Mission Statement of the
Institute of Cardiovascular Science and Medicine

The Institute of Cardiovascular Science and Medicine (ICSM) commits itself to strive for excellence in research, teaching and training in cardiovascular sciences which contributes to the prevention and patient management of cardiovascular diseases in Hong Kong.

We shall offer the highest standards of teaching research and scholarship in an interactive environment conducive to creativity, to innovative learning and to freedom of thought, enquiry and expression in all aspects of cardiovascular sciences.

We shall continue to undertake research, teaching and other forms of service in clinical and basic cardiovascular sciences which will advance our quest for wisdom, truth and excellence in biomedical science at large.

We shall make known the mission of this Institute in Hong Kong and internationally
Governance

Council

The members of the Institute elect a Council, who are responsible for carrying out the work of the Institute according to its Mission, Objectives, By-Laws and Regulations. The Council consists of the Officers, the immediate Former Director (if available), and three to ten Council Members. The Officers of the Institute are the Director, Deputy Director, Honorary Secretary and Honorary Treasurer. Each Council serves the Institute for a period of two years. The second Council of the Institute, elected at the 4th Annual General Meeting on 30th October 1999, remained in office from January - November 2001, and the Third Council of the Institute was elected at the 5th Annual General Meeting on 1st December 2001. The members of the Second and Third Councils were:

Second Council of the ICSM (January - November, 2001)

Director: Professor C.P. Lau
Deputy Director: Professor R.Y.K. Man
Honorary Secretary: Dr. H.J. Ballard
Honorary Treasurer: Dr. A.K.T. Chau
Council Members: Dr. B.M.Y. Cheung, Dr. Y.F. Cheung, Dr. M.L. Fung, Professor G.W. He, Professor C.R. Kumana, Dr. K.L.F. Lee, Dr. Karmin O, Professor M.P. Leung, Dr. H.F. Tse

Third Council of the ICSM (December 2001)

Director: Professor C.P. Lau
Deputy Director: Professor T.M. Wong
Honorary Secretary: Dr. H.J. Ballard
Honorary Treasurer: Dr. Y.F. Cheung
Council Members: Dr. A.K.T. Chau, Dr. B.M.Y. Cheung, Dr. M.L. Fung, Dr. K.L.F. Lee, Professor R.Y.K. Man, Dr. Karmin O, Dr. H.F. Tse

Membership Sub-Committee of the Council

Dr. H.J. Ballard, Professor C.R. Kumana, Professor T.M. Wong
Membership

Membership of the Institute of Cardiovascular Science and Medicine continued to increase in the year 2001. By the end of December 2001, membership stood at 104, and consisted of 12 Founding Members, 44 Full Members, 15 Associate members and 33 Affiliate Members.

Criteria for membership

Clinicians, scientists, researchers and students with an interest in the cardiovascular field are invited to become members of the Institute. The classes of membership open to applicants are Full, Associate or Affiliate Membership.

All applicants for admission shall

1. Be at least 18 years of age; and
2. Be of good character and repute; and
3. Undertake in writing to adhere to the By-Laws of the Institute, as amended from time to time.

Applicants for admission as a Full Member shall also

1. Be a full time or honorary teacher (Assistant Professor, Honorary Clinical Lecturer or above) of the University of Hong Kong or be deemed to be holding an equivalent position; and
2. Be engaged in research in cardiovascular science or cardiovascular medicine, as evidenced by his or her published works.

Applicants for admission as Associates shall also

1. Possess either a medical degree (MBBS or equivalent) plus a higher qualification (MRCP or equivalent), or a doctorate (PhD or equivalent) in science; and
2. Be engaged in research in cardiovascular science or cardiovascular medicine.

Applicants for admission as Affiliates shall also

1. Possess a University degree or equivalent in medicine, nursing or science; and
2. Be engaged in or have a strong interest in cardiovascular research.

