CONFERENCE ABSTRACT

September 6-8, 2024 Vancouver, Canada





Proudly Canadian, Truly Global

Abstract Book

September 6-8, 2024 - Vancouver, Canada

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Venue

University of British Columbia September 7, 2024 Vancouver, Canada

Table of Contents

Welcome Remarks	02
Conference Venue	03-04
Conference Time Schedule	05
Conference Committee	06-10
Authors' Presentation Review	11-13
Instructions for Oral Presentation	14
Instructions for Publication	14
Instructions for Participants	14
Authors' Presentation Schedule	15-21



Welcome

As Conference Chair I'm honored to welcome all participants to the **Conference organized by Global Conference Alliance Inc.** held on September 6-8, 2024, in beautiful Vancouver, Canada.

This conference will be an excellent opportunity to meet and network with delegates from around the world in areas of management, marketing, international business, human resource management, accounting, finance, entrepreneurship, digital marketing, informational technology, Nursing, healthcare, HRM Leadership, Social Science, Engineering, business, and economics. Participants should benefit from conference presentations exploring cutting-edge reviews and investigations in basic and applied research.

Attending this conference also gives you an opportunity to explore Vancouver and enjoy its scenic views, tropical climate, and friendly people. Vancouver enjoys a global reputation as one of the world's top cities for quality of life and recreation. Vancouver attracts many international conferences and events, including the 2010 Winter Olympics and Paralympics.

Thank you for considering attending the Conference. A wide scope of participation will enrich our conference and help us all add significant value and experience to our shared research objectives.

Dr. Afzalur Rahman

CEO & Conference Chair

Global Conference Alliance Inc.

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Proudly Canadian, Truly Global



Conference Venue

University of British Columbia

Classroom C400+ foyer, 800 Robson Street Vancouver, British Columbia, Canada V6Z 3B7

Directions:







Public Transit:

UBC Robson Square is a short walk from the Burrard, Granville, and City Centre SkyTrain stations. Use the TransLink website to plan your trip via transit from any location in the Lower Mainland: https://www.translink.ca/

Driving & Parking

To access the West Park lot for 800 Robson Street (Lot 189), head south on Howe Street to the corner at Nelson Street. The parking lot entrance will be on your right, just before Nelson. Note that Howe is a one-way street. Once you have entered the parking lot, follow the directional signs to UBC Robson Square. Please consult the West Park website for current pricing. Or Call Westpark at: 604-669-7275 [PARK]

Accessibility

UBC Robson offers elevator access via our entrance on Hornby Street at Robson Street.





Conference Schedule

September 6-8, 2024 - Vancouver, Canada

Disclaimer: Please note that all our conferences are multidisciplinary. In addition to the main topic, other topics may also be discussed during the scheduled sessions. Please note the main conference day is 7th September and the conference will be held at University of British Columbia. If you need any help on the 6th September please let us know, otherwise we are eager to have you on board on the conference day.

- Friday, September 6, 2024 Arrival & Reception of the participants in Vancouver, Canada
- Saturday, September 7, 2024 (Conference Day) Registration, opening speech, keynote speech, and technical sessions:

Registration will start from 01:00 PM, Gate Closes at 1:30 PM

Activity List, Saturday 7th September, 2024 (Conference Day)	Time
Registration and Lunch	1:00 PM - 1:30 PM
Opening Remarks by Conference Chair Dr. Ekram Azim	1:30 PM - 2:00PM
Keynote Speech by Dr. Victor Herrera Tanaka and Q/A	2:00 PM - 2:20 PM
Break	2:20 PM - 2:25 PM
Keynote Speech by Natasha O Gulati and Q/A	2:25 PM- 2:45 PM
Break	2:45 PM - 2:50 PM
Keynote Speech by Dr. Neeta Nagra and Q/A	2:50 PM - 3:10 PM
Break	3:10 PM - 3:15 PM
Keynote Speech by Dr. Ekram Azim and Q/A	3:15 PM - 3:35 PM
Break	3:35 PM - 3:40 PM
Author 1: Bamidele Jonathan Kolawole	3:40 PM - 3:55 PM
Break	3:55 PM - 4:00 PM
Author 2: Nadia Monjezi	4:00 PM - 4:15 PM
Certificate Distribution and Photo Session	4:15 PM - 4:30 PM
Networking and Testimonials	4:30 PM - 4:45 PM

• Sunday, September 8, 2024 – City Tour (optional to the participants)





Conference Committee *Keynote Speech*



Victor Herrera Tanaka, MD Clinical Research Coordinator Dr. Chih-ho Hong Medical Inc.

