SCHOLARS CONFERENCES

6th World Congress on

CANCER RESEARCH AND ONCOLOGY

23-25 September 2024 | Village Hotel Changi, Singapore

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SCIENTIFIC PROGRAM

DAY 01 - September 23, 2024
Sphere 1, Village Hotel Changi,
Singapore

08:30-09:30 Registrations

09:30-09:45 Opening Ceremony

Keynote Forum

09:30-10:10 **Title: Causal relationship between immune cells and gastroduodenal ulcer: A Mendelian randomization analysis**
Hui Tang, *The First People's Hospital of Yunnan Province, China*

10:10-10:50 **Title: Leveraging machine learning and vibrational spectroscopy for enhanced cancer diagnostics**
Parmita Mishra, *Precigenetics, United States*

Group Photo

Refreshments Break @ 10:45-11:05 @ Sphere Foyer

11:10-11:50 **Title: The role of histone mutations in human disease**
Kui Ming Chan, *City University of Hong Kong, Hong Kong*

11:50-12:30 **Title: From retinoids to DNA polymerase inhibition in cancer therapeutics**
Nadine Darwiche, *American University of Beirut, Lebanon*

12:30-13:10 **Title: Influence of remnant lipoprotein article cholesterol on non-target lesions progression in patients undergoing percutaneous coronary intervention**
Li Liang, *Xuzhou Medical University, China*

Networking Lunch Break @ 13:10-14:00 @ The Blue Tiffin

14:00-14:40 **Title: China's regimen of fulminant myocarditis**
Dao Wen Wang, *Tongji Hospital, China*

14:40-15:20 **Title: Warfarin resistance or coagulopathy and fight against reoperation from mechanical to bioprosthetic valves: A case report**
Souna Boyadjian, *Nork Marash Medical Center, Armenia*

Speaker Session:

Session Chair: Dao Wen Wang, Tongji Hospital, China

15:20-15:45 **Title: Self-recruited neutrophils trigger over activation of innate immune response and phenotypic change of cardiomyocytes in fulminant viral myocarditis**
Huihui Li, *Tongji Hospital, China*

15:45-16:10 **Title: Frequency of high degree atrioventricular block in patients with acute anterior wall myocardial infarction**
Waqas Dar, *Rehmatul lil Alameen Institute of Cardiology, Pakistan*

Refreshments and Networking Break @ 16:10-16:30 @ Sphere Foyer

16:30-16:55 **Title: Factors affecting door to balloon time for patients presenting with ST segment elevation myocardial infarction for primary angioplasty in a tertiary care centre in western India**
Anand Ahuja, *Rhythm Heart Institute, India*

16:55-17:20 **Title: Impact of intra-aortic balloon pump support on early outcomes in coronary artery bypass grafting for patients with reduced left ventricular ejection fraction: A single-center study**
Abir Tazim Chowdhury, *Evercare Hospital Dhaka, Bangladesh*

17:20-17:45 **Title: Percutaneous device closure of sub aortic and doubly committed Ventricular Septal Defect (VSD) case series from Bangladesh**
Nurun Nahar Fatema, *LabAid Cardiac Hospital, Bangladesh*

17:45-18:10 **Title: The treatment effects of Immunoglobulin on Fulminant Myocarditis (FM) was controversial**
Chen Chen, *Tongji Hospital, China*

Panel Discussions & B2B Meetings

Day 01 End | Closing Ceremony

SCIENTIFIC PROGRAM

DAY 02 - September 24, 2024
Sphere 1, Village Hotel Changi,
Singapore

08:50-09:00 Opening Ceremony

Keynote Forum

09:30-10:00 **Title: The stability and delivery challenges of commercial nucleic acid therapeutics**
Rahul G Ingle, *Datta Meghe College of Pharmacy, DMIHER, India*

Speaker Session:

Session Chair: Nadine Darwiche, American University of Beirut, Lebanon

10:00-10:25 **Title: Icariside II induced ferroptosis to suppress the progression of NSCLC through activation of the mitochondrial dysfunction**
Fei Xu, *Affiliated Hospital of Shandong University of Traditional Chinese Medicine, China*

10:25-10:50 **Title: The Five Reasons Biotech Companies Fail to Raise Capital and How to Fix Them**
David Dobkin, *LifeSci Capital LLC, USA*

Refreshments and Networking Break @ 10:50-11:10 Sphere Foyer

11:10-11:35 **Title: The Synthesis of 2-amino-3- benzylindolizines with using the mixture of halides n-benzyl-2-halogenpyridines and CH-acids – derivatives acetonitrile**
Kyryl Bocharov, *Luhansk Taras Shevchenko National University, Austria*

11:35-12:00 **Title: Obtaining new recombinant cysteine synthase A from Limosilactobacillus reuteri LR1 and studying its properties**
Natalia Chikurova, *The Federal Research Centre of the Russian Academy of Sciences, Russia*

12:00-12:25 **Title: Expression optimization of the recombinant peptidase M23 from Limosilactobacillus reuteri LR1**
Leonid Shaposhnikov, *The Federal Research Centre of the Russian Academy of Sciences, Russia*

12:25-12:50 **Title: Armadillidium vulgare miR-2863 Inhibits Liver Cancer Cell Proliferation, Migration, and Invasion via the Bcl-2/Bax/Caspase-3 Signaling Pathway**
Chun Yi, *Hunan University of Chinese Medicine, China*

Networking Lunch Break @ 12:50-13:40 @ The Blue Tiffin

13:40-14:05 **Title: An increase in the cardiac consultation of suspected cardiac involvement symptoms with unaltered etiology during the post-COVID-19 period**
Yaqi Tang, *Qingdao Women and Children's Hospital, Qingdao University, China*

14:05-14:30 **Title: Minimally invasive cardiac surgery in pediatrics patients**
Mujeeb Ur Rehman, *Peshawar Institute of Cardiology, Pakistan*

14:30-14:55 **Title: Determination of bioactive compounds in selected medicinal plants and their activity evaluation**
Binita Pokhrel, *Purejoy Private Limited, Nepal*

Poster Session @ 15:20-16:00

SP0101 **Title: Innovative 2D nanoplatforms for advanced multi-drug delivery in future cancer treatments**
Zarska Ludmila, *Palacky University Olomouc, Czech Republic*

SP0102 **Title: Graphene derivatives as a way to understand cancer cell processes for potential targeted therapies**
Chaloupkova Zuzana, *Palacky University Olomouc, Czech Republic*

SP0103 **Title: Plasma small RNAs as predictive and monitoring biomarkers for immunotherapy response in advanced gastric cancer**
Fang Jingshuai, *Southeast University, China*

SP0104 **Title: A Novel Automated Microfluidic Cartridge-Based Platform for Nucleic Acid Extraction**
Elian Rakhmanaliev, *One BioMed, Singapore*

Refreshments and Networking Break @ 16:00-16:20 Sphere Foyer

Panel Discussions & B2B Meetings

Day 02 End | Closing Ceremony

SCIENTIFIC PROGRAM

DAY 03 - September 25, 2024
GMT +2 | Virtual | ZOOM

08:50-09:00 Opening Ceremony

Keynote Forum

09:00-09:30
Title: The Beneficial Effects of Physical Activity and Exercise on miRNAs Expression within White Blood Cell Nucleus for Cancer Prevention
Vimolmas Tansathitaya, *Mahidol University, Thailand*

09:30-10:00
Title: Globalization of Congenital Heart Disease, establishment of a global platform of outcomes following congenital heart surgery
James St Louis, *Children's Hospital of Georgia, USA*

Speaker Session

10:00-10:25
Title: Malnutrition in colorectal cancer patients: Association with lack of eating motivation and inappropriate diet
Le Thi Ngoc Anh, *University Medicine and Pharmacy, Vietnam*

10:25-10:50
Title: Frequency of Significant Coronory Artery Disease in Cases with ST Segment Depression During Recovery Phase of Exercise
Umer Farooq, *Rehmatul lil Alameen Institute of Cardiology, Pakistan*

Refreshments Break @ 10:50-11:10

11:10-11:35
Title: Novel Cardiac Troponin T (TNNT2) Mutations in Indian Hypertrophic and Dilated Cardiomyopathy Patients
Deepa Selvi Rani, *CSIR-Centre for Cellular & Molecular Biology, India*

11:35-12:00
Title: Right to Left Angina Yasser's Syndrome (Swinging Yasser's Central Heart Syndrome) or Dancing Yasser's Heart Syndrome
Yasser Mohammed Hassanain Elsayed, *Egyptian Ministry of Health, Egypt*

12:00-12:25
Title: A 2-gene signature within blood leukocytes as diagnostic biomarkers for early colorectal cancer
Yu Wang, *Immodx LLC/ Hangzhou Normal University, Singapore*

12:25-12:50
Title: The Effect of Right Ventricle Septal Pacing vs Apical pacing in Dual chamber Pacemakers on Patients' Anxiety and Depression: A One-Year Follow-up Study
Hassan El-Shirbiny, *Kafrelsheikh University, Egypt*

12:50 -13:15
Title: Synergizing Fusion Modelling for Accurate Cardiac Prediction Through Explainable Artificial Intelligence
Niyaz Ahmad Wani, *Thapar Institute of Engineering and Technology, India*

13:15-13:40
Title: HPV and Cervical Cancer Screening Results of southernmost province of Türkiye
Tunga Barcin, *Adana Seyhan Devlet Hastanes Adana Turkey, Turkey*

E-Poster

13:40-14:00
Title: Features of emotional status of smoking patients with heart failure with reduced ejection fraction
Alexey Ibatov, *I M Sechenov First Moscow State Medical University, Russia*

14:00-14:20
Title: Intramyocardial Dissecting Hematoma of Post Primary Percutaneous Coronary Intervention
Bungsu Daniswara, *Cipto Mangunkusumo Hospital, Indonesia*

Panel Discussions

Day 03 End | Awards and Closing Ceremony

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KEYNOTE SPEAKERS Day 1

Hui Tang
The First People'S Hospital of Yunnan Province, China

Biography

Hui Tang received her PhD in Environmental Medica V Engineering from Kunming University of Science and Technology, China. Tang's major interests are molecular mechanisms of gastrointestinal tumors and development of anti-tumor oncolytic vaccine. Her group is currently work on the mechanisms beyond the synergistic effect of rVV-CCL5 on PD-L1/TDO2 inhibitors treatment of microsatellite-stable colorectal cancer (MSS-CRC).

Causal relationship between immune cells and gastroduodenal ulcer: A Mendelian randomization analysis

BACKGROUND: Gastroduodenal ulcers are a common gastrointestinal disease encompassing both gastric ulcers and duodenal ulcers. Patients not only face the challenges posed by the disease itself but also frequently suffer from associated complications, posing significant threats to human health. Antibiotic resistance in treating gastroduodenal ulcers highlights the pressing demand for new therapeutic strategies. The immune system is pivotal in the development and healing of peptic ulcers, yet the immunological mechanisms specific to gastroduodenal ulcers are intricate and varied. Applying Mendelian randomization analysis to investigate the causal relationship between immune cells and gastroduodenal ulcers not only aids in a deeper understanding of their pathophysiological mechanisms but also facilitates the development of new therapeutic methods and intervention strategies.

PURPOSE: The aim of this study is to apply Mendelian randomization analysis to investigate the causal relationship between immune cells and gastroduodenal ulcers.

MATERIAL & METHODS: Using immune cell phenotypes as exposures and gastroduodenal ulcers as outcomes, a two-sample Mendelian randomization (MR) analysis method was conducted to investigate the causal relationship between immune cell phenotypes and gastroduodenal ulcers. Data were sourced from publicly available GWAS databases, with the Inverse Variance Weighted (IVW) method employed as the primary statistical testing approach ($P<0.05$). Sensitivity analysis, heterogeneity testing, and assessment of horizontal pleiotropy were conducted to ensure the reliability of the data.

RESULTS: Among 731 immune cell phenotypes, 27 were found to have a causal relationship with gastroduodenal ulcers. Specifically, 15 immune cell phenotypes exhibited a negative correlation with increased risk of gastroduodenal ulcers, while 12 were positively correlated with increased risk.

CONCLUSION: This study elucidates the causal relationship between 27 immune cells phenotypes and gastric duodenal ulcers. It contributes to understanding the pathogenesis and progression of gastroduodenal ulcers and promotes the development of novel therapeutic approaches.

Parmita Mishra
Precigenetics, United States

Biography

Parmita Mishra is the founder and CEO of Precigenetics, leading the development of advanced non-invasive diagnostic tools that integrate biophotonics with machine learning. Whilst completing studies at the University of Pennsylvania in computational biology and bioinformatics, Parmita is dedicated to pushing the boundaries of healthcare technology, with a particular focus on non-invasive diagnostics.

Leveraging Machine Learning and Vibrational Spectroscopy for Enhanced Cancer Diagnostics

The integration of machine learning (ML) with vibrational spectroscopy, including Raman and infrared spectroscopy, offers a transformative approach to non-invasive cancer diagnostics by enhancing the identification of molecular signatures unique to cancerous cells. This study applies advanced ML algorithms to open-source cancer datasets, refining the detection and classification of cancer cells through their spectral data. We evaluate the efficacy of both supervised and unsupervised learning models in processing vibrational spectra, focusing on feature extraction, noise reduction, and pattern recognition. These techniques are applied to open-source data, enabling the identification of biomarkers associated with various cancer types. Our results demonstrate the precision and potential of ML-enhanced vibrational spectroscopy in distinguishing between malignant and benign cells. Our research underscores the potential of ML-driven vibrational spectroscopy to create cost-effective, real-time diagnostic tools suitable for clinical deployment. By leveraging open-source cancer data, this study not only validates the robustness of our approach but also contributes valuable insights to the broader cancer research community. These findings pave the way for future innovations in early detection and personalized treatment strategies.