Applications for membership, accompanied by the appropriate supporting documents (eg. resume, list of relevant publications, copies of certificates) should be submitted to the Honorary Secretary, to whom membership enquiries may also be addressed. The application form may be obtained by writing or e-mailing (icsm@hkucc.hku.hk) to the Honorary Secretary, or it may be downloaded from the membership section of our website (http://www.icsm-hk.org)
Research Activities Of The ICSM

Organisation of Research

The Institute of Cardiovascular Science and Medicine actively facilitates and promotes collaborative research in cardiovascular science and medicine between its members, by the formation of research groups, each of which is focussed on a particular area of cardiovascular research. Each special-interest group organises its own schedule of “brain-storming” sessions on relevant topics, develops collaborative research projects and submits grant proposals on topics within its area of interest. The Institute’s collaborative research program was developed further in 2001, and the current research groupings are as follows:

Atherosclerosis, Inflammation and Thrombosis

**Co-ordinator** Dr. Karmin O

**Key team members** Prof R Man, Dr K O, Dr YL Siow, Dr HF Tse, Dr WH Chen, Dr SCF Tam, Prof F Tang, Dr JP Bourreau, Dr B Cheung.

There is mounting evidence that inflammation plays a role in the pathogenesis of atherosclerosis. Small increases in serum levels of C-reactive protein (CRP), a marker of systemic inflammation, are associated with increased risk of ischaemic heart disease, and serum CRP level is an independent risk factor for cardiovascular disease. Adrenomedullin is a peptide that acts as a local autocrine and/or paracrine vasoactive hormone, and it has vasodilator and blood pressure lowering properties. It may also play a role in mediating inflammatory responses. Plasma concentration of adrenomedullin is elevated in patients with cardiovascular disease, in inflammatory states and septic shock.

Cardiovascular Risk Factors

**Co-ordinator** Dr. Bernard Cheung

**Key team members** Prof TH Lam, Prof CP Lau, Prof Stephen WK Cheng, Dr Bernard MY Cheung, Dr Sidney CW Tam.

This part of the programme involves epidemiological studies of cardiovascular risk factors and cardiovascular events in Hong Kong. The prevalence of, and trends in, risk factors such as hypertension, diabetes, hypercholesterolaemia, obesity and smoking are examined in Chinese subjects. The effects of perinatal influences on cardiovascular risk factor development in adult life are also studied. Some of the epidemiological studies involve the collection of DNA from subjects for use in the investigation of genetic markers for susceptibility to various cardiovascular diseases. The results of all these studies can be used to guide public health policy.

Heart Failure and Arrhythmia

**Co-ordinator** Professor C.P. Lau.

**Key team members** HW Chan, K Fan, CP Lau (Medicine (Cardiology) HKU), KLF Lee, SK Leung, GR Li, HF Tse, CM Yu, J Zhang.

Despite a falling trend of mortality from coronary artery disease in the developed country, the incidence of heart failure is increasing. Heart failure is responsible for 20% of all mortality in Hong Kong. Many cases of death from heart failure are sudden, usually related to the occurrence of cardiac arrhythmias. Members of our research group are international authorities and pioneers in using pacing and ablation for atrial
fibrillation, the use of catheter based cooling energy (cryoablation) for the ablation of focal atrial fibrillation, animal and cell models for anti-arrhythmic drug development, electronic cardiac signal processing during arrhythmia, and reverse cardiac remodelling after cardiac resynchronisation.

**Hypoxia and Ischaemia**

**Co-ordinator** Professor T.M. Wong.

**Key team members** HJ Ballard, JP Bourreau, YF Cheung, ML Fung (Physiol), PCW Fung, GR Li, FT Tang.

When tissues are subjected to hypoxia/ischaemia, inflammatory responses and the generation of free radicals may occur, which lead to injury or even cell death. Hypoxia/ischaemia and tissue injury also trigger compensatory responses, which prevent or attenuate the damage. However, prior exposure to an insult such as ischaemia, hypoxia, metabolic inhibition, heat, cold and stress induces pre-conditioning or protection against subsequent and more severe insults of the same or different kinds. We are studying the compensatory responses and mechanisms of preconditioning to enable us to design better strategies in the prevention and treatment of diseases/disorders arising from hypoxia/ischaemia.

