



HBSRA Conference Proceedings 2022

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Online Live International Conference

27th January 2022

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Eurasia Research Online Live International Conference
27th January 2022

HBSRA – Healthcare & Biological Sciences Research Association



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Online Live International Conference

22nd February 2022

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 Eurasia Research Online Live International Conference
22nd February 2022
HBSRA – Healthcare & Biological Sciences Research Association



<p>Upcoming online conference</p> <ul style="list-style-type: none">BarcelonaParisSingaporeAmsterdamLondonKuala LumpurBerlin	<p>Participants from 13 countries</p> <p>Contact us: Phone: +91 7290808650 Email: convener@eurasiaresearch.info https://hbsraevents.org/hbsra</p>	<p>Benefits</p> <ul style="list-style-type: none">• Networking Experience• Certification• Proceedings• Publication• Safety
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Online Live International Conference

25th March 2022

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 Eurasia Research Online Live International Conference
25th March 2022
HBSRA – Healthcare & Biological Sciences Research Association



Upcoming online conference
Amsterdam
London
Kuala Lumpur
Berlin
Paris
Prague
Singapore

Participants from 11 countries

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Online Live International Conference

30th April 2022

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Eurasia Research Online Live International Conference
30th April 2022
HBSRA – Healthcare & Biological Sciences Research Association



<p>Upcoming online conference</p> <p>Kuala Lumpur Berlin Paris Prague Singapore Bangkok Budapest</p>	<p>Participants from 11 countries</p> <p>Contact us: Phone: +91 7290808650 Email: convener@eurasiaresearch.info https://hbsraevents.org/</p>	<p>Benefits</p> <ul style="list-style-type: none">• Networking Experience• Certification• Proceedings• Publication• Safety
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Video link for the Live Conference: [Click Here](#)

Participants from following countries

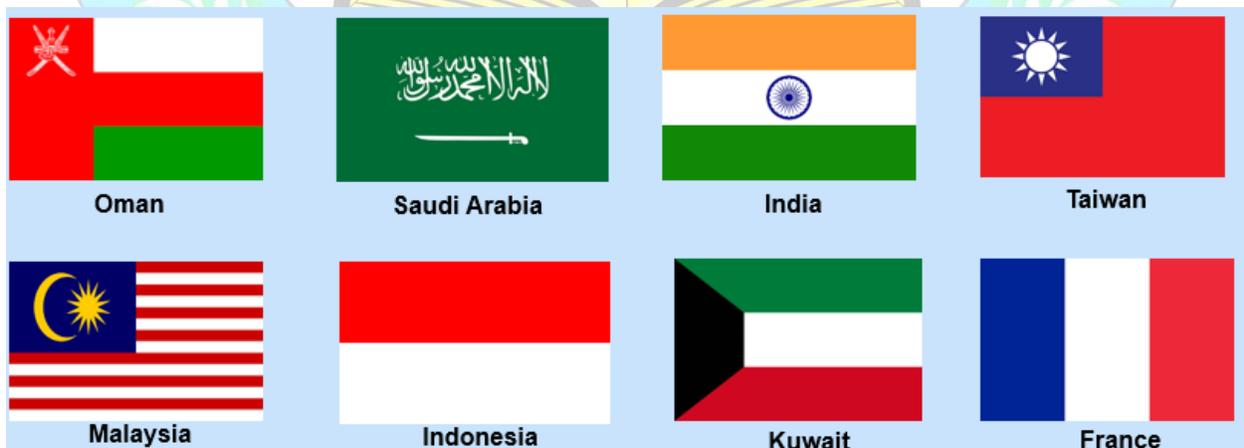
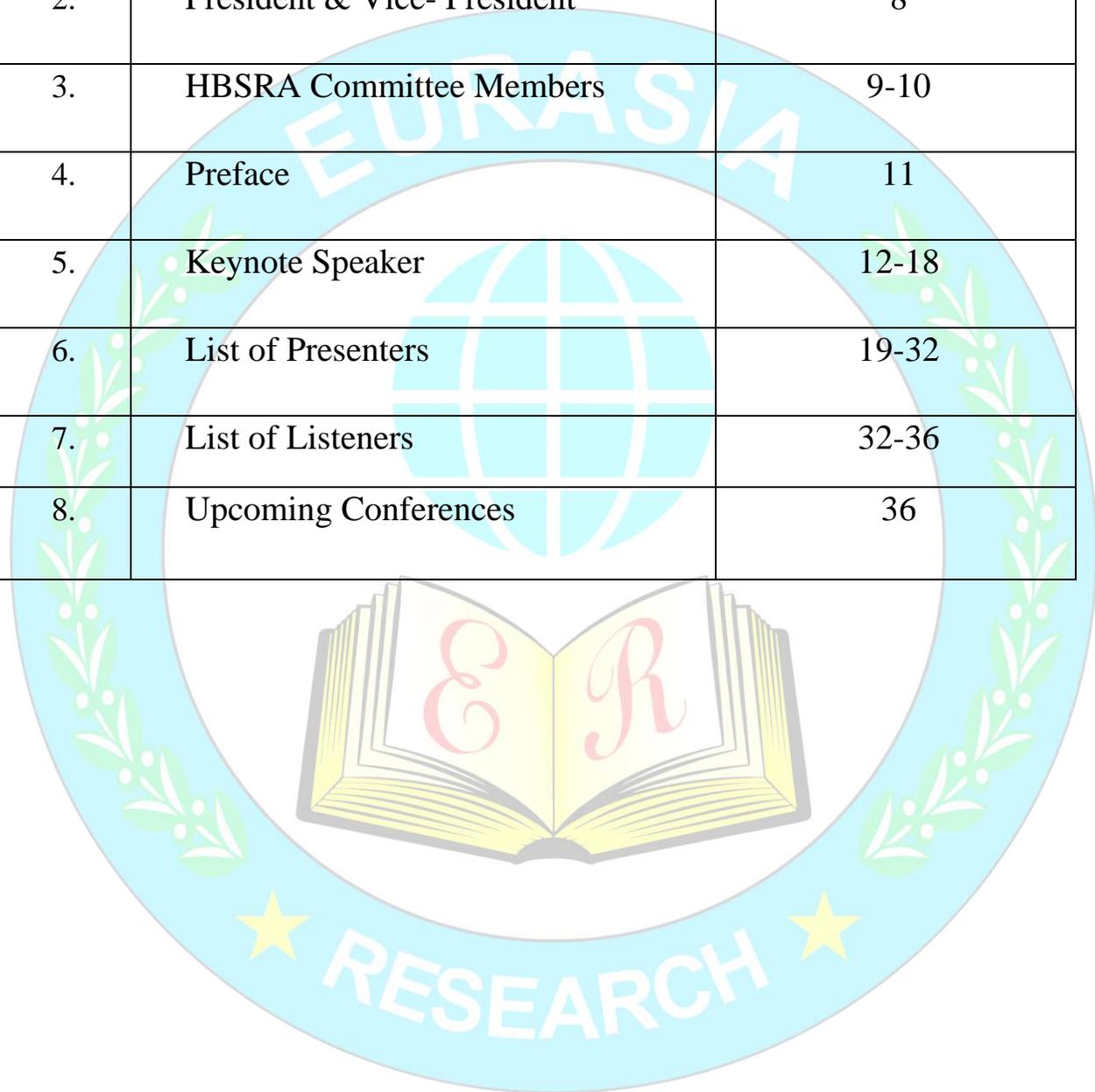


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Healthcare and Biological Sciences Research Association (HBSRA) is an international community of researchers, practitioners, students, and professionals for the development and spread of ideas in the field of healthcare and life sciences.

