

# BOOK OF ABSTRACTS



सीएसआईआर  
CSIR  
भारत का नवाचार इंजन  
The Innovation Engine of India



## 30<sup>th</sup> Swadeshi Science Congress

25-27 May 2023

National Conference on Holistic Approach for a Sustainable Lifestyle  
Perspectives from Indian Knowledge System at NIT - Calicut



Organized by:  
Swadeshi Science Movement-Kerala  
in association with  
National Institute of Technology (NIT), Calicut

Supported by:  
Council of Scientific and Industrial Research (CSIR),  
Govt. of India  
Ministry of Earth Sciences (MoES), Govt. of India



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### *Focal Theme*

Holistic Approach for a Sustainable Life Style-  
Perspectives from Indian Knowledge System

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(Kerala Chapter of Vijnana Bharati, New Delhi)  
&

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## **BOOK OF ABSTRACTS**

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**May 2023**

- VAF/33** Natural level of phosphorus in commercially important wild caught shrimp species - Priya, E.R., Nelbin Joseph, Laly, S.J., Zynudheen, A.A. and Femeena Hassan
- VAF/35** Enzyme profiles, virulence and genetic diversity of *V. parahaemolyticus* isolated from bivalves along south-west coast of India - Remya, B., Krupesha Sharma, S.R., Murugadas Vaiyapuri, Vineeth Rajan and Ardhra Vijayan
- VAF/36** Characterization of classic virulence determinants in *Salmonella* serotypes from seafood: Factors embracing pathogenicity - Greeshma, S.S., Vishnu Vinayagam, Toms C. Joseph and Asha, K.K.
- VAF/38** Influence of dietary tannic acid on growth performance in *Oreochromis niloticus* fingerlings - Tejpal, C.S., Lekshmi, R.G.K., Sanal, E., Chandrasekar, S., Renuka, V., Anas, K.K. and Anandan, R.
- VAF/39** Bio-extraction of chitin from shrimp shell waste by successive co-fermentation using *Bacillus licheniformis* and *Lactobacillus* sp. - Anupama, T.K., Krishnamoorthy, E., Lekshmi R.G. Kumar and Toms C. Joseph
- VAF/51** Shrimp processing side stream-based natural foliar formulation for better growth and yield in Red amaranthus (*Amaranthus tricolor L.*) - Angel Maria Selassy and Sabu, S.

## 6. Health Sciences

- HSS/PL/01** Effect of environmental pollutants on human health - Balagopal Unni
- HSS/PL/02** The impact and importance of Science Based, Evidence Based Ayurveda (SBEBA) in Indian healthcare - Remya Krishnan
- HSS/PL/03** Human-on-a-chip, a next generation approach in pre-clinical studies - Mohanan, P.V.
- HSS/01** Effectiveness of yoga therapy: Case studies - Vijayaraghavan, N. and Madhavachandran, K.
- HSS/02** Low back pain: A pragmatic plan for Ayurveda intervention for the accomplishment of sustainable development - Amrutha Elamon and Purushothaman, P.
- HSS/03** Anatomical and analytical evaluation of a new poly herbal formulation with special reference to skin care - Nayana, K., Indu Chandrabose, Deepthy



*Mohan, Priyanka, K.S., Bindu, K.K, Asish, G.R. and Sheela Karalam, B.*

**HSS/04** Psychological autopsy - *Payal Shrivastava*

**HSS/05** Daivavyapashraya chikitsa: The mystic and spiritual healing - *Adarsh Varma, R.*

**HSS/06** Healthcare ergonomics in India: A review of current practices and future directions - *Ebin Mathew, Sridharan, R. and Ratna Kumar, K.*

**HSS/07** Role of Ayurvedic prescription of menstrual diet recipe in women's reproductive healthcare - *Priyanka, T.K.*

**HSS/08** Causes, impact, awareness and management of stress among college students - *Vinaya, V. and Anu George*

**HSS/09** Antimicrobial resistance among common clinical isolates from Wayanad district: A retrospective study - *Athira, A. and Deepthy, B.J.*

**HSS/10** *In vitro* evaluation of ethanolic extract of *Coriandrum sativum* for anti-urolithaitic activity and phytochemical characterization - *Rinshida, N. and Nayana, P.*

**HSS/11** Exploring the benefits of Yoga sessions in gender and technology programs: A feedback -based presentation - *Chitra, M.S.*

**HSS/12** Quit behaviour among smokeless tobacco users in India: Evidence from global adult tobacco survey - *Karthika, M.*