**Stem Cell Transplantation**

**Co-ordinator** Dr. H.F. Tse.

**Key team members** S.W.K Cheung, Prof CP Lau, Dr GR Li, Dr JCL Zhang

This project examines the feasibility of using bone marrow and embryonic stem cells as a novel strategy for myocardial and brain regeneration after injury, and it promises to be an extremely important field in the very near future. Our research group contains the only team in Hong Kong that is already developing stem cell transplantation for humans.

**Visitors and Lectures**

In 2001, the ICSM has again hosted a fascinating programme of visits and seminars from overseas speakers. In April, we received a visit from Professor Ruth L. Collins-Nakai, the President of the Canadian Cardiovascular Society: ICSM members held a long discussion with Professor Collins-Nakai on 23rd April, in which our two centres were introduced, and a number of possible areas for future collaboration were identified. In October we received a visit from Professor Alberto Zanchetti, Professor of Medicine and Director of the Centre for Clinical Physiology and Hypertension at the University of Milan, and editor-in-chief of the Journal of Hypertension. Professor Zanchetti met ICM members for a roundtable discussion on October 9th, at which we discussed cardiovascular pharmacotherapy for hypertension, and techniques to raise public awareness of the disease.

Dr. Alex Chen from the College of Human Medicine at Michigan State University gave a fascinating seminar entitled “NOS gene therapy and cardiovascular disease” on 31st July. The theme of “endothelial control” was continued by Dr. Michel Feletou from the Institut de Recherches Servier, France, one of the world’s leading researchers in the area of endothelium-dependent control of vascular tone, who gave a talk on “Endothelium-dependent hyperpolarisation” on 22nd August. The same theme was developed even further on October 3rd, when Dr. Chris Triggle, Associate Dean of Research in the Medical Faculty at the University of Calgary, gave his talk on “Endothelium-derived relaxing factors: contributions from a hyperpolarising factor and changes in function in diabetes”.

**Scientific Meetings**
The Institute of Cardiovascular Science and Medicine organised two Scientific Meetings in the year 2001:

**University Program 2001:**

**Core Curriculum in Cardiology**

The Core Curriculum in Cardiology is a major seminar organized annually by the ICSM to provide a comprehensive refresher course for practicing cardiologists, cardiology trainees and allied professionals. It was held on July 28 – 29, 2001, at the Sheraton Hong Kong Hotel, on the theme of ECG and General Cardiology. The programme comprised four sessions on ECG interpretation and clinical cardiology, and included an interactive workshop on ECG.

**The Fifth Annual Scientific Meeting:**

**Angiogenesis and Cellular Cardiomyoplasty - For the New Millenium**

Molecular, Integrative and Clinical Approaches to Cardiovascular Diseases

The Fifth Annual Scientific Meeting was held at the Hong Kong Convention and Exhibition Centre on 1st-2nd December 2001. The meeting was expanded to two days, in response to the continuing growth in both attendance and submissions of papers, and we were extremely fortunate to receive sponsorship from the Croucher Foundation. A very exciting programme included symposium topics such as Non-Pharmacological Treatment of Heart Failure, Myocardial Angiogenesis, Mechanisms of Cardiovascular Disease and Cardioprotection, and New Perspectives for the Treatment of Cardiovascular Disease. This meeting also introduced a symposium entitled “Research Achievements of the ICSM”, in which, the recipients of the 2000 ICSM research grants presented the findings of their projects. A joint symposium with the University of Manitoba, Canada, on Atherosclerosis and Vascular Sciences, was held on the second day of the meeting. The meeting attracted 289 registrants, and 80 abstracts were submitted, of which, around one third were from China and Taiwan, one quarter from international institutions, mainly in Canada, U.S.A and Australia, and the remainder from Hong Kong faculty and research students. Distinguished overseas speakers included **Julie YH Chan**, Professor of Physiology, National Yang-Ming University, Taiwan, **Patrick C. Choy**, Professor and Associate, Dean of Medicine, University of Manitoba, Canada, **Shmuel Fuchs**, Director of Myocardial Angiogenesis, Washington Hospital Center, USA, **Cornelis Kluft**, Sector Head: Genetics, clinical and epidemiological research and Associate Professor in Coagulation and Fibrinolysis, University of Southern Denmark, Esbjerg, Denmark., **Roger J. Laham**, Director of Clinical Research, Harvard Medical School, USA, **Peter K. Law**, Founder and Chairman, Cell Therapy Research Foundation, USA, Choong-Chin Liew, Director, The Cardiovascular Genome Unit, Brigham and Woman’s Hospital, Harvard Medical School, Boston, MA, USA, **Gerald Y Minuk**, Professor of Internal Medicine, University of Manitoba, Canada, **Ryuichi Morishita**, Associate Professor of Cardiovascular Science, Osaka University Medical School, Japan, **David Mymin**, Professor of Internal Medicine, University of Manitoba, Canada, **Eng-Shiong Tan**, Department of Cardiology, Thoraxcenter, University Hospital Groningen, the Netherland, and **Chi-Ming Wei**, Associate Professor of Surgery and Molecular Biology, University of Maryland, USA.

