Preface to the Journal of Cardiovascular Disease Research, second issue 2012

I am delighted to present this issue of the Journal of Cardiovascular Disease Research (JCDR). The JCDR is proud to enter 2012 in a strong position. Readers may be aware that Wolters Kluwer Health (Philadelphia, PA) acquired Medknow and thus became the publisher of JCDR. Wolters Kluwer Health is a leading global provider of information and business intelligence for physicians, nurses, students and specialized clinicians. Major brands include Lippincott Williams & Wilkins, Ovid®, UpToDate®, Medi-Span®, Facts & Comparisons®, Pharmacy OneSource® and ProVation® Medical. With new opportunities and challenges, we will continue to strive to make JCDR more influential, powerful and useful to the cardiovascular disease research community. The exponential growth and enhanced visibility of JCDR is reflected by the rapid rate of indexing in PubMed, PubMed Central, Scopus, Google Scholar, Chemical Abstracts, etc. This is paralleled by an increase in the number of article downloads, indicating that JCDR has been attracting more readers in the area of cardiovascular disease research. The number of submitted manuscripts from all over the world is also increasing steadily, demonstrating that our journal is becoming a respected and reliable venue for researchers to disseminate their findings.

I would like to take this opportunity to welcome our new associate editors and section editors and thank our hard-working reviewers and editorial board members for their dedicated service to this scientific endeavor, to our authors and readers for their contributions and continued interest in JCDR, and to our publisher for their effort to expand the influence and quality of JCDR. We still have a long road ahead of us, and as always we welcome your new ideas, valuable comments, suggestions and feedback. Through your involvement, we are closer to accomplishing our goal of positioning JCDR among the leading journals in the field of cardiovascular disease.

MEMBERS IN THE NEWS

On behalf of the JCDR editorial board, I would like to congratulate the Editor-in-Chief of JCDR, Dr. Peng Zhou, on his appointment as Chairman of the Education/CME Committee of the Chinese American Heart Association. We applaud this achievement and extend our warm wishes for continued success. In addition, because JCDR has been receiving more clinical manuscripts, Yongxia Sarah Qu MD, PhD, and Guangzhen Zhong MD, PhD, were appointed as Associate Editors of JCDR.

LAUNCH OF NEW SECTIONS OF JCDR

Last year we launched the Section of Cardiothoracic Surgery, an endeavor spearheaded by Vakhtang Tchantchaleishvili, MD, Department of Surgery, University of Rochester Medical Center. Dr. Tchantchaleishvili has authored several publications and book chapters in cardiac surgery although his main interest includes various treatment modalities for heart failure. The Section of Cardiothoracic Surgery has continued to evolve since its introduction in the 3rd issue of 2011. As a consequence, we have decided to establish additional sections in sub-areas of cardiovascular disease research and invite internationally recognized experts as section editors.

Commissioned by Dr. Peng Zhou (Editor-in-Chief, JCDR), I am thus pleased to officially announce, on behalf of the JCDR editorial board, the launch of the following sections of JCDR: Dayue Darrel Duan, MD, PhD, FAHA, will serve as the Section Editor of Frontiers in Cardiovascular Research; John F. Beshai, MD, FACC, FHRS, will serve as the Section Editor of Clinical Electrophysiology; Li Zhang, MD, will serve as the Section Editor of Continuing Medical Education; while Cynthia C. Taub, MD, FACC, FASE, will supervise the Section of Non-invasive Cardiology; Pitchai Balakumar, PhD, will serve as the Section Editor of Cardiovascular Pharmacology.