**HSS/13** Isolation and identification of bacteria from wounds of diabetic patients - *Akshara Ajay, Anamika Chandrababu, Jyothika, S., Nikhitha, M.R., Mary Reena Jacob and Akhila Rajan*

**HSS/14** Comparative assessment of conventional Jaipur foot with other prosthetic feet - *Preeti Chauhan, Amit Kumar Singh and Naresh K. Raguwanshi*

**HSS/15** Association between lifestyle and health among working women in Kozhikode - *Sooryagayatri, M.K., Rajesh, K., Geethalakshmi, V. and Mathew Sebastin*

## 7. Engineering and Technology

**EAT/PL//01** Conversion of innovation and technology to foster entrepreneurship-

determine the most prevalent and emerging bacterial pathogens among them. A seven month retrospective study of different bacterial isolates from various clinical samples was conducted in a tertiary care hospital in Wayanad district. Clinical samples taken for the study included urine, pus, sputum and blood. The data were stored and processed using WHONET software, and statistically analyzed. Data from 2125 clinical samples were studied, in which 661 were urine samples, 910 were pus samples, 225 were blood samples and 339 were sputum samples. The predominant bacteria identified from urine sample was *E. coli* among which the prevalence of extended spectrum beta lactamase (ESBL) producing *Escherichia coli* was 40.61%, and the metalobetalactamase (MBL) producers 3.45%. *Staphylococcus aureus* was the predominant bacteria in the pus samples, in which Methicillin resistant *S. aureus* (MRSA) was found to be 3.92%. *Acinetobacter* was the most predominant bacteria in the blood samples, in which ESBL producing *Acinetobacter* was noted as 3.57%. *Klebsiella* species were the predominant bacteria in the sputum samples, in which ESBL producing *Klebsiella* was 16.79% and MBL producers were 3.82%. The study helped to identify the most predominant antibiotic resistant strains from each of the clinical samples in a resource- limited setting like Wayanad. Similar studies would help in successfully formulating treatment strategies against bacterial infections, thereby reducing morbidity and mortality in patients.

HSS/10

## ***In vitro* Evaluation of Ethanolic Extract of *Coriandrum sativum* for Anti-urolithaitic Activity and Phytochemical Characterization**

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Urolithiasis are the third most prevalent disease of urinary system. Standard procedures in healthcare cannot provide complete cure, thus leading to infections and high recurrence rate. Hence, people prefer herbal medicines over synthetic medicines. Herbal medicines contain variety of phytoconstituents that exert their effects in a multiple ways to treat urolithiasis. Moreover it can be considered a less expensive method and can



reduce the recurrence rate. The present study focuses on the anti-urolithiatic activity of easily available plant *Coriandrum sativum* by *in vitro* approach. In the present study, aqueous extract and ethanolic extract of *Coriandrum sativum* were subjected to qualitative and quantitative analysis. Antiurolithiatic activity was determined by turbidity method against Calcium oxalate crystal. By analyzing the result ethanolic extract was selected for further studies. Characterization was done by microscopic analysis, and UV-Vis spectrophotometry. Characterization of Calcium oxalate crystal after treatment with the ethanolic extract of *Coriandrum sativum* showed significant reduction in the crystal formation with respect to the control. From the study, it was concluded that *Coriandrum sativum* can be used as an excellent herbal medicine against urolithiasis.

HSS/11

## Exploring the Benefits of Yoga Sessions in Gender and Technology Programs: A Feedback-based Presentation

**Chitra, M.S.**

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Women often face unique challenges related to online privacy and internet usage, as well as a general lack of awareness of web-based issues in Free and Open Source Software. To address this issue, International Centre for Free and Open Source Software (ICFOSS) has taken proactive steps to redress the imbalance. Women-only hackathons, fellowship programs, workshops, winter and summer schools, residential programs, Back to Work Programs etc. have been organized. Yoga session was implanted as a part of Gender and technology programs of ICFOSS and it has resulted in notable improvements in vital capacity among participants. It helped in validating the effectiveness of Yoga and Pranayama in enhancing the vital capacity which was a positive therapeutic outcome that eventually enhanced respiratory function and overall well-being of the participants. The Yoga sessions were conducted by certified Yoga instructors which includes physical postures, breathing exercises, and mindfulness practices. Post completion of the program, participants were asked to provide feedback on their experience with the Yoga sessions through surveys and open-ended questions which was an essentiality