2022

VIRTUAL PHARMA CONFERENCE

June 18, 2022 | Online Conference

Theme:

Avances and Innovations in Pharmaceutical Science and Novel Drug Delivery Systems

impact Conferences

KEYNOTE FORUM

DAY 1

4th International conference on

PHARMACEUTICS AND NOVEL DRUG DELIVERY SYSTEMS

BOOK OF ABSTRACT

JUNE 18, 2022

VIRTUAL PHARMA 2022

Sergey Suchkov
Institute for Global Health of MGUPP, and A.I. Evdokimov Moscow State University of Medicine & Dentistry, Russia

Personalized and Precision Medicine (PPM) as a Unique Healthcare Model to Be Set Up through Biodesign, Unique Translational Applications and Upgraded Business Marketing to Secure the Human Healthcare, Wellness and Biosafety

Traditionally a disease has been defined by its clinical presentation and observable characteristics, not by the underlying molecular mechanisms, pathways and systems biology-related processes specific to a particular patient (ignoring persons-at-risk). A new systems approach to subclinical and/or diseased states and wellness resulted in a new trend in the healthcare services, namely, personalized and precision medicine (PPM).

To achieve the implementation of PPM concept, it is necessary to create a fundamentally new strategy based upon the biomarkers and targets to have a unique impact for the implementation of PPM model into the daily clinical practice and pharma. In this sense, despite breakthroughs in research that have led to an increased understanding of PPM-based human disease, the translation of discoveries into therapies for patients has not kept pace with medical need. It would be extremely useful to integrate data harvesting from different databanks for applications such as prediction and personalization of further treatment to thus provide more tailored measures for the patients and persons-at-risk resulting in improved outcomes and more cost effective use of the latest health care resources including diagnostic (companion ones), preventive and therapeutic (targeted molecular and cellular) etc.

Translational researchers, bio-designers and manufacturers are beginning to realize the promise of PPM, translating to direct benefit to patients or persons-at-risk. For instance, companion diagnostics tools and targeted therapies and biomarkers represent important stakes for the pharma, in terms of market access, of return on investment and of image among the prescribers. At the same time, they probably represent only the generation of products resulting translational research and applications. So, developing medicines and predictive diagnostic tools requires changes to traditional clinical trial designs, as well as the use of innovative (adaptive) testing procedures that result in new types of data. Making the best use of those innovations and being ready to demonstrate results for regulatory bodies requires specialized knowledge that many clinical development teams don't have. The areas where companies are most likely to encounter challenges, are data analysis and workforce expertise, biomarker and diagnostic test development, and cultural awareness. Navigating those complexities and ever-evolving technologies will pass regulatory muster and provide sufficient data for a successful launch of PPM, is a huge task. So, partnering and forming strategic alliances between researchers, bio-designers, clinicians, business, regulatory bodies and government can help ensure an optimal development program that leverages the Academia and industry experience and FDA's new and evolving toolkit to speed our way to getting new tools into the innovative markets.

Sergey Suchkov

Institute for Global Health of MGUPP, and A.I. Evdokimov Moscow State University of Medicine & Dentistry, Russia

Healthcare is undergoing a transformation, and it is imperative to leverage new technologies to support the advent of PPM. This is the reason for developing global scientific, clinical, social, and educational projects in the area of PPM and TraMed to elicit the content of the new trend. The latter would provide a unique platform for dialogue and collaboration among thought leaders and stakeholders in government, academia, industry, foundations, and disease and patient advocacy with an interest in improving the system of healthcare delivery on one hand and drug discovery, development, and translation, on the other one, whilst educating the policy community about issues where biomedical science and policy intersect.

Biography

Sergey Suchkov was born in the City of Astrakhan, Russia, in a family of dynasty medical doctors. In 1980, graduated from Astrakhan State Medical University and was awarded with MD. In 1985, Suchkov maintained his PhD as a PhD student of the I.M. Sechenov Moscow Medical Academy and Institute of Medical Enzymology. In 2001, Suchkov maintained his Doctor Degree at the National Institute of Immunology, Russia.