Kui Ming Chan
City University of Hong Kong, Hong Kong

Biography

K. M. CHAN graduated with BSc and received his PhD at the department of Biochemistry, the University of Hong Kong (HKU). He then moved to Mayo Clinic (Rochester MN, USA) for postdoctoral training and obtained the Edward C. Kendall Research Fellowship in Biochemistry. In February 2015 he joined the Department of Biomedical Sciences (BMS), City University of Hong Kong as a tenure-track Assistant Professor and was promoted to Associate Professor in 2021. Dr Chan is interested in understanding the role of epigenetics in regulating gene expression under physiological and pathological conditions. His group is currently focusing on

1. Identifying new cancer driving histone mutations and developing therapeutics for these diseases using different animal models and

2. The role of novel protein factors and RNA binding proteins in X Chromosome inactivation.

The Role of Histone Mutations in Human Disease

Histones are small nuclear proteins essential for DNA packaging and epigenetic gene regulation. Recent studies on the various cancer associated-histone mutations have revealed the significance of oncohistones in driving different types of cancers. Others and work done by us have previously revealed the identification and characterization of the first oncogenic mutation in genes encode histone H3 (H3K27-to-M in diffuse intrinsic pontine gliomas "DIPG"). The H3K27M mutation occurs in the N-terminal tail domain and affects gene expression via inhibiting PRC2/EZH2 activity and modulating histone post-translational modifications. In addition to the onco-mutations found in histone H3, we have recently identified three oncogenic mutations in genes encode histone H2B in pancreatic ductal adenocarcinoma "PDAC" and breast cancer. The H2B-G53D mutation weakens the interaction between the histone octamer and the nucleosomal DNA. Through analyzing the ATAC-seq, PRO-seq, CUT&RUN and RNA-seq on the CRISPR-Cas9 generated H2BG53D knockin PDAC cells, our data demonstrated that the G53D mutant H2B elevated the transcription of genes involved in cancer properties including cell migration and the PI3K-Akt signaling pathway. Depletion of one of the target genes ANXA3 reduced the oncogenic properties in H2BG53D mutant cells, revealing the significance of the H2BG53D mutation in PDAC development. The H2BE76K mutation alters the interaction between Histone H2B and H4, destabilizes the nucleosomes and affects the expression of genes in multiple cancer pathways. In this meeting, I will present our ongoing work of the role of the above two mutations in pancreatic and breast cancers.

Nadine Darwiche
American University of Beirut, Lebanon

Biography

Nadine Darwiche is a Professor in the Biochemistry and Molecular Genetics Department at the American University of Beirut. Her research focuses on cancer prevention and targeted cancer therapy using retinoids and on the characterization of inhibitors of DNA polymerases. She is also interested in drug development from medicinal plants and drug formulations using nanoparticles. She teaches biochemistry and cancer-related courses and advises graduate students focusing on cancer research. She is an active member of several cancer societies (AACR- EACR- Women in Cancer Research USA- American Society for Biochemistry and Molecular Biology- Lebanese Association for the Advancement of Science). She is an associate editor and reviewer of several cancer-related journals and grants.

From retinoids to DNA polymerase inhibition in cancer therapeutics

Retinoids are a group of vitamin A derivatives, that exhibit various biological activities, have been successful in the cancer clinic. Synthetic retinoids containing an adamantyl group (adamantly retinoids) have been reported to selectively interact with retinoic acid receptors (RAR). One such compound, CD437, exhibits its broad apoptotic effects in various tumor cells, irrespective of RAR activation. Another adamantyl retinoid, ST1926, derived from CD437, displays enhanced antiproliferative and antiapoptotic properties along with improved pharmacological characteristics. ST1926 is orally bioavailable, well-tolerated, and exhibits potent antitumor effects that are independent of RAR and p53. ST1926 has demonstrated significant efficacy against solid tumors (such as ovarian, lung, prostate, breast, colorectal, teratocarcinoma, pancreatic, neuroblastoma, glioblastoma, mesothelioma, and rhabdomyosarcoma) and hematological malignancies (including acute myeloid leukemias, adult T cell leukemia/lymphoma, chronic myeloid leukemia, and primary effusion lymphoma). Studies indicate that ST1926 and CD437 inhibit DNA polymerase α (POLA1), causing substantial DNA damage. POLA1, which initiates DNA synthesis in mammalian cells, is often elevated in tumors compared to normal tissues. Although effective micromolar concentrations of ST1926 are quickly achieved in plasma after oral administration, rapid glucuronidation leads to a drop in plasma levels, which has halted its clinical development. Efforts to enhance ST1926's bioavailability include developing analogs with improved pharmacological properties, like MIR002 and GEM144, which target both POLA1 and histone deacetylase 11. MIR002 and GEM144 showed potent antitumor effects across various human cancer models. Additionally, nanoparticle formulations of ST1926 have been developed to improve stability and bioavailability, aiming to advance its clinical application.

Li Liang
Xuzhou Medical University, China

Biography

Li Liang is a Chief Physician and a Master's supervisor at Xuzhou Medical University. Liang currently serves as the Deputy Director of the Cardiology Department, the Director of the Coronary Care Unit (CCU), the Director of the Heart Failure Center, and the Director of the Cardiovascular Metabolism Center. He is an editorial board member of Frontiers in Cardiovascular Medicine and a reviewer for the European Heart Journal. Liang specializes in the interventional treatment of coronary artery disease, bedside and intracardiac ultrasound, and the diagnosis and treatment of heart failure and critical cardiac conditions. He has long been engaged in basic and clinical research on coronary artery function and microcirculation assessment and was the first in the world to propose the concept of using multiple quantitative indicators in MCE (Myocardial Contrast Echocardiography) for the combined evaluation of coronary blood flow.

Influence of Remnant Lipoprotein Particle Cholesterol on Non-Target Lesions Progression in Patients Undergoing Percutaneous Coronary Intervention

Background: The LDL-C is the primary lipid therapy target for coronary artery disease (CAD) after PCI. However, progression of coronary atherosclerosis occurs even LDL-C controlled well. This study aims to elucidate the relationship between RLP-C and the progression of non-target lesions (NTLs) in patients with well-controlled lipid levels after PCI, as well as to explore the clinical characteristics of patients with high RLP-C concentrations.

Methods: This retrospective study included 769 CAD patients who underwent percutaneous coronary intervention (PCI) between May 1,2016, and May 31,2019, and followed up coronary angiography (CAG) within 6 to 24 months thereafter. LDL-C levels were used to assess lipid control. Patients were categorized into progression and non-progression groups based on the assessment of NTLs progression via quantitative coronary angiography (QCA). Multivariate Cox regression analysis identified RLP-C as an independent risk factor for NTLs progression. Using the ROC curve, an optimal cutoff value for RLP-C was determined, and patients were stratified into two groups. Propensity score matching balanced confounding factors between groups, and Log-rank tests compared Kaplan–Meier curves for overall follow-up to assess NTLs progression.

Results: The control of LDL-C remains inadequate in CAD patients after PCI. Multivariate Cox analysis showed that RLP-C was an independent lipid risk factor for NTLs progression when LDL-C controlled well. The ROC curve for RLP-C demonstrated an AUC of 0.721 (SE 0.044, 95% CI=0.635–0.807, P<0.001), with an optimal cutoff of 0.555 mmol/L for predicting NTLs progression. Following propensity score matching, Kaplan–Meier curves illustrated a significantly higher cumulative rate of NTLs progression in patients with RLP-C levels ≥0.555 mmol/L (log-rank P<0.001; HR 4.175, 95% CI=3.045–5.723, P<0.001) compared to those with RLP-C levels <0.555 mmol/L. Elevated RLP-C levels were associated with high Triglyceride (TG) concentrations, diabetes mellitus (DM), and increased risk of revascularization.

Conclusion: The RLP-C could be a significant residual risk factor for cardiovascular disease progression after PCI. Lowering RLP-C below 0.555 mmol/L may assist in mitigating the progression of NTLs.

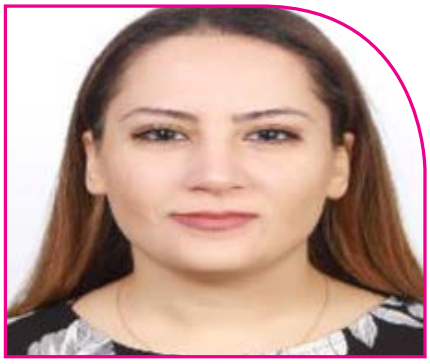
Dao Wen Wang
Tongji Hospital, Tongji Medical University, Huazhong University of Science and Technology, China

Biography

Dao Wen Wang, MD, PhD, is an academician of International Eurasian Academy of Sciences (IEAS), a Senior Specialist of Hubei Province. He is the Honorary Director of Department of Internal Medicine, Tongji Hospital, Tongji Medical College, Huazhong University of Science & Technology, Director of Hubei Key Laboratory of Genetics and Molecular Mechanism of Cardiologic Disorders, and Director of Translational Medicine Center & Genetic Diagnosis Center. He is also Director of Hubei Provincial Quality Control Center of Fulminant Myocarditis, a Standing Committee member of Chinese College of Cardiovascular Physicians (CCCP), a committee member of Chinese Society of Internal Medicine, and chairman of Internal Medicine Section of Hubei Medical Association.

China's Regimen of Fulminant Myocarditis

Fuminant myocarditis is a class of severe inflammatory disease in the heart and is characterized with rapid onset and progressing, cardiogenic shock and extremely high mortality. We developed a novel treatment regimen, "Life Support Based Comprehensive Treatment Regimen", also known as "China's Regimen", which core contents include (1) Mechanical supports, especially mechanical circulatory support using IABP and plus ECMO if necessary to maintain basic circulation rather than vasoactive agents or cardiotenic drug; (2) applications of immunomodulatory therapy using sufficient doses of both glucocoticoid and immunoglubin rather than immunosuppresants and (3) applications of nueraminidase inhibitor as adjuvant. This treatment regimen effectively reduced in hospital mortality of fulminant myocarditis from higher than 50% to less than 3.8-7.5% with excellent long-term outcome (death: 1 of 66 patients in one year follow-up). Chinese Guidelines specially emphases "extremely early recognizing, extremely making diagnosis, extremely predicting and extremely treating patients with fulminant myocarditis".



Souna Boyadjian
Nork Marash Medical Center, Armenia

Biography

Souna has honed their expertise through years of hands-on experience. For the past five years, she has been an invaluable asset to Nork Marash Medical Center, Yerevan, Armenia, where she has made a significant impact on patient care and medical research. Souna is a proud member of several prestigious professional organizations, including the European Society of Cardiology (ESC), the European Association of Cardiovascular Imaging (EACVi), the American College of Cardiology (ACC), and the Armenian Cardiac Association (ACVC). Her commitment to advancing the field of cardiology is evident in their active participation in the NSTE-ACS registry of ESC, where she contributed valuable insights to the understanding and treatment of non-ST-elevation acute coronary syndromes, she was enrolled as a co-investigator in the study for evaluation of the TTR for INR control after mechanical valve prosthesis in Nork Marash Medical Center in the past year. Currently, Souna is involved in the STEMI registry of Armenia, aiming to improve the outcomes of patients with ST-elevation myocardial infarction through comprehensive data collection and analysis, and also involved in arrythmology fellowship program at Nork Marash Medical Center.

Warfarin Resistance or Coagulopathy and Fight Against Reoperation from Mechanical to Bioprosthetic Valves: A Case Report

Background: Resistance to high doses of different vitamin K antagonists is a very rare phenomenon, especially when the patient does not have the most common single nucleotide polymorphism mutations for warfarin resistance, which makes it challenging to reconsider the diagnosis of warfarin resistance or coagulopathy, and whether the patient will be thromboembolic episode-free after bioprosthesis replacement.

Case summary: A 42-year-old woman was diagnosed with severe mitral valve regurgitation, moderate aortic valve regurgitation, left ventricular global systolic dysfunction, no signs of pulmonary hypertension and dilated ascending aorta. She underwent mechanical mitral and aortic valve and ascending aorta prosthesisreplacement about one and a half years ago.

On PostOperative Day (POD) 3, warfarin (Coumadin®) 3 mg therapy was started with an International Normalized Ratio (INR) of 1.36 (therapeutic range, 2.00-3.00) and nadroparincalcium (Fraxiparine®) 0.6 mg once daily. She had a very long hospital stay for 79 days due to non-therapeutic INR readings. During her hospitalization, the warfarin dose was increased to 12 mg. However, the INR increased only until POD 11 with its subsequent decrease despite the high dose of warfarin.