Experienced cardiologist and clinical scientist with a strong background in clinical research and pharmaceutical drug development. Renowned for mentoring medical residents and students, I prioritize education and training for excellence. I bring a positive, empathetic attitude, adept at working across organizational levels for continuous skill enhancement. Skilled in-patient evaluation and specialized procedures in various settings, I have a profound grasp of complex health issues. I am seeking to utilize my expertise and innovative spirit to develop new treatments and enhance patient care.

Keynote Speaker Topic: Clinical Trials Medical and Health Sciences.



Keynote Speech



Dr. Neeta Nagra *Founder, Fit To Be Strong Leader*

Dr. Neeta Nagra is an internationally recognized healthcare leader, author, and leadership coach. Holding a Doctor of Education in Leadership, a Master of Business Administration, and advanced degrees in Mental Health and Psychiatric Nursing, she brings extensive expertise to her diverse roles. As the founder of the NEWW app, Dr. Nagra supports nurses by providing free, specific self-care resources. Her work extends to writing, where she explores leadership and the impact of her global travels, including visits to the seven wonders of the world. Dr. Nagra also coaches individuals from various cultural backgrounds, helping them succeed in Canadian professional settings. She enjoys outdoor activities like hiking and paddleboarding to maintain her well-being.



Keynote Speech



Natasha Olga Gulati ImagineSuccess

Natasha Olga Gulati, a skilled professional with over a decade of experience in HR and business development, is the founder of ImagineSuccess. Her coaching philosophy centers on strong connections and personalized guidance, turning adversity into success. Natasha's approach is grounded in clarity, resilience, and deep knowledge of individual journeys, ensuring impactful, non-judgmental coaching sessions.

Her life has been a journey of both significant achievements and profound challenges. Natasha has experienced corporate success but has also faced failures, social humiliation, and personal struggles. She understands the addictive patterns that arise from coping with pain and fear, and knows the courage required to break free from them.

After immigrating to Canada at the peak of her career, Natasha encountered the harsh reality of starting over in a new country, compounded by the global pandemic. This experience brought her deepest insecurities to the surface, but it also turned her into a resilient and determined individual. Through reflection and coaching, she rediscovered her strengths and transformed her life narrative.

Natasha became a Certified Leadership Coach, motivated by the belief that coaching provides the missing piece in human empowerment. She is dedicated to helping others realize their potential and achieve authentic transformation. Natasha's message is clear: If she can overcome life's challenges, so can you.



Keynote Speech



Ekram Azim, PhD, EP, RP Lead Scientist, WSP Canada

Dr. Ekram Azim is a Lead Scientist at WSP Canada with over 25 years of teaching, research and consulting experiences around the world in the areas of Aquatic Resources Management, including aquaculture and fisheries. He is highly skilled in technical writing and editing, has published around 100 articles in peer reviewed journals, books, professional magazines, and newspapers. Dr. Azim also edited a book on "Periphyton: Ecology, Exploitation and Management" published by CAB International (UK), and attended numerous international conferences and presented scientific papers. Dr. Azim has maintained an international professional relationship by acting as an Associate Editor for Freshwater Science (Frontiers), an Editorial Board Member for Aquaculture Reports (Elsevier) and reviewer for numerous international journals and research grant proposals. His professional experience in both academia and industries has made him an excellent professional in solving real-word environmental issues through innovative science and cutting-edge technology. Besides professional activities, Dr. Azim is involved in various community development initiatives including a Co-founder of the Step to Humanity, a Canadian charity for international development.