From 1989 through 1995, Dr Suchkov was being a Head of the Lab of Clinical Immunology, Helmholtz Eye Research Institute in Moscow. From 1995 through 2004 - a Chair of the Dept for Clinical Immunology, Moscow Clinical Research Institute (MONIKI). In 1993-1996, Dr Suchkov was a Secretary-in-Chief of the Editorial Board, Biomedical Science, an international journal published jointly by the USSR Academy of Sciences and the Royal Society of Chemistry, UK.

At present, Dr Sergey Suchkov, MD, PhD, is:

Professor, 1Institute for Global Health of MGUPP and 2A.I. Evdokimov Moscow State University of Medicine & Dentistry (MGMSU), Russia;

Antonio Vassallo
University of Basilicata, Italy

Nanotechnological exploitation of the antioxidant potential of Hura crepitans L. extract

Hura crepitans L. belongs to the Euphorbiaceae family. It is a tree growing up to 40 m high, characterized by dark, pointed (conical) spines. Its common name “Monkey-no-climb” refers to the characteristic spiny trunk. H. crepitans is known for many ethnomedicinal applications, but also for its toxicity. Indeed, the latex is used as arrow poison and is said to cause ailing teeth to fall out. The milky sap is known to be a poison to fish, due to the presence of huratoxine and hexahydrohuratoxin, two lectins with hemagglutinating activity that inhibit protein synthesis. Huratoxin was demonstrated to be more potent than callicarpone, isolated from Callicarpa candicans (Burm. f.) Hochr., and rotenone, a strong inhibitor of complex I of the mitochondrial respiratory chain. On the other hand, H. crepitans leaves, stem bark, roots, and seeds have several therapeutic applications, which include the treatment of skin diseases, rheumatism, intestinal worms in leprosy. A few studies reported the presence of flavonoids, phenolic acid, carotenoids, terpenes in root, stem bark, and leaf extracts of H. crepitans, especially in aqueous extracts. These compounds are secondary metabolites involved in the defense of plants that play a key role in reducing oxidative stress, which is a prominent cause of various human diseases, such as cancer, neurodegenerative diseases, diabetes, and obesity. Solvent, temperature, and duration of extraction can influence the phytochemical profile and biological activity of plant extracts.

The purpose of this study was to improve the knowledge on Hura crepitans L and its antioxidant activity in nanoformulation. Different green extraction methods were applied, varying solvent, temperature, and duration of extraction, which can influence the phytochemical profile and biological activity of plant extracts, and the extracts were fully characterized. Aqueous extracts exhibited a superior antioxidant activity, as indicated by different spectrophotometric tests, and were cytoprotective to HepG2 cells used as model cells. Liquid chromatography–mass spectrometry analyses were performed to identify the secondary metabolites involved in these effects and demonstrated that solvent, duration, and temperature indeed influenced the extraction of polyphenols. Furthermore, the most promising extract, in terms of antioxidant potential, was incorporated into liposomes with the aim of promoting cell interaction and enhancing the antioxidant activity.

Biography

Antonio Vassallo obtained his master degree on Pharmacy in 2002 at the University of Salerno (Italy). November 2005, he obtained his Specialization in Hospital Pharmacy. 2010 he obtained his Ph.D. discussing a doctoral thesis “Identification of new potential inhibitors of Hsp90, a promising target in cancer therapy”. He spent in 2006 and 2009 a traineeship at the Molecular Oncology Laboratory of Sigma-Tau (Rome). Since 2010, Assistant Professor at the University of Basilicata (Italy). The main field of research deals with studies of biologically active compounds isolated from food and medicinal plants and their conventional and innovative drug delivery systems.