HBSRA is promoted by Eurasia Research. HBSRA aims to bring together worldwide researchers and professionals, encourage intellectual development, and create opportunities for networking and collaboration. These objectives are achieved through academic networking, meetings, conferences, workshops, projects, research publications, academic awards, and scholarships.

The driving force behind this association is its diverse members and advisory board, who provide inspiration, ideas, efforts and drive collaborations. Scholars, Researchers, Professionals are invited to become a member of HBSRA and join this ever-growing network, working for benefit of society and research with the spirit of sharing and mutual growth.

Salient Features:

- 15000 + and growing network of professionals
- Professional and Experienced team
- Conferences in Asia, Europe & Africa
- Events at reputed institutes and grand venues
- Lifetime membership
- Strong Social Media Platform for networking
- Young Researcher Scholarships
- Research publication in international journals

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Yoshiko Yamaguchi, Research Associate of Home Care Nursing, Faculty of Nursing, Kwassui Women's University, Nagasaki, Japan

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17.	Prof. Dr. Hanan Anwar Aly Taie	Research Professor of Plant Biochemistry and Head of Plant Biochemistry Department, National Research Centre, Giza, Egypt

18.	Dr. Arif Hussain	Associate Professor, School of Life Sciences, Manipal Academy of Higher Education, Dubai, UAE
19.	Dr. Kesaven Bhubalan	Associate Professor, Marine Biology Program, School of Marine and Environmental Sciences
20.	Dr. Vigneswari Sevakumaran	Senior Lecturer School of Fundamental Science (PPSA), Universiti Malaysia Terengganu, Malaysia
21.	Dott. Tiziano Zanin	Chief Technician of the Histology and Pathologic Anatomy Department, Genetic Laboratory and Clinical Analysis Laboratory, E.O. OSPEDALI GALLIERA, Genova, Italy

Preface:

Healthcare and Biological Sciences Research Association (HBSRA) is an international forum of researchers, academicians, and practitioners for sharing knowledge and innovation in the field of healthcare and life sciences. HBSRA aims to bring together worldwide researchers and professionals, encourage intellectual development, and providing opportunities for networking and collaboration. This association meets its objectives through academic networking, meetings, conferences, workshops, projects, research publications, academic awards, and scholarships. HBSRA strives to enrich its diverse group of advisory members. Scholars, Researchers, Professionals are invited to freely join HBSRA and become a part of a diverse academic community, working for benefit of academia and society through collaboration and vision.

For this conference around 20 Participants from around 7 different countries have submitted their entries for review and presentation.

HBSRA has now grown to 16,450 followers and 9500 members from 85 countries.

Membership in our scholarly association HBSRA is chargeable.

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The proceeding is a book of abstracts, all the abstracts are published in our conference proceedings a day before the conference.

You can get our conference proceedings at: <https://hbsra.org/conference/proceedings/>

We hope to have an everlasting and long-term friendly relation with you in the future.

In this context, we would like to share our social media web links:
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You will be able to freely communicate your queries with us, collaborate and interact with our previous participants, share and browse the conference pictures on the above link.

Our mission is to make continuous efforts in transforming the lives of people around the world through education, application of research & innovative ideas.

Editor: Dr. Davis Lazarus

KEYNOTE SPEAKER



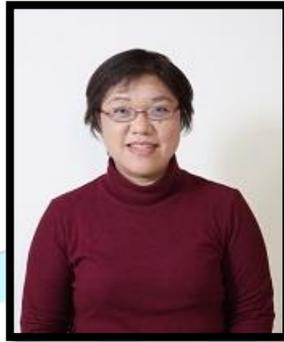
Dr. Mohd Norazmi bin Nordin

Ph.D., Lecturer, Pusat Kajian Pendidikan dan Kesejahteraan Komuniti, Fakulti Pendidikan, Universiti Kebangsaan Malaysia (The National University of Malaysia), Bangi, Selangor, Malaysia

Topic – Special Elements and Values Needed in Leadership for Special Education

Dr. Mohd Norazmi bin Nordin holds a doctor of philosophy (PhD) degree in special education leadership. Former academic teacher at Batu Pahat Special Education School, Johor, Malaysia. Successfully completed PhD studies within two years. Currently working as a special education lecturer at the Center for the Study of Education and Community Wellbeing, Faculty of Education, Universiti Kebangsaan Malaysia (The National University of Malaysia). He is also the founder of SKAF-Style Quick Thesis Writing Techniques which has greatly helped undergraduate and doctoral students in completing their theses. Receive invitations from various universities in and outside Malaysia as speakers and keynote speakers for international conferences and seminars. He is also Editor in Chief of a special education journal and as an editorial board in five international journals.

KEYNOTE SPEAKER



Dr. Yoshiko Yamaguchi

Home Care Nursing, Faculty of Nursing, Kwassui Women's University, Japan

Topic: Nurse Retention (E.G., Nurse Turnover, Nurses' Intention to Leave), Nurses' Stress (Work Stress, Family Related Stress, Stress Outcome), Employee's Work-Family Interface (Work-Family Conflict, Work-Family Enrichment)

Dr. Yoshiko Yamaguchi has received her PhD in. Kyushu University during the period of 2013-2016. Currently, she is working as research associate in Home Care Nursing, Faculty of Nursing, Kwassui Women's University, Japan. She has successfully completed her responsibilities as a reviewer of eighty-one research articles of twenty-four Journal from 2016-present. And she has been serving as an editorial board member of two Journal; LIFE: International Journal of Health and Life-Sciences and Journal of Practical and Professional Nursing and has been delegated vice president of Healthcare and Biological Sciences Research Association (HBSRA).

KEYNOTE SPEAKER



Malini Nair

Co-Curriculum Chair for the Quality Program in the Business Division at Sharjah Women's Campus, United Arab Emirates

Topic: Innovation and lifestyle entrepreneurship: A study of lifestyle enterprises in the UAE

Malini Nair is a Business Faculty at the Higher Colleges of Technology. She teaches classes in Quality, Auditing, Innovation & Entrepreneurship, Management and Leadership as well as Economics. She is interested in the use of interventions, technologies, and tools that facilitate group/team processes and lead to better task outcomes through Quality standards. She has developed and taught several courses related to Quality, HR, Innovation, Marketing and Economics to both MBA and undergraduate students. She is currently a member of the Program Advisory Committee for Quality at the University level. She is a Doctoral candidate pursuing her PhD in Business and Management. She has written several research papers and continues to do so. She has received a SEED grant for one of her research papers. She is actively involved in Community projects and her forte is mentoring and encouraging her students to actively participate in these initiatives. Prior to her appointment as a faculty she has an immense amount of industry experience especially in the retail sector in the UAE. She studied Economics Honors and attended the prestigious Birla Institute of Technology (BIT) in India where she obtained her Master's degree in Business Administration. She went on to work as a Group HR Manager and continued to teach as she believes in sharing the knowledge gained through the industry. Her initiatives at the college level have been highly commended.