Committee Members

- Dr. Afzalur Rahman, Douglas College, Canada Conference Chair
- Dr. Michael Henry, Thompson Rivers University, Canada; Dean, School of Business & Economics – Adviser
- Masum Billah Bhuiyan, Founder of Giant Marketers IT Entrepreneur || Public Speaker || Business Coach || Digital Marketing Expert
- Mr. John O'Fee, QC, Thompson Rivers University, Canada Business Law and Human Resource Management
- Dr. Erika Skita, Instructor, Granville College in Vancouver, Canada
- Dr. Dushyant Gosai, Colorado State University-Global Campus, United States Accounting
- Mr. Simon Parker, Douglas College, Canada Marketing and International Business
- **Dr. Ahmed Hoque**, Vancouver Island University, Canada Economics and Banking
- **Dr. Emrul Hasan**, The University of British Columbia, Canada -Finance
- Dr. Murat Erogul, Faculty Member, Adelphi University, USA
- Ms. Marisa McGillivray, Economist at Statistics Canada Consumer Prices Division
- Mr. Quazi M. Ahmed, IFC/World Bank Group Certified Master Trainer
- Mrs. Yasmin Jahir, Divisional Chair, Electrical and Computer Engineering Director of Operations, USA
- Dr. Imtiaz Ahmed, Assistant Professor, Department of Electrical Engineering and Computer Science, Howard University, Washington, DC, USA
- Husnu Saner Narman, Faculty Member at Marshall University





Authors' Presentation Review

Saturday, September 7, 2024

Name and Affiliation	Title
Abigail Aba Hayford (Author) New Edubiase Government Hospital Kingsley Boadu (Co-Author) New Edubiase Government Hospital	The Impact of knowledge and attitude of pregnant women on the utilization of Antenatal Care (ANC) service. A case study of Obuasi S.D.A.Hospital
Akua Asantewaa Yeboah (Co-Author) New Edubiase Government Hospital	•

Name and Affiliation	Title
Bamidele Jonathan Kolawole (Author) Khola Vet Services	
Hannah Loni Kolawole (Co-Author) Ahmadu Bello University Zaria	
Ochuko Orakpogheno (Co-Author) Regional Disease Surveillance Systems Enhancement (REDISSE) Project	
Ayokanmi Charles Toluhi (Co-Author) National Veterinary Research Institute Vom	Rabies: an endemic zoonotic disease in Nigeria – confirmation in a 4-year-old male Nigerian indigenous dog, Abia State.
Odukoya Adesoji Olatunde (Co-Author) Federal Ministry of Agriculture and Rural, Department of Veterinary and Pest Control Services	
Innocent Abazie (Co-Author) Ministry of Agriculture, Department of Veterinary Services Umuahia	



Name and Affiliation	Title
Folajimi O. Shorunke (Author) Nigeria Field Epidemiology Network/Nigeria Police Force	
Muntari Hassan (Co-Author) Nigeria Centre for Disease Control	
Christopher Ibrahim (Co-Author) Nigeria Centre for Disease Control	
Eugene Chidi Eugene (Co-Author) University Teaching Hospital Jos	Descriptive Epidemiology of Diphtheria Outbreak Data, Taraba State, Nigeria, August-november 2023
Olaitan Ruth Yetunde (Co-Author) Nigeria Centre for Disease Control	
Eugene Bwede (Co-Author) Nigeria Centre for Disease Control	
Dako Hadiza Jumma (Co-Author) Ministry of Health	

Name and Affiliation	Title
Kongnyuy B. Fonlon (Author) University of Buea Mabel Nechia Wantim (Co-Author) University of Buea	Assessing the Effective Implementation of Cholera (Vibrio Cholerae) Preventive Measures in Secondary and High Schools in the Limbe Municipality
Bonaventure Ngong Ukah (Co-Author) University of Buea	

Name and Affiliation	Title
Sher Ali (Author) Research Centre for Reservoir Resettlement, Three Gorges University Ribesh Khanal (Co-Author) Holmes Institute	The Influence of Environmental Regulation on Technological Advancement in New Emerging Industrial Zones in China.