An attempt to try several other anticoagulants (phenindione), (acenocumarol), with an increase in their doses aggressively, however, failed to correct the INR. Therefore, an switch back to warfarin was performed and the dose increased up to45 mg/day, during this time the INR was very labile with each increase and maintaining the new high dose of warfarin the INR decreased. Warfarin genetic tests were conducted, which did not detect any mutation for CYtochrome P450 enzymes (CYP2C9:430C>T; CYP2C9:A>C; CYP4F2:C>T) or Vitamin K epOxide ReductaseComplex (VKORC1:-1639 G>A) receptor, neither forcoagulation factor V nor factor II. It was decided to restart with a very low dose of warfarin 3 mg with the assumption that she might be inresponsive to high doses of warfarin and unfortunately had the same effect. Finally, the patient was switched back to warfarin starting with 30 mg/day and increased aggressively up to 72

mg until the INR became 2.74. On the same day, she was discharged with some advice to continue the intake of warfarin 75 mg/day.

Warfarin dose was further increased up to 85 mg/day post-discharge, but the INR stayed at non-therapeutic levels. Enoxaparin sodium 0.6 mg twice daily started to prevent mechanical valve thrombosis. After multiple consultations with cardiac surgical and hematology teams, it was decided to prescribe the oral anticoagulant phenprocoumon (Marcoumar®) and an anti-Xa and anti-IIa taking into consideration that both prosthetic valves were normallyfunctioning with enoxaparin.

Conclusion: Despite the satisfying idea of changing the mechanical to bioprosthetic valves in similar cases, it is reasonable to maximize the chance of preserving till today both normally functioning mechanical valves with different types of oral anticoagulants in order to postpone multiple future bioprosthesis replacements in such young patients.

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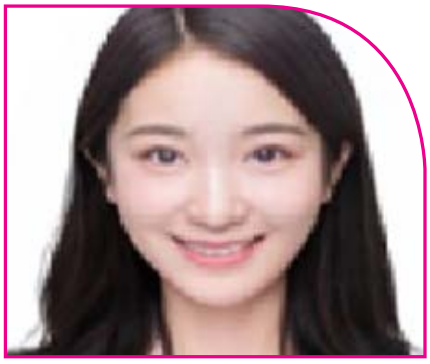
SPEAKERS
Day 1



Huihui Li
Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, China

Biography

Li is a post-doc at the University of Huazhong University of Science and Technology, Wuhan, China. She worked as a visiting scholar at Chinese Academy of Medical Sciences and Peking Union Medical College in 2021 and received her Ph. D degree from Huazhong University of Science and Technology in 2024. Li's research focuses on fulminant myocarditis, elucidated the role of innate immune system in the development of fulminant myocarditis, identified several new diagnostic and therapeutic targets.

Self-Recruited Neutrophils Trigger Over Activation of Innate Immune Response and Phenotypic Change of Cardiomyocytes in Fulminant Viral Myocarditis

Fulminant myocarditis (FM) is a life-threatening, inflammatory disease. We explored the cellular dynamics and immunological networks during FM progression, the mechanisms underlying acute onset, and novel therapeutic targets. Four-to six-week-old male A/J mice were treated with coxsackievirus B3 (CVB3) to induce FM. During disease progression, dynamic changes in cardiac function, as measured by echocardiography, revealed a sudden decline in cardiac systolic function onday 4. Single-cell RNA sequencing was used to profile CD45+ cells and cardiomyocytes (CMs) extracted from mouse hearts on days 0, 4, and 7 post-infections. Transcriptomic signature revealed that healthy CMs differentiated into pro-angiogenic and pro-inflammatory CMs on day 4. Neutrophils, the most expanded immune cells on day 4, exhibited a developmental trajectory only after migrating to the heart. Neutrophils acquire higher pro-inflammatory, chemotactic, and cytokine-releasing abilities during the differentiation process. Well-developed neutrophils continuously attract peripheral neutrophils, resulting in the acute accumulation of neutrophils and subsequent monocytes in the heart. Moreover, cardiac-infiltrating neutrophils, but not viruses, induced phenotypic changes in CMs, which directly led to cardiac functional collapse. Blocking the self-recruiting loop of neutrophils by neutralising CXCR2 or CXCL2 and CXCL3 substantially reduced the mortality rate and prevented cardiac phenotypic changes and cytokine release in FM mice. This study provides a comprehensive single-cell atlas of immune cells and CMs in FM, and reveals that neutrophils exhibit a distinct developmental trajectory after infiltrating the heart. Well-developed cardiac neutrophils trigger the overactivation of the innate immune response and mediate phenotypic changes in FM. Our study suggests potential strategies for treating FM that target self-recruited neutrophils by blocking the CXCL2/CXCL3-CXCR2 axis.".

Waqas Dar
Rehmatul lil Alameen Institute of Cardiology, Pakistan

Biography

Waqas Dar is a consultant cardiologist at Rehmatul lil Alameen institute of Cardiology, Lahore, Pakistan and has 12 years of experience in field of cardiology. He was graduated from medical school in Pakistan in 2011. He has special interest in cardiac electrophysiology including invasive and non-invasive approaches. He has done a lot of research work which has been published in eminent journals. He has a positive attitude and uses tireless energy at his workplace to educate his colleagues and junior doctors.

Frequency of High Degree Atrioventricular Block in Patients with Acute Anterior Wall Myocardial Infarction

Atrioventricular (AV) block is an AV conduction disorder that can manifest in various settings, with varying symptomaticity and severity. Complications of acute ST-elevation myocardial infarction (STEMI) as AV blocks are often observed. The first degree of atrioventricular block is the most common and requires no treatment. The second-degree block is sub-classified in Mobitz type I and Mobitz type II. This study aimed to determine the frequency of high degree atrioventricular block in acute anterior wall myocardial infarction cases. The current cross-sectional analysis was conducted at the Department of Cardiology, Rehmat-ul-Lil-Alameen Institute of Cardiology, Lahore, from 19- 02-2021 to 18-08-2021. A total of 311 patients were enrolled in the study. Cases underwent an electrocardiogram, and high degree AV Block was labeled per operational definitions. The results were noted and recorded on the same proforma. The overall mean age of the patients was 55.6±8.4 years. Gender distribution of patients shows a higher frequency of 57.9% males compared to 42.1% females with a female-to-male ratio of 1:1.4. High degree of atrioventricular block was found among 5.8% of the total patients. Around 5.8% of AWMI patients presented with high-grade AV block in this study are in-concomitant with other studies. No association of risk factors (p-value >0.05) was presented regarding age, gender, DM, hypertension, dyslipidemia, family history of CAD, and smoking in this study.

Anand Ahuja
Rhythm Heart Institute, India

Biography

Anand Ahuja is a senior interventional cardiologist, holds 19 years of experience in invasive and non-invasive cardiology including thousands of coronary interventions, coronary imaging and CHIP cases. He serves on the editorial board, Journal of Cardiac Interventions. He is associate faculty, National Hypertension Working Group (a joint venture of European Society of Hypertension and Indian Society of Hypertension). He is regularly on the abstract grading panel, European Society of Cardiology Congress. He's been an investigator in several international randomized clinical trials. He is a faculty at several national and international cardiology conferences.

Factors Affecting Door to Balloon Time For Patients Presenting with ST Segment Elevation Myocardial Infarction for Primary Angioplasty in A Tertiary Care Centre in Western India

Methods: 192 patients presenting with STEMI for primary angioplasty during a 6-month period, were analysed with respect to their age, sex, geographical location (rural or urban), reference through a family doctor or not, diagnosis, presence of single or multi vessel CAD, time of presentation (day or night), procedure performed by a junior or senior cardiologist. The door to balloon time (DBT) was further split up as door to coronary angiography time, angiography to consent for primary PCI time and consent to balloon inflation time.

Observations: Mean DBT was 99.27 minutes, the highest being 288 minutes and lowest 20 minutes. Mean door to angiography time 46.4 was minutes, mean angiography to consent time 29.2 minutes and mean consent to balloon inflation time 23.6 minutes.

Interpretation And Analysis: The DBT was significantly higher for females, for rural patients, for primary PCI done during nighttime versus day (due to performing Cath lab team on duty not being on duty on campus). It was also higher for patients presenting directly, versus those referred by family doctors. It was higher for those with multi vessel than single vessel CAD. Age or gender bias, education and awareness levels, acceptance of procedure and financial status were determinants of differential door to balloon times. The DBT was similar with respect to age of the patient, type of infarct (anterior or inferior), whether a junior or senior cardiologist performed the primary PCI procedure. This was because only trained and experienced cardiologists capable of performing primary PCI in STEMI were assigned the responsibility.

Conclusion: DBT, an important determinant of primary PCI outcomes – in real world scenarios, is affected by multiple parameters beyond science. Due consideration of these factors and appropriate awareness and corrective measures will go a long way improving this vital Cath lab quality indicator and help translate scientific triumphs into actual patient benefits. Abstract should give clear indication of the objectives, scope, results, methods used, and conclusion of your work. One figure and one table can be included in your results and discussions.

Abir Tazim Chowdhury
Evercare Hospital Dhaka, Bangladesh

Biography

Dao Wen Wang, MD, PhD, is an academician of International Eurasian Academy of Sciences (IEAS), a Senior Specialist of Hubei Province. He is the Honorary Director of Department of Internal Medicine, Tongji Hospital, Tongji Medical College, Huazhong University of Science & Technology, Director of Hubei Key Laboratory of Genetics and Molecular Mechanism of Cardiologic Disorders, and Director of Translational Medicine Center & Genetic Diagnosis Center. He is also Director of Hubei Provincial Quality Control Center of Fulminant Myocarditis, a Standing Committee member of Chinese College of Cardiovascular Physicians (CCCP), a committee member of Chinese Society of Internal Medicine, and chairman of Internal Medicine Section of Hubei Medical Association.

Impact of Intra-Aortic Balloon Pump Support on Early Outcomes in Coronary Artery Bypass Grafting for Patients with Reduced Left Ventricular Ejection Fraction: A Single-Center Study

Background: Despite advancements in surgical techniques, myocardial protection strategies, and postoperative care, coronary artery bypass grafting (CABG) in patients with reduced left ventricular ejection fraction (LVEF) poses significant challenges, leading to increased postoperative morbidity and mortality. This study aims to evaluate the early outcomes of patients with LVEF <35% undergoing on-pump CABG, focusing on the use of intra-aortic balloon pump (IABP) support and its impact on postoperative LVEF improvement.

Methods: Fifty-five patients with impaired LVEF who underwent isolated on-pump CABG at the Department of Cardiothoracic and Vascular Surgery in Evercare Hospital Dhaka, Bangladesh, between January 2020 and December 2023 were included. Fifteen cases received per-operative IABP support immediately after revascularization, meeting specific inclusion and exclusion criteria. Various preoperative, intraoperative, and postoperative variables were collected, analyzed, and compared.

Results: The mean age of patients was 57.81 ± 7.57 years, with 72% being male and 18% female. Antegrade cardioplegia was administered to all patients. The mean LVEF increased from 33 ± 1.38% preoperatively to 40.2 ± 3% six months postoperatively. However, postoperative complications included low cardiac output syndrome in 45% of patients, pulmonary complications in 15%, neurological complications in 2%, sternal wound infection in one case, atrial fibrillation in 10%, and acute kidney injury in five cases. In-hospital mortality occurred in two cases.

Conclusion: The results suggest that IABP support immediately following CABG in patients with reduced preoperative LVEF leads to improved postoperative LVEF and New York Heart Association (NYHA) functional class. This study sheds light on the potential benefits of IABP in enhancing early outcomes for this challenging patient population.

Nurun Nahar Fatema
Lab Aid Cardiac Hospital, Bangladesh

Biography

Nurun Nahar Fatema has passed MBBS in 1985 & FCPS in Paediatrics in 1995. She was trained in Prince Sultan Cardiac Center in Riyadh, KSA in Pediatric Cardiology from 1996 to 1998. Later trained in Australia, UK, USA, India etc. Awarded with FRCP and FACC in 2009 and FSCAI in 2011.Working as Chief Pediatric Cardiologist of CMH Dhaka since 1998 and HOD pediatrics since 2014. She is Head and prof of paediatrics of Armed Forces Medical College since 2014. Professor Fatema is the pioneer Pediatric Cardiologist of Bangladesh. She performed more than 9000 pediatric cardiac interventions and innovated many new techniques in cardiac interventions. Her NNF protocol for PPHN and cyanotic spell is widely used and saving life of hundreds of newborns and children. She has about 100 publications in different national and international medical journals. She has participated in more than hundred national and international seminar and presented scientific papers. She received highest national and peace time military award from her country for contribution to medical science.

Percutaneous Device Closure of Sub Aortic And Doubly Committed Ventricular Septal Defect (VSD) Case Series From Bangladesh

Introduction: VSDs constituted 20% to of congenital heart defects. Incidence of VSD is about 1.35 to 3.5/1,000 live births. With the advent of echocardiography, the recognition of VSDs has increased to 5 to 50/1,000 live births. Spontaneous closure of small defects occurs before the age of three in approximately 45% patients depending on types. Patient with significant hemodynamic effects or small defects with complications needs closure. Surgical closure is an established procedure yields excellent result so far. Percutaneous device closure of VSD was first reported in 1988 (Lock et al.) and we started device closure of VSD in 2004 in CMH Dhaka as first ever in Bangladesh. Percutaneous closure is a recent technology which offer less aggressive, minimally invasive and more comfortable alternative of VSD closure in acceptable varieties. Usually, Peri membranous VSD and Muscular Ventricular Septal Defect is suitable for device closure but Sub aortic VSD's are immediately below the aortic valve and have propensity to develop aortic valve prolapse and aortic regurgitation. Doubly committed sub-arterial VSDs are mostly associated with aortic valve prolapse, and these types are difficult to do Device closure and usually referred to the cardiac surgeon for surgical closure.

