, in sufflation, aromatherapy, nasal drop, snuff, vapor bath), topical application (douching, anointment), beside the other treatments like music therapy and massage are among the strengths of PM in the treatment of insomnia in various ways.



Functional Foods for Growth and Development in the Pediatric Age Group

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Growth and Development are the unique and most important focuses in the pediatric age group. One of the main influencing factors is healthy lifestyle including healthy dietary habits. The first 1000 days of life is the most important period of life in this regard. Functional foods, which in addition to nutrients and energy, can beneficially modulate targeted functions in the body for health promotion and disease prevention.

Functional foods have prenatal influences on the intra-uterine fetal development; after birth, 'functional' human milk provides adequate growth of infants and pro- and prebiotics can modulate the flora composition and related benefits. Nutritional factors during childhood and adolescence have short-term effects on growth pattern, body composition and body functions as well long-term effects on health, morbidity and mortality in adulthood. Moreover, functional foods have effects on the development of neural functions and behavior, which is a phenomenon called 'metabolic programming'.

The gene-environment interaction, i.e. nutrients and gene expression may provide the basis of many of these programming effects. The relationship between availability of food ingredients and cell and tissue differentiation and its possible uses for promoting health and development needs further exploration. The pediatric age group, especially the first 1000 days of life, including the course of pregnancy, childbirth and lactation as well as human milk composition and the short- and long-term outcome of the child are influenced by the intake of foods and mainly micronutrients, e.g. polyunsaturated fatty acids, iron, zinc and iodine. Moreover, folic acid supplementation from pre-conception until the first weeks of pregnancy can noticeably reduce the occurrence of severe embryonic malformations and other potential benefits. Intestinal growth, maturation, and adaptation as well as long-term function may be influenced by food ingredients such as oligosaccharides, gangliosides, high-molecular-mass glycoproteins, bile salt-activated lipase, pre- and probiotics.

Adolescence is the other important life period in this regard. Peak bone mass at the end of adolescence can be increased by dietary means, which is expected to be of long-term importance for the prevention of osteoporosis at older ages. The collective effects of calcium and other constituents of growing bone, such as phosphorus, magnesium and zinc, as well as vitamin D, and the trace elements.

The use of biotechnology and recombinant techniques may offer the opportunity to include various bioactive substances in special dietary products for children and adolescents.



The role of effective natural products in indigestion and Persian Medicine Perspective

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Introduction: dyspepsia is a digestive disorder with high prevalence in society. Among various treatment options, treatment by complementary and alternative medicines is used. Persian Medicine recommends various natural products such as numerous medicinal plants to improve dyspepsia. In this study, through investigation of Persian Medicine references, we aimed to identify we identified natural products to improve dyspepsia.

Methodology: In this qualitative study, dyspepsia symptoms based on Rome criteria including fullness, early satiety, bloating, nausea, and belching were checked under reliable sources of Persian Medicine. Then natural products recommended for the treatment of the symptoms were extracted from the books. Also, modern related information was extracted applying SID, PubMed and Google Scholar databases as well.

Results: In this study, various natural products including medicinal plants, animal and mineral products were obtained. Medicinal plants were obtained from 37 plant families, such as *Apiaceae*, *Lamiaceae*, *Amaryllidaceae* and *Zingiberaceae*, which could treat various symptoms of dyspepsia. In this research, based on the information in Persian Medicine reference texts, we obtained 62 products effective for bloating, 45 for nausea, 39 for appetite loss and 8 for belching.

Conclusions: Finding effective natural products effective on dyspepsia based on Persian Medicine could suggest a better strategy for the relieving of dyspepsia symptoms. In Persian Medicine prescribes natural products based on the individual characteristics of each patient and practices multiple target therapies.

Keywords: Herbal Medicine, Dyspepsia, Medicinal Plants, Persian Medicine



Functional Foods and Microbiome Health

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Background: Functional foods are defined as "foods that may provide health benefits beyond basic nutrition". Currently, health problems associated with eating habits are having a profound impact in the world. Functional foods and wellbeing dietary patterns are then reaction to the change in lifestyle. Now, the market for functional foods has been consistently growing, addressing both an open door and a challenge. This presentation aims to discuss the most recent studies about what dietary patterns, probiotics, prebiotics and synbiotics are impacting the gut microbiota and its metabolites and also their effects on health.

Main body: The human body is populated by a huge number of microorganisms, from bacteria, viruses and fungi which the most abundant are found in the gastrointestinal tract. The main functions of the gut microbiome are vitamin synthesis, fermentation, adjustment of the gastrointestinal obstruction, and short-chain fatty acids production. The brilliant advances in research of gut microbiome showed its involvement in metabolic diseases, gastrointestinal disorders, and nervous system. Bacterial metabolites including short-chain fatty acids, biliary acids and trimethylamine-N-oxide are directly affected by dietary patterns and pro/pre/syn biotics. Certainly, the role of the microbiome in the management and prevention of different disorders is not to be neglected.

Conclusion: It is becoming clear that the microbiome is very sensitive to the composition of diets and that the products of bacterial metabolism play an overwhelming role in general health. However, more detailed studies on the association between the microbiota and functional foods are needed. There is still much to learn regarding the connections between gut microbiome, health, and disease. Novel therapies including the manipulation of diet, the use of syn/pre/probiotics, or administration of different supplements, should be taken into consideration



Evidence Based clinical trials for some herbal drugs

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Herbal and traditional pharmacologic therapies are in widespread use throughout the world. Such widespread use suggests but does not assure, that traditional medicines have a favourable risk-benefit ratio. Rather, traditional medicines may be regarded as a rich source of potentially attractive therapies. The actual benefits and risks remain to be evaluated by clinical trials supported and conducted according to the principles of modern clinical science.

This indicates the importance and necessity to develop a standard operational procedure for the standardization of herbal drugs, quality control and quality assurance of herbal drugs world play a major role in providing highly reliable and effective herbal drugs.

Today, herbal formulations have been used for the treatment of different diseases such as cancer, various infections, cardiovascular, central nervous system, depression, diabetes and arthritis.

Some herbal drugs have been studied adequately.

But well-controlled double blind clinical trials to prove their safety and efficacy.

In many clinical trials the effects of *Boswellia* extracts has been studied for different diseases such multiple sclerosis, osteoarthritis. Colitis, and good efficacy has been shown. Also, *Turmeric* extracts has been studied on patients with arthritis, and many other studies which will be discussed.



Phytoestrogens: potential available herbal remedies for the prevention and management of gynecological diseases

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In recent years, there has been a growing interest in natural remedies to prevent or treat female diseases. In specific, many studies have focused on searching natural remedies with less side effects than standard hormonal therapies. Although phytoestrogen-based therapies have been widely considered, treatments with phytoestrogens testified in the literature are very intermittent.

In this evaluation, it has been focused on complexes of natural basis, which have progestin effects and that could be respectable applicants for preventing and treating female diseases. We identified the following natural remedies with phytoestrogens: Soybean, Linseed, Sesame, Fenugreek, Beans, Yams, Hops, Alfaalfa, Apples, Carrot, Pomegranates, Wheatgerm, Fennel, Licorice root.

Several studies presented hopeful consequences such as health benefits including a lowered risk of osteoporosis, heart disease, breast cancer, and menopausal symptoms. Although restricted data are available, it seems that phytoestrogen could be a hopeful means for preventing and treating hormone-dependent diseases.

Keywords: phytoestrogen; Herbal remedies; female disease



Natural products: Contribution to nutrition and health

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Natural products (NPs) are considered a great source of biologically active molecules with many biologically characteristics. Generally, natural products are either of prebiotic origin or originate from plants, microbes, or animal sources. The use of natural products is increasing in both developed and developing countries. Natural products and their derivatives are commonly used as food additives, including spices and herbs, antibacterial factors, and antioxidants compounds. In addition, these products have been applied in both traditional and modern medicine for treating diseases. Previous evidences demonstrated that natural products might have protective roles and treatment effects in patients suffer from chronic diseases, including diabetes, cardiovascular diseases, metabolic syndrome, cancer, inflammatory diseases, as well as neurodegenerative diseases. Natural products through the several activities including antioxidant properties and cellular mechanism such as cell signaling, play a beneficial role in disease prevention and treatment. Despite various therapeutic approaches for treatment of non-communicable diseases (NCDs), because of the side effect of common therapeutic methods and lack of certain definitive cure, a treatment for NCDs remains elusive. Therefore, in addition to common therapeutic methods, natural products have attracted a great deal of attention as a beneficial treatment for NCDs and inflammatory diseases. In addition, products such as ginseng, ginkgo, garlic, Echinacea, glucosamine, st. John's worth, peppermint, fish oils/omega-3 fatty acids, ginger, green tea, soy and so forth, could be applied as nutritional supplements that these are effective in promoting health status. Because of the use of natural products as an important component of complementary and alternative medicine (CAM) and healthy nutrition, as well as their antioxidant and treatment features, we aimed to review the role of natural products in nutrition and health.

Keywords: Natural products; Nutrition; Health; Chronic diseases



Challenges of natural products

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Natural products are chemical compounds or substances that are found in nature. The demand for natural products has increased and corresponding to this demand, the below mentioned challenges have increased as well.

- Production

- A- Wasteful harvesting of nature, especially endangered plants
- B- The problem of industrial cultivation of medicinal plants
- C- Lack of suitable pharmaceutical formulations
- D- Insufficiency of the necessary information in the field of production and processing. And the impossibility of using the existing standards for these formulations - the lack of standards for natural products including spirits and essential oils
- D- Problems with pharmaceutical products production, industry - research, export
- E- Lack of reliable market for cultivation, production and sale of natural medicines
- D- Importing plant products that can affect the production industry of these products.
- R- Challenges related to packaging and supplying the appropriate form of medicines to the market, such as saffron
- H- Absence of explainable and defendable regulations
- I- Mixing pollutants with natural products and the problem of their identification, separation and purity

B. Distribution

- A- Distribution of unlicensed products in the market by non-pharmaceutical specialists
- B- Incompatibility of the ingredients listed on the containers with the ingredients inside the product
- D- Absence of proper mechanism for exporting herbal medicines and medicinal products derived from them
- E- Raw sale and export of drugs in raw form
- D- The similarity of plants with each other and selling them instead of each other, such as parsley, hemlock, and common chives



C- Prescription and consumption

- 1- Failure to prescribe and use these drugs rationally for the following reasons
 - A- Unfamiliarity of Attars and prescribers with the properties and side effects of these substances and their superficial information from medical sciences
 - B- The entry of uninformed people into this field in such a way that people with different knowledge have become experts in herbal-traditional-Islamic and Iranian medicine.
 - C- Abusing the public's ignorance to fill the pockets of abusers due to people's trust in these products
 - D- Prescribing such drugs by agents who do not have a license to operate.
 - E- Carrying out therapeutic interventions and invasive therapeutic measures such as diagnosis, and prescription, and lack of attention from the authorities.
 - G- Absence of herbal products covered by insurances

Solutions:

- 1- Supervision of the country's pharmaceutical authorities on the work of distribution and prescription of natural products by unlicensed people, experimental claimants of traditional, Iranian, Islamic, herbal medicine, etc.
- 2- Preventing the therapeutic interventions of unlicensed people and preventing their aggressive therapeutic measures
- 3- The planning of the officials to pay more attention to the natural products industry and to pursue the creation of a safe and effective market and to adequately monitor them.
- 4- preparing defensible regulations regarding the production, distribution and prescription of these products
- 5- Encouraging and persuading experts to conduct effective research on natural products and innovation in the industry of these products by introducing plants or new products to the market
- 6- Preventing the wasteful harvesting of healing and endangered plants
- 7- Training and encouraging farmers to cultivate medicinal plants and create a reliable market for selling them
- 8- Pursuing the creation of an appropriate organizational structure to achieve the goals of the National Document of Medicinal Plants and similar documents
- 9- Preparing the appropriate mechanism for the export of medicinal plants and natural products in customs
- 10- Helping to conduct research and in-depth research in this field and encouraging team and coherent research

Key words: challenging, natural, products



The evolution of the concept of health and disease in Islamic civilization

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The concept of health and disease is one of the words that have existed across time and space during human life on this planet. But determining examples of health in any period depends on many conditions. Since the time of Aristotle, many definitions and examples have been determined for the concept of health and disease. In Islamic civilization, scientists have tried to define these concepts. In the past, health was more about physical health and other aspects were less desired, but today, according to the World Health Organization, health is a multidimensional concept and health includes physical and mental aspects.

This research wants to examine different definitions of the concept of health over time. Also, this research wants to explain how the concept of health and disease has changed since the beginning of Islamic civilization until now.