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A. C. Matin
Stanford School of Medicine, USA

mRNA-based directed gene delivery therapy

The presentation focuses on systemically administered targeted gene therapy using mRNA instead of DNA; why the former is superior for this purpose will be discussed. Lipid nanoparticles (LNPs) and, more recently, extracellular vesicles (EVs, aka exosomes) have proven effective vectors. An example of LNP-mediated directed mRNA delivery is that of Cas9 gene for editing of PTEN by the CRISPR/Cas system. Also, an mRNA-LNP drug, NTLA-2001, is in clinical trial for treating transthyretin amyloidosis. EVs are nature's own antigen delivery system, posing minimal immunogenicity/toxicity risk and their surface integrins confer intrinsic tissue tropism. They have been engineered to display targeting moieties, which are fused to EV anchor domains. Emphasis here will be on the lactadherin C1-C2 anchor domain (which binds to the EV surface) and its fusion to a high affinity anti-HER2 scFv, resulting in HER2 receptor targeting EVs. These were loaded with mRNA that encodes the enzyme HChrR6, which can activate several prodrugs, including CNOB and CB1954 (tretazicar). (The loaded and targeted EVs are called 'EXODEPTs'.) Systemic delivery of EXODEPTs along with either CNOB or tretazicar resulted in the killing of HER2+ breast cancer xenografts in mice without any off-target effects, indicating gene delivery exclusively to the cancer. Attaining specific tumor targeting and loading of the EVs with the HChrR6 mRNA were greatly facilitated by the fact that the activated drug of CNOB, MCHB, is highly fluorescent and can be visualized non-invasively in living mice. Tretazicar was effective at its safe dose; the EVs needed to be delivered only twice; and there were no side effects. Thus, the results augment clinical transfer potential of this regimen. Examples of EV targeting using other anchor proteins, e.g., Lamp2b and CD47, will also be briefly discussed. As the EV anchor domains can be fused to other targeting moieties, the approach is generic for specific gene delivery also in other diseases.

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SPEAKERS

DAY 1

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David Mead
Terra Bioworks Corp., USA

New Tools for Meta/Genome Mining of Microbial Therapeutic Compounds

The discovery and production of bioactive small molecule compounds is complicated and time intensive. Using new synthetic biology tools, we have been able to clone thousands of full-length pathways obtained from uncultivated microbes found in soil microbiomes, resulting in hundreds of new bioactive pathways. Using a different set of novel tools, 134 biosynthetic gene clusters (BGCs) ranging from 12 to 150 kb from over 100 diverse bacterial and fungal strains were successfully captured and cloned using CRISPR-Cas9 to precisely excise the pathway of interest. To improve the success of heterologous expression, we developed a new Actinobacteria BGC expression vector (pDualP) and a companion vector for Bacillus which uniquely includes two inducible promoter elements, one flanking each side of the cloning site. Clusters cloned and introduced to Actinobacteria and Bacillus heterologous hosts include ACT, RED, nystatin, erythromycin, vancomycin, difficidin, bacillusin A, and many dozens of novel clusters. We de-orphaned the stravidin BGC from Streptomyces sp. NRRL S-98 in two months using the same inducible approach. Second, we observed a substantial enhancement of the antimicrobial activity of heterologously-expressed, soil-derived metagenomic BGCs through induction with pDualP and demonstrate the ability to reconstitute complete BGCs from fragments of metagenomic libraries. Finally, we applied directed BGC cloning to model and novel fungal BGCs for successful heterologous expression in Aspergillus. These results indicate that virtually any sequenced BGC can be cloned intact from complex genomes, and that direct cloning to a dual-inducible expression vector can greatly accelerate downstream small molecule characterization.

Biography

David Mead is CEO and Co-Founder of Terra Bioworks, the Natural Products by Design Company. Terra Bioworks has developed a new generation of synthetic biology tools that accelerate drug discovery tenfold, enabling the production of “unnatural” drugs from nature. Dr. Mead also founded and built Lucigen into a multimillion-dollar company before its sale in 2018 to LGC for $70M. Dr. Mead has developed dozens of molecular products, is the inventor of TA cloning (a billion-dollar product) and has 65 peer-reviewed publications and 11 issued patents.