Dr. Dayue Darrel Duan is a Professor at the Department of Pharmacology, University of Nevada School of Medicine. He is an internationally renowned cardiovascular scientist. He is President-elect of the Academy of Cardiovascular Research Excellence. Dr. Duan has served on numerous
boards and expert committees, including the U.S. National Institutes of Health (NIH) Center for Scientific Review Special Emphasis Panel (NHBLI Systems Biology), American Institute of Biological Sciences NYSTEM Cardiology Panel, Biotechnology and Biological Sciences Research Council of UK, Canadian Institutes of Health Research, Peer Review and Research Committees in American Heart Association, Life Science Committee at the National Natural Science Foundation of China, Expert Committee for the Ministry of Education of China, The Research Grants Council of Hong Kong, Executive Committee and Chairman of Award Committee in Division of Cardiovascular Pharmacology of American Society of Pharmacology and Experimental Therapeutics. He has published extensively in prestigious journals such as Nature, Circulation, and Circulation Research. Dr. Duan serves on the editorial boards of several leading international cardiovascular and pharmacological journals and reviewer for 56 peer-reviewed scientific journals. His research has been continuously supported by NIH and American Heart Association. Dr. Duan's research interests include ion channels, functional genomics and proteomics, phenomics, cardiac electrophysiology and pharmacology, cardiac ischemia, cardioprotection, myocardial hypertrophy and heart failure.

Dr. John F. Beshai, an Associate Professor of Medicine at the University of Chicago, has earned a reputation as an international expert in cardiac electrophysiology. He is an Associate Director of the Heart Rhythm Center and the Director of Pacemaker/Defibrillator Services. His clinical expertise includes radiofrequency catheter ablation for atrial fibrillation, ventricular tachycardia and supraventricular tachycardia, as well as pacemaker and defibrillator implantation for cardiac arrhythmia. As a respected scientist, Dr. Beshai's clinical research interests are focused on device therapy in patients with congestive heart failure and sarcoidosis. In addition, he is involved in multiple studies developing new technologies and approaches to radiofrequency catheter ablation of complex arrhythmias, including atrial fibrillation and ventricular tachycardia. Dr. Beshai served as the national principal investigator and Steering Committee Chairman for the Cardiac Resynchronization Therapy in Heart Failure and Narrow QRS complexes (RETHINQ) trial, and was senior author of its publication in the New England Journal of Medicine.

Dr. Li Zhang is an Associate Professor at Jefferson Medical College and Lankenau Institute for Medical Research. She is the Director of Cardiovascular Outcomes Research of Main Line Health Heart Center at Lankenau Institute for Medical Research. Dr. Zhang is a renowned expert in inherited arrhythmias associated with increased risks of sudden death in young but otherwise healthy individuals. Dr. Zhang's primary research goal is to improve the early diagnosis of fatal cardiac arrhythmia for prompt medical intervention and sudden death prevention. Her publication record is prolific. She has made important contributions in establishing the ongoing registry studies in China for long QT syndrome (LQTS), arrhythmogenic right ventricular dysplasia (ARVD) and left ventricular noncompaction. Dr. Zhang is Vice President of the Chinese American Heart Association. She is also an Adjunct Professor at Xi'an Jiaotong University and Guest Professor at Peking University.

Dr. Cynthia C. Taub is an Associate Professor of Clinical Medicine at Albert Einstein College of Medicine, and the Director of Non-invasive Cardiology at Einstein Division/Montefiore Medical Center. Dr. Taub serves on the FASE Committee at the American Society of Echo. She is also on the Executive and Medical Leadership Committee for the American Heart Association “Go Red” campaign. Dr. Taub is Vice President of the Chinese American Heart Association. She has received numerous teaching and research awards. She is well-known for her expertise in tissue Doppler imaging, 3D echocardiography, echocardiographic evaluation of cardiac resynchronization therapy, intraoperative transesophageal echocardiography and adult congenital heart disease.