KEYNOTE SPEAKER



Thillainathan Sathanathan

Senior Lecturer attached to Department of Medical Education & Research, Faculty of Health-Care Sciences (FHCS), Eastern University, Sri Lanka

Topic: Consideration of practices of formative feedback

Thillainathan Sathanathan is a Senior Lecturer attached to the Department of Medical Education & Research, Faculty of Health-Care Sciences (FHCS), Eastern University, Sri Lanka (EUSL), specialized in Chemistry (BSc), Education (MEd), Medical Education (MPhD, PhD) and Criminal Law (LLM, LLB). Since the inception of the functioning of FHCS, he involved in the effective implementation of the modern form of integrated curriculum for MBBS and BSc. Nursing programs of FHCS. He was also titled as “Saiva Pulr” [Hindu Scholar] as he successfully completed a course in Hindu Philosophy and pass the examination. He developed a culturally sensitive blueprint for formative assessment called the cSEEFAR model to practice in an ethnically diverse environment when he did his Ph.D. at the University of Dundee, UK.

KEYNOTE SPEAKER



Dr. Agnieszka Ilendo-Milewska

Ph.D., Head of Department of Psychology, Private University,
Białystok, Poland

Topic: What COVID-19 Revealed about Significant Personal Experience – and 4 Ways to Rethink Mental Health Problems

Ph.D. Agnieszka Ilendo-Milewska is a psychologist, certified coach, and career counsellor. She is a university professor and head of the Faculty of Psychology at the Private University of Pedagogy in Białystok, Poland. She is the head person and founder of the Private Primary School in Białystok and the head person of the Private Preschool in Białystok. She is also an expert at the Ministry of National Education in Warsaw. Her major research interests include self-regulation, dysfunctional behaviour, and social relation. Her scientist's project is concentrating on 'Self-regulation among middle school students and 'Emotions and relationships between groups'. She is also an Editorial Board Member of Social Science and Humanities Research Association (SSHRA), Journal Humanities and Social Sciences (HSS), PEOPLE Journal: International Journal of Social Sciences and International Journal of English Literature and Social Sciences (IJELS). She acts as an Honorary Peer Reviewer for Global Association of Research USA. She has published widely in Polish and English. She has authored several books: 'School environment in the students' experiences, tendencies of changes' (2016) and 'Dysfunction among middle school students' (2009). She awarded the Medal of the Commission of National Education in Poland for exceptional services to education and upbringing (2017), Medal Diligentiae for urgency and good posture, granted by the President of the City of Białystok (2018), Award of the Ministry of National Education for outstanding achievements in didactic and educational work (2019).

KEYNOTE SPEAKER



Dr. Reeti Debnath

PGDHHM, M.Phil., Ph.D., School of Health Sciences, NSHM,
Knowledge Campus, Maulana Abul Kalam Azad University of
Technology, India

**Topic: Mental Health in Pandemics: Implications of COVID-19 in an
Indian Perspective**

Dr. Reeti Debnath is Program Coordinator (Public Health) at School of Health Sciences, NSHM, Knowledge Campus, affiliated to Maulana Abul Kalam Azad University of Technology, India. Dr. Reeti has graduated from University of Calcutta with a Honours in Chemistry, she has obtained Post Graduate Diploma in Health Care & Hospital Administration, from Indian Institute of Social Welfare & Business Administration, India. Later, she completed her Master in Philosophy and Doctoral Degree (Specialization in Healthcare Quality). As an avid researcher, she has published numerous articles in reputed national and international journals and edited books. She has been invited as a Guest Speaker in live Webinars, Television career shows and presented papers at various national and international conferences held in India and abroad. She has been invited by reputed institutes like TISS Mumbai, Indian Public Health Association (IPHA), Army Institute of Management, Mizoram University etc. for taking special lectures in their various Post Graduate Programs. Dr. Reeti Debnath is the Foreign Research Advisor for guiding PhD students at Kazakhstan Medical University and University Exam Setter at Maulana Abul Kalam Azad University of Technology (MAKAUT), India. Her research interests include Disease Epidemiology & Public Health, Maternal & Child Health, and Quality in Healthcare. She is an active member of different organizations like the Indian Science Congress Association (ISCA), the Indian Public Health Association (IPHA), and the International Association for Promotion of Healthcare and Life-Science Research (IAPHLRSR).

KEYNOTE SPEAKER



Dr. Abdulrasheed Olatunji Abdussalam
Associate Prof, Islamic University of Perlis, Malaysia

Topic: Psychological and social factors responsible for violence among the secondary school students in Nigeria

Dr. Abdulrasheed Olatunji Abdussalam is a lecturer of Islamic University of Perlis, Malaysia. He holds a Doctor of Philosophy (PhD) and Master in curriculum education and instruction from Al Madinah International University, Malaysia. He had a diploma in computer studies from Cairo Centre for Electronics Studies and Mini Masters in Business Administration from Al-Naser Training Academy.

PRESENTERS

(Applicants & Participants)

<p>Max Doody ERCICPNR2231059</p>	<p>Lacking Home Experience with Children Identified as a Barrier to Infant Care for Medical Students</p> <p>Max Doody Medical Sciences Division, University of Oxford, Oxford, England</p> <p>Abstract</p> <p>Many medical students find their paediatric placement daunting due to the unfamiliarity of interacting with, and caring for, young children. To understand this problem, we designed a comprehensive online questionnaire exploring the experience of students outside clinical settings with infants and their attitudes towards their paediatric placement. In the responses collected from 41 medical students at the University of Oxford, we identified two groups of respondents based on the degree of experience they had caring for infants outside of the clinical setting. Respondents with a lack of experience outside the clinical setting were significantly more likely to report feeling tense ($p < 0.01$) and frightened ($p < 0.01$) when handling infants in the clinical setting. They also reported that their absence of experience made them significantly less comfortable examining infants in front of parents ($p < 0.05$) and thus saw a barrier to their practice. Ninety-five percent of respondents felt that the introduction of specific teaching on the care of infants would improve their ability to provide appropriate care. We argue that protected teaching on infant-specific care such as handling, changing, feeding and bathing would improve the quality of medical student involvement in care.</p> <p>Keywords: Infant Care, Medical Education, Care Quality</p>
<p>Steven E. Dierksmeier ERCICPNR2231060</p>	<p>Lacking Home Experience with Children Identified as a Barrier to Infant Care for Medical Students</p> <p>Steven E. Dierksmeier Medical Sciences Division, University of Oxford, Oxford, England</p> <p>Abstract</p> <p>Many medical students find their paediatric placement daunting due to the unfamiliarity of interacting with, and caring for, young children. To understand this problem, we designed a comprehensive online questionnaire exploring the experience of students outside clinical settings with infants and their attitudes towards their paediatric placement. In the responses collected from 41 medical students at the University of Oxford, we identified two groups of respondents based on the degree of experience they had caring for infants outside of the clinical setting. Respondents with a lack of experience outside the clinical setting were significantly more likely to report feeling tense ($p < 0.01$) and frightened ($p < 0.01$) when handling infants in the clinical setting. They also reported that their absence of experience made them significantly less comfortable examining infants in front of parents ($p < 0.05$) and thus saw a barrier to their practice. Ninety-five percent of respondents felt that the introduction of specific teaching on the care of infants would improve their ability to provide appropriate care. We argue that protected teaching on infant-specific care such as handling, changing, feeding and bathing would improve the quality of medical student involvement in care.</p> <p>Keywords: Infant Care, Medical Education, Care Quality</p>