Monti Daniela
University of Pisa, Italy

Nanomicellar formulations for thedevelopment of an antiglaucoma eye drop based on a MAGL inhibitor

The ocular endocannabinoid system (ECS) including enzymes and CB1/CB2 receptors determines various substantial effects, such as anti-inflammatory activity and reduction of the intraocular pressure (IOP). The modulation of 2-AG levels obtained via MAGL inhibition is considered as a promising pharmacological strategy to activate the ECS. This study aimed to evaluate the effect of a selective MAGL inhibitor (MAGL17b) on the IOP reduction in normotensive rabbits after application of a suitable eye drops containing the highest possible concentration of the drug. The development of the formulation went through several phases including first of all the solubilization of the drug in a hydrophilic environment with the use of appropriate non ionic surfactants, chosen on the basis of their compatibility with the eye. Furthermore, the study involved the evaluation of cytotoxicity and of in vitro/ex vivo corneal permeation of MAG17b of selected formulations. The use of surfactants allowed the solubilization of the drug through the formation of micellar structures with a diameter of 12.3 nm and the formulation obtained determined a significant permeation of MAGL17b, both through excised rabbits corneas and reconstituted corneal epithelium, with a limited corneal epithelial cells death (>80%). The blockade of MAGL activity induced a reduction of the IOP up to 4 mmHg in albino and pigmented rabbits after topical instillation, thus confirming the potential efficacy of the MAGL inhibition approach in the treatment of ocular pathologies.

Biography

Prof. Daniela Monti graduated in Chemistry and Pharmaceutical Technology and received the PhD in "Design, Development and Bio-evaluation of Drugs". In 2000, she became Assistant Professor of Pharmaceutical Technology and currently she holds the role of Associate Professor at the Department of Pharmacy, University of Pisa.

Her scientific research is oriented towards the study of drug delivery systems to the cutaneous, ungual, ocular, vaginal and buccal site, the use of cell cultures to evaluate toxicity on corneal epithelium cells of ophthalmic excipients and the cosmetic field. From 1997 to 2000 he participated in the European project BIOMED-2, (BMH4-97-2324) entitled "Evaluation of oculotoxicity of drugs in vitro" with the following European partners: University of Tampere (Finland), University of Bremen (Germany), University of Ioannina (Greece), Orion Corporation Ltd. and Oy Star AB, (Finland). She is also responsible for several research projects involving international companies. Furthermore, she is the author of many publications in international journals with referee, of patents and presented her research at national and international meetings. She has been reviewer for many scientific journals.

Jianqin Lu
The University of Arizona, USA

Sphingomyelin-derived Nanovesicles for Improved Cancer Immunochemotherapy

Despite the enormous therapeutic potential of immune checkpoint blockade (ICB), it benefits only a small subset of patients. Some chemotherapeutics can switch 'immune-cold' tumours to 'immune-hot' to synergize with ICB. However, safe and universal therapeutic platforms implementing such immune effects remain scarce. We demonstrate that sphingomyelin-derived camptothecin nanovesicles (camptothesomes) elicit potent granzyme-B- and perforin-mediated cytotoxic T lymphocyte (CTL) responses, potentiating PD-L1/PD-1 co-blockade to eradicate subcutaneous MC38 adenocarcinoma with developed memory immunity. In addition, camptothesomes improve the pharmacokinetics and lactone stability of camptothecin, avoid systemic toxicities, penetrate deeply into the tumour and outperform the antitumour efficacy of Onivyde. Camptothesome co-load the indoleamine 2,3-dioxygenase inhibitor indoximod into its interior using the lipid-bilayer-crossing capability of the immunogenic cell death inducer doxorubicin, eliminating clinically relevant advanced orthotopic CT26-Luc tumours and late-stage B16-F10-Luc2 melanoma, and achieving complete metastasis remission when combined with ICB and folate targeting. The sphingomyelin-derived nanotherapeutic platform and doxorubicin-enabled transmembrane transporting technology are generalizable to various therapeutics, paving the way for transformation of the cancer immunochemotherapy paradigm.