**Media Briefings**

Professor C.P. Lau and Dr. Kathy Lee held a press conference on 15th June on the topic “Sudden Death in Hong Kong” to report on the prevalence and underlying causes of this phenomenon among the local population. 89% of sudden deaths in Hong Kong in 1997 were related to cardiovascular diseases, and the
majority of these were attributable to coronary heart disease. These findings were widely reported in the local media.

On November 2nd, Professor Ricky Man, Drs. Karmin O and Bernard Cheung from the ICSM, and Dr. Susan Fan from the Family Planning Association, held a joint press conference to announce the findings of their study on “the effects of hormone replacement therapy on cardiovascular risk factors in Hong Kong women”. The media briefing was well-attended, and resulted in the publication of 15 news reports in newspapers, on radio and through on-line news services.

An extremely successful press conference was held in association with the 5th Annual Scientific Meeting. Dr. Y.F. Cheung from the ICSM reported that snoring by young children was associated with a higher blood pressure and body mass index, and a lower arterial distensibility. Professor C.C. Liew, Director of the Cardiovascular Genome Unit at Harvard Medical School, and an invited speaker at the 5th Annual Scientific Meeting, described the use of DNA chip technology to investigate the genetic basis of heart failure. Both of these topics, as well as the 5th A.S.M. itself, were extensively reported in the media.

**Community Service**

Hyperhomocysteinaemia is regarded as an independent risk factor for coronary heart disease. Homocysteine is an amino acid formed during the conversion of methionine to cysteine. Moderate elevation of homocysteine in the blood correlates to increased risk for cardiovascular disease, and susceptible individuals can be successfully treated with dietary folate.

During the year 2000, a homocysteine assay was set up by ICSM Council members Dr. Bernard Cheung and Dr. Karmin O, and reference levels for the Hong Kong Chinese population were established in a pilot study of 200 patients. Early in 2001, the assay was made available as an investigative service to cardiologists, and the uptake of the assay service has continued to increase steadily throughout the year.

**Fund Raising**

The activities of the ICSM are funded through its commercial activities, such as advertising revenue associated with the Annual Scientific Meeting and assay services for cardiovascular risk factors, as well as donations, mainly from pharmaceutical companies. We aimed to increase our funding base, so as to be able to provide more funding to research projects. An advertising flyer was sent out to members of the general public in December 2001, to introduce our research work to the population of Hong Kong and to solicit donations for research funding. A number of donations were received in response to the flyer, and we will continue to send out updated flyers annually.
### Research Grants awarded by the ICSM in 2001

<table>
<thead>
<tr>
<th>Investigator(s)</th>
<th>Project Title</th>
<th>Award (HK$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. G.R. Li</td>
<td>Research “start-up” funds</td>
<td>120,000</td>
</tr>
<tr>
<td>ICSM Research Assistant Professor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Research grants awarded by the RGC in 2001 to members of the ICSM