Keywords: health, disease, Islamic civilization, transformation



The Effect of Natural Products in Oral Health

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Statement of Problem: Periodontal diseases and dental caries are the most common diseases worldwide. They are the main cause of tooth loss and can reduce oral health related quality of life; negative effects on nutrition, self-esteem, and general health. Besides specific pathogenic agents consisting of microbial biofilm and poor nutrition, a common risk factor approach between oral and general diseases dominates on oral disorders, and motivates finding common strategy and policy.

Research Purpose: The study reviewed the nutritional and non-nutritional substances to control and increase oral health.

Research Method: Review of the literature including systematic and narrative reviews, as well as, papers in Persian and English language was prepared.

Results and Conclusion: Poor nutrition such as consumption of frequent, sticky, and high amount of carbohydrates deteriorated oral health conditions; however, dairy products consisting of calcium, phosphor, and casein reduce de-mineralization and promote re-mineralization of teeth. Probiotics compete with microbial flora, and are against dental caries, periodontal diseases, and some other oral disorders. Fruits, although, have fermentable sugars and potentially can produce dental caries, but they are recommended, because of having a lot of useful agents and helping optimum oral health. Green tea with antibacterial, anti-inflammatory, and antioxidant agents for periodontal health is of beneficial. Cariostatic effect of green tea owing to fluoride is also significant. From non-nutritional substances, the role of Miswake with both physical and chemical properties in oral health is crucial.

For having a good oral health, awareness about and use of natural products is very important. The approach of common risk factor for health and disease would improve both oral and general health.

Keywords: oral health, general health, natural products



Honey bees as ingenious manufacturers of innovative and healthy products

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Honey bees are ingenious manufacturers of special products. Their success in the animal kingdom arises from the chemistry and the potential of its products, either those synthesized by them, such as bee venom, royal jelly or beeswax, as well as those collected from natural sources and processed by the bees, such as honey, propolis, pollen or bee bread.

Bee products have been widely used in medicine since ancient times and recently gained popularity all over the world as important ingredients of healthy foods and cosmetics. Several biological activities were described in beehive products, with different scientific reviews dedicate to thematic of therapeutic, nutraceutical, pharmaceutical and cosmetic properties. Bee products knowledge and the development of innovative applications is essential to obtain new sustainable added-value products, which will expand the economic sector and so, contributing to the promotion of ecosystems biodiversity.

Keywords: *Apis mellifera*, bee products, bioactive properties, nutraceuticals, healthy foods



Lasers and Life

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Since the last century, the laser occupied a large degree of attention in the scientific and technological fields; invention of laser contributes to a chain of important developments in: industrial, space, pollution, military, criminology, arts, agriculture, measurement, medicine and surgery.

Albert Einstein 1917 laid down the first step in the field of laser when established the "Quantum Theory of Radiation". In 1953, Charles H. Townes and his student constructed a device operating similar to laser, followed by manufacturing of the first laser device by Theodore H. Maiman at Hughes Research Laboratories, Malibu, California in 1961.

Looking at this beam and the energy that it possesses seriously and harness all the potential efforts to benefit from it or increase its use in man daily lives .

The laser is an acronym for Light Amplification by Stimulation Emission of Radiation, the light of laser is an electromagnetic wave traveling through the space; it covers broad range from radio wave to X-rays .

Today laser light covers a wide range of wavelength from about 0.1 nm to 12000 nm, laser radiation is an intense beam of light generates energy in the wavelengths that range from the near ultraviolet to the near infrared .

This study summarizes information about the laser, why it is called so, the history and fundamentals of this beam, it's physics and the manner it can be classified and the fields it is currently used in addition to the future prospects.

Key words: Laser, history, fundamentals, physics, applications



Bioheart

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Cardiovascular disease (CVD) is one of the leading causes of death worldwide and is increasing rapidly. According to global statistics, one out of every three deaths occurs as a result of CVD, and half of these cases are due to coronary heart disease (CHD), which is one of the most important risk factors in these diseases (including heart failure and stroke). We can refer to total cholesterol (TC) and high blood pressure. Studies have shown that some probiotics, including *Lactobacillus roteri*, can potentially reduce low-density lipoprotein cholesterol (LDL-C), which in turn reduces the risk of CHD, especially in people with high cholesterol levels. Probiotics can bind to cholesterol in the intestines to prevent its absorption. They also help the metabolism of fat and cholesterol in the body by producing special bile acids; Studies have also shown that probiotics can prevent the formation of cholesterol by the liver by producing short-chain fatty acids. In a clinical study, it has been shown that the use of probiotic capsules in people with high cholesterol has reduced LDL by 12% and total cholesterol (TC) by 9%; Which shows the beneficial effect of this capsule on blood fat. A meta-analysis study conducted on the results of 32 studies has also shown the significant effect of probiotics on reducing cholesterol (TC). In recent years, researchers have noticed that there have been changes in the digestive microbiome in people with high blood pressure. A meta-analysis study based on clinical trials and previous studies has shown that the consumption of supplements and foods containing probiotics can be effective in reducing blood pressure. According to the favorable results of the studies, today probiotic supplements, powders and capsules are produced worldwide. Heart Health Florassist capsule is made by Life Extension company and contains *lactobacillus rotari* strain which is a supplement to maintain heart health. and vessels are used. In Iran, for the first time, the researchers based in Amin Pharmaceutical Company, under the project management of Ms. Dr. Tarabi, succeeded in formulating and manufacturing the Bioheart product containing *Lactobacillus roteri* with a specified amount, and this product finally succeeded in obtaining a license in 1998.



Moodamine

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Lactobacillus helveticus and *Bifidobacterium longum* two types of bacteria have many studies in improving the health of the nervous system. The gut-brain axis is an axis that explains part of the relationship between the health of the microbiota of the digestive system and the nervous system based on sending messages and chemical mediators. Studies have shown that these two strains together can reduce stress and depression, increase positivity, and reduce cortisol levels. Reducing the level of cortisol in turn reduces stress and anxiety and can also improve the inflammatory responses caused by the entry of allergens. The ability of these two strains to regulate sleep in sleep-related disorders has also been reported. The activation of the vagus nerve, which starts from the covering layer of the digestive system and reaches the brain, is one of the mechanisms through which *Lactobacillus rhamnosus* has reduced depressive behaviors in mice. Studies have shown that in the presence of *Lactobacillus rhamnosus* and vagotomy (removal of the vagus nerve), mice show depressive behavior as much as in the absence of this probiotic, which proves the importance of this signaling pathway. The activation of the endocrine system of the digestive system can also be one of the possible mechanisms of the effects of probiotics on the nervous system, because the use of probiotics with the mechanism of producing neuroactive substances directly or stimulating the release of neuropeptides and neurotransmitters of the endocrine system is effective on the nervous system. It has been able to show a promising perspective in the field of using probiotics in the treatment of this disease by reducing the symptom of difficulty in establishing communication, which is one of the main symptoms of autism. Although the exact mechanism has not been explained in all these cases, the effects of using certain probiotics in reducing digestive problems have been evident. It is believed that pro-inflammatory cytokines cause limbic disintegration following depression, and studies have shown that using a combination of two probiotic strains of *Lactobacillus helveticus* and *Bifidobacterium longum* can prevent it as a prophylaxis. All these evidences and research results have led to the production of products all over the world, including Florassist. In Iran, for the first time, the researchers based in Amin Pharmaceutical Company, under the project management of Mrs. Dr. Torabi, succeeded in formulating and manufacturing the Modamine product containing *Lactobacillus helveticus* and *Bifidobacterium longum* with specified amounts, and this product finally succeeded in obtaining a license in 1998.



Hemp seed oil

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The cannabis plant (*Cannabis sativa*) is native to East and South Asian countries and needs warm and humid weather to grow. Since this plant belongs to the same family as cannabis and marijuana, special considerations are taken into account in the regulatory systems of the world. However, it should be noted that the percentage of THC in hemp is much lower than other members of the family (less than 0.3%), while the seeds of this plant contain high amounts of three unsaturated fatty acids, incorporating linoleic acid (omega-6), alpha linoleic acid (omega-3) and gamma linoleic acid. The presence of these three substances with high nutritional value has made this seed effective in conditions such as the following:

Skin problems: According to studies, the consumption of hemp seed oil can be effective in relieving the symptoms of atopic dermatitis (eczema). These results are obtained by the effect of the oil in decreasing TEWL and as a result improving skin dryness and itching. Also, this substance is useful in improving conditions such as acne and psoriasis. According to the available evidences, this oil develops the resistance of the skin and protects against infection.

Blood pressure: Conducted researches have shown that this oil seed can lead to a decrease in blood pressure; Therefore, the consumption of this oil is recommended for people suffering from hypertension (a small but significant reduction has been reported). In other words, omega-6 is converted into arachidonic acid, which is a mediator in the production pathways of prostaglandins and leukotrienes, through metabolic reactions going on inside the body, and ultimately has antagonistic effects on the contraction of vessels and inflammatory pathways. On the other hand, Omega-6 is transformed into EPA and DHA in this metabolic pathway, which are the precursors of compounds that regulate inflammation, vasoconstriction, and ultimately blood pressure.



سبک زندگی از دیدگاه طب جدید و طب سنتی

مدرس: دکتر محمد انصاری پور

(عضو هیات علمی گروه طب ایرانی، دانشکده پزشکی، دانشگاه علوم پزشکی اصفهان)

زمان: سه شنبه ۱۹ اردیبهشت - ساعت ۱۴ تا ۱۶

هزینه ثبت نام: دانشجویان ۷۰ هزار تومان

سایرین ۱۰۰ هزار تومان

سرفصل ها:

- اپیدمیولوژی بیماری ها در ایران و جهان
- نقش سبک زندگی در پیشگیری و درمان بیماری ها
- مولفه های سبک زندگی سالم بر اساس طب جدید و طب سنتی ایرانی
- راهکار های حفظ و ارتقاء سلامتی

طب تکمیل با تاکید بر طب سوزنی

مدرس: دکتر محبوبه والیانی

(عضو هیات علمی گروه مامائی، دانشکده پرستاری دانشگاه علوم پزشکی اصفهان)

زمان: سه شنبه ۱۹ اردیبهشت - ساعت ۸ تا ۱۲

هزینه ثبت نام: دانشجویان ۱۰۰ هزار تومان

سایرین ۵۰۰ هزار تومان

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- انرژی حیات (Qi) و نقش آن در سلامت
- کانال های انرژی و طب سوزنی
- اوریکولو تراپی و نقش آن در سلامت

بهبود سازی نان های سنتی کشور

مدرس: دکتر محمدرضا خواجه

(محقق و مدرس نان های سنتی ایران)

زمان: چهارشنبه ۲۰ اردیبهشت

همزمان با برگزاری کنگره به صورت عملی

هزینه ثبت نام: دانشجویان ۷۰ هزار تومان

سایرین ۱۰۰ هزار تومان

سرفصل ها:

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- معرفی نان های سنتی ایران
- نکات کاربردی در تهیه نان سالم

سامانه های رسانش ترکیبات زیست فعال

مدرس: دکتر سید حمید نوربخش

(محقق پسادکتری، دانشکده علوم و فناوری های زیستی دانشگاه اصفهان)