Name and Affiliation	Title
Mian Adnan Kakakhel (Author) College of Hydraulic & Environmental Engineering, Three Gorges University	
Nishita Narwal (Co-Author) University School of Environment Management, Guru Gobind Singh Indraprastha University	
Alam Khan (Co-Author) Sustainable Bioenergy and Biorefinery Laboratory, Department of Microbiology Department of Life Sciences Abasyn University Islamabad Campus	The underlying mechanisms behind the change in swimming behavior in grass carp (Ctenopharyngodon idella) induced by water
Majid Rasta (Co-Author) College of Hydraulic & Environmental Engineering, Three Gorges University	velocity: An integrate transcriptomic analysis.
Shi Xiaotao (Co-Author) College of Hydraulic & Environmental Engineering, Three Gorges University	
Yanqin Bai (Co-Author) University School of Environment Management, Guru Gobind Singh Indraprastha University	

Name and Affiliation		Title
Nadia Monjezi (Author) Plant Science Department, University	McGill	Novel Bioactive Metabolites of Devosia sp. Strain SL43: Implications for Sustainable
Donald L. Smith (Co-Author) Plant Science Department, University	McGill	Agriculture.



Instructions for Oral Presentation

Saturday, September 7, 2024

Devices provided by the conference organizer:

- **❖** Laptop (with MS-Office and Adobe Reader)
- Projector and Screen

Materials provided by the presenters:

PowerPoint or PDF files (files should be copied to the conference laptop at the beginning of each session)

Duration of each presentation:

- ❖ Regular oral presentation 10 minutes including Q&A
- ❖ Keynote speech 20 minutes

Instructions for Publication

All accepted papers in the Conference will be published in the online conference proceedings:

Title: Conference Abstract September 6-8, 2024 – Vancouver, Canada.

ISBN: 978-1-998259-44-1

Format: Electronic book

Instructions for Participants

To attend the conference, please ensure you bring a printed invitation letter and a valid photo ID (such as Passport, Driving License, or any government-issued ID with a photo) on the day of the event. Admittance to the conference will not be granted without these documents. We greatly appreciate your cooperation.



Authors' Presentation Schedule

Saturday, September 7, 2024

Name and Affiliation	Title & Abstract
	The Impact of knowledge and attitude of pregnant women on the utilization of Antenatal Care (ANC) service. A case study of Obuasi S.D.A.Hospital
Abigail Aba Hayford (Author) New Edubiase Government Hospital Kingsley Boadu (Co-Author) New Edubiase Government Hospital Akua Asantewaa Yeboah (Co-Author) New Edubiase Government Hospital	Abstract: Antenatal care is a medical and general care provided to pregnant women during pregnancy. It is aim at meeting both psychological and medical needs of pregnant women within the context of health care delivery system. The study investigated pregnant women's knowledge and attitude towards antenatal care services at Obuasi S.D.A. Hospital. Three research objectives and questions were formulated to guide the study. The literature was conceptually, empirically and theoretically reviewed based on the main variables under study. The study adopted a descriptive and explanatory design and the sample size was 300 pregnant women attending antenatal care at the Hospital from January – May, 2016. The instrument for data collection was a structured questionnaire. The study revealed that majority of the respondents had good knowledge and favorable attitude towards antenatal care. Additionally, the result indicated that attitude and knowledge of pregnant women negatively and positively predict the utilization of ANC services respectively. However, attitude of pregnant women showed a higher negative impact on the utilization of ANC services than combining it with interest of pregnant women. The study recommended that publicity on the effectiveness of antenatal care should be encouraged by health practitioners. Again, health practitioners should treat patients as unique individuals without any favoritism in order to encourage the utilization of ANC. Keywords: Antenatal, conceptually, complications, attitude.