Risk Factors for Neonatal Respiratory Distress Moroccan Data



Latifa Mochhoury
ERCICPNR2232051

Latifa Mochhoury

Hassan First University, Higher Institute of Health Sciences, Laboratory of Health Sciences and Technologies, Settat, Morocco

Abstract

The objective of our study is to determine the risk factors of neonatal respiratory distress in the neonatology department of the IBN SINA University Hospital of Rabat. This was a retrospective study with a descriptive and analytical aim on all new-borns hospitalized from January 2020 to March 2021 in the neonatology department of the IBN SINA University Hospital in Rabat. The identification of risk factors was carried out using bivariate and multivariate analyses (calculation of the odds ratio (OR), its confidence interval (CI) and its level of significance (p). 3000 cases were registered during this period. We included 630 births, Neonatal respiratory distress was multifactorial, statistical analysis could incriminate mostly: maternal anaemia (OR = 18.10; CI 95 (7.5 -43.55); $p < 0.05$); diabetes (OR = 3.65; CI 95 (1.98-6.72); $p = 0.001$); caesarean section (OR = 4.23; CI 95 (1.54-11.59); $p = 0.001$); prematurity (OR = 2.45; CI 95 (1.41-4.26); $p = 0.01$). Neonatal respiratory distress is dominated by conditions originating in the perinatal period; its multifactorial nature implies a multidisciplinary intervention strategy, involving pre- and periconceptual prevention.

Sustainable Water Infrastructure for Adapting to Coastal Climate Change



Hassan Davani
ERCICSTR2201053

Hassan Davani

Civil Engineering, San Diego State University, San Diego, California

Abstract

This project seeks to advance the sustainability and resilience of coastal communities against foreseeable impacts of climate change, such as intensified precipitation, sea-level rise (SLR), and SLR-driven groundwater rise. The central hypothesis is that sustainable and resilient infrastructure to manage water supply and flooding in coastal areas requires informed decisions aimed at (i) enhancing sustainability by balancing the local water budget through decentralization and (ii) enhancing resilience against compound flooding in which precipitation may coincide with other inundation sources. Projections of SLR impacts increasingly will need to consider the flooding associated with the interconnections between SLR and shallow coastal aquifers, as well as expected compound flooding under typical precipitation events. Therefore, this project will establish a mechanistic framework to analyze important stressors to water infrastructure, with a focus on disadvantaged communities, and it will develop a decentralized model to enhance their sustainability and resilience. The project also aims to systematically understand the impacts of frequent and longer timescale flooding events on water infrastructure systems and explore the sustainability benefits of decentralized infrastructure to mitigate the compound inundation impacts in which precipitation coincides with other inundation sources. The project team will employ a Life Cycle Assessment (LCA) technique and couple it with distributed hydrologic modeling informed by groundwater table observations. A comprehensive LCA framework will be informed by merging approaches from hydrology and data sciences to forecast the response of water infrastructure systems to future climate change stressors. Because the success of decentralized systems heavily relies on understanding barriers that communities face in system implementation and operation, this project seeks to advance sustainability assessment of infrastructure by incorporating the needs of communities

Salah-Eddine
Ouldboukhitine
ERCICSTR2201055

A Model for Predicting the Hygrothermal Behavior of a Hemp-Concrete Wall Using the Finite-Element Method

Salah-Eddine Ouldboukhitine
IUT Clermont Auvergne, Université Clermont Auvergne, Institut Pascal, France

Sofiane Amziane
Université Clermont Auvergne, Institut Pascal, CNRS, SIGMA Clermont, F-63000 Clermont-Ferrand, France

Abstract

Plant-based concrete is a construction material which, in addition to having a very low environmental impact, exhibits excellent hydrothermal comfort properties. In recent decades, numerous studies have been carried out to develop models to evaluate the hydrothermal behavior of porous building envelopes. Most previous models are based on Luikov's theory, considering mass accumulation, air and total pressure gradient. This study presents a methodology for solving the classical one-dimensional hydrothermal transfer model with an implementation in MATLAB. The resolution uses a discretization of the problem according to the finite-element method. The energy and mass balances are expressed using measurable transfer quantities (temperature, water content, vapor pressure, etc.) and coefficients expressly related to the macroscopic properties of the plant-based concrete (thermal conductivity, specific heat, water vapor permeability, etc.), determined experimentally. The methodology is validated on a test case and the results show that the methodology is robust in handling a rationalization of the model whose parameters are not ranked and not studied by their degree of importance.



Yixin Li
ERICRLSH2201068

Three-Dimensional Reconstructions of Canal Network Reveal Coral Growth patterns

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Zuhong Lu
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Southeast University, Nanjing 210096, China

Abstract

Coral reefs are the cornerstone of marine ecosystems. Researchers have performed comprehensive studies on reef-building corals including their genomics, polyp metabolism, disease resistance, and adaptation to environmental change. However, the forming regulations of the canal network in coral colonies are still not understood adequately. The non-transparent skeleton influences direct observation of the distribution, parameters, and relationships among canals in coral colonies. Experiments with traditional biological methods have provided very limited structural information of coral skeletons and internal canals. To solve this problem, high-resolution computed tomography (HRCT), which can be used to non-destructively capture the morphology and internal structure of coral colonies, has gained our attention. In this study, we reconstructed 11 coral species using HRCT to investigate coral growth patterns and parameters. Our reconstructions of canal network revealed the characteristics of different coral species, and

we further visualized the growth axes and growth rings to understand the coral growth directions. Our reconstructions can visualize the coral growth processes during different physiological states, which reveals the mechanism of calcium transport in coral colonies. In addition, we calculated the coral skeleton void ratios to ascertain the skeletal diversity, devising a method to quantify coral growth. On the basis of the three-dimensional (3D) reconstructions and growth parameters, we investigated the growth strategies of different coral species. This research increases the breadth of knowledge on how reef-building corals grow their colonies, providing information on reef-forming regulations. The data obtained through HRCT and 3D reconstruction contain a large amount of coral growth information, which can be used in further research on reef-forming patterns under different conditions. The method used in this study can also be applied to animals with porous skeletons.