زمان: سه شنبه ۱۹ اردیبهشت

ساعت ۱۸ تا ۲۰ بصورت آنلاین

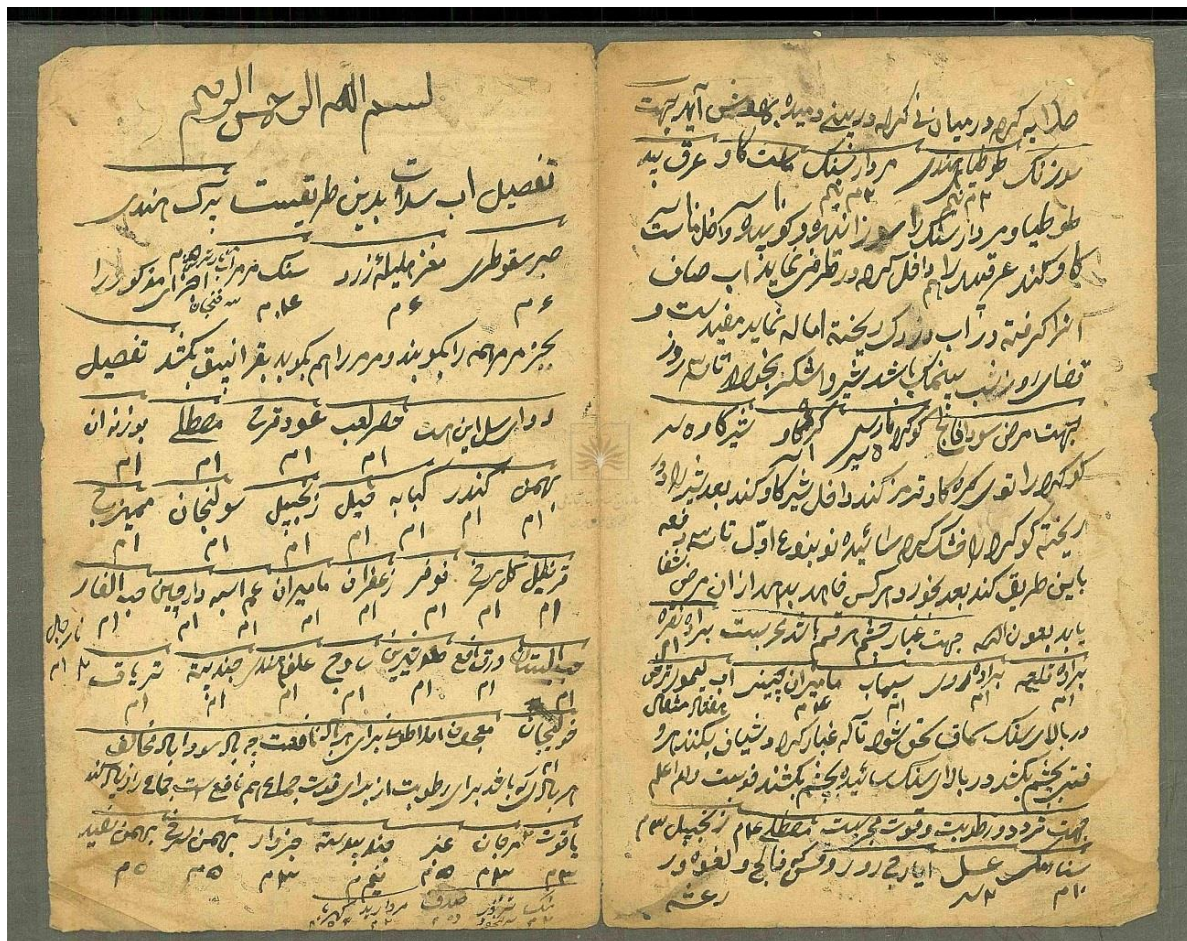
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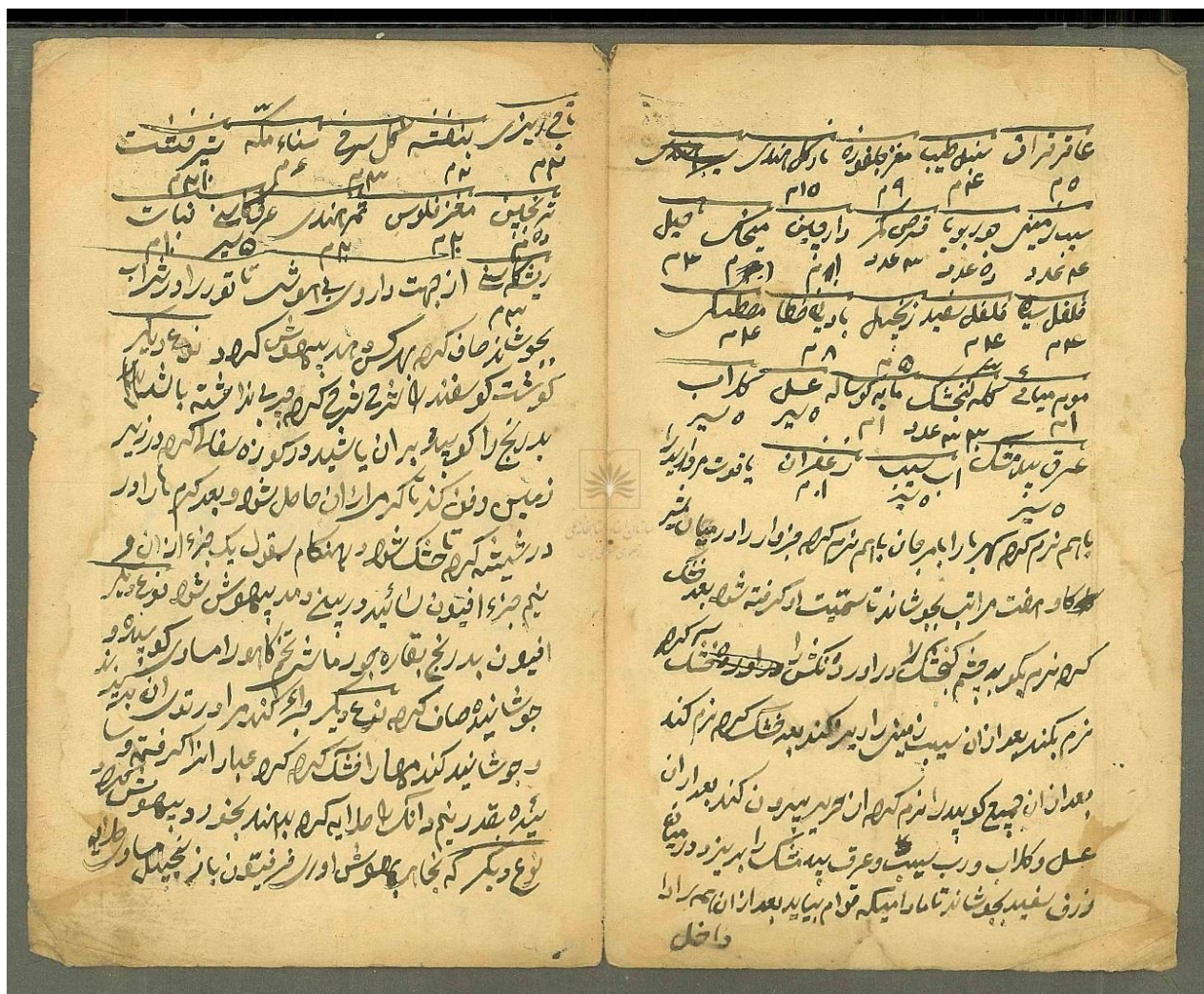
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- مواد و تکنیک های آزادسازی و رهایش کنترل شده
- ذرات لیپیدی خود مونتاژ شده

گزیده اسناد تاریخی



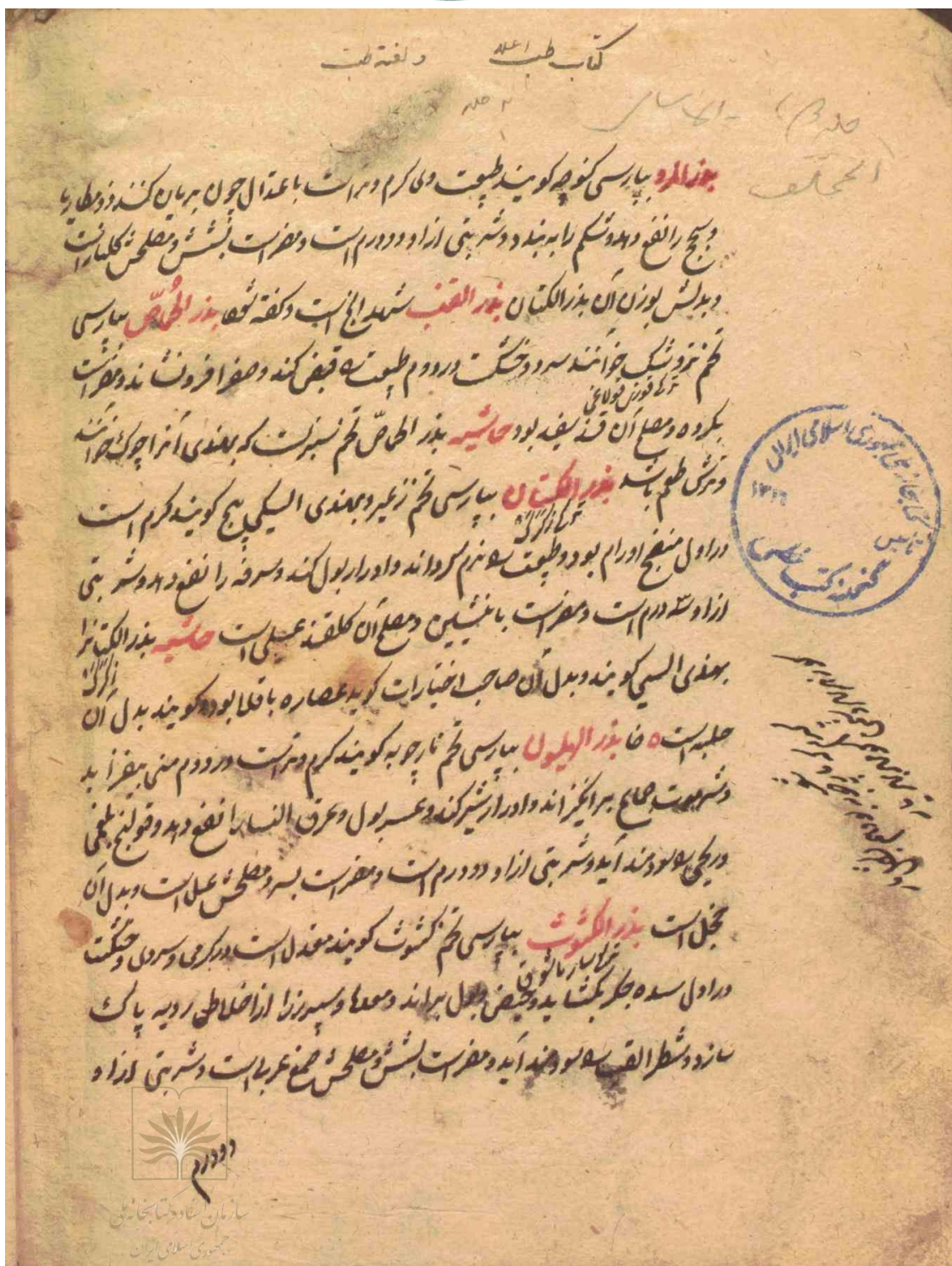
طرز تهیه چند داروی گیاهی برای سل، چشم درد و داروی بیهوشی (صفحه ۱)

کتابخانه ملی (۲۳۲۵۵/۲۹۶)

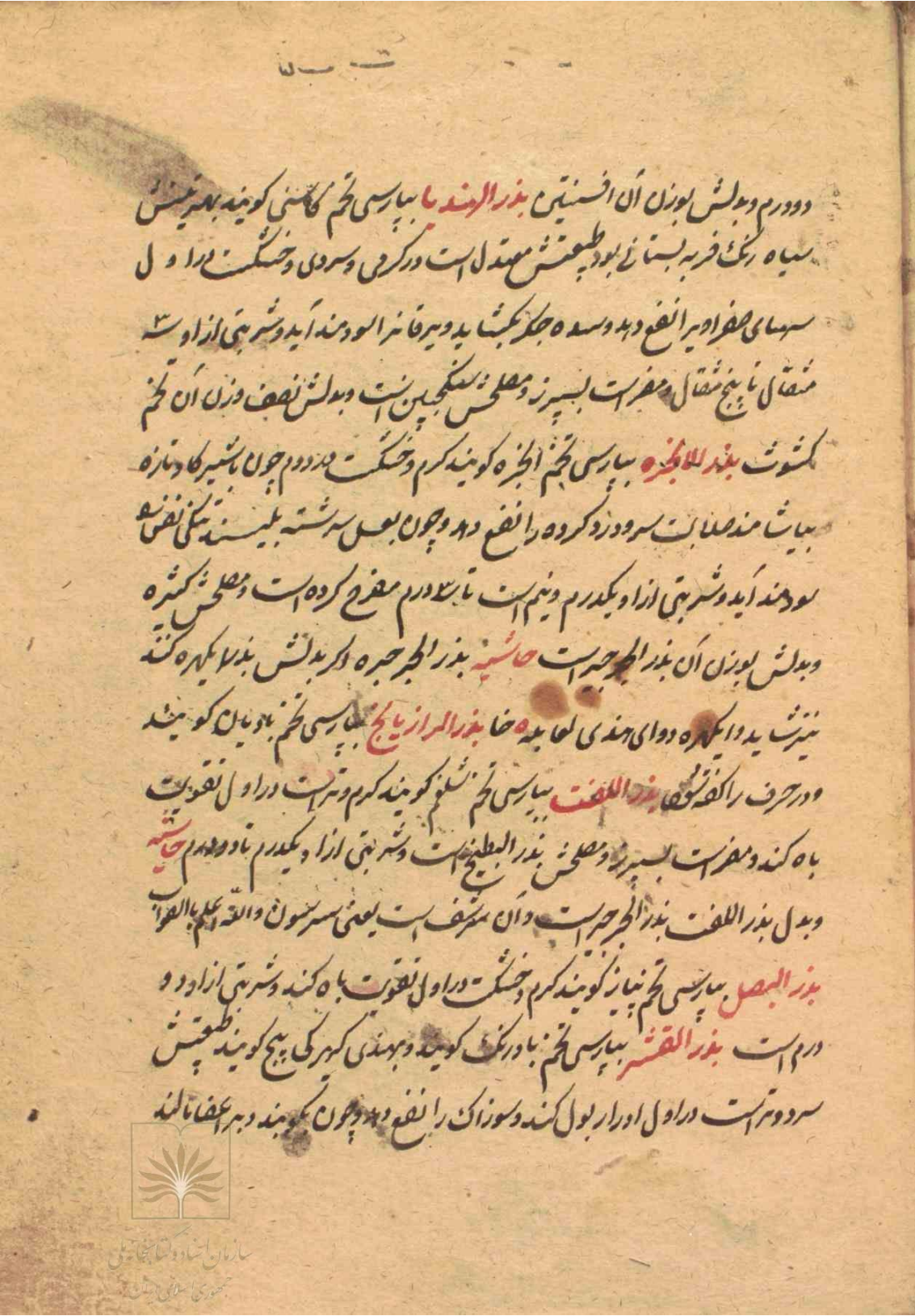


طرز تهیه چند داروی گیاهی برای سل، چشم درد و داروی یبوشی (صفحه ۲)