Conclusion: Device closure of Sub aortic & Doubly committed VSD is a complicated procedure than other VSD's. Vicinity of two valve apparatus, moderator band, chordatendinae and papillary muscle needs careful consideration. Encroachment of Aortic valve or tricuspid valve within device may lead to serious hemodynamic derangement. Our study proved percutaneous closure of subaortic and doubly committed VSD in selected cases are safe effective, feasible technique under TEE/TTE guide, without general anaesthesia and without need for stay in ICU. However large-scale study is still required for strong recommendation.

Chen Chen
Tongji Hospital, China

The Treatment Effects of Immunoglobulin on Fulminant Myocarditis (Fm) Was Controversial

Objective: The Treatment Effects Of Immunoglobulin On Fulminant Myocarditis (Fm) Was Controversial.

Methods: FM was induced in A/JGpt mice via coxsackievirus B3 (CVB3) intraperitoneally, and intraperitoneal injection of immunoglobin was daily administered. On the 7th day, cardiac structure and function were determined by echocardiography and cardiac catheterization. Meanwhile, single-cell RNA sequencing (scRNA-seq) was employed to evaluate CD45+ cells from the mouse hearts.

Results: Immunoglobin application dramatically reduced mortality and significantly improved cardiac function in mice with FM. ScRNA-seq revealed that immunoglobin treatment effectively modulated cardiac immune homeostasis, particularly attenuated the over-activated innate immune responses. At the cellular level, immunoglobin predominantly targeted Plac8+ monocytes and S100a8+ neutrophils, suppressed their pro-inflammatory activities, enhanced the antigen processing and presentation capabilities, thereby amplified the efficiency and potency of the immune response against virus. Modulation of multiple signal pathways, including relevant receptors on immune cells, directing the chemotaxis of inflammatory cells, antigen presentation, and anti-viral effects, mediated the benefits of immunoglobin. Finally, Bst2-ILT7 ligand-receptor mediated cellular interaction manipulated by immunoglobin was further confirmed *in vivo*.

Conclusion: Immunoglobin treatment could significantly attenuate FM-induced cardiac inflammation and improved cardiac function by extensively inhibiting over-activated innate immune response.

6th World Congress on

Cancer Research and Oncology

23-25 September 2024 | Village Hotel Changi, Singapore

Keynote Day 2

Rahul G. Ingle
Datta Meghe College of Pharmacy, DMIHER, India

Biography

Rahul G. Ingle working as a Professor at Datta Meghe College of Pharmacy, Datta Meghe Institute of Higher Education and Research (Deemed to University), Sawangi (M), Wardha, India. He pursued his post doctorate from Zhejiang University, China. He has about three years of experience in the teaching undergraduate students and about six years of research experience at Roselabs, Ahmedabad (India), and Wockhardt Research Centre, Aurangabad (India). He has authored about 30 national and international publications and an Indian patent. He has presented papers at several conferences. He also serves as a reviewer of number of research journals.

The Stability and Delivery Challenges of Commercial Nucleic Acid Therapeutics

Nucleic acid (NA)-based biopharmaceuticals have emerged as promising therapeutic modalities. NA therapeutics is a diverse class of RNA and DNA and includes antisense oligonucleotides, siRNA, miRNA, mRNA, small activating RNA, and gene therapies. Meanwhile, NA therapeutics has posed significant stability and delivery challenges and is expensive. We discuss the challenges and opportunities for achieving stable formulations of NAs with novel drug delivery systems (DDSs). In addition, the current progress in the stability issues and the significance of novel DDSs associated with NA-based biopharmaceuticals, as well as mRNA vaccines. We also highlight the European Medicines Agency (EMA) and US Food and Drug Administration (FDA)-approved NA-based therapeutics with their formulation profiles. NA therapeutics could impact future markets if the remaining challenges and requirements are addressed.

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Speakers Day 2

Fei Xu
Affiliated Hospital of Shandong University of Traditional Chinese Medicine, China

Biography

Fei Xu received her PhD in Chinese and Western Integrative Medicine from Fudan University, China. Professor Fei's major interests are Antitumor effects of TCM from Tumor immunology, Metabolism in tumor and immunology and Mechanical signaling in tumor and immunology. Her strategy involves research programs in basic biology and in clinical medicine. Her group is currently developing and testing natural small molecular compounds isolated from Chinese Herbs against NSCLC. A number of these small-molecule compounds have been experimentally verified and her group aim to progress these drugs to clinical trials.

Icariside II induced ferroptosis to suppress the progression of NSCLC through activation of the mitochondrial dysfunction

Aim: This study aimed to explore how icariside II (ICSII) induces ferroptosis in non-small cell lung cancer (NSCLC) via mitochondrial dysfunction.

Methods: RNA sequencing analysis was conducted to investigate the anti-tumor mechanism of ICSII. Cell viability was assessed using MTT assays. EdU proliferation and colony formation assays were employed to evaluate cell proliferation, and wound-healing and transwell assays were performed to assess cell invasion and migration. Mitochondrial membrane potential (MMP) and superoxide production were detected using JC-1 and Mitosox fluorescent dyes, respectively. Ferroptosis was evaluated by measuring levels of MDA, LDH, SOD, GSH, Fe2+, ROS, and ATP. Transmission electron microscopy (TEM) analysis was used to observe mitochondrial structure. Western blot (WB) and polymerase chain reaction (PCR) were employed to validate the expression levels of matrix metalloproteinases (MMPs), EMT markers, and GPX4, SLC7A11, ACSL3, ACSL4, HO-1, and NRF2. In addition, rescue experiments with the ferroptosis inhibitor ferrostatin-1 (Fer-1) were performed to further validate the effects of ICSII on ferroptosis. In vivo, a nude mouse xenograft model was constructed to verify the inhibitory effects of ICSII and the levels of ferroptosis in tumor tissues.

Results: ICSII exerted inhibitory effects on the cell viability, proliferation, invasion, and metastasis of NSCLC cells in vitro and in vivo. ICSII inhibited the expression of MMP2, MMP9, vimentin, and N-cadherin but increased the expression of E-cadherin. RNA sequencing analysis indicated that the anti-tumor effects of ICSII are mediated via ferroptosis-related pathways. It triggered ferroptosis by increasing the levels of lipid ROS, iron, MDA, and LDH while decreasing the levels of SOD, GSH, and ATP. ICSII also induced mitochondrial structural damage, as confirmed by increased mitochondrial ROS release, decreased MMP, and reduced mitochondrial ATP. The induction of ferroptosis by ICSII was associated with the proteins ACSL3, ACSL4, NRF2, HO-1, SLC7A11, and GPX4, modulating the GPX4/ACSL4/ACSL3 axis. Inhibition of ferroptosis by Fer-1 rescued ICSII-induced ferroptosis by ameliorating these indices.

Conclusion: Our findings demonstrated that ICSII restrained the proliferation, invasion, and metastasis of NSCLC cells by inducing ferroptosis mightily through the enhancement of mitochondrial dysfunction.

David Dobkin
LifeSci Capital LLC, United States

Biography

David Dobkin is the founder of Dobkin & Co. which was founded in 2015. He is currently the Chief Financial Officer & Director at LifeSci Acquisition III Corp. Mr. Dobkin's former jobs include Managing Director at Boustead Securities LLC, Chief Financial Officer & Director at LifeSci Acquisition Corp. From 2019 to 2020, Director at Petra Acquisition, Inc., and Chief Financial Officer & Director at Lifesci Acquisition II Corp. Mr. Dobkin's education includes an undergraduate degree from The Trustees of Columbia University in The City of New York in 2001 and a graduate degree from the University of Southern California in 2005.

The Five Reasons Biotech Companies Fail to Raise Capital and How to Fix Them

Successfully navigating the complexities of funding and managing a biotech startup requires a keen understanding of several critical factors. First, having a market-relevant indication is essential; pursuing a direction that lacks market relevance is a surefire way to doom a project from the start. Proper financial planning is also crucial, particularly in accurately assessing the amount of money needed to reach the finish line. Many companies mistakenly try to raise funds in stages, such as through a Series A round, to prove concept and achieve milestones. However, this piecemeal approach often leads to significant dilution, as investors are increasingly wary of early-stage companies. They understand that their stakes might be wiped out by the time the product reaches the market—if it ever does. Valuation and cap table management are other areas where companies frequently stumble. While fear of dilution is understandable, improper valuations can create severe cap table issues, forcing companies to give away too much equity during later funding rounds, leaving founders with little to show for their efforts. It's also vital to recognize when to quit. Many companies become too attached to their science, ignoring data that suggests a project should be abandoned. Knowing when to kill a project and return funds to investors can actually increase trust and willingness to invest in the future. Moreover, bringing in subject matter experts, especially in business and finance, is crucial. In early-stage companies, it's common for team members to wear many hats, but this can be detrimental when non-experts lead critical business functions. Engaging consultants or experts can accelerate deal-making and provide valuable insights. Finally, aligning the stage of the project with the appropriate type of capital is essential. Preclinical projects may find funding through grants or government agencies, while commercial-stage companies might access debt or other structures. Understanding these dynamics can significantly impact a company's success.".

Kyryl Bocharov
Luhansk Taras Shevchenko National University, Austria

Biography

Kyryl O. Bocharov is a scientist in the field of organic synthesis and medicinal chemistry. He is a third-year bachelor student of Applied Chemistry at IMC University of Applied Sciences Krems. Austria. He is defending his Bachelor Thesis on "Carbocyclisation of aldoses using NHC catalysis via Stetter reaction". He has many years of experience in organic synthesis of bioactive compounds, as well as in the use of modern methods of spectroscopic analysis and molecular docking. His research is focused on the development of new methods for the synthesis of organic compounds with high potential applications in medicine and academia.

The Synthesis Of 2-Amino-3- Benzylindolizines with Using the Mixture of Halides N-Benzyl-2-Halogenpyridines and Ch-Acids – Derivatives Acetonitrile

The chemistry of indolizine derivatives holds great promise for the development of potential new drugs. Both natural and synthetic indolizines have demonstrated a diverse range of pharmaceutical properties, from antitumour and antimycobacterial to antagonistic and antiproliferative activities. The discovery and strategic planning of new building blocks for the synthesis of potential indolizine compounds represents a significant breakthrough in improving and optimizing the chemical production of existing drugs. The multistep synthesis of indolizine derivatives was proposed and carried out based on Eugene Babaev's studies on the use of 2-halogenpyridinium salts. The synthesis included a modified method of benzyl bromide addition without the use of solvents, SNVin reaction with diverse symmetric and asymmetric C-nucleophiles (CH-acids) and intermolecular cyclisation by Thorpe-Ziegler. The synthesis of aryl and vinyl derivatives resulted in high yields, as confirmed and described by NMR 1H, 13C, LC-MS data and reported in our recent publication. Finally, we have developed and systematised an efficient method for synthesising potential new indolizine building blocks for further application in medicinal chemistry and cutting-edge drug design.

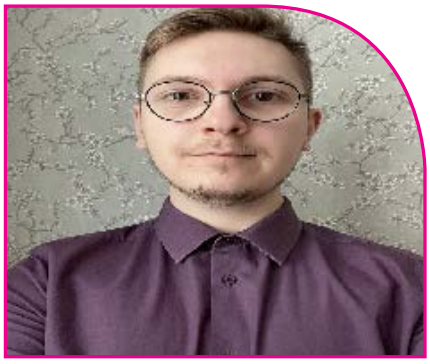
Natalia Chikurova
The Federal Research Centre of the Russian Academy of Sciences, Russia

Biography

Natalia Chikurova is an accomplished chemist who graduated from the Chemistry Department of Lomonosov Moscow State University in 2019 and earned her PhD in Chemistry in 2023. She currently serves as an assistant at the Department of Analytical Chemistry at Moscow State University, where she focuses on designing and applying new materials for HPLC separations. Additionally, she is a junior researcher at the Federal Research Centre "Fundamentals of Biotechnology" of the Russian Academy of Sciences. Her research is centered on developing novel stationary phases for hydrophilic interaction chromatography and reversed-phase chromatography, with applications in biochemistry. Natalia's work has been published in leading journals, including the Journal of Chromatography A and the International Journal of Molecular Sciences, both indexed in Scopus and WoS. She has also presented her findings at major conferences, such as HPLC 2023 in Düsseldorf.

Obtaining New Recombinant Cysteine Synthase a From *Limosilactobacillus* Reuteri LR1 and Studying its Properties

Cysteine synthase A (CysK) is an enzyme that catalyzes synthesis of L-cysteine from O-acetyl-L-serine and sulfide (primarily hydrogen sulfide) with PLP as cofactor. While its primary role in cysteine biosynthesis and sulfur assimilation is important for living organisms this enzyme also has potential secondary (or moonlighting) functions such as regulation of various gene expression by binding to DNA or RNA, cellular signaling by varying cysteine levels, or even affecting apoptosis and its pathways by differentiating in cysteine levels which is needed for glutathione synthesis necessary for protection from apoptosis induced by oxidation stress. One such CysK was found in *Limosilactobacillus reuteri* LR1 where it was expressed only in response to *Klebsiella pneumoniae* presence. In this work, the recombinant enzyme CysK from *L. reuteri* LR1 (the strain was kindly provided by the All-Russian Dairy Research Institute (VNIMI)) was obtained and its various properties were studied. The enzymatic activity of this CysK was studied using several different methods such as spectrophotometry and hydrophilic interactions liquid chromatography (HILIC) and the results were compared. Using the most efficient of these methods, kinetics and stability of this enzyme were also studied. Catalytically important amino acid residues were described using the model structure of this enzyme which was compared to other known structures of CysK from different organisms.