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Institution</th>
<th>Project Title</th>
<th>Award (HK$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Chan Sophia S.C.</td>
<td>HKU</td>
<td>A randomized controlled trial of a nurse delivered staged-matched smoking cessation intervention to promote heart health of cardiac patients</td>
<td>948,540</td>
</tr>
<tr>
<td>Dr Cheung, Bernard</td>
<td>HKU</td>
<td>Hong Kong cardiovascular risk factor prevalence study-2 (CRISPS-2)</td>
<td>1,100,000</td>
</tr>
<tr>
<td>Man Yung</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr Cheung, Yiu Fai</td>
<td>HKU</td>
<td>Effect of iron overloading on arterial distensibility and endothelial function in patients with beta-thalassaemia major</td>
<td>532,775</td>
</tr>
<tr>
<td>Dr Fung, Man Lung</td>
<td>HKU</td>
<td>Angiotensin II receptors in the carotid body: its function and expression in perinatal and postnatal hypoxia</td>
<td>699,600</td>
</tr>
<tr>
<td>Prof He, Guo Wei</td>
<td>CUHK</td>
<td>The Interaction between Endothelium and Smooth Muscle/Cardiac Myocytes during Heart Surgery and Clinical Significance</td>
<td>1,234,00</td>
</tr>
<tr>
<td>Prof Kwan, Yiu Wa</td>
<td>CUHK</td>
<td>The Mechanisms Responsible for the Exaggerated Excitatory Effect of Acetylcholine in the Pulmonary Artery of Spontaneously Hypertensive Rats</td>
<td>699,600</td>
</tr>
<tr>
<td>Dr Li, Gui Rong</td>
<td>HKU</td>
<td>Volume-sensitive chloride current and cell volume regulation in human atrial myocytes</td>
<td>734,000</td>
</tr>
<tr>
<td>Prof Wong, Tak Ming</td>
<td>HKU</td>
<td>Cardioprotective effects of female sex hormone as a result of negative modulation of beta-adrenoceptor - mechanisms of action</td>
<td>699,600</td>
</tr>
<tr>
<td>Prof Yim, Ping Chuen Anthony</td>
<td>CUHK</td>
<td>Homocysteine, Oxidant Stress and Vein Graft Failure: Interactions with Diabetes and Hypercholesterolaemia and Novel Approaches to Therapy Using Gene Transfer in a Porcine Model</td>
<td>1,227,600</td>
</tr>
</tbody>
</table>
Other external research grants and donations awarded in 2001 to members of the ICSM

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Project Title</th>
<th>Awarding body</th>
<th>Award (HK$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof Hedley Anthony J</td>
<td>Study of short-term health impact and costs due to road traffic-related air pollution</td>
<td>EPD: HK Govt</td>
<td>625,000</td>
</tr>
<tr>
<td>Prof Hedley Anthony J</td>
<td>Human dioxin levels in Hong Kong – a pilot study</td>
<td>Environment Conservation Fund</td>
<td>1,281,920</td>
</tr>
<tr>
<td>Prof Lau Chu Pak</td>
<td>Centre of Excellence</td>
<td>Guidant Hong Kong Ltd</td>
<td>2,000,000</td>
</tr>
<tr>
<td>Prof Lau Chu Pak</td>
<td>Cardiovascular Animal Research and Training Fund</td>
<td>Medtronic International Ltd.</td>
<td>200,000</td>
</tr>
<tr>
<td>Prof Lau Chu Pak</td>
<td>Support Cardiology Research</td>
<td>Sorin Biomedica Asia Pte Ltd</td>
<td>240,000</td>
</tr>
<tr>
<td>Prof Lau Chu Pak</td>
<td>Support a new project on angiogenesis of end-stage coronary artery disease</td>
<td>Sun Chieh Yeh Heart Foundation</td>
<td>500,000</td>
</tr>
<tr>
<td>Prof Lau Chu Pak</td>
<td>Support Cardiology Research</td>
<td>Aventis Pharma Ltd</td>
<td>120,000</td>
</tr>
<tr>
<td>Prof Lau Chu Pak</td>
<td>Support to purchase echocardiographic machines for patients care and research</td>
<td>Sun Chieh Yeh Heart Foundation</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Prof Lau Chu Pak</td>
<td>Francis R Zimmern Centre for Cardiology</td>
<td>Mrs Helen Zimmern</td>
<td>30,000,000</td>
</tr>
<tr>
<td>Prof Lau Chu Pak</td>
<td>Support Coronary Care Unit</td>
<td>Mr Chung Siek Yung</td>
<td>80,000</td>
</tr>
</tbody>
</table>
Meeting our Targets