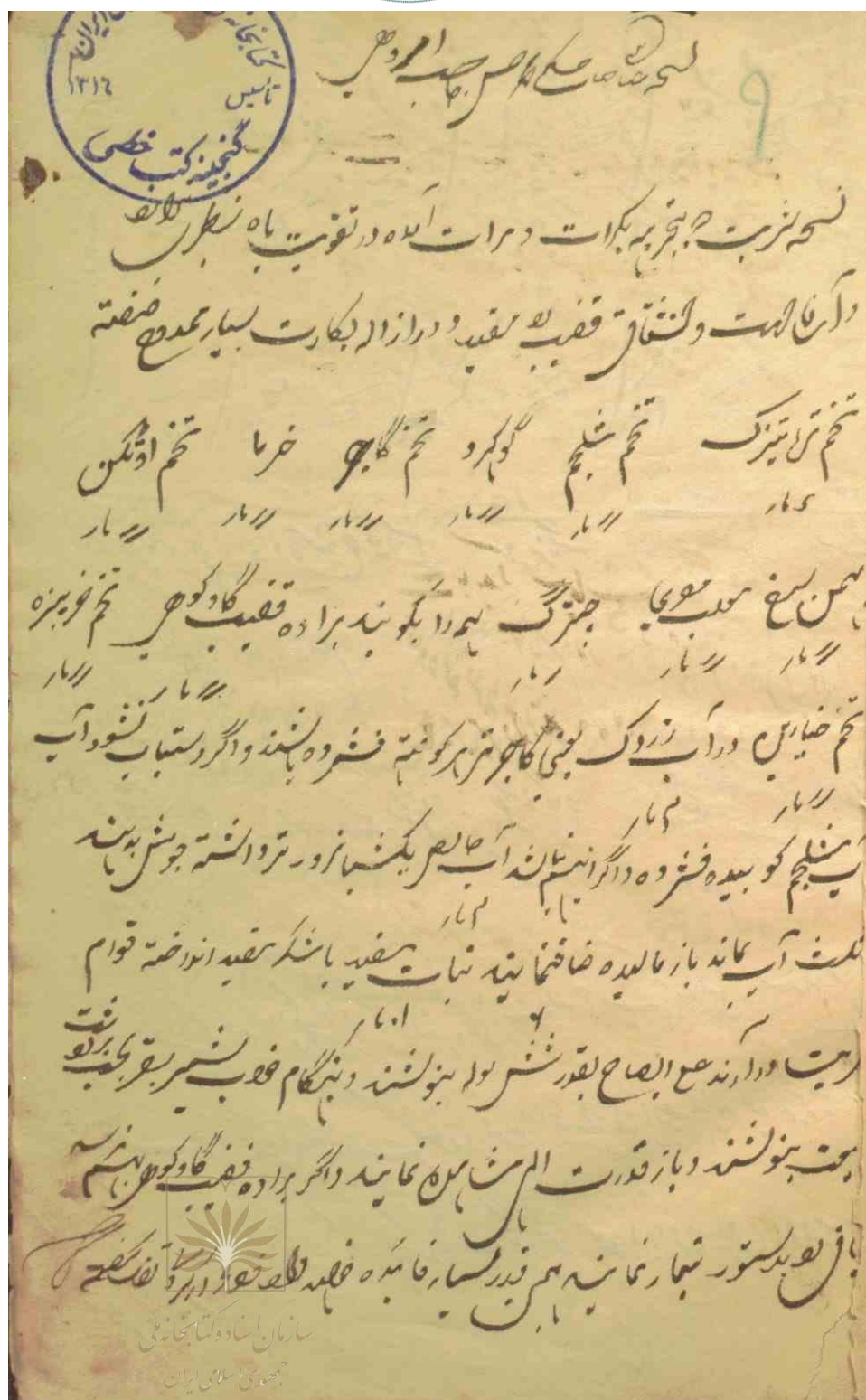
کتابخانه ملی (۲۳۲۵۵/۲۹۶)



ادویه مفرده [نسخه خطی] صفحه ۱، کتابخانه ملی (۱۷۹۶۶-۵)

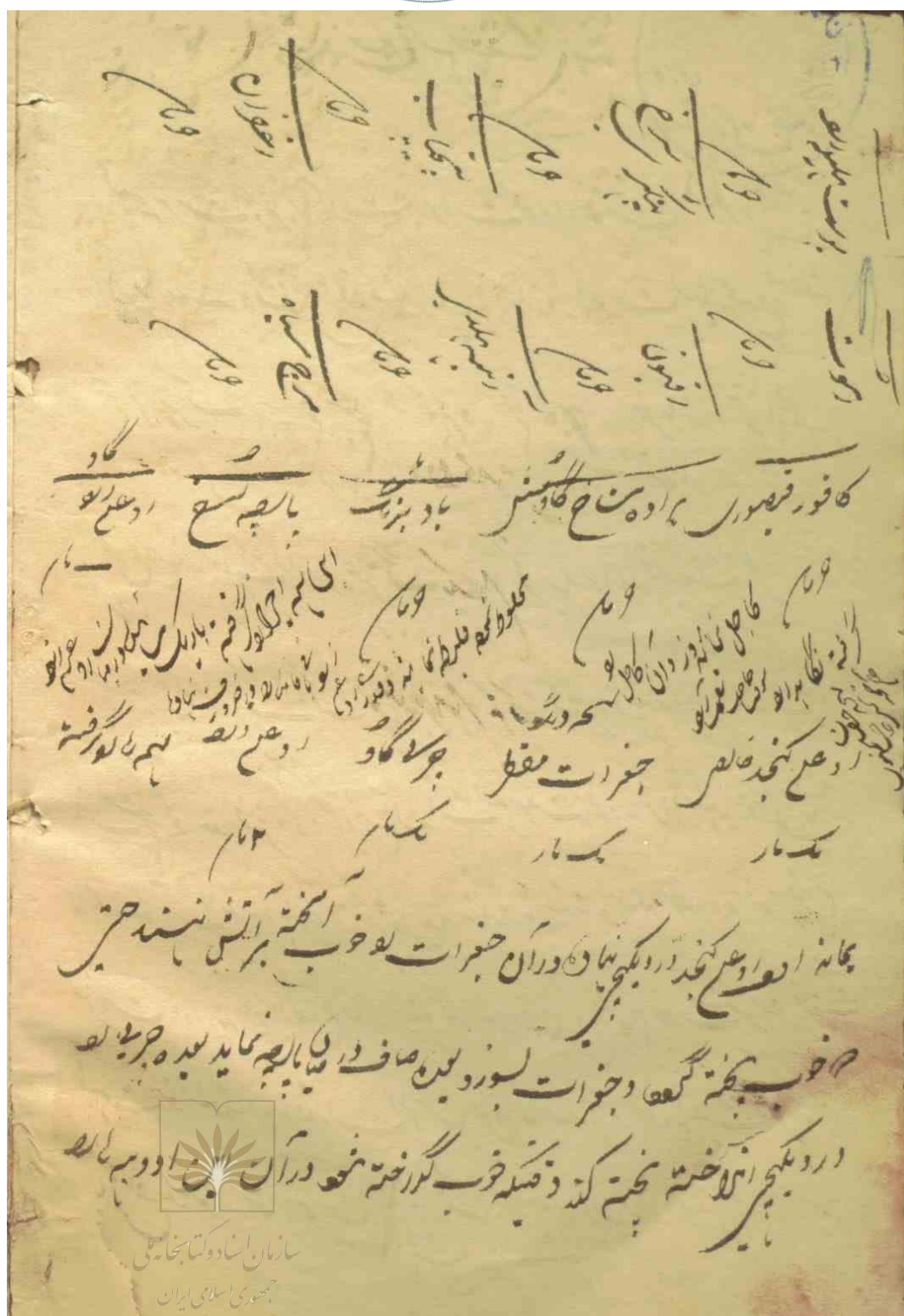


ادویه مفرده [نسخه خطی] صفحه ۲ ، کتابخانه ملی (۵-۱۷۹۶۶)



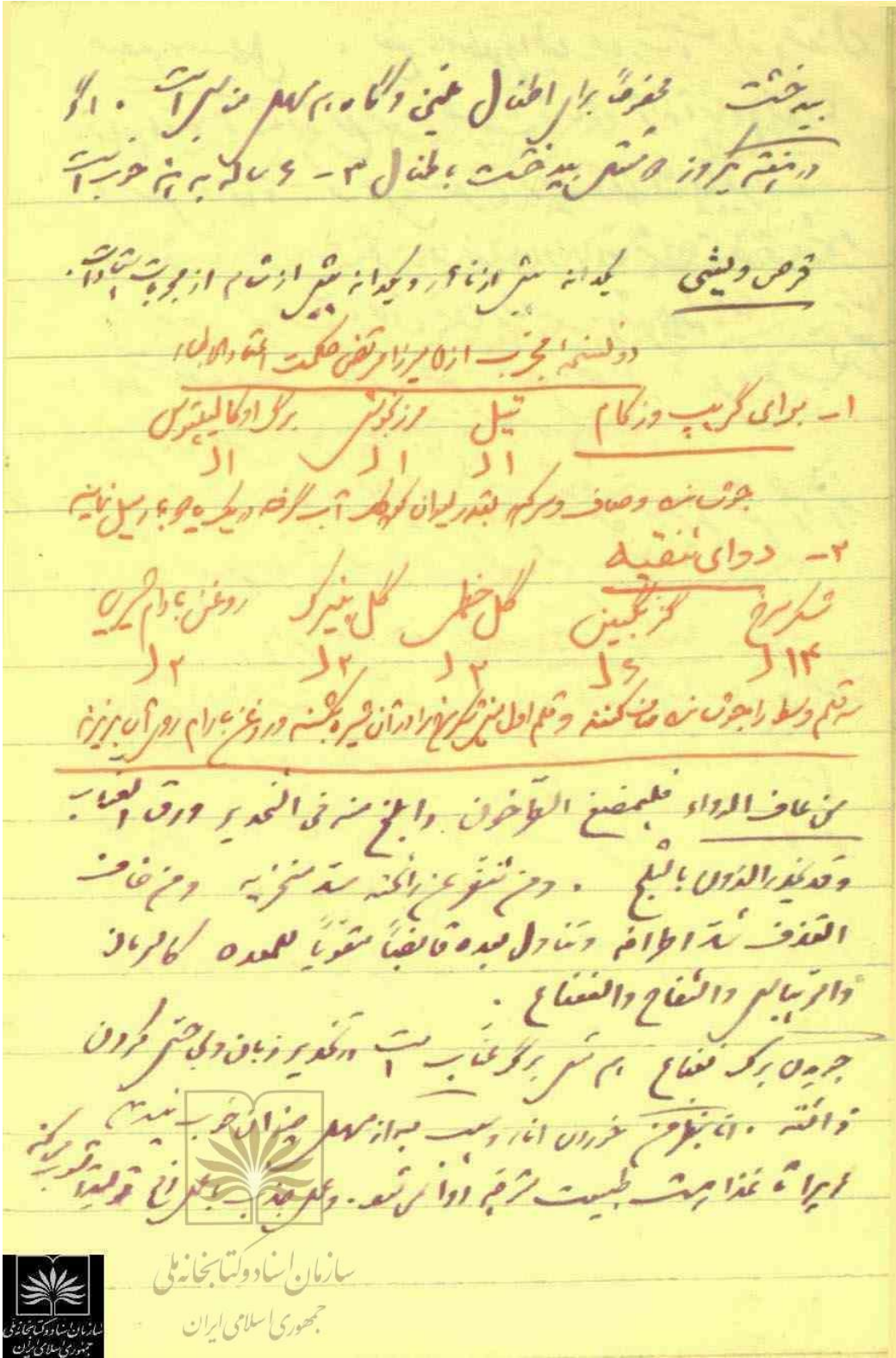
نسخه جات: حکیم محمد حسن صاحب امروهی (صفحه ۱)