Name and Affiliation	Title & Abstract
	Descriptive Epidemiology of Diphtheria Outbreak Data, Taraba State, Nigeria, August-november 2023
Folajimi O. Shorunke (Author) Nigeria Field Epidemiology Network/Nigeria Police Force Muntari Hassan (Co-Author) Nigeria Centre for Disease Control	Background As of October 9, 2023, diphtheria has been noted to be re-emerging in four African countries: Algeria, Guinea, Niger, and Nigeria. 14,587 cases with a case fatality rate of 4.1% have been reported across these regions, with Nigeria alone responsible for over 90% of the cases. In Taraba State Nigeria, the index case of Diphtheria was reported on epidemic week 34, August 24, 2023 with 75 confirmed cases found 3 months after the index case and a case fatality of 1.3%. We described the distribution, trend and common symptoms found during the Outbreak.
Christopher Ibrahim (Co-Author) Nigeria Centre for Disease Control	Methods The Taraba State Diphtheria Outbreak line list on the Surveillance Outbreak Response Management & Analysis System (SORMAS) for all its 16 local government areas (LGAs) was analyzed using descriptive statistics (graphs,
Eugene Chidi Eugene (Co-Author) University Teaching Hospital Jos	chats and maps) for the period between 24th August to 25th November 2023. Primary data was collected through the use of case investigation forms and variables like Age, gender, date of disease onset, LGA of residence, and symptoms exhibited were collected. Naso-pharyngeal and
Olaitan Ruth Yetunde (Co-Author) Nigeria Centre for Disease Control	oro-pharyngeal samples were also collected for Laboratory confirmation. The most common diphtheria symptoms during the outbreak were also highlighted. Results A total of 75 Diphtheria cases were diagnosed in 10 of the 16
Eugene Bwede (Co-Author) Nigeria Centre for Disease Control	LGAs in Taraba State between 24th August to 25th November 2023, 72% of the cases were female with the age range 0-9 years having the highest proportion of 34 (45.3%), the number of positive diagnosis reduces with age among
Dako Hadiza Jumma (Co-Author) Ministry of Health	cases. The Northern part of the State had the highest proportion of cases 68 (90.7%) with Ardo-Kola LGA having the highest 28 (29%). The remaining 9.2% of cases is shared among the middle belt and southern part of the State. The Epi-curve took the characteristic shape of a propagated infection with peaks at the 37th, 39th and 45th epidemic weeks. The most common symptoms found in cases were fever 71 (94.7%), pharyngitis 65(86.7%), tonsillitis 60 (80%), and laryngitis 53 (71%).



Conclusions

The number of confirmed cases of Diphtheria in Taraba State Nigeria between 24th August to 25th November 2023 is 75. The condition is higher among females than male and mostly affected children between ages 0-9 with the northern part of the state most affected. The most common symptoms exhibited by cases include fever, pharyngitis, tonsillitis and laryngitis.

Keywords: Diphtheria outbreak, Nigeria, Taraba state, Trend, Epidemiology

Name and Affiliation	Title & Abstract
Bamidele Jonathan Kolawolo (Author) Khola Vet Services	Rabies: an endemic zoonotic disease in Nigeria –
Hannah Loni Kolawolo (Co-Author)	confirmation in a 4-year-old male Nigerian
Ahmadu Bello University Zaria	Abstract: The negative impacts of zoonotic diseases such as rabies
Ochuko Orakpogheno (Co-Author) Regional Disease Surveillance Systems Enhancement (REDISSE) Project	on human and animal population cannot be overemphasized. In this case report, rabies was confirmed in a 4-year-old male Nigerian indigenous dog
Ayokanmi Charles Toluh (Co-Author) National Veterinary Research Institute Vom	several other dogs without provocation. Upon report to Khola Vet Services a Private Veterinary Clinic within
Odukoya Adesoji Olatundo (Co-Author) Federal Ministry of Agriculture and Rural, Department of Veterinary and Pest Control Services	fluorescent antibody test (DFAT) was used to detect rabies virus in the sample and it was confirmed positive. This outcome further confirms the endemicity of rabies
Innocent Abazie (Co-Author) Ministry of Agriculture, Departmen of Veterinary Services Umuahia	Keywords : zoonotic, rabies, pet, DFAT