Aims for 2001

Our objectives for 2001 were to further develop our fundraising efforts in 2001, by inviting donations towards our research funding from the general public; to further increase the visibility of the ICSM, by holding press conferences to report our most interesting new findings; to bring the homocysteine assay into a state of commercial viability; and to see the award of grants and the publication of research papers attributable solely to the ICSM. All of these objectives were fully achieved during 2001. Flyers were sent out to the general public in order to introduce the ICSM and its research programmes, and to invite contributions towards our research funding, and a number of donations were received from members of the public. Three press conferences were held over the course of 2001, resulting in a large number of media reports on ICSM research activities. The homocysteine assay was made available to cardiologists in Hong Kong, and is being run on a cost-recovery basis. Dr. G.R. Li, the ICSM Research Assistant Professor, secured an RGC research grant and published several research papers in the name of the ICSM.

Aims for 2002

Collaborations with other research groups

The ICSM brings together researchers in cardiovascular science and medicine, and actively promotes collaboration between its members. In 2002 we plan to further expand our collaborative links to other groups researching in areas related to cardiovascular science and medicine. The major mortality and morbidity in the ageing population is attributable to cardiovascular disease, whilst diabetes is associated with accelerated atherosclerosis. Heart disease, peripheral vascular disease and stroke are the major causes of death in diabetic patients over the age of 50: diabetes doubles the probability of stroke and increases the probability of myocardial infarction by 3-5 times. We aim to strengthen our links with groups working on geriatric medicine and diabetes, so as to further increase our effectiveness in these areas.

Research Assistant Professor

Dr. G.R. Li joined the Institute as a Research Assistant Professor in September 2000 for a 3-year period. He has been successful in securing external grant funding and in the publication of his research work in high quality journals. As he will be entering into the final year of his contract with us in 2002, we aim to secure additional funding to retain Dr. Li with the Institute.

Service

The ICSM has been successful in making the homocysteine assay available to cardiologists in Hong Kong, and we plan to make available further diagnostic tests in the future. In 2002 we will study the feasibility of introducing tests for troponin and BNP (brain natriuretic peptide), with the aim of making at least one of them available during 2003.
ICSM Publications in 2001

Abstracts from the Fifth Annual Scientific Meeting (held in December 2001) were published as a Supplement to the December 2001 issue of the Journal of the Hong Kong College of Cardiology (Volume 9, Supplement, pp. 103-128).

P.K. Law  
Human myoblast transfer into the heart  
103

Patrick C. Choy  
Atherosclerosis risk factors: the possible involvement of lysophosphatidylcholine in hyperlipidemic patients  
103

J.Y.H. Chan  
Heat shock proteins and protection against cardiovascular depression  
103

Ryuichi Morishita  
Gene therapy in cardiovascular disease: gene therapy is real medicine in 21st century  
104

Y.F. Cheung, G.C.F. Chan and S.Y. Ha  
Effect of iron overloading on arterial distensibility and endothelial function in patients with beta-thalassaemia major  
104

H.J. Ballard, R. Das and M.P. Leung  
The influence of neonatal hypoxia on the subsequent adaptation to chronic hypoxia by adult animals  
104

Isabel S.S. Hwang and F. Tang  
Cardiovascular changes of adrenomedullin in two-kidney, one clip renovascular hypertensive rat  
105

Gui-Rong Li and Chu-Pak Lau  
Electrophysiological remodelling of chronic heart failure  
105