پزشکی سنتی گیاهان دارویی کتابخانه ملی (۵-۱۷۹۶۶)

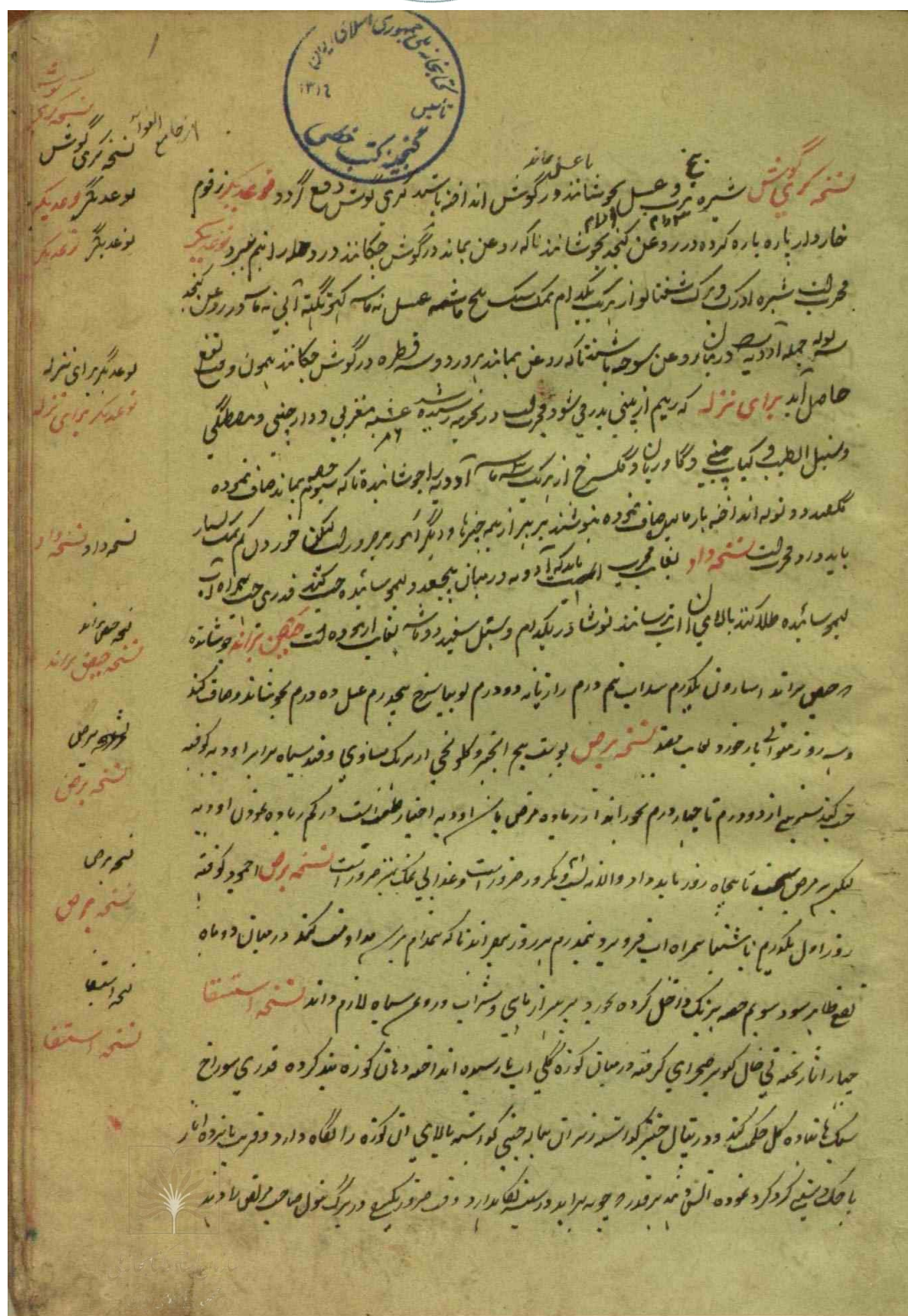


نسخه جات حکیم محمد حسن صاحب امروهی (صفحه ۲)

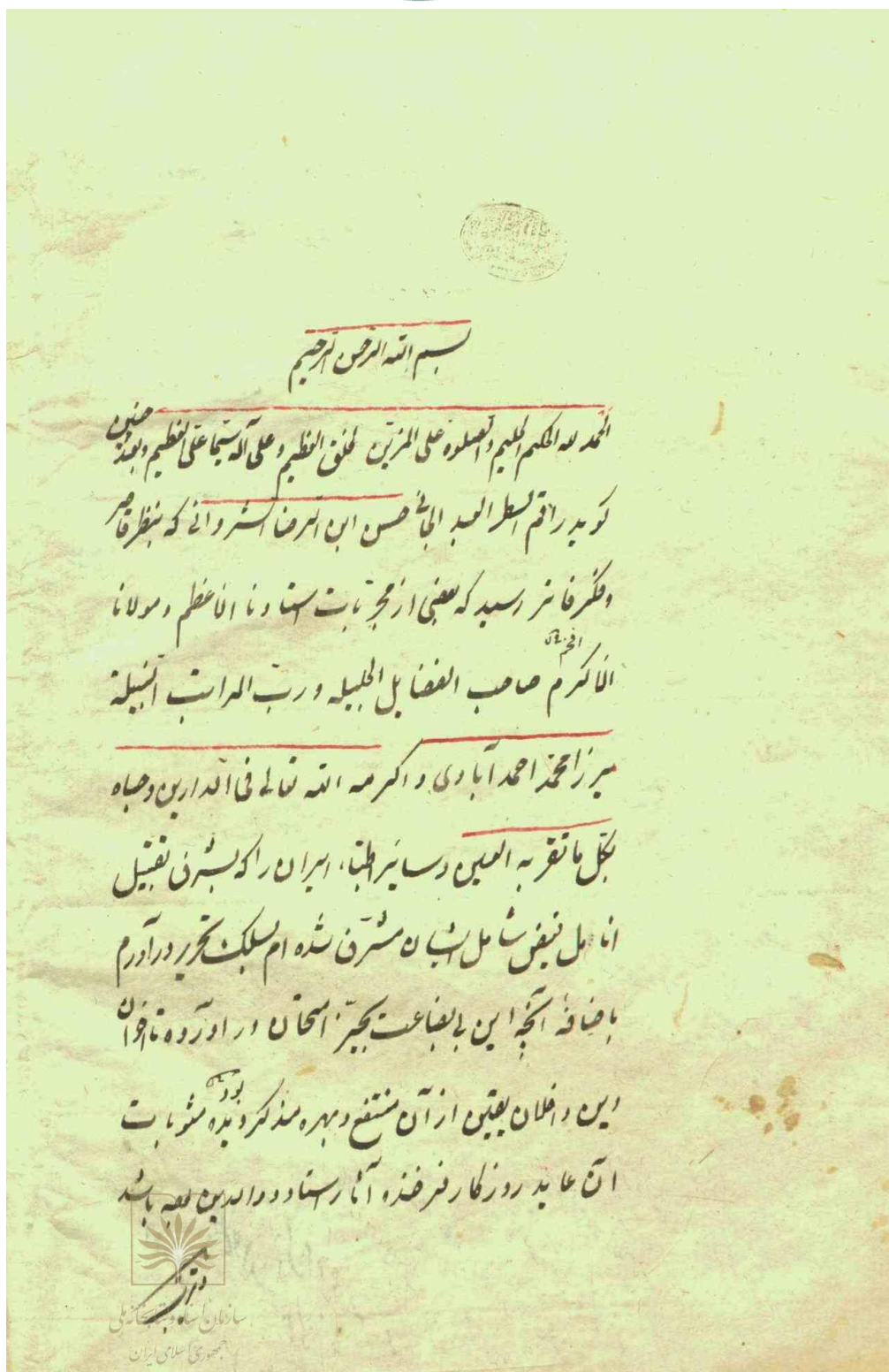
پزشکی سنتی گیاهان دارویی کتابخانه ملی (۵-۱۷۹۶۶)



نسخه دارو و درمان: جلال الدین همایی (گیاهان دارویی قرن ۱۴)، صفحه ۱، کتابخانه ملی (۲۰۲۴۳-۵)