Keywords: High-Resolution Computed Tomography, Canal Network, Structural Information, Reef-Building Coral, Growth Pattern



Joanna Zelazny
ERICRSLH2201073

Kinesiotherapy Online Form of Rehabilitation Due to the Pandemic

Joanna Zelazny

Polish Musculoskeletal Prophylaxis Center, Medical Łódź University, Łódź, Poland

Abstract

What to do when the threats of Covid-19 reduce our physical activity? many people stayed at home for long periods. However, their need for exercise is still the same. Many people in need of rehabilitation abandoned them because of fear of the virus. One of the ways to activate people who require rehabilitation without leaving home was the implementation of new technologies. Kinesiotherapy is a well-known field in physiotherapy. However, just a few years ago, few people would have thought about conducting this kind of rehabilitation in on-line form. In Poland and probably in other countries around the world, challenges have been taken up. The most difficult thing was to reach the people most in need of this form of rehabilitation - the elderly persons. At the beginning, many of them were afraid of this form of exercises. However, the need for movement and contact with the therapist were stronger than the fears. Many people from the gym exercises switched to virtual reality. Less than 2 years ago the pandemic was announced. Nowadays it can be seen how the online kinesiotherapy exercises affected people who took advantage of this opportunity. In Poland, many classes are now held stationary. The vast majority of people, however, like online classes. For many people it is the dominant form of rehabilitation activity, for others it is only a supplement. Cameras and the Internet will never replace a personal meeting with a therapist, but the pandemic has opened up new possibilities in rehabilitation. This task brought with it many opportunities and threats, it brought advantages and disadvantages, which will be discussed during the presentation



Giorgi Zaalishvili
ERICRSLH2201075

Zebrafish as a Model for Genotoxic Anticancer Drug Research

Giorgi Zaalishvili

Institute of Cellular and Molecular Biology, Agricultural University of Georgia, Tbilisi, Georgia

Margarita Karapetian

Institute of Cellular and Molecular Biology, Agricultural University of Georgia, Tbilisi, Georgia

Abstract

Poly (ADP-ribose) polymerase-1 (PARP-1), as well as topoisomerases (Top) nowadays serve as a target for cancer therapy and have been extensively studied in mammalian model systems, however in other vertebrate models remain less characterized. Zebrafish is emerging as an alternative vertebrate model for recapitulation of numerous human diseases including cancer due to its cost effectiveness, high fecundity, transparency of embryos and homology of major

organs and cell types to that of mammals. Our studies have shown that Top 2 poisons (doxorubicin and etoposide) do not cause death in 1-day post fertilization (dpf) embryos, however they induce DNA damage as observed by alkaline comet assay. After the detailed examination of this phenomenon, it was shown by fluorescence microscopy that DOX uptake depends on the stage of embryonic development and differs in in vivo and ex vivo systems. We have also revealed some similarities of response towards genotoxic stress induced by Top 1 poisons (rubitecan and irinotecan) and PARP-1 inhibitor olaparib between mammalian and zebrafish systems. It was shown that Top 1 poisons increase mortality of 1 dpf zebrafish embryos and induce DNA damage. It was also demonstrated that PARP-1 inhibitor – olaparib, significantly increased the mortality of rubitecan treated embryos as well DNA damage level. Interestingly, chemical inhibition of tyrosyl-DNA phosphodiesterase -1 (TDP1), the main player in Top 1 cleavage complex repair in mammalian system, did not show any effect on embryo mortality and DNA damage level. On the next step we evaluated the effect of Top 1 poisoning and PARP inhibition on caspase-dependent apoptosis in zebrafish embryos. We have shown PARP-1 apoptotic fragmentation in 5-hour rubitecan treated zebrafish embryos by Western Blotting. For in situ detection of apoptotic cells, whole mount immunofluorescence using anti-activated caspase-3 Abs has been performed. Caspase-3 positive cells were observed predominantly in the brain, eye and notochord area. The amount of caspase-3 positive cells was significantly reduced in rubitecan treated embryos in the presence of olaparib. Collectively, our data introduces zebrafish as a valuable model for anticancer drug research.

Keywords: Zebrafish, Embryo, Topoisomerase, PARP-1, Apoptosis

Xiaoxiang Zhou
ERCICRLSH2202060

A Rapid and Label-Free Platform for Virus Enrichment Based on Electrostatic Microfluidics

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Abstract

Virus surveillance and discovery are crucial for virus prediction and outbreak preparedness. Virus samples are frequently bulky and complicated so that effective virus detection remain challenging. Herein, we develop an 3D electrostatic microfluidic platform to rapidly and label-free enrich viruses from bulky samples at low concentrations. The platform consists of double microchannels for streamlining large volume processing and electrodes for enriching viruses by electrostatic interaction. The trajectories of simulation show that particle is successfully enriched under different forces of electrostatic field and different sample flow rates. We demonstrate that the electrostatic microfluidic platform can increase the limit of detection in 100-fold higher based on real-time PCR quantified analysis. Our design thus provides a simple, rapid, label-free and high-throughput viruses concentration platform and would thus have significant utility for various viral detection.

Md. Rahidul Islam
ERCICRLSH2202052

Physical Activity and Diabetes Mellitus: A Review Article

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Abstract

Physical activity is effective for glycemic control and reduces the risk of Diabetes. Regular physical activities control body weight and obesity and reduce insulin resistance and increase insulin sensitivity. Physical activity includes different types of activities such as walking, running, swimming, and other activities where physical movements are involved. Among all physical activities walking is the best for all ages/ groups of people. Diabetes increases the risk of different types of morbidities such as hypertension, cardiovascular diseases, kidney diseases,

dyslipidemia, cerebrovascular diseases, eye problems, and many others. As physical activities decrease the risk of Diabetes, it decreases the other morbidities. So, it's very much essential for every person in society to reduce the morbidity and mortality rate.



Aleksandra Drozd-Rzoska
ERCICRLSH2202053

Supercriticality in Linseed Oil as Revealed in Dielectric Spectroscopy Studies

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Abstract

Linseed oil is well known for its pro-health properties, leading to its application in food, cosmetic, and even medical products. Its properties are linked to the unique set of its constituents. This report shows that yet another, physical, factor can be important - the impact of hidden supercritical. Thus, the phenomenon is coupled to the continuous ('critical') or weakly discontinuous phase transition and the appearance of multimolecular fluctuations, which size and lifetime increase to infinity on cooling towards the critical point. This causes the unusual ability to feedback interactions with 'external agents'. In fact, the supercritical technology based on the gas-liquid critical point (mainly in CO₂), is one of the most important 'green technologies', enabling for instance the selective removal of the non-desired component. This report presents the evidence for the liquid-liquid criticality in linseed oil at $T \sim 240$ K, with the 'supercritical impact' extending well above the room temperature. This poses the question of the influence of linseed oil supercritical on its properties. It also offers a hypothetical possibility of the significant increase of this impact via an exogenic-agent controlled shift of the liquid-liquid critical point. The supplementary high-pressure studies revealed that the impact of liquid-liquid critical points can be even stronger under compression. In the opinion of the author's results described in this report can offer a possibility of creating new functional features of linseed oil-based products.

Ramilya Muradova
ERCICRLSH2202062

Frequent Gynecological Aspects of Female Infertility in Kyrgyzstan

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Abstract

Relevance: The number and frequency of infertility among couples of childbearing ages in various countries of the world reaches more than 15%, according to WHO, which is a critical problem requiring urgent solutions. In the mechanism of development of infertility, the role of pathologies of the endometrium is undoubted and especially significant, because it is the adequate morpho functional state of the latter that is one of the main factors that ensure the successful implantation of a fertilized egg and the development of the embryo. According to a number of researchers, more than half of the patients included in assisted reproductive technologies (ART) programs have endometrial pathologies. **Purpose of research:** Evaluation of the state of the endometrium according to ultrasound, hysteroscopy in women with primary / secondary infertility, as well as verification using additional histopathological examination, followed by determination of the most informative method for diagnosing pathological endometrium, to improve the effectiveness of ART. **Materials and methods of research:** The main materials for the study were the case histories of 200 patients aged 20 to 47 years (mean age -33 years-old women), based on the clinic of Professor Asymbekova, Bishkek, Kyrgyzstan.