Biography

Jianqin Lu, PhD, is an Assistant Professor of Pharmaceutical Sciences in Pharmaceutics and Pharmacokinetics at The University of Arizona R. Ken Coit College of Pharmacy. The Lu research laboratory strives to develop innovative, safe, and efficacious therapeutics at the interface of drug delivery, synthetic chemistry, pharmaceutics, nanotechnology, and tumor immunology to address the pressing unmet needs in current cancer and other diseases therapy and prevention, particularly in the emerging field of combination immunochemotherapy.

Ana Golez
Celje General and Teaching Hospital, Slovenia

Pharmacological and non-pharmacological aspect to improve quality of life of paraplegic, paraparetic and tetraparetic patients

Many paraplegic, paraparetic and tetraparetic patients wish to improve quality of their life, using pharmacological and non-pharmacological approaches of lowering spasticity and pain, and increasing range of movement, strength, and, if possible, walking ability. Their main aim is to stay independent in activities of daily living.

Painkillers and spasticity drugs, also botulinum toxin, are among mostly widely used medications of paraplegic, paraparetic and tetraparetic patients, among their other prescribed medications.

Among non-pharmacological aspects patients mostly search for help of physiotherapists and occupational therapists. Often they start swimming and diving, because water gives them support and can move freely or with minimal assistance. Some of them take part in sports activities regularly or also compete. Sports generally lead to positive emotional experience, and being physically active and engaging in sports practices leaves people feeling better afterward, also in long-term. They have more energy and a lasting feeling of wellbeing.
With the help of medications and non-pharmacological assistance, people with motor disabilities can stay independent in activities of daily living and can improve quality of live.

Biography

Ana Golez is medical doctor and PRM specialist, working in Celje General and Teaching Hospital, Slovenia.

Ram Narayan Prajapati
Bundelkhand University, India

Dendrimers: New Avenues for Drug Delivery and Nanotechnology

The quest to control the structure of nano-scale objects in terms of size, shape, surface chemistry and flexibility led to the invention of dendrimers. Dendrimers are one of the key components in the growing field of nanotechnology. The unique properties of dendrimers, including well-defined shape and structure, large number of fine-grained surface functional groups, versatility, water-soluble, multivalent, well-defined molecular cavities and internal hydrophobic cavities; has made these nanostructures a budding potential for many areas, including drug delivery, medicine and biomedical, biotechnology fields.

Dendrimers have shown potential in drugs, primarily to improve solubility and drug delivery. The ability to tailor dendrimer properties to drug needs makes them ideal nanocarriers for drug capture and provides a platform for designing nanodevices for advanced therapeutic applications.

Biography

Dr. Ram Narayan Prajapati is affiliated with the Department of Pharmaceutics, Institute of Pharmacy, Bundelkhand University, Jhansi (U. P.) INDIA, and provides services as an assistant professor. He is the author and co-author of several peer-reviewed scientific articles and presented his works at many national and international conferences. Dr. Prajapati developed dendrimer-mediated formulations of various drugs as well as nanotechnology-based targeted formulations for site-specific delivery of therapeutic agents. He was awarded the "Best Faculty Award" at the International Scientist Awards on Engineering Science and Medicine-INSO Awards 2022, organized by the VDGOOD Professional Association. He is actively affiliated with various associations and academies, reviewer / editorial board member of various international journals and has one patent.

Ram Narayan Prajapati
Bundelkhand University, India

Formulation, evaluation and comparative analysis of various formulations of Caesalpinia bonduc extracts obtained by modified ultrasonication assisted extraction method to manage benign prostatic hyperplasia (BPH)