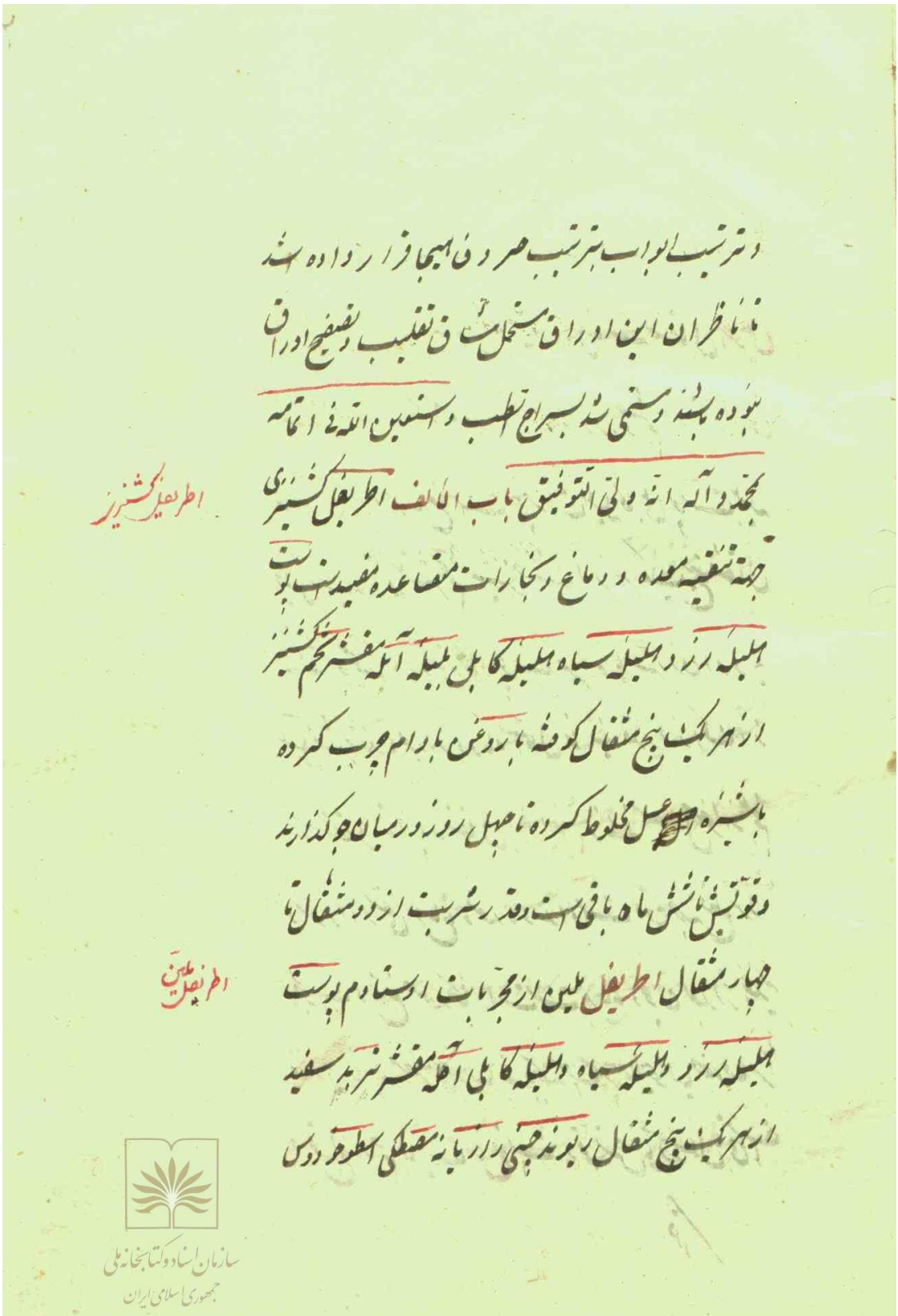


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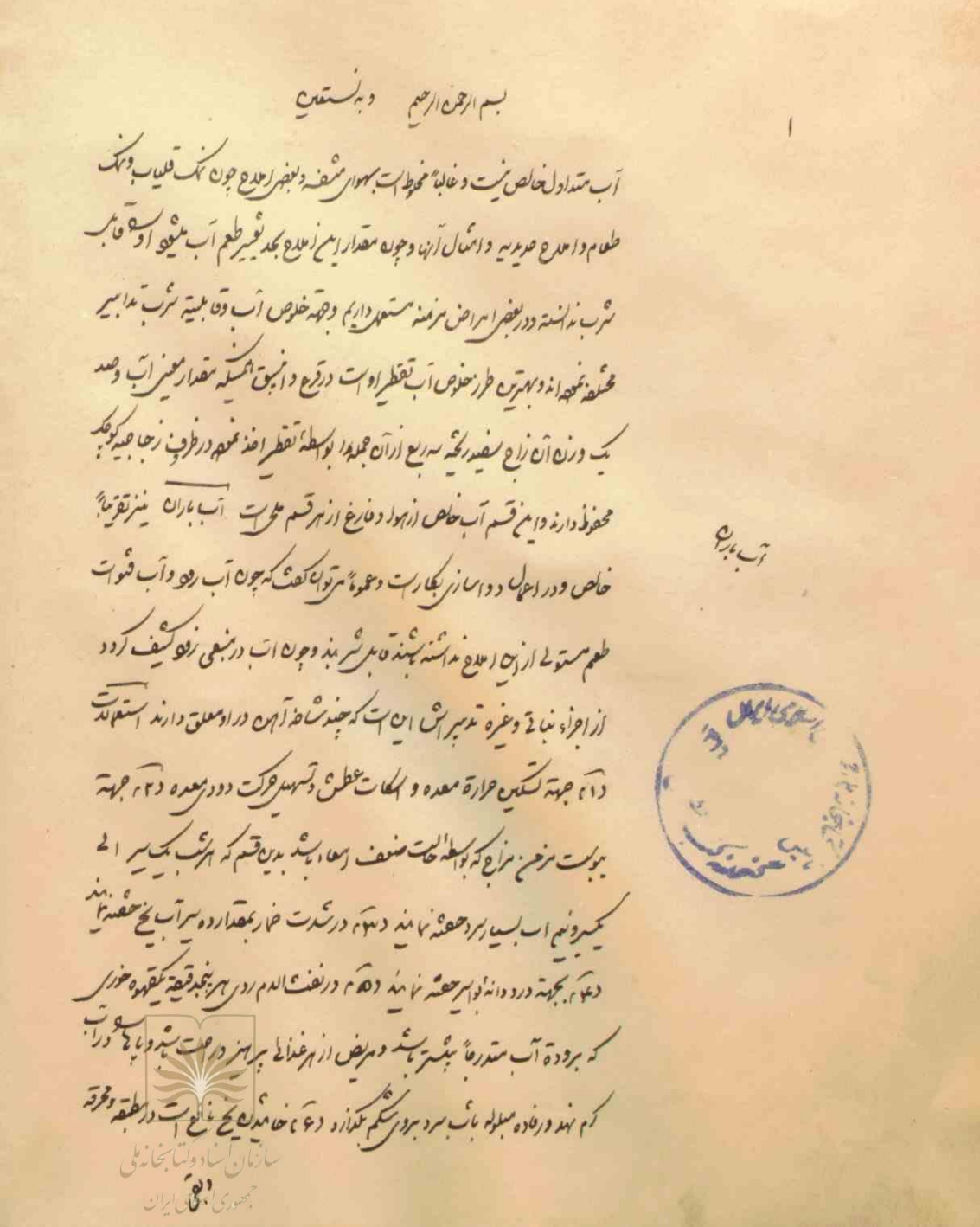


سراج الطب: حسن بن الرضا الشروانی شیروانی (رساله ای در داروشناسی داروسازی) (صفحه ۱)

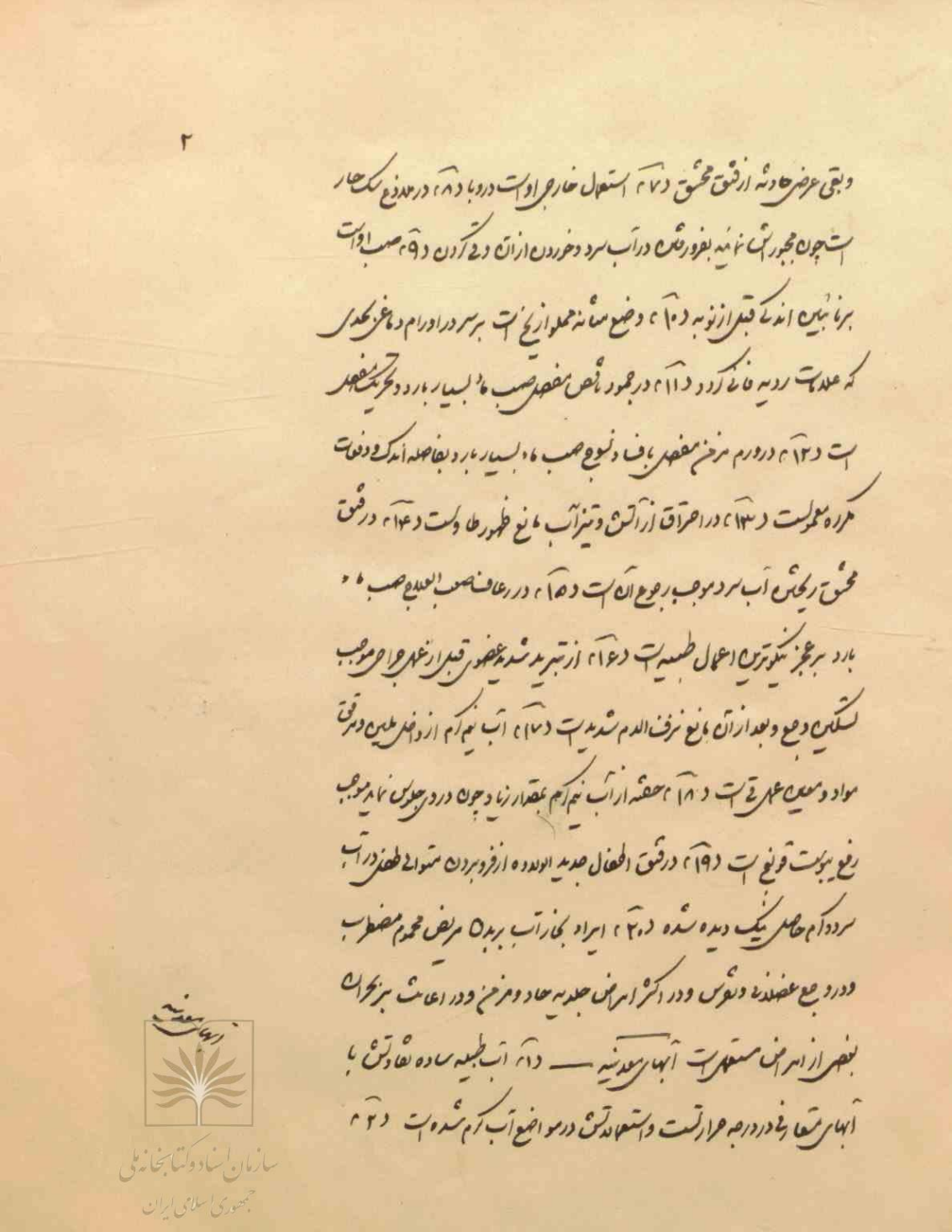
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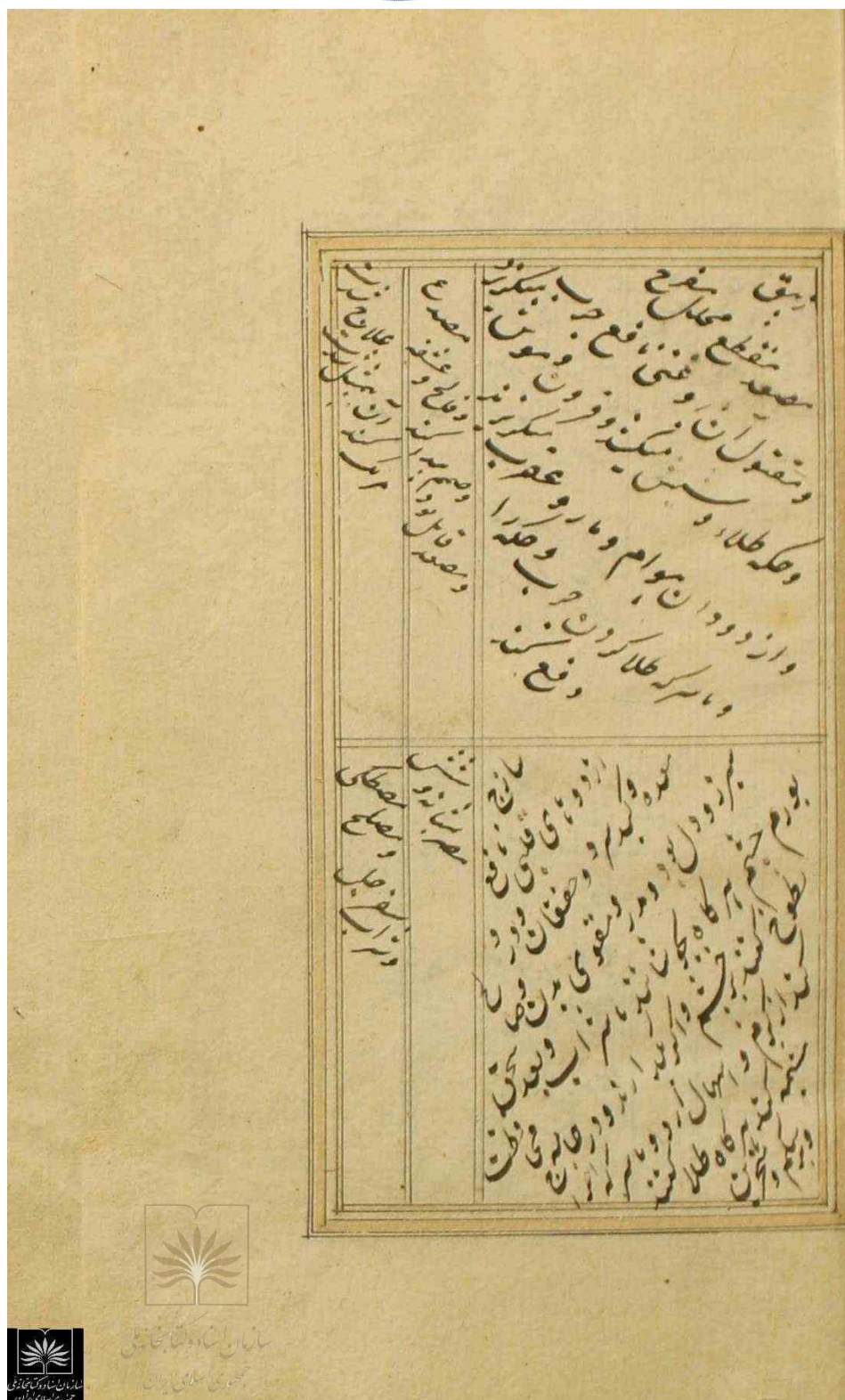
سراج الطب: رساله ای در داروشناسی داروسازی (صفحه ۲)، کتابخانه ملی (۵۶۷۰۱-۵)



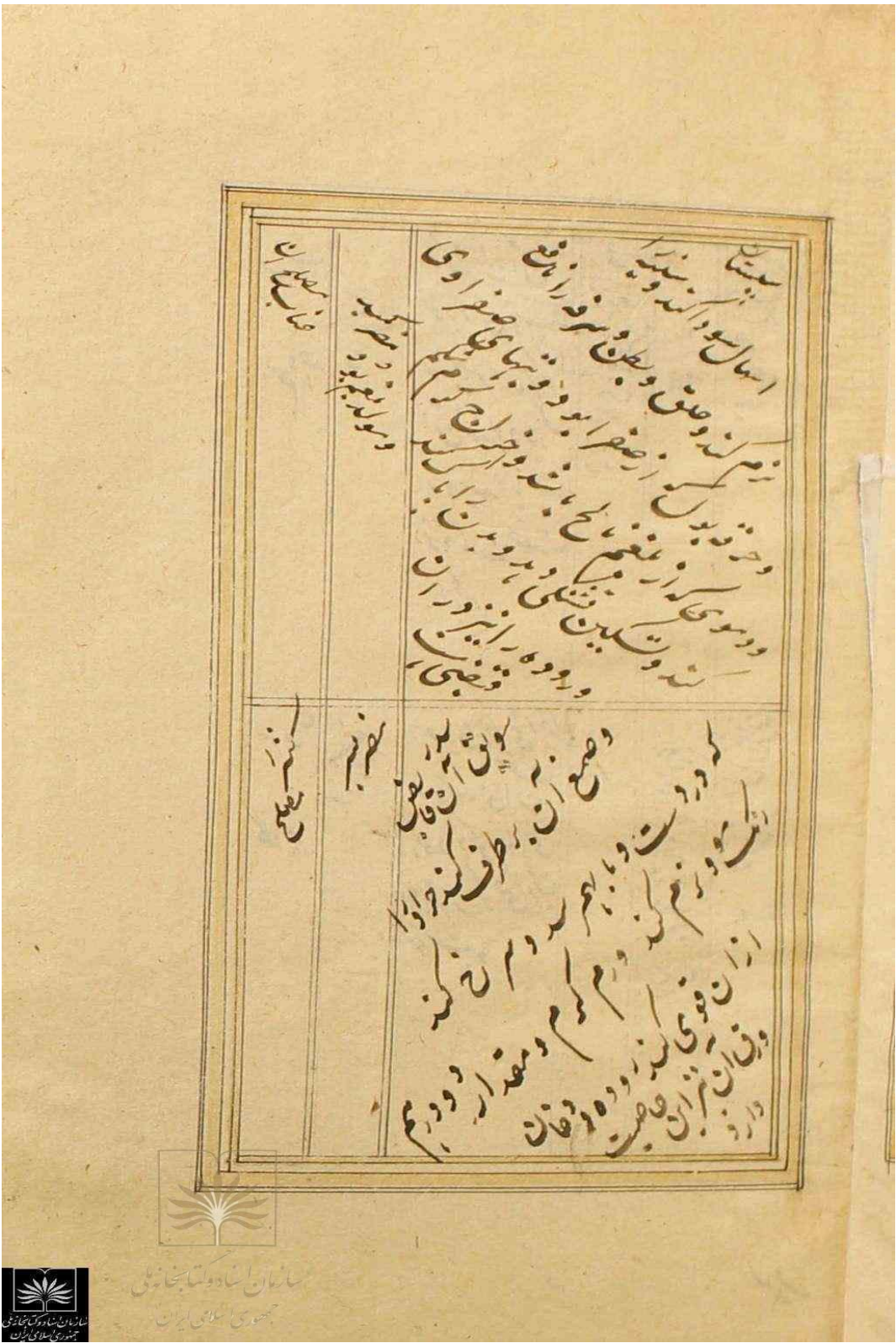
کتاب (نسخه خطی) شیمی: میرزا محمد ملقب به صدیق الحکماء (کتاب درسی دارالفنون) (صفحه ۱)، کتابخانه ملی (۹۸۴۱-۵)