Their retrospective analysis was carried out. At the first stage, two hundred patients, and this is 100% of the sample, were assigned an ultrasound examination of the small pelvis on the VolusonE6 device, using a multi-frequency vaginal sensor, with a frequency of 3.7-9.3 MHz on the 22nd day of the menstrual cycle, which corresponds to the period "windows of implantation". With the help of ultrasound, an assessment was made of the state of the endometrium, the norm of which is a value from 10 to 15 mm. Further, 181 patients (90.5% of the sample) underwent hysteroscopy, due to the method of minimally invasive examination of the uterine cavity, using a hysteroscope, for further diagnostic and surgical manipulations. At the next stage of the diagnostic study, manual vacuum aspiration (MVA) was mandatory for the above 90.5% of patients, followed by a histological examination of the material obtained from the uterine cavity, to verify the presence or absence of endometrial pathologies. Results of research: The data of the case histories of the patients were processed in the SPSS 16.0 program, obtaining the following results: Using ultrasound was possible to identify the normal state of the endometrium in 15 patients in 7.5% of cases, polyps were detected in 56 patients (28%), endometrial hyperplasia was observed in 60 patients, which accounted for 30% of cases, hypoplasia was observed in 4 patients - 2 % of cases. There were also cases with uterine myoma in 11 patients (5.5%), with adenomyosis in 27% of cases, in 54 patients. Researching using a hysteroscope, showed the following results: 19 patients (9.5%) did not undergo hysteroscopy. 42 patients (21%) were diagnosed with "primary" infertility, while "secondary" infertility was observed in 48 patients (24%). 33 patients (16.5%) made up the cohort of patients with endometrial polyps, and 38 patients (19%) were confirmed endometrial hyperplasia. The rest of the sample consisted of 2 patients of the postmenopausal period -1%, as well as 18 patients with prolapse of the pelvic organs -9%. The MVA procedure was performed in 181 patients, 19 patients (9.5%) refused the procedure. In 76 patients (38%), endometrial polyps were detected, 47%, in the face of 94 patients with endometrial hyperplasia, while hypoplasia was assessed only in 4.5% of the total sample in 9 patients. The remaining 2 patients accounted for 1% of postmenopausal patients. After taking aspartate, to establish the diagnosis, a histological examination of the obtained material was performed. The presence of polyps was confirmed in 63 patients (31.5%), in 81 patients (40.5%), endometrial hyperplasia was also confirmed, in 37 patients (18.5%) the endometrium was enlarged in the secretion phase. 9.5% of patients, namely 19 patients, were not presented for histological research. As a result, 62.5% of patients received the results of ultrasound and histological examination. However, in some of the 15 patients (7.5%), the endometrium was in a normal state on ultrasound, after a histological examination, pathological conditions were detected, an increased percentage of diseases. Conclusions: Summing up the results of the studies, after analyzing the results of a retrospective analysis, we can conclude that infertility is a multifaceted, polyetiological disease, one of the obvious risk factors of which is endometrial pathology, which patients do not always pay attention to. Only after a thorough history taking, determination of the etiology of the disease, a phased diagnosis and further treatment of the disease is possible. After analyzing the results of research, it was found that not in all cases of exclusively ultrasound examination it is possible to identify pathologies of the endometrium. The inclusion of hysteroscopic, histological examination of the endometrium and MVA in the examination of patients with infertility in ART programs allows timely diagnosis and, in some cases, elimination of intrauterine pathology, which makes it possible to improve the condition of the endometrium and increase the effectiveness of overcoming female infertility.

**Ramyani
 Bhattacharjee
 ERCICRLSH2235057**

Gender Role in Intimate Partner Violence in Young Adults and its Influence on Development of Future Relationships

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Abstract

Intimate Partner Violence has become one of the most relevant concerns in the dynamics of romantic relationships in young adults. Research suggests that even though it is prevalent in male and female genders, the experiences are different for both the groups. The objective of this study was to explore the experience of Intimate Partner Violence from the lens of young male and female survivors and to understand its influence on development of future relationships. Participants were survivors of IPV within the age of 18-25. A thematic analysis identified overarching themes for both the groups highlighting their experience: Reality alteration, controlling behavior, Tolerating abuse, Influence on personal characteristics, and Defense behaviors in future relationships. Future research can be conducted to delve deeper into the gender dynamics of Intimate Partner Violence and on constructing effective rehabilitation plans for the survivors of Intimate Partner Violence.



Ahmed Muthanna Shibel
 ERICRLSH2236055

Deep Learning Detection of Biometric Presentation Attack

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Abstract

The face recognition systems are increasingly important in today's society, being mainly employed as a security measure also every item, such as mobile phones and laptops, or more crucial security systems, such as the airport access control, which are examples of face recognition usages. The repetition of facial recognition system spoofing attacks has become a major source of worry within the biometric community. The spoofing attacks happens when someone trying to cheat the biometric system by present photo, 3-dimensional mask, or replay video for another person. The video attacks are the most frequent, cheapest, and simplest spoofing techniques to cheat face recognition systems. It occurs when someone attempts to impersonate another by producing a false biometric characteristic (replay video) of the user and presenting it to the sensor, thus impersonating the actual user. This research paper focuses on face liveness detection on video attacks, with the goal of determining if the provided characteristic came from a genuine legitimate client or not, by extracting frames from the videos and analyzing them by using a deep learning algorithm. As a result, we found the optimal number of frames after experiment and analysis is three frames which gave us the highest accuracy 96.93 % in less time of processing for face liveness detection. The database Replay-attack was utilized in this research.

Keywords: Biometric, Deep Learning, Presentation Attack, Face Liveness Detection, Video Attacks

Online Mood Mentoring as an Early Intervention strategy on Young People's Mental Health

Jacqueline Campbell

ERCICRLSH2236053

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Abstract

Aim: The impact of online mood mentoring on the resilience and mental health of school students. **Introduction:** It is well known that the symptoms of stress, anxiety and depression, formerly illnesses suffered in old age, are now commonly observed in children and young people. Furthermore, due to the Covid 19 Pandemic, young people are now exposed to a greater number of environmental, social and political risk factors than ever, that can negatively impact their mental health, which, if not addressed, can be taken into their adulthood life. As Covid-19 has brought on greater use of digital technologies to continue teaching and learning, greater use of emotional intelligence (EQ) strategies rather than, IQ fosters not only improved academic achievement, but improved mental health management, emotional intelligence and resilience, as the way forward guaranteeing future success of our children. Although there is a growing need for universal interventions in schools, government funding in the UK does not seem to reach schools for children who are most at risk and in need of support. Studies show how prompt intervention online, can prevent mental health difficulties developing later in life. **Methods:** This research pilot uses the grounded theory approach to analyse the impact of a digital mood mentoring program on a group of 10 students aged from 12 to 16 years old in one London secondary school over the period of one term, January to April 2021, using pre and post interviews from their parents and teachers to measure the impact of providing early intervention on young peoples' mood, mental health, and satisfaction. **Results:** Results obtained from this investigation indicated a significant impact on the mood and wellbeing of the sample being mentored with these improvements seen by parents, teachers, and the young people participating in this study. **Conclusion:** Early intervention online is as impactful as face-to-face intervention through mood mentoring and is beneficial to help young people develop their emotional intelligence and strategies to manage current difficulties that may challenge their mental health as a result of the Covid-19 Pandemic guaranteeing better quality of life, happiness and success for our children. **Discussion points:** Mood mentoring, online mental health intervention, developing resilience, confidence in mood mentoring, emotional intelligence
Keywords: Moods, Early Intervention, Mental Health, Depression, Stress, Anxiety, Mood Management