Leonid Shaposhnikov
The Federal Research Centre of the Russian Academy of Sciences, Russia

Biography

Leonid Shaposhnikov graduated from the Chemistry Department of Lomonosov Moscow State University, Moscow, Russia in 2019 and received his PhD in Chemistry in 2024. From 2021 he worked at the Department of Chemical Enzymology of Moscow State University as an assistant, and from 2023 he works as a junior researcher in the Federal Research Centre "Fundamentals of Biotechnology" of the Russian Academy of Sciences. Scientific work is devoted to the cloning, obtaining, and studying enzymes from various organisms for medicinal or biotechnological purposes. The main research results were published in journals indexed in Scopus and WoS and included in Q1 (Journal of chromatography A, International Journal of Molecular Sciences, Biomolecules).

Expression Optimization of the Recombinant Peptidase M23 from *Limosilactobacillus Reuteri* LR1

Metaloendopeptidase M23 of *Limosilactobacillus reuteri* LR1 belongs to the superfamily of metaloendopeptidases. These enzymes catalyze the cleavage of peptidoglycan and cleave either the N-acylmuramoyl-Ala bond between the cell wall peptidoglycan and the cross-linking peptide or a bond within the cross-linking peptide preferring the poly-Gly in this peptide making them preferably cleave gram-positive bacteria. These peptidases usually use Zn ions for catalysis. It was found that M23 peptidase is expressed in *Limosilactobacillus reuteri* LR1 due to presence of other microorganisms. This enzyme could be important for designing new antimicrobial agents especially against gram-positive pathogenic bacteria such as *Staphylococcus aureus* or Streptococcus pneumoniae. In this work we obtained recombinant M23 from L. reuteri LR1 (the strain was kindly provided by the All-Russian Dairy Research Institute (VNIMI)). We studied expression levels of this enzyme in E. coli and optimized it by removing signal peptide coding sequence from the enzyme's sequence. After the optimization of this enzyme's expression in E. coli it is now possible to obtain M23 in bigger quantities and use it as potential antibacterial agent. We've also completed preliminary test on non-pathogenic gram-positive bacteria such as B. megaterium and shown that M23 causes lysis of these bacteria.

Chun Yi
Hunan University of Chinese Medicine, China

Biography

Chun Yi is a Lecturer and the Deputy Director of the Department of Pathology at the School of Medicine, Hunan University of Chinese Medicine. She serves as an Executive Member of the Pathology Professional Committee of the Hunan Traditional Chinese Medicine Information Research Association and is a member of the Oncology Rehabilitation Committee of the Chinese Society of Gerontology and Geriatrics. Her primary research focuses on the role of non-coding RNA in tumorigenesis and the combined treatment of cancer using traditional Chinese and Western medicine. She has led one National Natural Science Foundation Youth Project, one project funded by the Hunan Provincial Department of Science and Technology, one Outstanding Youth Project by the Hunan Provincial Department of Education, and one project supported by the Changsha Municipal Natural Science Foundation. In addition to these roles, she has actively participated in numerous national, provincial, and university-level teaching and research projects. Dr. Yi has published over ten research papers in esteemed journals such as Oncogene, Drug Delivery and Translational Research, and others.

Armadillidium vulgare miR-2863 Inhibits Liver Cancer Cell Proliferation, Migration, and Invasion via the Bcl-2/Bax/Caspase-3 Signaling Pathway

Objective To explore the effects and underlying mechanisms of miRNA avu-miR-2863, derived from the traditional Chinese medicine Armadillidium vulgare, on the proliferation, migration, and invasion of HepG2 and MHCC97H liver cancer cells. Methods Small RNA sequencing identified miRNAs from Armadillidium vulgare, followed by screening candidate miRNAs. HepG2 and MHCC97H cells were divided into two groups: NC and avu-miR-2863. Cell proliferation, migration, and invasion were assessed using CCK8, scratch, and Transwell invasion assays. A 3D tumor sphere model was used to simulate the tumor microenvironment and evaluate tumor cell proliferation. Western blotting was performed to detect the expression of Cyclin D1, C-Myc, E-cadherin (E-ca), N-cadherin (N-ca), Vimentin (Vim), and matrix metalloproteinase 14 (MMP14). Bioinformatics analysis was conducted to predict target genes of avu-miR-2863, and KEGG and GO pathway enrichment analyses were performed to explore its mechanism of action. The expression of cleaved Caspase-3, Bax, and Bcl-2 was also detected by Western blotting. Cell apoptosis was assessed using flow cytometry, while mitochondrial fluorescence and intracellular reactive oxygen species (ROS) were detected using Mito-Tracker Red, Hoechst staining, and DCFH-DA assays. The expression of avu-miR-2863 in mouse blood was measured by qRT-PCR. Results High-throughput sequencing identified miRNA avu-miR-2863 from Armadillidium vulgare. Compared with the NC group, avu-miR-2863 inhibited the proliferation, migration, and invasion of HepG2 and MHCC97H cells ($P<0.01$) and reduced the size of 3D tumor spheres ($P<0.01$). avu-miR-2863 downregulated the expression of Cyclin D1, C-Myc, N-ca, Vim, and MMP14, while upregulating E-ca expression ($P<0.05$, $P<0.01$). Bioinformatics analysis suggested that avu-miR-2863 may exert its effects by regulating the Bcl-2 family-mediated apoptosis pathway. Compared to the NC group, avu-miR-2863 increased cleaved Caspase-3 and Bax expression and decreased Bcl-2 expression ($P<0.05$, $P<0.01$), resulting in enhanced apoptosis ($P<0.01$), reduced mitochondrial fluorescence intensity ($P<0.01$), and elevated ROS levels ($P<0.05$, $P<0.01$). qRT-PCR analysis demonstrated that miRNA avu-miR-2863 from Armadillidium vulgare could enter mouse blood through the gastrointestinal tract ($P<0.01$). Conclusion miRNA avu-miR-2863 from Armadillidium vulgare may inhibit the proliferation, migration, and invasion of liver cancer cells HepG2 and MHCC97H by regulating the Bcl-2/Bax/Caspase-3 signaling pathway, thereby exerting potent anti-liver cancer effects.

Yaqi Tang
Qingdao Women and Children's Hospital, Qingdao University, China

An Increase In The Cardiac Consultation Of Suspected Cardiac Involvement Symptoms With Unaltered Etiology During The Post-Covid-19 Period

Background: Hypertension is a global disease affecting one billion people and is the common risk factor for death throughout the world. Hypertension is a major risk factor and one of the leading causes of Cardiovascular Diseases (CVD) such as Acute Myocardial Infarction (AMI), stroke, heart failure and death. Patients make catastrophic out-of-pocket payments to manage this condition conventionally. In Africa some patients still visit traditional healers even after consulting with medical personnel and are apparently willing to pay out of pocket for Traditional Medicine (TM). This is done without the knowledge of health personnel, with the risk of incurring adverse drug-herb interactions. The aim of this study is to compare the costs of orthodox medicine and TM in the management of hypertension.

Methods: Questionnaire interviews of 122 participants, 104 hypertensive patients and 18 trad practitioners were conducted to obtain qualitative and quantitative data. Cost analysis between orthodox and TM treatment of hypertension was performed. Data was expressed in frequencies and percentages, used to determine significance.

Results:

1. We found that the cost of orthodox treatment of hypertension was almost two times higher than that of TM.

2. Age, self-rated health and self-employment positively influenced antihypertensive drug adherence.

3. Plants used by tradipractitioners had bioactive substances to counter hypertension.

Conclusion:

Hypertension treatment is less costly with TM than with orthodox treatment. TM can be a good alternative in managing hypertension

Mujeeb Ur Rehman
Afridi Medical Complex and Teaching Hospital, Pakistan

Modifiable Risk Factors associated with Post-Operative Bleeding and transfusion requirements in Cardiac Surgery

Objectives: In this study we determine the modifiable factors related to bleeding and transfusion in post-cardiac surgery patients who underwent open heart surgery.

Methods: This is a retrospective study that includes two hundred patients who had undergone open heart surgery (OHS) at Northwest General Hospital and Research Center from December 2018 to July 2021. Platelet count and haemoglobin level were measured in the pre-operative period.

Results: This study included both male and female patients. Postoperative platelets were counted as follow: 50-100 x109 L in 3.0% cases, 101-150 x109 L seen in 27.5% cases, and >150 x 109 L in 69.5% cases which required transfusion. We have also reported the increased requirement of transfusion of blood and blood products in patients with pre-operative haemoglobin (Hb) < 10 g/dl.

Conclusion: Correction of pre-op Hb, post-op platelet count and total bypass time are the significant and preventable parameters in patients undergoing cardiac surgery if proper pre-op assessment of the patient is performed.

Discussion: Bleeding Academic Research Consortium (BARC reported that 5 or more units of packed red blood cells (PRBCs) transfusions in 48 Hours and greater than 2 liters of chest tube output in 24 Hours are said to be significant in cardiac surgery patients.5 Patients that bleed actively can be taken to these summits rarely and early steps for optimization are usually necessary including the use of blood products, blood, medical optimization and reoperation. This is only possible with proper preoperative assessment of the patient.6 Correction of acidosis and hypothermia are the entity leading to decrease bleeding. The small bleeders can be tamponade by keeping the PEEP of around 10cm. These parameters can be achieved in order to assess the cause and status of profuse bleeding such as complete blood count, Thromboelastography, Prothrombin time, Activated thromboplastin time and fibrinogen levels.6,11 To improve the coagulation, Platelets transfusion, Fresh Frozen Plasma, and occasionally Desmopressin are the important parameters. Additional Protamine can be used to treat the Heparin rebounding phenomenon. Coagulopathy can be treated with a novel agent such as Recombinant factor VII. Aminocaproic acid and Tranexamic acid have frequent use too.19 The Commonly used and avoiding Preoperative associated factors leading to postoperative bleeding are Clopidogrel which should be stopped five days before the surgery, Ticagrelor which should be stopped three days before the operation, Heparin for acute coronary syndromes, low molecular weight heparin and patients on Warfarin or novel oral anticoagulants as these factors are not analyzed in our study. Common causes of excessive bleeding are extra cardiac bleeders, LIMA bed, and surgical bleeders from either distal or proximal anastomosis sites. That is why; it is quite complicated to ensure proper hemostasis.11

Binita Pokhrel
Pure joy Private Limited, Nepal

Biography

Binita Pokhrel is an Alumini of Kathmandu University, School of Science Department of Biotechnology. (Btech in Biotechnology 2012-2016; MS by research in Biotechnology 20172020) MS Pokhrel is Founder/ Managing Director at Purejoy Pvt Ltd.Pure Joy Pvt Ltd is a winery established April 2017 in Dhapakhel, Lalitpur. The company started with just two factory workers and now has 10 full-time employees and 18 contract-based employees. They have leased 21900 sq ft of land and constructed a factory building of 2400 sq ft. Pure Joy Pvt Ltd consumes 180 metric ton fruits annually, indirectly employing more than 50 other farmers with production of 150000 liters of wine annually. She has been involved in providing trainings in various organizations and places in Nepal regarding Biotechnological Practices in daily lives. Along with Pure joy she has been involved in various projects that involves agricultural and herbal products formulations.

Determination of Bioactive Compounds in Selected Medicinal Plants and their Activity Evaluation

Medicinal plants in particular have been used in traditional medicine since antiquity to maintain holistic health and have provided preventive and curative medicines in infectious conditions. Medicinal plants are rich in a wide variety of secondary metabolites such as tannins, terpenoids, alkaloids, and flavonoids, which are known to have immunomodulatory, antioxidant, antimicrobial, anti-diabetic and anticancer properties. The emergence of new infectious diseases, the resurgence of several infections that appeared to have been controlled and the increase in bacterial resistance have created the necessity for studies directed towards the development of new antimicrobials. Considering the failure to acquire new molecules with antimicrobial properties from microorganisms, there is a shift in focus: looking novel compounds showing antimicrobial activity in some exotic plants. This study investigated the phytochemical constituents, antioxidant potential and antibacterial properties of Nepalese medicinal plants using various analytical techniques. A phytochemical profile of methanol extracts of selected medicinal plants was established using High Resolution (HR)-LCMS. The extracts were tested against five different pathogenic microorganisms by agar diffusion method and showed considerable inhibition zones ranging from 9-14 mm at maximum concentration of 10 mg/further, phenol/flavonoid analysis revealed that the highest amount of total phenolic and total flavonoid content in methanol extract of KUPS_7(Rheum australe) with TPC value of 249.58 ± 7.73 Gallic acid equivalent µg/mg and TFC value of 480.84 ± 8.81 Rutin equivalent µg/mg. Moreover, all the samples showed 2,2-diphenyl-1-picrylhydrazyl (DPPH) free radical scavenging activity.