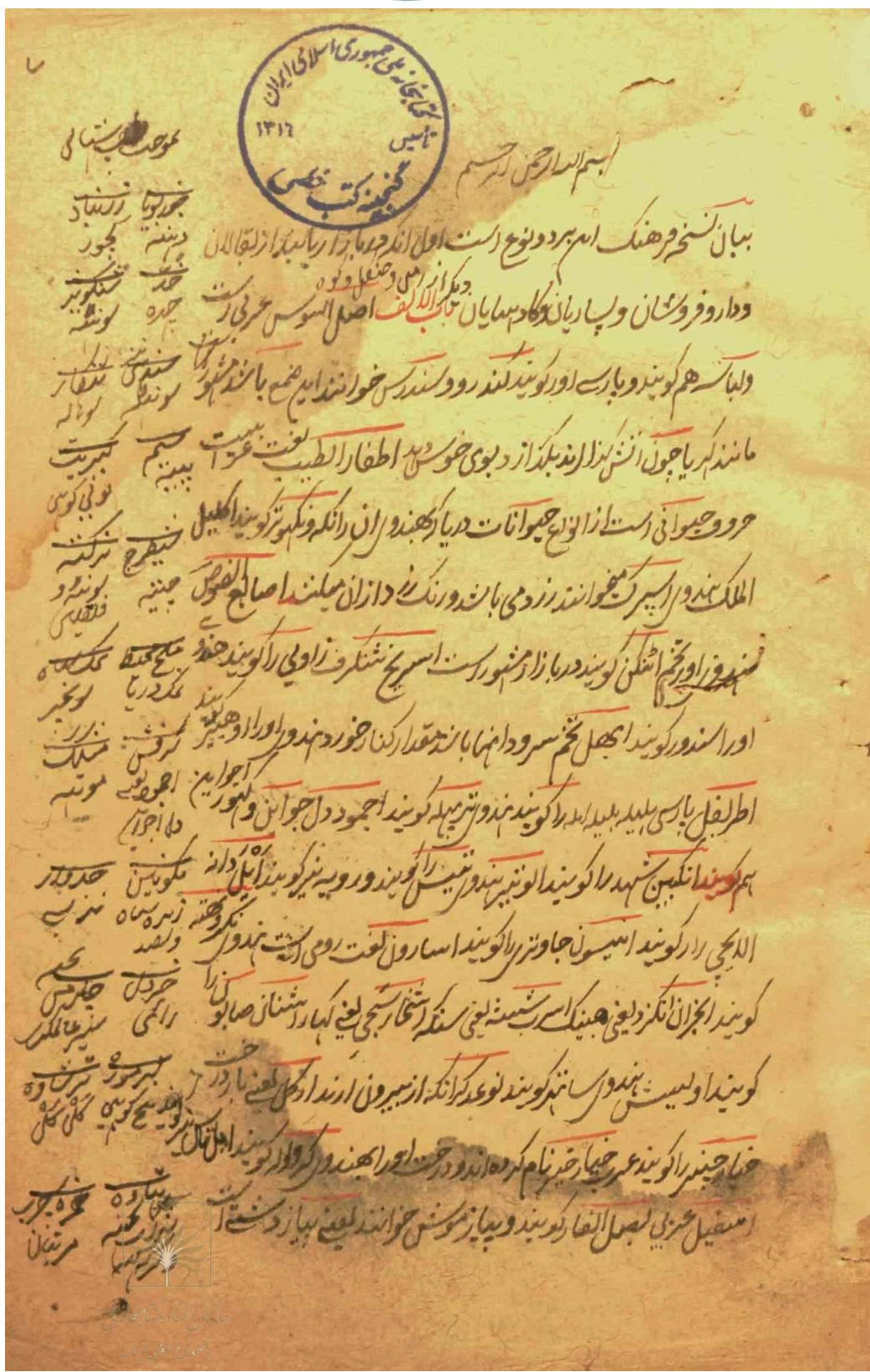
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 کتابخانه ملی (۹۸۴۱-۵)



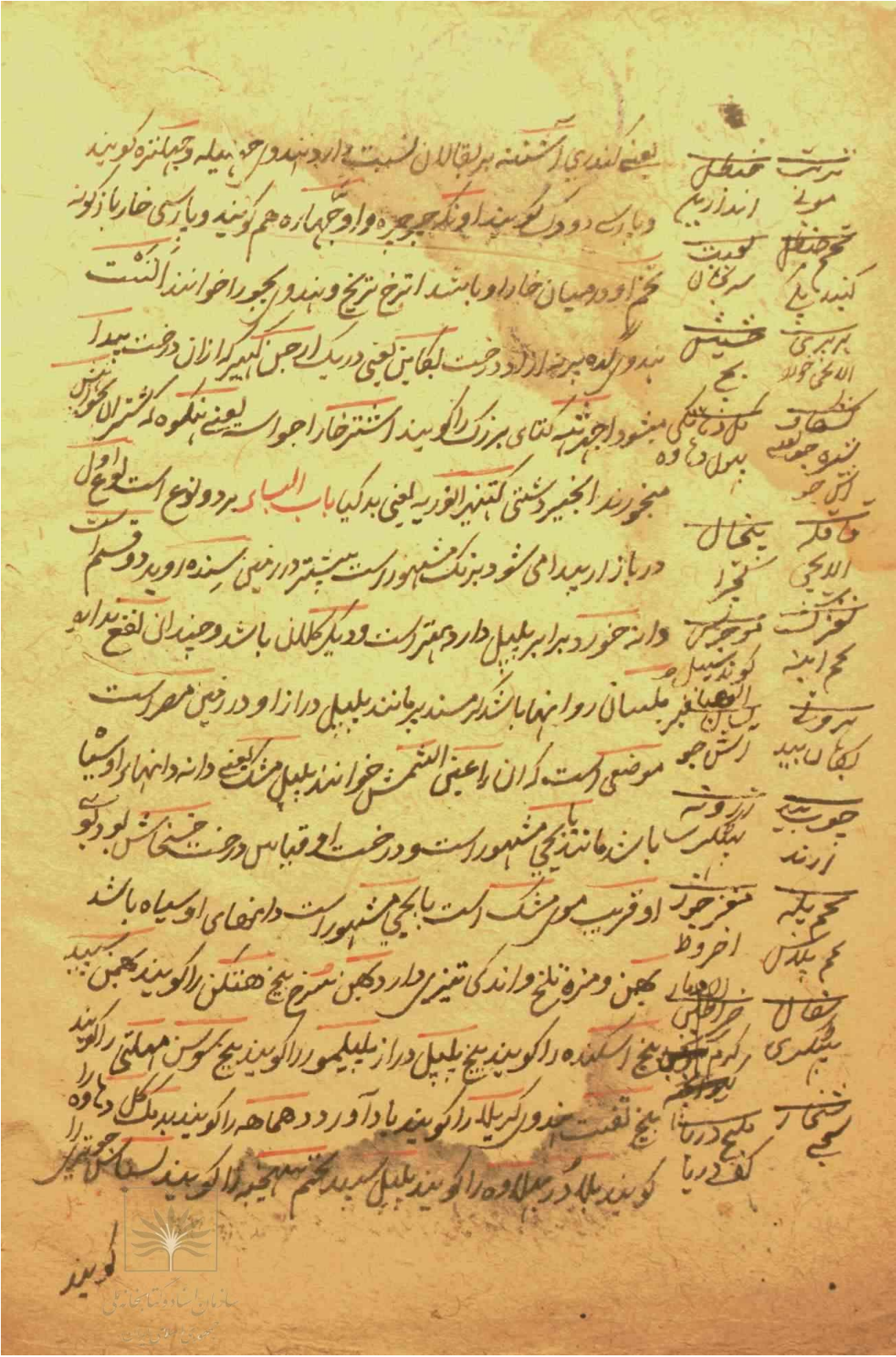
گیاه شناسی در پزشکی سنتی (صفحه ۱)، کتابخانه ملی (۳۲۹۱۰-۵)



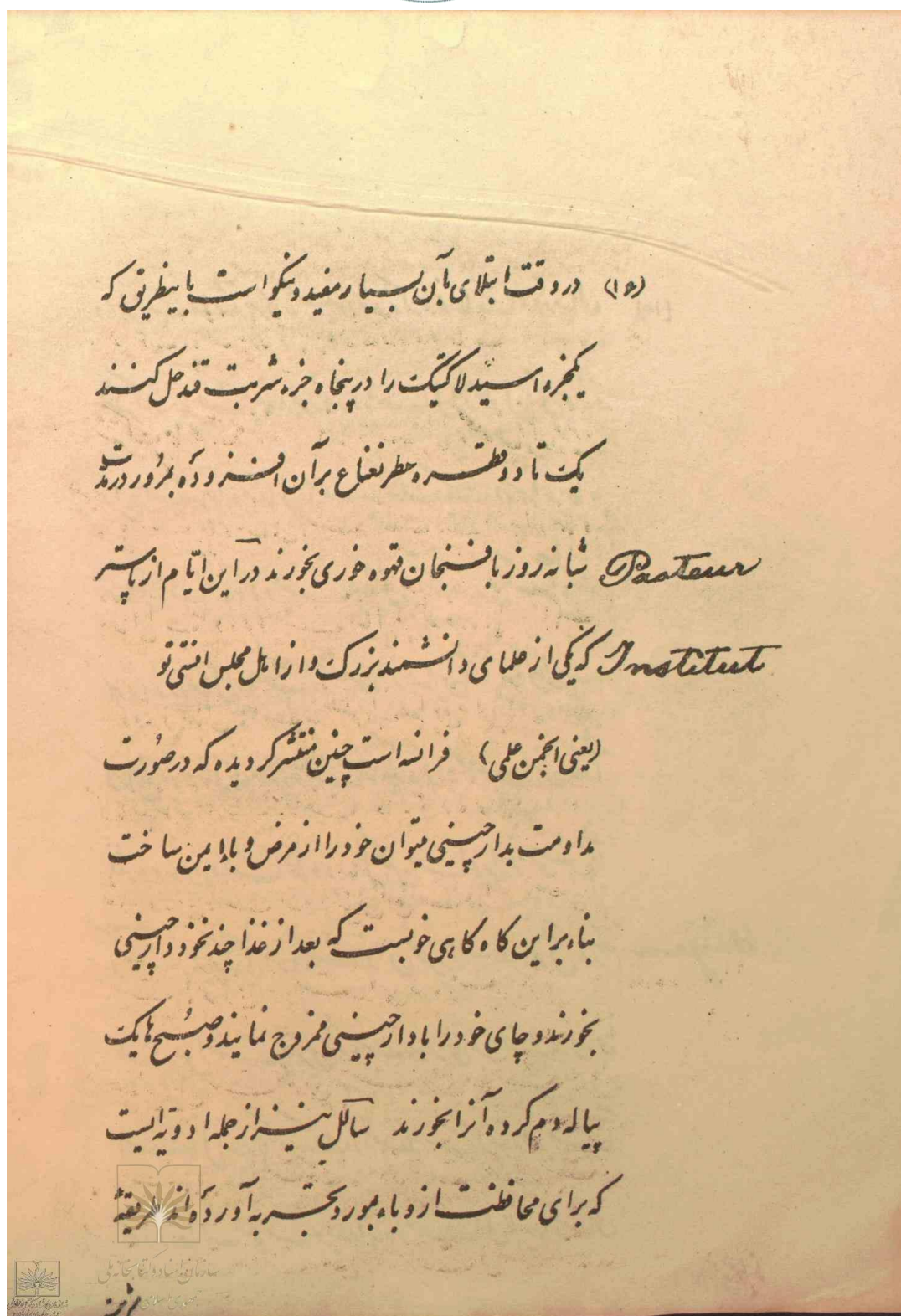
گیاه شناسی در پزشکی سنتی (صفحه ۲)، کتابخانه ملی (۵-۳۲۹۱۰)