Benign prostatic hyperplasia (BPH) is one of the most common urinary problem affecting men, generally after the age of 50. Several herbal medicines have been used to treat BPH and the symptoms associated with it in the lower urinary tract. This study was designed as the formulation and comparative analysis of various formulations various formulations (tablet, hard capsules and soft gel capsules) prepared for the management of BPH disorders. Here, we describe a therapeutic formula to manage prostate carcinoma from C. bonduc seed (ethanol, hydroalcohol and water extract) by applying a novel ultrasonication-assisted maceration and extraction technique. The seeds were crushed and subjected to a maceration process followed by ultrasonication to yield ethanol, hydroxyl alcohol and water extract separately. After this, the extracts were subjected to various formulations. The tablets were prepared using a single rotatory punching machine, and hard capsules were prepared by filling the dried extracts into hard capsules. The soft gel capsules were prepared by mixing 50% of the extract after lyophilization was solubilized with 50% of pure refined soyabean oil and then subjected to soft gel capsule making using a soft gel capsule making apparatus. After that, the tablets were evaluated for colour, odour, thickness and diameter, with visual inspection for any defects, weight variation, hardness, friability and in vitro disintegration time. In the case of capsules, pharmacopeia tests such as uniformity of weight, disintegration, drug content, and dissolution were carried out. The formulated capsules exhibited optimal in vitro release of extract and passed the uniformity of weight, disintegration, and drug content tests. The formulated capsules also passed the drug content test and had a good sedimentation rate, sedimentation volume, and flow rate. Finally accelerated stability studies, LC-QTOF-MS and HPTLC were conducted to verify the stability and efficacy of the formulations. In conclusion, results of the present evaluations confirmed this product as a promising herbal tablets/capsule formulation as potential replacement of medicines on the market.

Biography

Dr. Shan Sasidharan [Pharm D, MBA (Health Care), B. Pharm, BCMAS-US, PGDPHN (Public Health & Nutrition)] currently pursuing his Ph.D. degree in Pharmacy from Lincoln University College, Malaysia. After graduating, he started his career as an R&D Head for a reputed multinational company located in Kerala, India for a few years. To pursue my dream career, I moved to the Pankajakasthuri group of institutions (Kattakada, Trivandrum, Kerala, India) as the Director of R&D, and have spent the last 3 years keenly involved in research activities for the deployment of various herbal formulations. During his tenure at the Pankajakasthuri group of institutions, he successfully formulated several products. Currently, he is also holding the charge of Director, R&D, CARe KERALAM Ltd. (Trissur, Kerala, India), a public limited company established as a cluster of Ayurveda industries. He has published several international journal papers in the fields of pharmacology, toxicology, pharmaceutical technology and clinical research. He is well versed in designing, planning and conducting controlled experiments and/or clinical trials to improve understanding of a drug's activity.

Mirza Muhammad Faran Ashraf Baig
The University of Hong Kong, Hong Kong

2D DNA nanoporous scaffold promotes osteogenic differentiation of pre-osteoblasts

Biofunctional materials with nanomechanical parameters similar to bone tissue may promote the adherence, migration, proliferation, and differentiation of pre-osteoblasts. In this study, deoxyribonucleic acid (DNA) nanoporous scaffold (DNA-NPS) was synthesized by the polymerization of rectangular and double-crossover (DX) DNA tiles. The diagonally precise polymerization of nanometer-sized DNA tiles (A + B) through sticky end cohesion gave rise to a micrometer-sized porous giant-sheet material. The synthesized DNA-NPS exhibited a uniformly distributed porosity with a size of 25 ± 20 nm. The morphology, dimensions, sectional profiles, 2-dimensional (2D) layer height, texture, topology, pore size, and mechanical parameters of DNA-NPS have been characterized by atomic force microscopy (AFM). The size and zeta potential of DNA-NPS have been characterized by the zeta sizer. Cell biocompatibility, proliferation, and apoptosis have been evaluated by flow cytometry. The AFM results confirmed that the fabricated DNA-NPS was interconnected and uniformly porous, with a surface roughness of 0.125 ± 0.08035 nm. The elastic modulus of the DNA-NPS was 22.45 ± 8.65 GPa, which was comparable to that of native bone tissue. DNA-NPS facilitated pre-osteoblast adhesion, proliferation, and osteogenic differentiation. These findings indicated the potential of 2D DNA-NPS in promoting bone tissue regeneration.

