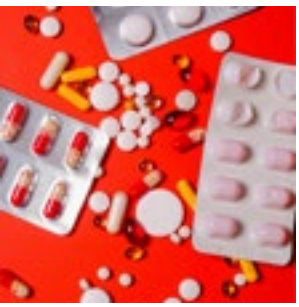
Keynote Forum
Dec 14, 2022

Pharmacology 2022





7th World Congress on

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Abdeslam Jaafari

Sultan Moulay Slimane University, Morocco

How Pharmacogenomics, Epigenetics and Data Analysis could improve anticancer treatment

Pharmacogenomics, Epigenetics or Data analysis and Bioinformatics could play a vital key role to fight a dreadful disease like cancer. The goal of our presentation is to give more insights into the relationship between pharmacogenetics and drug response, the role of epigenetics modification in carcinogenesis and cancer therapy, and how could data analysis support understanding and predict the relationship between pharmacogenes-drug response. It has been confirmed that the patient genotype could highly impact therapeutic effects and/or adverse events of anticancer drugs in particular. Pharmacogenomics/Pharmacogenetics aims to evaluate the relationship between drug efficacy/toxicity of a given drug and its pharmacokinetics and pharmacodynamics. Proteins involved in all these mechanisms are encoded by what we call pharmacogenes. Thus, any mutation in those genes could lead to treatment failure and/or resistance of cancer cells to chemotherapeutics drugs. Consequently, we can optimize and improve anticancer drug efficacy and/or adverse effects by understanding the interaction between genome variation and drug response. Recently, next-generation sequencing technology led to the discovery of new genetic variants, like cytochrome P450 genes, ATP-binding cassette (ABC) transporters, and many others, related to anticancer therapy and cancer cell resistance, the major obstacle to successful anticancer treatment. On the other hand, as there is no doubt today that epigenetic modifications are involved in cancer pathogenesis, progress and prognosis, researchers are looking for how to treat cancer by fixing these epigenetic alterations. In fact, this way could provide good results since epigenetic modifications, unlike genetic mutations, are reversible. Bioinformatics and data analysis, by integrating network pharmacology-based prediction and experimental validation, could also help to give some vital information that can lead to elucidating the genome-drug response relationship to find the right drug for the right patient. Some public databases, algorithms, protein-protein interaction, and gene ontology have been used in this sense.

Recent Publications

1. Abdeslam Jaafari, Mostafa ellouali & Hassane Latrache Interfacial mechanisms involved in the interaction between Fusarium oxysporum f. Sp. Albedinis and date palm root Tarbiat Modares University Press Journal of Crop Protection Volume 10, Issue 3 (2021)
2. Abdeslam Jaafari, Souad Lekchiri & Hafida Zahir A Cross-Immunity between SARS-cov-2 and MERS-cov:Interest in Anti-SARS-cov-2 Serotherapy Development Using Dromedary Serum Infection Epidemiology and Microbiology Spring 2021, Volume 7, Issue 2
3. Abdeslam Jaafari, Safae Tankiouine & Mostafa Ellouali Study of Initial Adhesion of a Bacterium to Different Support Materials before and after Conditioning Film of Olive Oil-Mill Wastewater Advances in Bioscience and Biotechnology Aug. 10, 2020.

Biography

Abdeslam Jaafari is currently working as an Laboratory of Biological Engineering, Lab of Bioprocess-Bio interfaces in Sultan Moulay at Slimane University, Beni Mellal, Morocco.

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Garima Kaushik

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Evaluation of concentration and toxicity of Bisphenol A in food grade plastic and its degradation by bacteria

Bisphenol A (BPA) is the man-made organic compound which is an important polymer used for the manufacturing of plasticizers, polycarbonates and epoxy resins. Plastic waste is increased in our environment due to its increasing demand day by day. Bisphenol A also known as an endocrine disruptor which mimics female sex hormone estrogen. Bisphenol A is acting as hormones so can induce cellular reactions and changes at very lower concentration. Thus determination of the concentration of BPA, its toxicity on soil environment and its degradation methods is of research interest. The developed method during this research project helps to determine the level of exposure and its toxicity and degradation methods. The 9 plastics items were analysed using UV/VIS spectrophotometer, all of them have significant amount of Bispehnol A present, the highest concentration of BPA was observed in Black polybags with 42.78 ppm followed by slice juice bottle (42.11 ppm) then baby bottle with 38.56 ppm. Here, we also investigated the toxicity of BPA on soil microflora by evaluating the CFU/ml. Adverse effect of BPA seen on microbial colonies number, the control plates CFU/ml was observed TNTC (Too numerous to count) while as the BPA concentration of 250 ppm and 500 ppm applied to culture the significant reduction in growth is observed respectively, 9 x 106 CFU/ml in 250 ppm BPA treated plate and 1.2 x 106 CFU/ml in 500 ppm BPA treated plate. For the determination of Rhizobium activity, a clear zone of inhibition was observed around discs and wells poured with 500 ppm BPA. The significant impact of BPA was also seen on Phosphate solubilizing bacteria (PSB). The present study is being extrapolated to see the effect of bacterial treatment in degrading BPA in lab scale experiments and results were analysed through HPLC.