Further, a significant correlation was found between the antioxidant activity of extracts and their total phenolic and total flavonoid contents. Furthermore, LCMS analysis manifested presence of several compounds of pharmaceutical importance in the plant extracts. The results highlight the need for further research and bioprospecting of these plants as sources of new natural antioxidants and antibacterial agents.

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Posters Day 2

Zarska Ludmila
Palacky University Olomouc, Czech Republic

Biography

Ludmila zarska studied Biophysics at Palacký University, Czech Republic, where she received her PhD degree in 2022 also. During her PhD studies she participated in five internships - The first at the University of Milan (Dr. Tommaso Santaniello). A six-month long internship at the University of Milan (Prof. Cristina Lenardi) and Foundation UNIMI – Filarete. A three-month internship at the Department of Inorganic Chemistry, Charles University, CZ (Prof. Jiří Mosinger). A four-month internship at CNR-ISTEC Institute of Science and Technology of Ceramic Materials in Faenza, Italy (Dr. Silvia Panseri). She also worked at the Institute of Macromolecular Chemistry of the Academy of Sciences of the Czech Republic in Prague (group of biological models with a specific specialization in polymer systems for tissue engineering). Her scientific activity focuses on the preparation and characterization of nanoparticles for biomedicine, photodynamic therapy (PDT), AFM microscopic imaging and biological in-vitro assays. She is the author and co-author of 10 publications.

Innovative 2D nanoplatforms for advanced multi-drug delivery in future cancer treatments

Current cancer treatment modalities often use combinations of multidrug chemotherapy, radiotherapy or surgery. Unfortunately, the efficacy of chemotherapy is commonly hindered by severe side effects and drug resistance. Nanocarriers offer promising solutions by enhancing drug accumulation in target cells and reducing toxicity. We developed a graphene-oxide-based (GO) 2D nanoplatform functionalized with highly branched polyethylene-glycol (PEG) to carry multiple drugs. This study utilizes Pt-based complexes and doxorubicin (DOX) to treat glioblastoma, breast carcinoma and osteosarcoma cell lines, models of aggressive tumors. Our results show that the GO@PEG nanoplatform achieves therapeutic effects at lower concentrations of administered and delivered drugs (15 μM Pt-drug, 0.6 μM DOX) compared to free drugs. This strongly suggests improved drug transport and accumulation. In 3D cell models with MG63 osteosarcoma cells, the nanoplatform displayed a reduced diffusion profile, indicating targeted delivery potential. Additionally, the GO@PEG nanoplatform demonstrated significant inhibition of cellular proliferation and migration, particularly in the highly invasive breast carcinoma (MDA-MB-231 cell line). Enhanced cellular uptake was more evident in osteosarcoma cells compared to glioblastoma, likely due to their metabolic differences. Overall, the GO@PEG nanoplatform is a versatile and potent system for cancer therapy, offering a tailored approach to overcome the limitations of traditional chemotherapy by targeting different cancers more effectively and safely.

Chaloupkova Zuzana
Palacky University Olomouc, Czech Republic

Biography

She graduated in Biochemistry at Palacky University in Olomouc, Czech Republic and in 2013 She received my MSc. In 2014 she joined the BioMed group led by Doc. Ranc in RCPTM in Olomouc. In 2018, she received my PhD degree in Physical Chemistry at the same institution. During my PhD study, she completed a 3-month internship at the University of Trieste under the supervision of Dr. Fornasaro. Since 2021 she became a junior researcher at CATRIN (Czech Advanced Technology and Research Institute) where she is still working. she is the author of 1 patent, first-author of 5 papers and co-author of other publications

Graphene derivatives as a way to understand cancer cell processes for potential targeted therapies

Introduction: Graphene derivatives belong to the group of 2D nanomaterials, which has attracted attention in many industries such as chemical, electronics and medical in recent years. Due to their unique properties such as strength, hydrophilicity and large specific surface area with the possibility of functionalization, graphene derivatives are particularly attractive materials in biomedicine as a candidate for use in targeted drug delivery. In conjunction with Raman mapping and MCR analysis, it is also possible to understand the processes tumor cells respond to these derivatives.

Objective: The aim of this work is to study the presence of graphene derivatives in cancer cells by Raman spectroscopy, moreover the fate of graphene derivatives within a single cell based on mapping and its evaluation by MCR analysis. As well as the study of these derivatives after functionalization for possible targeted drug delivery.

Conclusion: MCR-Raman spectroscopy could be used as a highly complementary technique to fluorescence labeling-based methods and MCR imaging could become a tool for exploratory single-cell studies because MCR analysis faithfully mimics the structure of the analytical measurement, and the MCR-Raman method offers a promising approach to determine graphene derivatives within single cells simultaneously. Since MCR-Raman spectroscopy can be used to observe peak shifts within a cell due to the interaction of graphene derivatives with individual cellular components, there is great potential for studying changes in the consequences of this interaction of graphene derivatives within a cell and also as a diagnostic analytical method for the detection of graphene derivatives with bound drug in drug delivery applications.

Fang Jingshuai
Southeast University, China

Biography

Jingshuai Fang, Ph.D. candidate at the School of Biological Science and Medical Engineering, Southeast University, China. His research primarily focuses on identifying biomarkers for immunotherapy in patients with advanced gastric cancer.

Plasma small RNAs as predictive and monitoring biomarkers for immunotherapy response in advanced gastric cancer

Immune checkpoint inhibitors (ICIs) have significantly prolonged survival in various malignancies, establishing a new standard of care for advanced gastric cancer (aGC). Currently, existing biomarkers are insufficient for effectively stratifying true responders, highlighting the urgent need to identify novel biomarkers. Our analysis reveals that responders experience improved overall and progression-free survival. To identify determinants of response, we examined the small RNA (sRNA) profiles of 140 plasma samples from aGC patients treated with immunotherapy, utilizing a training cohort (n = 49) and a validation cohort (n = 42). In this study, we identified three significantly altered sRNAs from the baseline plasma RNA sequencing of patients in the training cohort. Specifically, responders demonstrated upregulation of hsa-miR-3916 and downregulation of hsa-miR-181d-5p. A baseline prediction model was trained using these two features and subsequently validated on the validation cohort. The area under the curve (AUC) for the training cohort was 0.77 (95% CI; 0.62–0.93), while the AUC for the validation cohort was 0.83 (95% CI; 0.71–0.96). Additionally, we incorporated PD-L1 CPS positivity alongside these two features to refine the predictive model utilizing the same methodology. The AUC for the training cohort was 0.82 (95% CI; 0.68–0.96), and the AUC for the validation cohort was 0.83 (95% CI; 0.70–0.97). Additionally, immunotherapy was found to elevate responders' plasma levels of hsa-let-7f-2-3p and reduce levels of hsa-miR-320c, which were associated with improved prognosis; conversely, it decreased non-responders' plasma levels of mature-tRNA-Asn-GTT, indicating worse outcomes. Our findings provide insight into the sRNA features associated with response to combination immunotherapy in patients with aGC and provide biomarkers potentially relevant for selecting patients who may derive greater benefit from immunotherapy.

Elian Rakhmanaliev
One BioMed, Singapore

Biography

Elian Rakhmanaliev is Director of R&D at One BioMed. Elian is a Biotechnology professional with over 23 years of international academic and industrial experience and expertise in genetics and molecular diagnostics. For the past 14 years his main focus was on developing NGS-, qPCR- and IA-based IVD tests, platforms, nucleic acid extraction systems and POCT devices for molecular diagnostics. Elian obtained his MSc in Molecular Genetics from Moscow State University, and his PhD in Genetics from Vavilov Institute of General Genetics. He completed postdoctoral fellowships in Oncology at Karolinska Institute and in Immunogenetics at Johns Hopkins University.

A Novel Automated Microfluidic Cartridge-Based Platform for Nucleic Acid Extraction

Microfluidic technologies revolutionized the field of biomedical research by transforming bulky and expensive laboratory equipment into easy to use, cost-effective miniaturized systems. However, the most common nucleic acid (NA) extraction methods require either centrifugation or magnets or pumps that make development of microfluidic system for NA extraction challenging. We developed an automated cartridge-based microfluidic Xceler8™ system for NA extraction based on a novel proprietary reversable solid-phase chemical binding technology. This technique utilizes a unique feature of dimethyl adipimidate dihydrochloride, a cross-linking reagent, known to covalently link the free amino groups. The amidine bonds formed are reversable which is used to capture and release NA by changing buffering conditions. Performance of the Xceler8™ system was evaluated by comparing with two widely used automated NA extraction systems and manual kits. DNA and RNA were extracted from bacteria, animal and plant tissue, PBMCs, cell culture and whole blood. The purity, integrity and yield of the extracted NA were assessed using spectrophotometers, agarose gel, PFGE, qRT-PCR, short- and long-read sequencing. The system has demonstrated incredible efficiency in isolating high quality ultra-High Molecular Weight (HMW) DNA and its compatibility with Oxford Nanopore and PacBio library preparation kits. Overall results show either equivalency or superiority of the Xceler8™ system for majority of samples compared to the reference methods. This simple beads, membrane, and alcohol-free solid-phase extraction method enables gentle isolation of NA from various sample matrices. The Xceler8™ system thus appears as an efficient and reliable solution for NA extraction, especially for isolation of ultra-HMW DNA.

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Keynote Day 3

Vimolmas Tansathitaya
Mahidol University, Thailand

Biography

His current role, he serves as a lecturer at Thailand's Mahidol University's College of Sports Science and Technology. His primary research interests concern miRNA and chronic illnesses, as well as fitness. He is also interested in studies on the microbiome in chronic illnesses and exercise, which was presented in an article in 2022. One of his significant study topics concentrated on illnesses and their effects on birth abnormalities acquired by the second and third generations of descendants. MiRNAs and target genes were employed as biomarkers in the research. Tinarathpatra Co Ltd., Thai Health Promotion Foundation, and Mahidol University have all provided his with financial support to study the BDNF gene expressions in amphetamine drug users as part of my ongoing research. This research focused on BDNF gene expression, single nucleotide polymorphism (SNP), mRNAs, miRNAs, and the microbiota to modify miRNAs and target gene expression. After He received his Ph.D. in Health Promotion and Human Services from the University of Cincinnati in the United States, He was inspired to act on another idea. One of his initial thoughts was to look at how genotypes could potentially evolve as lifestyles shifted and how exercise could help mitigate diseases. Since then, He have been motivated to begin examining genetic causes by performing in-depth studies in epigenetics, with a focus on miRNAs and target genes as major indicators.

The Beneficial Effects of Physical Activity and Exercise on miRNAs Expression within White Blood Cell Nucleus for Cancer Prevention

Globally, cancer remains a top public health concern, with many countries actively seeking preventative measures. Physical activity is widely recognized as a key strategy for cancer prevention. Beyond its preventative effects, physical activity also influences biomarkers that assess exercise effectiveness. MicroRNAs (miRNAs), small molecules affected by exercise, diet, and lifestyle, are one such biomarker. MicroRNAs (miRNAs) are short, non-coding RNA molecules about 20-22 nucleotides in length. They bind to the 3' untranslated region (3'UTR) of messenger RNA (mRNA), potentially acting as anti-cancer regulators by downregulating cancer genes. Notably, exercise intensity can influence miRNA expression compared to a sedentary lifestyle.

During exercise, various internal organs release miRNAs into the bloodstream. Additionally, exercise can regulate genes within white blood cells, leading to the release of cytokines and chemokines into the extracellular space. This complex interplay of molecules may contribute to both anti-tumorigenesis and anti-oncogenesis processes, or in some cases, potentially initiate cancer formation. Overall, exercise appears to promote a favorable microenvironment within the body, particularly within white blood cells, that can help prevent cancer progression. However, the exact mechanisms and potential risks associated with exercise-induced miRNA expression and downstream effects require further research

James St Louis
Children's Hospital of Georgia, United States

Biography

James St. Louis currently holds the J. Harold Harrison Endowed Chair of Surgery at the Augusta University, University of Georgia Health System. He serves as the Chief of Pediatric and Congenital Heart Surgery at the Children's Hospital of Georgia and Co-director of the Pediatric and Congenital Heart Program. After completing medical school at Georgetown University School of Medicine, he accepted a cardiothoracic residency at Duke University under David Sabiston. He has been practicing congenital heart surgery for the last twenty year. His clinical expertise has focused on optimizing surgical outcomes with neonatal heart defects. St. Louis's most recent academic efforts have focused on international outcomes of congenital heart surgery.

Globalization of Congenital Heart Disease, Establishment of a Global Platform of Outcomes following Congenital Heart Surgery

Creation of a global platform to acquire knowledge and expertise for the treatment of congenital heart disease is critical for the care of children throughout the world. This need is exemplified by the significant number of children that lack adequate access to such care. It is estimated that almost 75% of the world's population lack access to adequate therapy to treat congenital heart disease. A critical mission of the World Society for Pediatric and Congenital Heart Surgery (WSPCHS) is to create a platform "to promote the highest quality of comprehensive cardiac care to all patients with congenital heart disease across the globe" The WSPCHS has recently embraced an effort to foster the development of dedicated national congenital heart surgery databases across the globe. The initial effort with creation of a national congenital heart surgery database occurred in South Korea. Currently 8 individual Korean centres contribute to the linkage to the global platform created by the WSPCHS. Similar efforts, at various stages, are underway in Vietnam, Philippines, Mexico, Argentina, Indonesia, Thailand, and Malaysia.