Name and Affiliation	Title & Abstract	
	Assessing the Effective Implementation of Cholera (Vibrio Cholerae) Preventive Measures in Secondary and High Schools in the Limbe Municipality	
Von annun D. Fanlan	Background and Objective: Since the first cholera outbreak in the South West Region in 2011, the Limbe Municipality has registered recurrent outbreaks which suggest that cholera remains a public health threat in this area. This study sought to assess the different cholera preventive measures put in place at selected secondary and high schools and the Cholera Treatment Center (CTC) used as a pilot center in the Limbe municipality and the challenges faced in implementing them. Methods: The study employed a descriptive cross-sectional	
Kongnyuy B. Fonlon (Author) University of Buea	approach with data generated through questionnaires, focus group discussions (FGD), key informant interviews and semi-structured interviews. SPSS Version 26.0 was used for data analysis and the Chi-square test to determine significant	
Mabel Nechia Wantim (Co-Author) University of Buea	differences in the level of implementation of cholera preventive measures. Findings: Out of 440 respondents, 361 (82 %) did not accept getting vaccinated. Disinfection of classrooms was very low	
Bonaventure Ngong Ukah (Co-Author) University of Buea	62 (14%). Regular use of hand sanitizers was very significant (p=0.013-95% CI). None of the surveyed schools met the standards of the World Health Organisation. Findings from this study revealed that, 526 (27.3 %) of cholera cases recorded at the CTC were from students and teachers. Challenges faced included limited financial resources 344 (86%), limited WASH kits 264 (60%), security challenges at the CTC and difficulties in separating patients from their relatives. Conclusion: The study revealed that, the level of implementation of cholera preventive measures in schools is moderate (51.5%) and high (85%) at the CTC. The study recommends strengthening of WASH services in schools.	
	Keywords : Cholera; Implementation; Preventive measures; Cholera risk, Challenges; School.	



Name and Affiliation	Title & Abstract				
	The Influence of Environmental Regulation on Technological Advancement in New Emerging Industrial Zones in China.				
Sher Ali (Author) Research Centre for Reservoir Resettlement, Three Gorges University Ribesh Khanal (Co-Author) Holmes Institute	Abstract In the contemporary landscape of China's industrial development, the interplay between environmental regulations and technological innovation in new emerging industrial zones has become a subject of considerable interest and importance. With a growing emphasis on environmental protection within China, understanding how regulatory measures influence technological advancements in these zones is crucial. This paper delves into this dynamic relationship by analyzing panel data from 2011 to 2021, focusing on 120 listed companies operating within new emerging industrial zones. Utilizing the Generalized Method of Moments (GMM) estimation technique, the study aims to uncover the impact of environmental regulations on the technological innovation of these companies. GMM is a robust econometric method particularly suitable for analyzing dynamic panel data, making it well-suited for this investigation. The empirical findings of the analysis reveal a positive correlation between environmental regulations and technological innovation within new emerging industrial zones. This suggests that stricter environmental regulations are associated with greater levels of technological innovation among the companies studied. Such results highlight the pivotal role those regulatory frameworks play in driving innovation towards environmentally sustainable practices. This study contributes to the understanding of how regulatory interventions shape industrial dynamics, particularly in the context of environmental sustainability. Demonstrating the positive influence of environmental regulations on technological innovation, underscores the importance of policy frameworks in steering industrial practices towards more sustainable trajectories. The implications of these findings are significant for China's industrial practices. This aligns with broader global efforts to address climate change and environmental degradation, positioning China as a key player in the evolution towards more sustainable industrial development. Keywords: En				



Name and Affiliation

Title & Abstract

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University School of Environment Management, Guru Gobind Singh Indraprastha University

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Sustainable Bioenergy and Biorefinery Laboratory, Department of Microbiology Department of Life Sciences Abasyn University Islamabad Campus

Majid Rasta (Co-Author)

College of Hydraulic & Environmental Engineering, Three Gorges University

Shi Xiaotao (Co-Author)

College of Hydraulic & Environmental Engineering, Three Gorges University

Yanqin Bai (Co-Author)

University School of Environment Management, Guru Gobind Singh Indraprastha University The underlying mechanisms behind the change in swimming behavior in grass carp (Ctenopharyngodon idella) induced by water velocity: An integrate transcriptomic analysis.