Recent Publications

1. G. Kaushik, S. Kumar, & R. E. Masto Evaluation of the Fuel Value and Soil Application Potential of the Cadmium Contaminated Biochar Obtained after Water Treatment Springer Link journal Solid Fuel Chemistry volume 54, pages411–417 (2020)

2. Garima Kaushik, bedabratbarooah & Mohd A. Dar Biochemical effects of three personal care products on growth and development in Cicer arietinum (chickpea) and Vigna aconitifolia (moth bean) science direct Volume 18, June 2022, 101051

3. Garima Kaushik, Indu shekharthakur & kritikasharma Occurrence and distribution of pharmaceutical compounds and their environmental impacts: A review Science Direct Volume 16, December 2021, 100841

Biography

Garima Kaushik is currently working as an assistant professor, in Department of Environmental Science, School of Earth Science, Central University of Rajasthan since 2011. She is a gold medallist in B. Sc. And M.Sc. From University of Rajasthan and obtained Ph.D. In the field of Environmental Biotechnology, from Jawaharlal Nehru University, New Delhi in 2009. She has also served as an

Published several research papers in the field of bioremediation, climate change adaptation in international and national peer reviewed journals and has contributed to organizing various conferences and seminars. She has also participated in various academic events at national and international level and is also the life member of many academic societies including IWA and BRSI. She is a recipient of Dewang Mehta National Education award for Best Faculty for Environment Management in 2016. She has worked on national and international scientific projects including Indo Mexico International Project for 2017-2020.

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Silvia Stefanelli

Founder of Stefanelli&Stefanelli Legal Firm, Rome

Legal topic of drugs digital support and digital therapeutics

The pharmaceutical industry is now heavily involved in medical software, significantly developing **Drug Digital Companion** (or Drug Digital Support), software that supports the patients navigating medications through their treatment journey, and **Digital Therapeutic**s-evidence-based therapeutic interventions guided by software to prevent, manage or treat a medical disorder or disease.

In the European context, the main legal questions to be dealt with are:

• The correct qualification of the software in compliance with the recent Medical Device Regulation (EU Reg. 2017/745)

• The rules to be applied for data protection in the light of the GDPR (Reg. 2016/679) and the lawful utilization of data generated through the software use (for example, Real World Data)

Furthermore, the next AI Regulation and the recent proposal of a Directive on AI liability will substantially impact this sector.

Recent Publications

1. Silvia Stefanelli &David Vaccarella The marketing of medical devices in Switzerland following the non-agreement with the European Union 05/05/2022

2. Silvia Stefanelli & Gaspare Castelli Electronic instructions for use of medical devices: here's what you need to know 18/01/2022

3. Silvia Stefanelli & Maddalena Collini AI and data accuracy: is the legal framework adequate? 12/03/2021.

Biography

Silvia Stefanelli is the founder of Stefanelli&Stefanelli Legal Firm, based in Bologna, Milan, Rome. She specializes in health legislation, digital health, medical devices, advertising, PA contracts, and data protection. She has qualified as a "Privacy Officer and Privacy Consultant" and, in 2017 obtained a "Course on European Data Protection Law" Certificate issued by the Academy of European Law in Brussels. She works on several innovative digital projects with SmithKline Foundation and Clusit Association and is a member of the Scientific Committee of the Telemedicine Observatory of Altems-Unicattolica.

She lectures in II° Level Master in several Italian Universities, including Unitelma La Sapienza, Uni Roma 3, and Altems Unicattolica. In addition, she gives national-level courses for several training institutions, such as IQVIA and Il Sole 24 Ore.Since 2005 she has been a registered publicist at the Association of Journalists of Bologna. She writes for several magazines, including About Pharma, Il Sole 24 Ore Sanità, and Quotidiano Sanità, and is co-author of several publications and contributions, most recently "La Privacy in sanità" - Giuffrè.

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