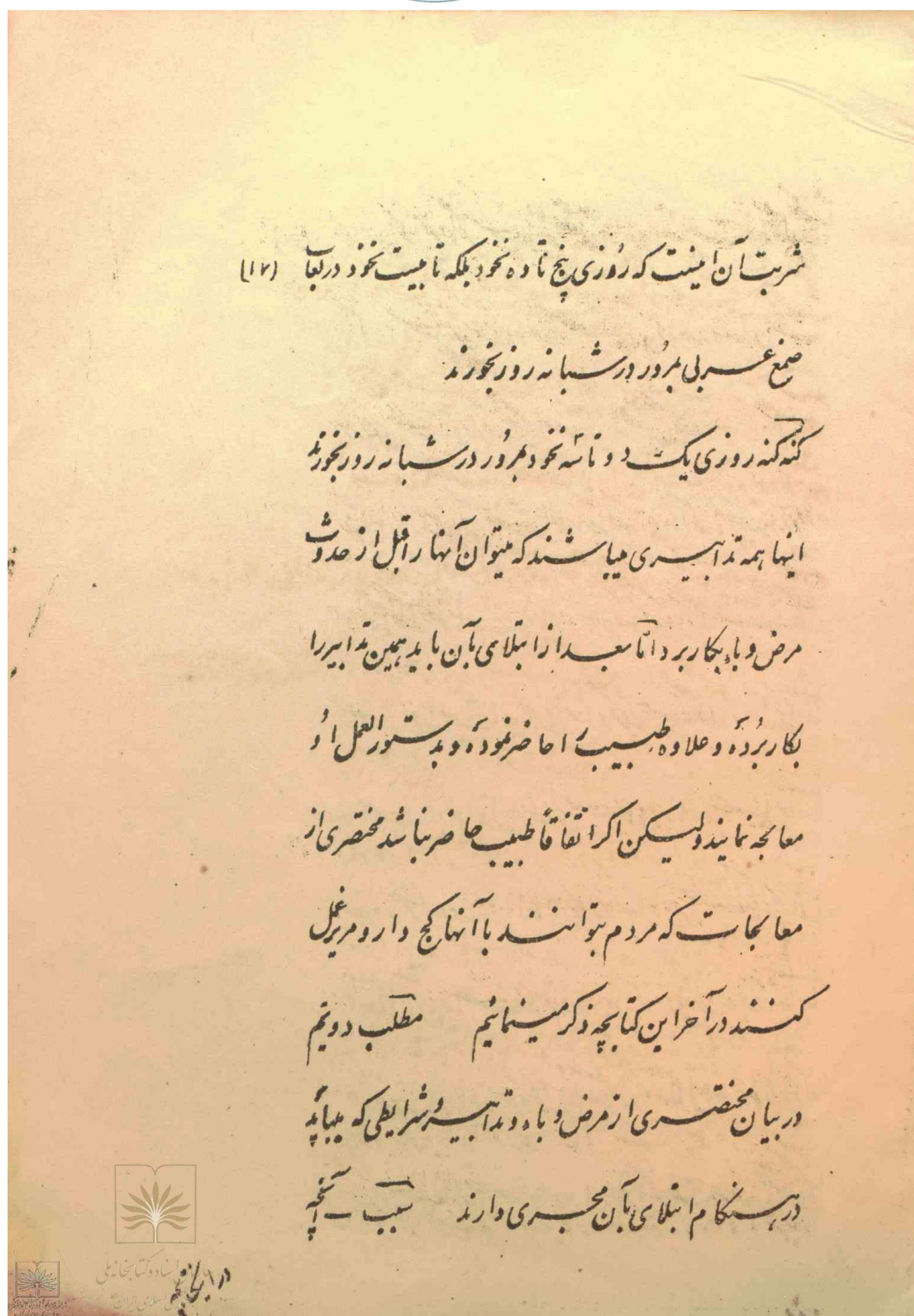
واژه نامه های چندزبانه گیاهان دارویی به سه زبان عربی، هندی و فارسی (صفحه ۱)، کتابخانه ملی (۷۳۸۰-۵)



واژه نامه های چندزبانه گیاهان دارویی (صفحه ۱)، کتابخانه ملی (۷۳۸۰-۵)



نسخه خطی وبائیة: معتمد الحکما محمود بن عبدالکریم (درباره چگونگی پیشگیری، تشخیص و درمان بیماری وبایا گیاهان دارویی) (صفحه ۱)، کتابخانه ملی (۱۱۱۹۳۵۲)



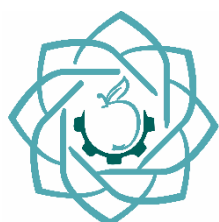
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کتابخانه ملی (۱۱۱۹۳۵۲)



دسیرخانه‌ی گنکره، به موجب وظیفه بر خود فرض می‌دانند از زحمات مسئولین، اساتید و دانشجویان دانشگاه اصفهان و علوم
نزشکی اصفهان و سایر دانشگاه‌های کشور و خارج از کشور، برای همکاری در برگزاری **گنکره بین المللی فرآورده‌های طبیعی**
شفا بخش به ویژه مساعدت‌های بی‌شائبه‌ی حامیان مادی و معنوی ذیل که ماراد برپایی هرچه با شکوه‌ترین همایش‌های
رسانند، قدردانی و تشکر نموده و توفیق روزافزون آنان را از خداوند متعال مسئلت نماید.



حامیان مالی



انجمن صنفی کارفرمایی تولیدکنندگان و
صادرکنندگان صنایع غذایی
استان اصفهان
شماره ثبت: ۶۸۸۲



شرکت داروسازی باریج اسانس

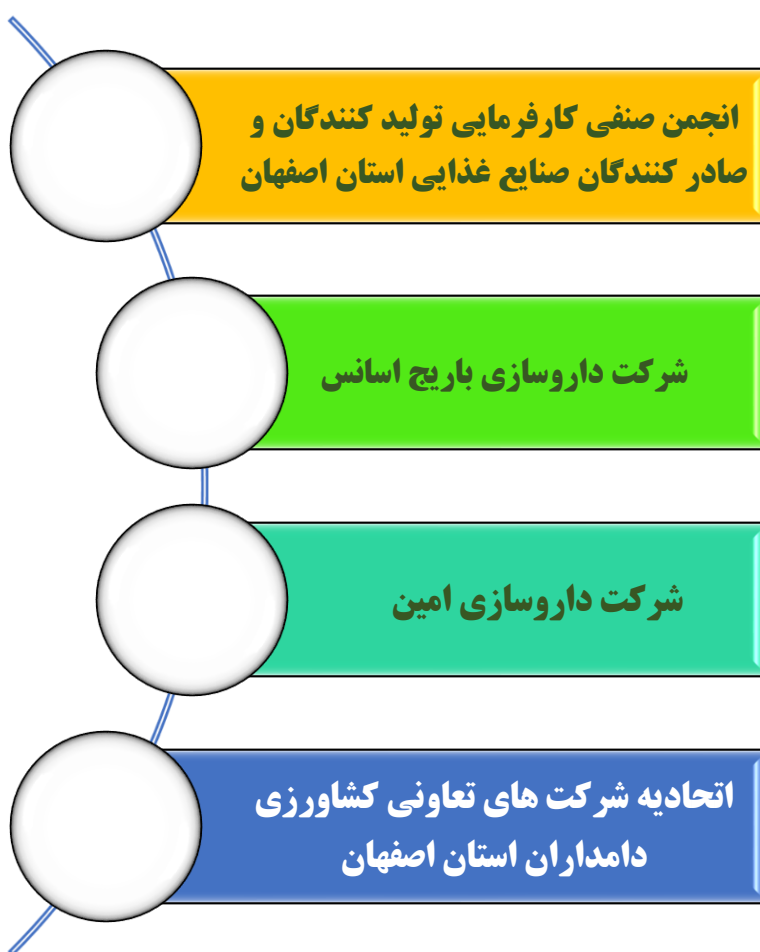


شرکت داروسازی امین

Amin Pharmaceutical Company

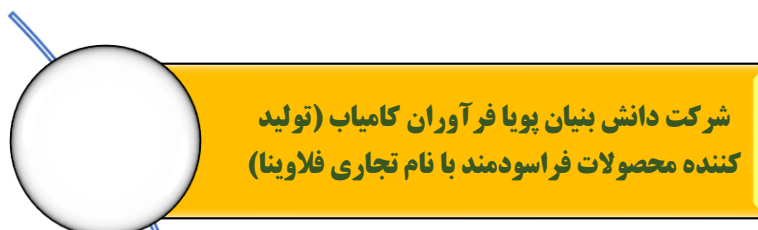


تاسیس ۱۳۶۶
اتحادیه شرکت های تعاونی
کشاورزی دامداران استان اصفهان

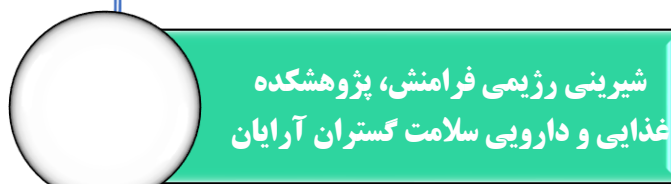




حامیان مالی



شرکت های رژیمی فرامنش
پژوهشگاه غذایی و دارویی سلامت گستران آرایان





University of Isfahan

May 2023

دانشگاه اصفهان

اردیبهشت ۱۴۰۲



حامیان معنوی



معاونت علمی و فناوری ریاست جمهوری
ستاد توسعه علوم و فناوری
گیاهان دارویی و طب سنتی



جمهوری اسلامی ایران
وزارت بهداشت، درمان و آموزش پزشکی
دفتر طب ایرانی



سازمان محترم اسناد و کتابخانه ملی، منطقه مرکزی کشور (اصفهان)



Iranian Traditional
Medicine Association

انجمن علمی
طب سنتی ایران



سازمان فرهنگی اجتماعی ورزشی شهرداری اصفهان
اداره توسعه فرهنگ سلامت

دانشگاه اصفهان،

اردیبهشت ماه ۱۴۰۲

قدمت استفاده ی بشر از فرآورده های طبیعی به منظور پیشگیری و درمان به هزاران سال می رسد، زیرا عفونت و بیماری ها در طول تاریخ، زمینه ساز مشکلات فراوان برای انسان بوده و برخی از آنها باعث بحران های شدید اقتصادی، اجتماعی و سیاسی شدند، اگرچه مصرف این محصولات تنها جنبه ی بهداشتی و درمانی نداشته؛ بلکه بسیاری از این فرآورده ها نقش تأمین غذا، حفاظت محصولات و کاربرد وسیعی در صنایع مختلف داشته است. فرآورده های طبیعی گستره ی وسیعی از محصولات را شامل می شود و بسیاری از پتانسیل های کاربردی آنها مجهول و بسیاری مغفول مانده است. با نگاهی اجمالی به کتب پزشکی و دیگر موارد علمی میتوان به میزان اهمیت مصرف این محصولات برای صاحبان حرف پزشکی و داروسازی در دو قرن اخیر و حکما و اطبای گذشته و حتی آحاد جامعه مردم پی برد.

علیرغم تلاش های گسترده به منظور دستیابی به درمان ها و پیشگیری موثر برای مقابله با عفونت ها و بیماری های مختلف، دنیای امروز همچنان درگیر این بیماری ها و عوارض ناشی از مصرف فرآورده های مصنوعی است و علاوه بر تلاش های ارزنده طب نوین در زمینه تولید و به کارگیری داروهای موثر علیه بیماری های مختلف، میتوان از گنجینه طب سنتی و مکاتب دیگر سلامت محور با توجه به گستره ی وسیع تاریخی و جغرافیایی مصرف فرآورده های طبیعی، نیز بهره برد. امروزه با بهره گیری از فرآورده های طبیعی و گسترش علوم مرتبط با تولید آنها، می توان خدمات پیشگیری، دارویی و درمانی مناسب تری به جامعه بشری ارائه کرد.