Experimental Analysis and Systematic Review of the Carcinogenic and Non-Carcinogenic Risk of Consuming Metal-Laden Wild Mushrooms in Nigeria

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Abstract

Mushrooms are undeniably rich in nutritive and therapeutic compounds; nevertheless, they are excellent bio-accumulators of hazardous substances in contaminated conditions. This study aims at investigating the potential human health risk associated with the consumption of metal-laden mushrooms in Nigeria. The concentrations of Pb, Cd, Cr, Cu, Ni, Zn and Al in six wild



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ERCICRLSH2203086

mushrooms collected from the Nigerian environment were determined using experimental analysis (AAS). Also, systematic analysis of 21 published articles on metal accumulation in mushrooms from Nigeria were obtained from scientific databases. The determined metals were analysed for their potential to induce carcinogenic and non-carcinogenic health risk in humans when consumed using hazard model indices. Zn and Cd, respectively, had the highest and lowest mean concentrations (mgkg⁻¹) in the analysed mushrooms while Fe and Co, respectively, had the highest and lowest mean concentrations (mgkg⁻¹) in the data from the 21 reviewed articles. The Estimated Daily Intake of the metals in the mushrooms were all within the PTDI limit set by JECFA and WHO. The Target Hazard Quotient of all the heavy metals in the experimentally analysed mushrooms were <1 while only Cd, Cr and Co exceeded the safe limit in the systematic analysis. The hazard indices obtained from both the systematic and experimental analyses were all >1, indicating significant health risk. The findings from systematic and experimental analyses revealed that consuming metal-laden mushrooms increases the carcinogenic risk of Cd, Cr, and Ni which exceeded the acceptable limit of 1E-04 according to USEPA. Based on the alignment in the findings from the systematic and experimental analyses, it suggests that consuming mushrooms collected from metal polluted substrates increases carcinogenic and non-carcinogenic health risk of mushroom consumers in Nigeria.

Keywords: Health Risk Assessment, Metal Pollution, Mushrooms, Nigeria, Systematic Review Analysis

Ahmed Badawy
ERCICRLSH2203054

International Standards in Combating the Transmission of Infectious Diseases through Central Sterilizers and Periodic Examination of Systems inside the Hospital

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Abstract

International standards in combating the transmission of infectious diseases through central sterilizers and periodic examination of systems inside the hospital, in order to reduce the burden on the citizen in thinking about what he will suffer while receiving treatment in a government hospital. The most important challenges and problems faced by the medical sector in Egypt are represented in the inadequacy of the health insurance system and its lack of comprehensiveness, with a noticeable disparity in health service indicators in different regions and between the different strata of society, in addition to the lack of a complete database for managing medical services in general, and the lack of use. The financial and human resources are well available, in addition to the poor distribution of doctors and health services to the different governorates, so that some specialties such as specialized surgeries, intensive care and anesthesia are completely absent in the border areas, with the scarcity of available financial resources and their mismanagement in some cases whenever they go away from the capital. There are also some other human factors affecting the health sector, such as the low rate of health awareness among the citizen and the spread of some harmful and wrong behaviors among the people, in addition to the citizen bearing the largest financial burden for the medical service with its high prices as a result of the citizen's weak confidence in the free government medical services, as well as the low wages of workers in the field of providing medical services and the severe inability to prepare nursing in all parts of the republic, with a severe weakness in the quality control systems in hospitals and health directorates.

The Way Forward for the Control of Stroke and Other Health Related Problems in Ghana



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ERICRLSH2203062

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Abstract

Stroke and other non-communicable diseases are important emerging public health concerns in sub-saharan africa where stroke-related mortality and morbidity are higher compared to other parts of the world. Despite the availability of evidence-based acute stroke interventions globally, uptake in low-middle income countries (lmic) such as ghana is uncertain. This study aimed to identify and evaluate available acute stroke services in ghana and the extent to which these services align with global best practice.

Methods

A multi-site, hospital-based survey was conducted in 11 major referral hospitals (regional and tertiary - teaching hospitals) in ghana from november 2015 to april 2016. Respondents included neurologists, physician specialists and medical officers (general physicians). A pre-tested, structured questionnaire was used to gather data on available hospital-based acute stroke services in the study sites, using the world stroke organization global stroke services guideline as a reference for global standards.

Results

Availability of evidence-based services for acute stroke care in the study hospitals were varied and limited. The results showed one tertiary-teaching hospital had a stroke unit. However, thrombolytic therapy (thrombolysis) using recombinant tissue plasminogen activator for acute ischemic stroke care was not available in any of the study hospitals. Aspirin therapy was administered in all the 11 study hospitals. Although eight study sites reported having a brain computed tomographic (ct) scan, only 7 (63.6%) were functional at the time of the study. Magnetic resonance imaging (mri scan) services were also limited to only 4 (36.4%) hospitals (only functional in three). Acute stroke care by specialists, especially neurologists, was found in 36.4% (4) of the study hospitals whilst none of the study hospitals had an occupational or a speech pathologist to support in the provision of acute stroke care.

Conclusion

This study confirms previous reports of limited and variable provision of evidence based stroke services and the low priority for stroke care in resource poor settings. Health policy initiatives to enhance uptake of evidence-based acute stroke services is required to reduce stroke-related mortality and morbidity in countries such as ghana.



Fayeem Aadil
ERICRLSH2203069

Elucidation of Phenylalanine and Tyrosine Ammonium Lyase Activities among Viola Species from Kashmir Region

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Abstract

Viola species belongs to family violaceae which has been recognized as an important medicinal plant due to its traditional therapeutic role in the treatment of respiratory disorders, laxative, cough, cancer, tumor and many other pathological conditions. In the present study, the comparative phytochemical parameters mostly phenylalanine ammonium lyase (pal) and tyrosine ammonium lyase (tal) activity was assessed, within different viola species with almost same altitude which are known to be stimulated under stress conditions as these are important in plant defense and are key enzymes for the biosynthesis of phenyl-propanoid products. The results revealed a significant amount of variation in terms of its phytochemical activities among different viola species across kashmir valley. The variation can be attributed to the difference in

the agro-climatic zones inhabited by *viola odorata* L., *v. Biflora* L, *v. Indica* w, and *v. Canescens* w. In conclusion, in case of *viola odorata* minimum pal & tal activities was recorded the maximum phytochemical and morphological activity was observed in the samples of *viola canescens* collected from wanganat conservation reserve (wcr) at naranag wildlife area of ganderbal district, in j&k. Moreover, highest pal & tal activities within *viola* species was recorded in descending orders as, *viola canescens*, *viola odorata*, *viola indica* and *viola biflora*.