Dr. Pitchai Balakumar is a Professor and Head of Department of Pharmacology at Rajendra Institute of Technology and Sciences, Sirsa, Haryana, India. He is the Editor-in-Chief of the Current Research in Cardiovascular Pharmacology and the Associate Editor for the International Journal of Recent Advances in Pharmaceutical Research. He was a Guest Editor of the Pharmacological Research (Elsevier Journal) for the Special Issue on peroxisome proliferator activated receptors (PPARs) in 2009 and a Guest Editor of the Current Molecular Pharmacology (Bentham Science Journal) for the Special Issue on PPARs in 2011. Dr. Balakumar has been widely recognized in cardiac hypertrophy and heart failure, myocardial ischemia-reperfusion injury, myocardial preconditioning and postconditioning, vascular endothelial physiology and pathophysiology.

**THIS ISSUE OF JCDR**

The papers in this issue represent a wide range of topics covering basic and clinical research on cardiovascular...
disease. I hope that JCDR readers find this issue interesting and informative. Below I highlight several key findings of some reports.

In an interesting study addressing the issue of genotype-phenotype analysis, Gao et al. explored the causes and clinical implications of Jervell and Lange-Nielsen syndrome (JLNS) in Chinese patients. JLNS is a rare form of LQTS with congenital sensorineural deafness. They identified seven KCNQ1 mutations, including two novel mutations that cause JLNS. Some identified mutations have been previously described in patients with Romano-Ward syndrome (RWS). They also found that ECG abnormalities in JLNS patients were associated with their clinical symptoms. They concluded that compound heterozygous KCNQ1 mutations could result in both JLNS and severe forms of RWS in Chinese patients. This study expanded the mutation and phenotype spectrum of JLNS and provided valuable information for our understanding of LQTS and JLNS.

In an article from Denmark, Thim et al. used novel surgical techniques along with medical and imaging techniques to investigate the relationship between wall shear stress and local plaque development in stenosed carotid arteries of hypercholesterolemic minipigs. Atherosclerotic lesions, in pre- and post-stenotic segments, were associated with thrombus in the stenosed segment. In patent carotid arteries, atherosclerotic lesions were only found in the post-stenotic segments. It was concluded that both low and oscillatory shear stress together would advance the development of atherosclerotic plaques with necrotic cores. This study has clinical significance in our understanding of the development of atherosclerotic plaques.

Chu et al. examined the association between the G-308 A (rs1800629) polymorphism of the tumor necrosis factor-alpha (TNF-α) gene and risk of coronary artery disease (CAD) and myocardial infarction (MI) in the Chinese Han population. The authors determined the genotypes of TNF-α G-308A (rs1800629) in Chinese patients with CAD, MI and controls. They also performed a meta-analysis of all previous studies on TNF-α G-308A polymorphism and the risk of CAD and MI. They concluded that there was no association between the G-308 A (rs1800629) polymorphism of the TNF-α gene (presence of A allele) and CAD/MI.

The global increase in patients with chronic kidney disease (CKD) is threatening to reach epidemic proportions over the next decade. Muhaisen et al. investigated the association between various risk factors of cardiovascular disease and different stages of CKD in children without kidney replacement therapy in the Gaza strip. The findings of this study indicate that many cardiovascular disease risk factors are associated with different stages of CKD in children prior to dialysis and some of these factors are exacerbated as CKD progresses. This study has potential implications in monitoring the progress of the disease and predicting future outcomes of CKD patients.

Petroleum products have been reported as environmental health risk factors that are associated with cardiovascular morbidity and mortality. Azeez et al. described the effects on body weight gain and cardiovascular function in a rat model. The results showed that exposure to petroleum products is associated with increased systolic blood pressure, diastolic blood pressure, mean arterial pressures, heart rate, and reduced body weight. A potential mechanism is that inhalation of petroleum products is associated with baroreflex sensitivity and arterial blood pressure resetting.

Family history has been shown to be a risk factor for many chronic diseases. Das et al. analyzed the association between the family history of type 2 diabetes mellitus (T2DM) and the risk of developing metabolic syndrome (MS) in the Indian population. The authors concluded that family history of T2DM was a significant predictor for the risk of MS. This study provides useful information in the prevention and early diagnosis of MS.