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Le Thi Ngoc Anh
University Medicine and Pharmacy at Ho Chi Minh City, Vietnam

Biography

Le Thi Ngoc Anh is a scientific research specialist, working at Clinical Science Theme, Tam Anh Research Institute (TAMRI), Vietnam. She graduated from the University of Medicine and Pharmacy at Ho Chi Minh City and completed a master's degree in Public Health. Currently, she completed her PhD in University of Medicine and Pharmacy in Ho Chi Minh City, Vietnam. She also an alumnus of the Vietnam Field Epidemiology Program (FETP). She has 15 years of experience working in scientific research and teaching. Her research and published articles are in the fields of cancer, nutrition, food safety, mental health and disasters

Malnutrition in colorectal cancer patients: association with lack of eating motivation and inappropriate diet

Objective: Colorectal cancer stands as a significant contributor to cancer-related mortality in Vietnam, accounting for 6.9% of cancer-related deaths in 2020. Notably, malnutrition, rather than the cancer itself, is responsible for one-fifth of fatalities among cancer patients. This study was conducted to identify the nutritional status and related factors among colorectal cancer patients.

Methods: A cross-sectional study was conducted at Ho Chi Minh City Oncology Hospital, Vietnam, from October 2022 to April 2023. The study included colorectal cancer patients aged 18 years and above, of both sexes. Data collection encompassed face-to-face interviews, anthropometric assessments, and review of medical records. The nutritional status was evaluated by using the Patient-Generated Subjective Global Assessment. The multivariable logistic regression model was used to identify factors related to malnutrition.

Results: A total of 388 colorectal cancer patients were included. The median age was 60.0 years old (interquartile range: 51.0 - 66.0), and 57.7% were in men. The prevalence of malnutrition in colorectal cancer patients was 87.9% (95% confidence interval (CI): 84.6-91.1), and the urgent need for nutritional intervention was 64.7%. Factors associated with malnutrition including lack of eating motivation (OR=8.76, 95%CI: 1.81-42.38), dieting for fear of developing cancer cells (OR=3.82, 95%CI: 1.27-11.52), had gastrointestinal symptoms (OR=5.38, 95%CI: 1.76-16.45), daily energy intake <25 Kcal/kg/24 hours (OR=7.02, 95% CI: 1.70-28.99), protein <1 gram/kg body weight/24 hours (OR= 7.02, 95%CI: 1.32-20.60), lipid <18% of total energy intake during 24 hours (OR=3.13, 95%CI: 1.02-9.57), MVC <85 fL (OR=4.74, 95%CI: 1.11-20.22), TCL ≤1700 lymphocytes/mm3 (OR=4.06, 95%CI: 1.22-13.50). In addition, patients whose dominant hand strength increased by 1 kg reduced the risk of malnutrition by 4% (OR=0.96, 95%CI: 0.93-0.99).

Conclusion: A high prevalence of malnutrition among colorectal cancer patients in Vietnam necessitates nutritional intervention. Factors like loss of eating motivation and inadequate dietary intake were the main contributors.

Umer Farooq
Rehmatul lil Alameen Institute of Cardiology, Pakistan

Biography

Umer Farooq is a consultant cardiologist at Rehmatul lil Alameen institute of Cardiology, Lahore, Pakistan and has 8 years of experience in field of cardiology. He was graduated from medical school in Pakistan in 2013. He has special interest in cardiac imaging including invasive and non-invasive approaches. He has done a lot of research work which has been published in eminent journals. He has a positive attitude and use tireless energy at my workplace to educate my colleagues and junior doctors.

Frequency Of Significant Cornory Artery Disease In Cases With ST Segment Depression During Recovery Phase Of Exercise.

Coronary Artery Disease (CAD) imposes physical, social, and economic burdens. It is among the leading causes of mortality and morbidity. Exercise-induced ST segment depression is considered a reliable ECG finding for the diagnosis of obstructive coronary atherosclerosis. Exercise testing has an excellent safety record. The study aims to determine the frequency of significant coronary artery disease in cases with ST-segment depression during the recovery phase of the exercise tolerance test. This descriptive case series was conducted at the Department of Cardiology, Rehmatul-Lil-Alamin Institute of Cardiology, Lahore, from 11-01-2021 to 10-07-2021. A total of 89 patients were taken in this study. Conventional coronary angiography via the femoral or radial route was performed. Lesions were quantified by the QCA technique in addition to visual assessment. Significant CAD was labeled as per international criteria. Patients ranged between 30-70 years of age, with a mean age of 51.8±10.8 years. There were 56 males (62.9%) and 33 (37.1%) females. History of diabetes mellitus was reported in 31 patients (34.8%), hypertension in 38 patients (42.7%), and smoking in 51 (57.3%). Family history of CAD found in 46 patients (51.7%). Hyperlipidemia was reported in 38 patients (42.7%). Significant CAD was observed in 76 patients (85.4%). Stratification for age, gender, diabetes mellitus, hypertension, and smoking were carried out, and there was no association with significant CAD. In conclusion, an 85.4% frequency rate of significant coronary artery disease in cases with ST-segment depression during the recovery phase of the exercise tolerance test was observed. Thus, careful evaluation of ST segment depression occurring in the recovery phase may add significantly to the clinical information derived from the results of ETT.

Deepa Selvi Rani
CSIR-CCMB, India

Biography

Deepa Selvi Rani is from CCMB-CSIR, India. She is interested in understanding the Genetic basis of Cardiovascular Diseases, Male infertility, Mitochondrial disorders, and the Origin of Modern Humans. She has two master's degrees, M.Sc. in Biochemistry and M.Sc. in Biotechnology. Her Ph.D. work was on "Molecular Studies in Cardiomyopathies and Noonan Syndrome." She identified several mutations in sarcomere protein genes causing cardiomyopathies and sudden cardiac arrest. To understand the disease specifically, she studied their molecular mechanisms, which are relevant to pharmacogenomic studies and personalized medicine. Rani is an enthusiastic, dedicated, outstanding researcher and published 50 papers in peer-reviewed International Journals.

Novel Cardiac Troponin T (TNNT2) Mutations in Indian Hypertrophic and Dilated Cardiomyopathy Patients.

Background: Cardiomyopathy is a major cause of heart failure and sudden cardiac death; several mutations in Sarcomere protein genes have been found to be the contributing factors for the disease phenotype. We sought to determine the frequency of the genetic variations in the Troponin T (TNNT2) gene and its association in Indian cardiomyopathy patients.

Methods: Direct Sequencing of all the exons and exon-intron boundaries of Troponin T in 162 Hypertrophic (HCM) and 147 Dilated (DCM) cardiomyopathies against 207 healthy Controls to detect the frequency of mutations and their association.

Results: Our study revealed a total of 15 SNPs and a 5 bp INDEL; of which, polymorphic SNPs were compared with the HapMap population data. In the present study we found a novel missense mutation (A28V), and a novel SNP (single-nucleotide polymorphism) (g.7239; G/A) disturbs the splicing significantly were detected in HCM patients. Interestingly, a novel R144W mutation, that substitutes polar-neutral tryptophan for a highly conserved basic arginine in cTnT, altering the charge drastically, was identified in a DCM, with a family history of sudden-cardiac death (SCD). This mutation was found within the tropomyosin (TPM1) binding domain, and was evolutionarily conserved across species, therefore it is expected to have a significant impact on the structure and function of the protein. Family studies had revealed that the R144W is co-segregating with disease in the family as an autosomal dominant trait, but it was completely absent in 207 healthy controls and in 162 previously studied HCM patients. Further screening of the proband and three of his family members (positive for R144W mutant) with eight other genes b-MYH7, MYBPC3, TPM1, TNNI3, TTN, ACTC, MYL2 and MYL3, did not reveal any disease-causing mutation, proposing the absence of compound heterozygosity. Therefore, we strongly suggest that the novel R144W unique/private mutant identified in this study is associated with FDCM. We also identified three SNPs, rs3729547 (C/T), rs3729843 (G/A), rs3729842 (C/T), which were in high linkage disequilibrium, and more interestingly a 5bp polymorphism that skipped exon 4 during splicing, which was found to be significantly higher in CM patients (del/del genotype, p = 0.00011; deletion allele, p = 0.00008). Further studies on the 5bp polymorphism in 2092 randomly selected individuals belonging to 39 ethnic and endogamous populations from 19 states of India, and representing the major linguistic Indian families, revealed that the South and the Northwest Indians have a high frequency of 5bp deletions.

Conclusion: In the present study, though the frequency of missense mutations in TNNT2 gene responsible for familial cardiomyopathies were detected very less in our Indian population, we found other novel variations like splice site variations, SNPs which had a very strong LD and a 5bp polymorphism had shown a strong association with disease phenotype. Therefore, we strongly suggest that the above observed variations had significant role in disease phenotype, and may provide insight to understand the molecular bases of disease, diagnosis and promote novel therapeutic strategies (personalized medicine)

Yasser Mohammed Hassanain Elsayed
Egyptian Ministry of Health, Egypt

Biography

Yasser Mohammed Hassanain Elsayed; A scientist, critical care physician, cardiologist, and independent researcher at Egyptian Ministry of Health. Publicized articles; (134). Innovations (13); (3) "Signs", (4) "Phenomena", (1) "Modification", (1) "Maneuver", (1) "Method", (1) "Test" and (2) "Syndrome". Speaker; (23) International conferences. Reviewer; (233) articles for (79) Journals. Honorable editor; (270) Journals. International Conferences OCM; (9). Instructor; (8) official and (88) non-official. COVID-19 publicized articles; (41). Prizes nomination; Breakthrough Prize, Einstein Prize, Abdul Hameed Showman Award for Arab Researchers, and ESICM Awards.

Right to Left Angina Yasser's Syndrome (Swinging Yasser's Central Heart Syndrome) or Dancing Yasser's Heart Syndrome

Rationale: Mesocardiac is the heart in the middle compartment of the chest. The human heart is normally located within the thoracic cavity, medially between the lungs in the mediastinum. Marfan syndrome is an autosomal dominant disorder and multi-systemic genetic disorder that affects the connective tissue. Dextrocardia is a rare congenital condition in which the apex of the heart is located on the right side of the body rather than towards the left. Heterotaxy syndromes refer to abnormal left/right distribution of thoracic and abdominal organs that is neither situs solitus nor situs inversus. They are commonly associated with congenital heart disease (CHD) and visceral malformations. There is either left or right isomerism also present in Heterotaxy syndromes. Patient concerns: A 17-year-old adolescent single-student male patient was presented to the intensive care unit (ICU) with angina and alternation of the chest pain referral to both arms. Diagnosis: Right to left angina Yasser's syndrome (Swinging Yasser's central heart syndrome) or Dancing Yasser's heart syndrome in an adolescent male patient. Interventions: Electrocardiography and echocardiography. Outcomes: Spontaneous dramatic clinical, and electrocardiographic improvement with no medications had happened. Lessons: Right to left angina Yasser's syndrome (Swinging Yasser's central heart syndrome) or Dancing Yasser's heart syndrome is a new and innovative cardiovascular syndrome. Due to some similarities, dextrocardia, Marfan syndrome, and Heterotaxy syndrome are implicated in Differentiation. Dancing hyperactivity, traction, and twisting theories are interpretative suggested theories for this new syndrome.

Yu Wang
Immodx LLC/ Hangzhou Normal University, Singapore

Biography

Wang Yu obtained his B. Sc(Hons) in biological sciences from Nanyang Technological University in 2006 and PhD in biomedical sciences from National University of Singapore in 2011. He completed his post-doctorate training at Genome Institute of Singapore before progressing to a Research PI position at National Cancer Centre Singapore. In his over 15 years of academic research experience focusing on hepatocellular carcinoma, he has published 17 papers in reputable international journals such as Nature Communication and Journal of Hepatology and held five National level grants in Singapore as PI. In 2020, he turned into an entrepreneur to co-found a biotech startup in China, focusing on novel diagnostic solutions based on immune signatures. He has since been awarded the Shaoxing Overseas Innovator Talent Award and China's National Young Innovator Award. He is now an adjunct professor from Hangzhou Normal University and recently appointed to the president of the newly established Zhuji International IVD Innovation Park.

A 2-gene signature within blood leukocytes as diagnostic biomarkers for early colorectal cancer

Background & Aims: Colorectal cancer (CRC) is one of the most common and deadly cancers worldwide. Here we aim to identify and develop novel diagnostic biomarkers to detect early-stage CRC.

Methods: Candidate biomarkers were identified from RNA-seq, validated using RT-qPCR essays and developed through the bioinformatics pipeline using multivariate binary logistic regression and receiver operating characteristic curve analysis.

Results: We identified a novel 2-gene signature within blood leukocytes which could robustly discriminate CRC from healthy controls (HC). Using an RT-qPCR assay based on the 2-gene signature, we detected CRC samples from HC samples with a sensitivity of 80% and a specificity of 81% in a training retrospective cohort of 314 samples and derived a logistic equation to calculate CRC risk probability termed as IRS-CRC. In an independent cohort of 178 samples, we validated 2-gene test and detected CRC from HC with a sensitivity of 82% and a specificity of 78%. Importantly, the 2-gene test can detect early-stage CRC and CRC which are tested negative for carcinoembryonic antigen (CEA) and carbohydrate antigen 19-9 (CA19-9) with 76-88% sensitivity which is significantly higher than that of either CEA (31-56%) or CA19-9 (9-44%).