Keywords: Phytochemical, Pal, Tal, Kashmir, Viola, Climate.



**Umer Hameed
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ERCICRLSH2203070**

Diet Ecology of Two Sympatric Species of Pheasants in and Around Dachigam National Park, Kashmir Himalaya, India

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Abstract

Diet of two pheasant species, Himalayan monal *Lophophorus impejanus* and koklass *Pucrasia macrolopha* was analyzed by faecal analysis during different seasons in and around dachigam national park, Kashmir, India. In all the seasons, both the pheasants preferred herbaceous diet followed by shrubs and grasses. Unidentified matter made most of the dietary part of both pheasants. An insect wing like structures was also obtained in spring from himalayan monal faecal matter indicating preference for invertebrates. No attempt was made to identify the wing structure as the task requires separate study. We performed anova and t tests to know differences in diets consumed during different seasons. Significant difference was observed between diets of both the pheasants during summer ($t=2.22$, $p<0.05$) and autumn ($t=2.24$, $p<0.05$), indicating their preference to same diets during both these seasons. No significant difference was observed by both the pheasant species during all the seasons, himalayan monal ($f=0.32$, $df=3,107$, $p>0.05$) and koklass ($f=0.50$, $df=3,107$, $p>0.05$). *Fragaria* sp., *rumex* sp., *aconogonum molle*, *viola* sp., *chenopodium* sp., *potentilla* sp., *artemisia* sp. And *malva* sp. Were commonly observed in the diets of both the pheasants. Painka's index confirmed the maximum dietary overlap in winter (0.95) and minimum in summer (0.42) for herb category.



**Selliah Joniton
ERCICRLSH2203085**

Effect of Selected Yoga Practices on Mental Health Among Mothers in The Third Trimester of Pregnancy

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Abstract

Yoga is a spiritual and ascetic discipline, a component of which is commonly practiced for health and relaxation and includes breath control, basic meditation, and the adoption of precise body postures. Excessive stress, anxiety and depression during pregnancy may cause mental disorders in pregnant women and may inhibit fetus growth also pregnant mothers suffer from fear of childbirth. This study included 180 pregnant women registered at the medical officer of health (moh) office at dehiowita from which thirty ($n=30$) pregnant mothers aged 19–35 years, in the third trimester of pregnancy from week 27 to the end of the pregnancy, were selected for this study under the purposive sampling method. Under the guidance of yoga experts, the researcher provided eight weeks of yoga instructions and yoga practices to the experimental group, three days a week, each session for a duration of 50 min. A post-test was conducted after eight weeks of the yoga training program. Depression, anxiety, and stress scale dass-21 were used to collect the data. Data were analyzed using Wilcoxon's test. The results showed that there was a significant difference ($p=0.000$) in stress levels, anxiety levels and depression

levels before and after intervention in the selected sample. The mean values of stress, anxiety and depression were recorded as 23.73 and 14.93, 14.86 and 7.93 and 14.96 and 7.44, before and after treatment respectively. It can be concluded that a reduction in stress, anxiety, and depression levels among pregnant women in their third trimester can be achieved as a result of yoga activities since the pre-test and post-test results of this study show a significant difference.
Keywords: Stress, Anxiety, Depression, Pregnant Women, Yoga Practices

Samuel Adesida
ERCICRLSH2203086

Experimental Analysis and Systematic Review of the Carcinogenic and Non-Carcinogenic Risk of Consuming Metal-Laden Wild Mushrooms in Nigeria

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Abstract

Mushrooms are undeniably rich in nutritive and therapeutic compounds; nevertheless, they are excellent bio-accumulators of hazardous substances in contaminated conditions. This study aims at investigating the potential human health risk associated with the consumption of metal-laden mushrooms in Nigeria. The concentrations of PB, CD, CR, CU, NI, ZN and al in six wild mushrooms collected from the Nigerian environment were determined using experimental analysis (aas). Also, systematic analysis of 21 published articles on metal accumulation in mushrooms from Nigeria were obtained from scientific databases. The determined metals were analyzed for their potential to induce carcinogenic and non-carcinogenic health risk in humans when consumed using hazard model indices. Zn and cd, respectively, had the highest and lowest mean concentrations (mgkg⁻¹) in the analyzed mushrooms while fe and co, respectively, had the highest and lowest mean concentrations (mgkg⁻¹) in the data from the 21 reviewed articles. The estimated daily intake of the metals in the mushrooms were all within the ptdi limit set by jecfa and who. The target hazard quotient of all the heavy metals in the experimentally analyzed mushrooms were <1 while only cd, cr and co exceeded the safe limit in the systematic analysis. The hazard indices obtained from both the systematic and experimental analyses were all >1, indicating significant health risk. The findings from systematic and experimental analyses revealed that consuming metal-laden mushrooms increases the carcinogenic risk of cd, cr, and ni which exceeded the acceptable limit of 1e-04 according to usepa. Based on the alignment in the findings from the systematic and experimental analyses, it suggests that consuming mushrooms collected from metal-polluted substrates increases the carcinogenic and non-carcinogenic health risk of mushroom consumers in Nigeria.

Keywords: Health Risk Assessment, Metal Pollution, Mushrooms, Nigeria, Systematic Review Analysis



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ERCICRLSH2203088

Antimicrobial Effects of Whey Permeate-Derived Animal Feed Acidifier

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Abstract

Antimicrobial resistance is a major global issue, increasing due to the excessive use of

antibiotics thus threatening the life of both – animals and humans. Antimicrobial compounds, produced by food-grade bacteria present an alternative to antibiotics, and are an effective way of food and feed preservation. Dairy propionibacteria are microorganisms that have Qualified Presumption of Safety (QPS) status. By releasing metabolites with antimicrobial activity, e.g., organic acids, diacetyl, acetoin, and bacteriocins, they can contribute to the maintenance of the microbiological quality of the animal feed. In this study, we tested the antimicrobial effects of a product obtained from fermented whey permeate and suitable as an additive for animal feed acidification. Acidification is a preventive method that helps to reduce the frequency of young animal diarrhea to keep the incidence of serious illness to a minimum, reducing the need for antibiotics. Utilization of whey-derived raw material in the production of animal feed additives also would improve the recycling of dairy industry by-products. Fermentation of whey permeate was performed under laboratory pilot-scale conditions at the Faculty of Food Technology of the Latvia University of Life Sciences and Technologies. We were using propionibacteria cultures (DSM 20273, 20535, 16859, and 4902), as well as nutrients and other additives to assure the necessary qualities of the product. Results demonstrated that the product has a strong antimicrobial effect against tested pathogen species – *Pseudomonas aeruginosa*, *Escherichia coli*, *Klebsiella pneumoniae*, and *Staphylococcus aureus* (representatives from multi-drug resistant bacteria group – ESKAPE list microorganisms), as well as *Bacillus subtilis* that can be used as an indicator species. Natural and diluted (0.8, 1.6, 3.1, 6.3, 12.5, 25.0, and 50.0 %) forms of the product completely inhibited the above-mentioned microorganism species. (Also, its influence on lactic acid bacteria, as well as its efficacy after different temperature treatments was studied. It is planned to supplement the abstract by the conference.)

Keywords: Antimicrobials, Animal, Biopreservation, Fermentate, Acidification, Propionic Acid Bacteria

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