In a rare case study, Mohite et al. presented an interesting case of a ruptured aneurysm of the right sinus of Valsalva into the main pulmonary artery, resulting in congestive heart failure. Very few similar cases have been reported. The authors detected the defect by trans-thoracic and trans-esophageal echo as well as angiogram. To my knowledge, this is the most extensive evaluation of such a case.

To better understand thrombocytopenia, Patnaik et al. presented an uncommon case of fatal thrombocytopenia that were associated with intracardiac tumor. The authors provided useful clinical results with a potential diagnosis on such patients. They discussed the potential causes of thrombocytopenia. Also included with this case report is an accompanying editorial from Dr. Kan Chen of Brigham and Women’s Hospital and Harvard Medical School in Boston.
Cao et al. described an atypical case of an inferior myocardial infarction secondary to aortic dissection associated with bicuspid aortic valve. The 40-year-old female patient was given anticoagulation and antiplatelet treatment. Surgical treatments included successful replacement of the ascending aorta, aortic valve replacement and coronary artery bypass grafting. This work adds significantly to our understanding on how such patients should be diagnosed and managed.

Generalized arterial calcification of infancy (GACI) is a rare, fatal, autosomal-recessive disease. GACI is associated with a high mortality rate owing to the development of severe hypertension and cardiovascular complications in early infancy. Kalal et al. provided a detailed report of a case of GACI and recommended that along with investigations like CT and fetal echo scan, molecular analysis of ectronucleotide pyrophosphatase/phosphodiesterase 1 (ENPP1) should be included in the clinical diagnosis of GACI.

Ventricular septal defect (VSD) complicating acute myocardial infarction is a very serious medical condition, which further deteriorates hemodynamics. Patnaik et al. provided a successful therapy to an anterior myocardial infarction patient with VSD, which is helpful to other health care providers in making a strategic clinical decision.

Kota et al. reported a case of a 48-year-old patient with pheochromocytoma and inferior vena cava (IVC) thrombosis. Pheochromocytoma with IVC thrombosis is a rare clinical condition. The authors described the results of abdominal CT and IVC venogram, and discussed the criteria for diagnosis and therapy. Surgical removal of pheochromocytoma was followed by anticoagulant treatment for IVC thrombosis.

In a case study, Jagiasi et al. reported a 38-year-old patient diagnosed with coronary vasospasm. The authors provided helpful information to clinicians by advising that coronary vasospasm should be considered in the setting of chest pain at rest with ST-T changes and localized stenosis on coronary angiography in the absence of obvious thrombosis, which might prevent unnecessary coronary stenting.

In the case of a 48-year-old patient with thrombotic thrombocytopenic purpura (TTP), Atreya et al. reported a rare case where TTP was manifested by ST-segment elevation myocardial infarction. It highlights the significance of a comprehensive clinical examination and may benefit future cases with similar characteristics.

In other clinical case reports: Oyedeji et al. presented a case of cor triatriatum sinister cum coexisting with a prominent Eustachian valve in which the diagnosis was confirmed by two-dimensional transthoracic echocardiography. Barik et al. reported a case in which congenital bicuspid aortic valve, aortic regurgitation, aortic coarctation and ruptured sinus of Valsalva aneurysm were surgically repaired in a single-stage procedure. Aundhakar et al. described the characteristics of cardiorenal syndrome (CRS) and the diagnosis of a patient with CRS who was resistant to diuretics and sensitive to ultrafiltration. Thej et al. reported a case with myocardial bridging over the left anterior descending artery combined with obstructive atherosclerosis in the proximal and intramyocardial part. Sakaria et al. described a case of Lutembacher syndrome in a 22-year-old pregnant lady, including a detailed examination and clinical investigation of the patient.

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How to cite this article: Zhu Y. Preface to the Journal of Cardiovascular Disease Research, second issue 2012. J Cardiovasc Dis Res 2012;3:61-4.