Conclusion: The 2-gene signature described here can potentially fill an unmet clinical need for a robust screening assay to identify CRC patients at early stages when potentially curative treatment options are available.

Hassan El-Shirbiny
Kafrelsheikh University, Egypt

Biography

He is an aspiring cardiologist and deeply passionate about cardiac health and the advancement of cardiac electrophysiology. Through rigorous academic training and clinical experiences, He have developed a strong foundation in cardiovascular physiology, diagnostic techniques, and cutting-edge treatment modalities. Committed to providing exceptional patient-centred care, He aim to empower those suffering from cardiac conditions to achieve optimal heart health and improved quality of life. Alongside my clinical work, He dedicated to scientific research, eager to contribute to the expansion of medical knowledge and the development of innovative solutions in cardiology and cardiac electrophysiology.

The Effect of Right Ventricle Septal Pacing vs Apical pacing in Dual chamber Pacemakers on Patients' Anxiety and Depression: A One-Year Follow-up Study

Background: Anxiety and depression are potentially harmful outcomes of permanent cardiac pacemakers. Dual chamber P.P.M. is frequently used to treat life threatening bradycardia. The study aims to estimate the effect of the right ventricular PM Lead position on recipients' Anxiety and depression before, six months, and one year after implantation.

Material and Methods: A prospective cohort study was designed to analyse and compare depression and anxiety in a sample of 182 patients divided into two main groups: 91 cases before the pacemaker implantation as a baseline, 36 and 49 patients, respectively septal and apical leads position subgroups and 91 patients in the same age group to be the control one. A Sociodemographic Questionnaire and the HADS scale were used to measure the study variables.

Results: A statistically significant correlation was discovered between the studied groups regarding HADS depression score after six months (p 0.013) and one year (p 0.013). A statistically non-significant difference was found among the studied groups at any point of time regarding baseline (p 0.063), after six months (p 0.054), or after one year (p 0.099). Significance was found between HADS anxiety score (p 0.015) or depression score after one year and the incidence of complications (p 0.001).

Conclusions: A strong relationship was found between the level of depression and the R.V. site of implantation, as patients with the apical group had higher levels of depression post-implantation. The septal position has less stress and depression on the patient's well-being than the apical one.

Niyaz Ahmad Wani
Thapar Institute of Engineering and Technology, India

Biography

Niyaz Ahmad Wani, born in 1992 in Jammu and Kashmir, India, has been passionate about artificial intelligence from a young age. He earned his bachelor's degree in computer science from the University of Kashmir and pursued postgraduate studies in artificial intelligence, focusing on Explainable AI (XAI). He completed his Ph.D. in Smart Healthcare systems at the Islamic University of Science and Technology. Niyaz's research has significantly contributed to the development of interpretable AI models, emphasizing the need for transparency in machine learning. His work in Smart Healthcare has aimed at enhancing diagnostic accuracy and patient care through AI. As an Assistant Professor at Thapar Institute of Engineering and Technology, he has inspired students and collaborated with scholars in a multidisciplinary research environment. Niyaz has published in several prestigious journals, such as Information Fusion, IEEE Access, and Engineering Applications of Artificial Intelligence, and serves as an editor for journals like IEEE Access and IEEE Transactions on Consumer Electronics.

Synergizing Fusion Modelling for Accurate Cardiac Prediction Through Explainable Artificial Intelligence

The healthcare industry has acknowledged the need of Explainable Artificial Intelligence (XAI) in improving confidence in AI systems. Explainable Artificial Intelligence (XAI) overcomes a major obstacle in the adoption of AI by ensuring the essential elements of openness and accountability in the healthcare sector, where choices may have substantial consequences for patients' well-being. Explainable Artificial Intelligence (XAI) provides healthcare practitioners with lucid justifications for AI-generated suggestions and diagnoses. This enables them to comprehend the underlying logic behind AI insights, resulting in more knowledgeable and self-assured decision-making in patient care. This technique not only improves the diagnosis process but also enables tailored treatment regimens, enhancing the efficacy and individualization of healthcare. Patients get advantages from XAI since it elucidates the mechanisms of AI, allowing them to comprehend the reasoning behind their diagnosis and treatment alternatives. This level of openness promotes confidence and cultivates a cooperative partnership between patients and healthcare professionals. Moreover, explainable Artificial Intelligence (XAI) assists regulators and policymakers in verifying that AI systems conform to established medical protocols and safety criteria, therefore mitigating biases and advocating for the responsible use of AI in the healthcare sector. In summary, XAI is transforming the healthcare industry by augmenting the transparency, responsibility, and reliability of AI systems, resulting in enhanced results and more secure patient care.

Tunga Barcin
Adana Seyhan Devlet Hastanes Adana Turkey, Turkey

Biography

Tunga Barcın is a specialist doctor in Infectious Diseases and Clinical Microbiology, born in imamoglu, Adana. He graduated from cukurova University Faculty of Medicine in 2002 and completed his specialization in Infectious Diseases and Clinical Microbiology in 2010.Barcın has held various roles, including Specialist Physician at Toros State Hospital (2015-2016), General Secretary of the Mardin Public Hospitals Association (2014-2015), Secretary General of the Union of Public Hospitals in Eskisehir (2016-2017), and President of Kutahya Province Public Hospitals (2017-2018). Since 2018, he has been serving at Adana Seyhan State Hospital.

HPV and Cervical Cancer Screening Results of southernmost province of Turkiye

Human papillomaviruses (HPVs); small, non-enveloped viruses with double stranded circular. DNA; are believed to play a role in the progression of cancer. However, the exact mechanisms are not well established. The interference of HPV proteins, especially E6 and E7, 21 with the cell cycle are considered to be the main pathway. We designed this study to evaluate the relationship of HPV infections and cervical cancer with healthy individuals in the screening program

Cervical cancer is the 12th most frequent cancer among women in Turkiye which is the 5th most frequent cancer among women age between 15 and 44 years old. Turkiye's current estimates indicate that every year 2532 women are diagnosed with cervical cancer and 1245 die from the disease. About 4.2% of women in the general population are estimated to harbour cervical HPV-16/18 infection at a given time, and 67.6% of invasive cervical cancers are attributed to HPVs 16 or 18. Based on TUİK 2024 (Türkiye Istatistic Institute) first half data cervix screening population of Adana Province is 33,671. The number of 1st Step HPV screening is 6809, and the number of 2nd Step SMEAR screening is 11,606. As a result of Stage 1 HPV screening, the number of referrals to the diagnostic center was determined as 253. The most commonly detected subtype was type 16 with 92 patients. During first half of 2024, 72 possible high cases were detected among these 18 patients were diagnosed with cervical cancer. In this presentation association of HPV in neoplastic transcormation and progression of cancer wil be higlighted. Over all considering HPV positivity is a very important factor in the development of cervical cancer, thus screening programs are curicial as preventing as well as early detectin.

6th World Congress on

Cancer Research and Oncology

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E-Posters
Day 3

Alexey Ibatov
I M Sechenov First Moscow State Medical University, Russia

Biography

A.D.Ibatov is a professor at Sechenov University, cardiologist for more than 20 years, member of the European Society of Cardiology, author of more than 200 publications, reviewer of the journals "Journal of Cardiothoracic Surgery", "High blood pressure & Cardiovascular prevention", "BioMedical Engineering OnLine». His research interests include psychosocial characteristics in cardiac patients.

Features Of Emotional Status Of Smoking Patients With Heart Failure With Reduced Ejection Fraction

This study aimed to assess the emotional status of 147 male patients (aged 41 to 68) with ischemic heart disease (IHD) and Heart Failure with Reduced Ejection Fraction (HFrEF) based on smoking status. Divided into two groups, 59 patients were smokers, and 87 were nonsmokers (NYHA class II-IV). Anxiety and depression levels were measured using the Hospital Anxiety and Depression Scale (HADS), and personality traits were evaluated using the Mini-Mult questionnaire. Results showed no significant differences in heart failure class or treatment between groups. Smoking patients (Group 1) exhibited lower anxiety (5.7±0.3) and depression (4.6±0.4) scores compared to nonsmokers (Group 2) with scores of 7.3±0.4 ($p < 0.01$) and 7.1±0.4 ($p < 0.01$) respectively. Personality traits in Group 1 included Hypochondriasis (56.8±1.1), Depression (50.1±2.3), Hysteria (50.3±1.3), Psychopathic Deviate (45.3±1.7), Paranoia (48.9±1.5), Psychasthenia (49.9±1.2), Schizophrenia (44.3±1.3), and Hypomania (47.4±2.1). In Group 2, personality traits were Hypochondriasis (57.8±0.9, $p > 0.05$), Depression (52.4±1.5, $p > 0.05$), Hysteria (52.9±0.86, $p > 0.05$), Psychopathic Deviate (48.7±1.2, $p > 0.05$), Paranoia (54.7±1.5, $p < 0.05$), Psychasthenia (51.3±1.4, $p > 0.05$), Schizophrenia (53.9±1.6, $p < 0.001$), and Hypomania (47.1±1.3, $p > 0.05$).

Conclusion. Smoking patients with IHD and HFrEF exhibited less pronounced personality traits and lower levels of anxiety and depression compared to nonsmokers. These findings have implications for treatment and rehabilitation strategies.

Bungsu Daniswara
Cipto Mangunkusumo Hospital, Indonesia

Biography

Bungsu Wahyu Sutrianingsih, SpPD from Indonesia. Graduated as a general practitioner from the Faculty of Medicine, Unissula Semarang in 2002. Graduated as a specialist in internal medicine from the Faculty of Medicine, Gadjah Mada University, Jogjakarta in 2013. she has worked as a doctor at a community health center since 2004 and as a doctor civil government since 2008. She has worked at the Samboja Kutai Kartanegara Regional Hospital, East Kalimantan since 2013. The position is chairman of the hospital medical committee and the hospital cost and quality control team. Now I am continuing my education as a sub specialist in internal medicine in cardiovascular at the Faculty of Medicine, University of Indonesia/ Cipto Mangunkusumo Hospital Jakarta from 2022 until now. History of research publications with the title Differences in Lung Function in elderly patients with hypertension and without hypertension at Sardjito Hospital Jogjakarta.

Intramyocardial Dissecting Hematoma of Post Primary Percutaneous Coronary Intervention

Background: ST-elevation myocardial infarction (STEMI) is a common medical emergency with various complication, including clinical and mechanical. In this case we present importance of differentiating rare complication of STEMI occuring after primary percutaneous coronary intervention (PPCI), intramyocardial dissecting hematoma (IMDH) and left ventricular (LV) thrombus. Echocardiography can establish the diagnosis of intramyocardial haematoma and to differentiate it from intracavitary thrombosis

Case report: 57-year-old man with history of hypertension, chronic heart failure and ischemic stroke arrived at our emergency room reporting crushing chest pain. ECG reveals ST segment elevation in V3-V6. Coronary angiography revealed total stenosis in proximal LAD with thrombus and PPCI successfully performed. Echocardiography revealed dilatation four chambers of heart, LVH concentric, reduced LVEF (32%), dysfunction diastolic grade II, reduced systolic RV function (TAPSE 10mm) and IMDH in apical LV (25x41mm). Patients discharged with DAPT, diuretic, betablockers, ACE-inhibitor and statin. Follow up patient reported no additional symptoms and IMDH reduced in size (12x35mm).

Discussion: Echocardiography is a non-invasive method for early diagnosis of IMDH with important differential diagnosis including LV thrombus. Intracardiac thrombus as a mass with well-defined margin distinct from underlying endocardium and seen as an area with significant LV, regional, or global wall motion abnormalities. IMDH echocardiography findings include echolucent mass within myocardial tissue, identification of ventricular myocardium outside mass and serial echogenicity changes within mass. Diagnosis IMDH was supported by recording a thin endomyocardial layer surrounding the hematoma with ample movement, a finding that differentiated it from an intracavitary thrombus.

UPCOMING CONFERENCES

3rd Edition of International Women's Forum
17-18 Mar 2025 | Amsterdam, Netherlands
womensforum@scholarsevents.org
https://scholarsconferences.com/womens-forum/

Global Entrepreneurship and Innovation Research Summit
March 17-18, 2025 | Amsterdam, Netherlands
entrepreneurship@scholarsevents.org
https://entrepreneurship-conference.org/

World Nursing Education and Practice Congress
July 07-08, 2025 | Prague, Czech Republic
nursing@scholarconferences.org
https://nursingworldcongress.com/

World Congress on Future of Aging: Science, Society, and Sustainability
09-11 July,2025 | Prague, Czech Republic
aging@scmeetings.org
https://scholarsconferences.org/aging/

Singapore Public Health Conference
September 15-17, 2025 | Singapore
publichealth@frontiersmeetings.org
https://scholarsconferences.com/public-health/

World Nursing and Healthcare Summit
October 27-29, 2025 | Bali, Indonesia
healthcare@scholarsevents.org
https://scholarsconferences.com/nursing-healthcare/

World Congress on Gynecology, Obstetrics & Women's Health
October 27-29, 2025 | Bali, Indonesia
gynecology@frontiersevents.com
https://scholarsconferences.com/gynecology-obstetrics/

Asia-Pacific Mental Health and Well-being Congress
October 27-29, 2025 | Bali, Indonesia
dileep@scholarsconferences.com
https://scholarsconferences.com/asia-pacific-mental-health/