Abstract:

A large-scale of hydropower projects have profoundly changed the water flow velocity, thereby damaging of fish habitats, and altering fish swimming behavior. Grass carp (Ctenopharyngodon idella) show significant adaptations to varying water velocities, essential for their survival and foraging behavior. The fish swimming behavior characteristics have been widely investigated under various environmental and hydrodynamic conditions. However, to the best of our knowledge, no research work has been reported in the available literature to understand the underlying mechanism shifting fish swimming behavior changes in the response of different water flow velocity. Therefore, the current study aimed to expose C. idella to different water velocities to unveil the gene expression using transcriptomics analysis. The fish was divided into four groups including 0 BL/s (Control), 0.5 BL/s, 1.5 BL/s, and 2.5 BL/s. The findings showed the water velocities significantly altered swimming behavior. Additionally, transcriptomics analysis revealed that differential expressed genes (DEGs) were identified and functionally annotated and revealing key pathways associated with changed behavior pattern. The Enrichment analysis resulted significant variation of rich factors in all groups including behavior (p < 0.05***), skeletal system development (p < 0.05***), hormone activity (p < 0.05***), muscle contraction (p <0.05**), locomotion (p < 0.05*), and swim bladder development (p < 0.05*). Moreover, some genes were identified for enzymes and hormones, which could play a direct or indirect role during swimming behavior. The current study possibly provides valuable insights into the molecular mechanism underlying fish swimming behavior.

Keywords: Grass carp; Swimming behavior; Gene expression; Calcium signaling pathway; Hormonal changes.



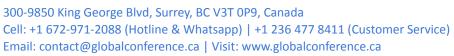
Name and Affiliation		Title & Abstract		
		Novel Bioactive Metabolites of Devosia sp. Strain SL43: Implications for Sustainable Agriculture.		
Nadia (Author) Plant Department, University Donald L. (Co-Author) Plant Department, University	Monjezi Science McGill Smith Science McGill	Abstract Synthetic fertilizers have improved crop yields but raised sustainability concerns. This has shifted the focus to ecoffriendly biofertilizers from active microbes that support plant growth and stress responses. However, their effectiveness can be inconsistent under stress. Recent research highlights microbial biostimulants, particularly cell-free supernatants (CFSs) from plant growth-promoting rhizobacteria (PGPR), as promising solutions for enhancing plant resilience to stressors like soil salinity. Another important aspect is identifying and understanding the molecular mechanisms of novel bacterial-derived metabolites that influence host plant physiological and morphological traits. This could enhance microbial inoculant technology and increase agricultural productivity and nutritional quality in a more sustainable way. Notable bacterial-derived signal compounds, such as lipo-chitooligosaccharides (LCOs) and thuricin 17, regulate plant responses to environmental stresses and improve growth metrics. Despite these advances, there is a gap between research and practical application. This study aimed to extract, isolate, and evaluate potential novel bioactive compounds from Devosia sp. strain SL43 to stimulate seed germination under saline conditions, providing sustainable alternatives for agricultural productivity. Using 1-butanol as the solvent, active compounds are extracted and characterized from Devosia sp. strain SL43. Crude extracts undergo HPLC analysis on a Vydac C18 column, and major peaks are tested for bioactivity in germination experiments. Results indicated that the first major HPLC peak, at 8 minutes, increased soybean germination by 14.29% under control conditions and 28.40% under 125mM NaCl, highlighting its effectiveness. Additionally, peaks at 2 and 17 minutes significantly enhanced germination under salt stress by 32.18% and 39.73%, respectively. These findings emphasize the agricultural application potential of these three peaks, which have been identified as the most effective for		



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Note







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