Biography

Baig, MMFA is a registered Pharmacist and did a PhD in Chemistry. His recent research interest is designing nanomaterials for Biomedical Engineering, Mechano Pharmacology, Developmental Biology, Structural Biology,and Neuroscience. He got his post-doctoral training in Nanomedicine at the Faculty of Dentistry, The University of Hong Kong. His postdoctoral work was focused on designing DNA-based functional & bio-active nanomaterials to apply in Restorative Dentistry, Oral Microbiology/ Oncology,Regenerative Therapeutics, Stem Cells Research, Drug Delivery, and Molecular Pharmaceutics. He got a Ph.D. degree in Chemistry (Therapeutical Biochemistry) from the School of Chemistry and Chemical Engineering, Nanjing University (NJU), China. During his Ph.D., he worked on DNA Nanotechnology, Nano-Therapeutics, Biosensing, Bio-imaging, Diagnostics, and Cellular Biophysics. Previously, He received his Doctor of Pharmacy (PharmD) and MPhil (Pharmaceutical Chemistry) degrees from the Faculty of Pharmacy, Bahauddin Zakariya University (BZU), Multan, Pakistan; where he learned about Biochemistry, Phytochemistry, Pharmacognosy, Biotechnology, Polymers, Organic, Medicinal, Bio-analytical, and Material Chemistry.

His research work mainly focused on the construction and function of DNA nanomachines, which are cutting edge and challenging topics. He designed and constructed unique DNA molecular tension probes using a short circular DNA nanotechnology technique and functionalized these probes with fluorophores, gold nanoparticles, small molecular drugs, and peptide ligands. He achieved nano-specific precision in organizing plasmonic nanoparticles on the nano DNA frameworks to achieve plasmon resonance effects. My work on the DNA nanomachines provided an efficient mechanism of fluorescence resonance energy transfer that realizes the bio-imaging, and detection of biological events, and functions of the biomolecules.

Noureddine Chaachouay
Hassan First University, Morocco

The Use of Medicinal plants to Prevent Sars-CoV-2 in Sale

Introduction: Coronaviruses are important animal and human pathogens. Towards the end of 2019, the novel coronavirus identified in Wuhan, China, presented as a cluster of symptoms of pneumonia. Its quick spread resulted in a global pandemic. This research documents detailed ethnopharmacological information on the medicinal plant species used by herbalists against coronavirus disease.

Methods: The study was conducted in Salé Prefecture, from March 1st, 2020 to May 31st, 2020. Semi-structured face to face interviews were held with 30 herbalists and collected; socio-demographic characteristics, the names of local species, and traditional remedies being used. The data were analyzed through the use reports (UR) and medicinal use value (MUV).

Results: In total, 20 plant species from 20 genera and 14 families had been most frequently used by herbalists from Salé Prefecture for the prevention and treatment of COVID 19. The most mentioned plant was Eucalyptus globulus Labill., followed by Azadirachta indica A. Juss,. and Ziziphus lotus (L.) Lam. Moreover, the most commonly used plant parts for herbal preparations were leaves (28.43%) and seeds (17.5%), and the majority of remedies were prepared through infusion.

Conclusions: The present study is the first contribution to the ethnopharmacological profile of this Prefecture. It is recommended that the constituents of indigenous species be studied to determine the therapeutic effects and mechanisms of action. However, attention must be paid to the conservation of medicinal species, comprehensively documenting traditional medicinal knowledge as well as conducting phytochemical validation of reported plants.

Biography

Noureddine Chaachouay: Assistant Professor of Higher education and training school, Hassan First University, Settat, Morocco. He holds a National Doctorate with an honorable distinction in Plant Biology from the Faculty of Science and Technology at Ibn Tofail University, Kenitra. He is interested in studying the use of plants by local communities in alternative medicine, cosmetics, clothing, rituals, flavors, fragrances, dyes, clothing, etc.

We wish to meet you
again at our upcoming webinar:

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