Guo-Wei He  
Surgical treatment for heart failure  
105

Chu-Pak Lau  
Electrical therapy for heart failure  
106

T.M. Wong  
Mechanism of delayed cardioprotection of ischaemic preconditioning  
106

G.Y. Minuk  
Light ethanol consumption, friend or foe?  
106

Peter C.W. Fung and Jiangang Shen  
Nitric oxide contributes to redistribution of phosphatidylserine and triggers apoptosis via peroxynitrite and p53 pathway in hypoxia-reoxygenated cardiomyocytes – we need a balance of NO  
107

D. Mymin  
Lipid management in cardiovascular disease – have we resolved the issues?  
107

Ricky Y.K. Man, Hwee Teoh, Susan W.S. Leung, Adrian Quan, Wendy Keung and Mary Y.K. Lee  
Sex hormones and vascular disorders  
107

Karmin O  
Role of homocysteine in atherosclerosis  
108

Y.L. Siow  
Cardioprotective implications of Chinese medicine: involvement of cellular signalling pathways  
108

C.C. Liew  
Heart failure – a genomic perspective  
108
Chiming Wei
DNA damage-repair system and apoptosis in cardiomyocytes 108

Yang Yingzhen, Su Yangang, Bao Weisheng, Liu Gongxin, Chen Haozhu
The effects of taurine and astragalus membranaceus on ion currents and their expression in cardiomyocytes after CVB3 infection 109

M.-L. Fung and G.L. Tipoe
The expression of hypoxia-inducible factor-1α, vascular endothelial growth factor (VEGF) and VEGF receptors in the rat carotid body in chronic hypoxia 109

CW Lau, ZY Chen, XQ Yao, ZD He, WY Tam and Y Huang
The vascular action of purified acteoside from ligustrum purpurascens 109

Yu Qing, Gui Yonghao, Cheng Lian, Xiao Honglei, Liu Yuyang, Ning Shoubao
The spatiotemporal expression pattern of fibronectin during vitamin A deficiency rat embryonic heart development 109

Molecular analysis of a smooth muscle specific protein SM22α and its novel isoform SM22β 110

Bouchard, M, Johnson, LL, Poppas, A, Schofield, L and Thambar, S
A swine model of chronic multivessel disease and left ventricular hibernation 110

BMY Cheung, TC Lam, CY Law, CR Kumana and CP Lau
The relationship between blood pressure and obesity in Hong Kong chinese 110

A Chiu
The use of cardiac troponin I to diagnose myocardial dysfunction in the critically ill 111

Ming-Hsiung Hsieh, Yi-Jen Chen, Paul Chan and Cheng-I Lin
Effects of thyroid hormone on the electrophysiological activity of pulmonary vein cardiomyocytes 111

YF Cheung, Clement SW Chiu*, TC Yung, Adolphus KT Chau
Impact of preoperative aortic cusp prolapse on long-term outcome after surgical closure of subarterial ventricular septal defect 111

Paul Chan, Ju-Chi Liu, and Jen-Chen Tsai
Beneficial effect to blood pressure and lipid profile by programmed exercise training in subjects with white coat hypertension 112

Ju-Chi Liu, Paul Chan, and Jen-Chen Tsai
Beneficial effect to blood pressure and lipid profile by programmed exercise training in Taiwanese patients with mild hypertension 112

Role of mitogen-activated protein kinase pathway in acetylcholine-mediated in vitro relaxation of rat pulmonary artery 113

Guoping Wang, Kathy KW Au-Yeung, Da-yuan Zhu, Karmin O, Yaw L Siow
Magnesium tanshinoate B attenuated AP-1 signaling in the ischemic/reperfused heart 113
<table>
<thead>
<tr>
<th>Authors</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.Y. Tsang, X.Q. Yao, H.Y. Chan, F.L. Chan, C.W. Lau, Y. Huang</td>
<td>Role of endothelium in ovariectomy-induced alteration in vascular reactivity</td>
<td>113</td>
</tr>
<tr>
<td>ZY Chen, IYF Wong, CW Lau, ZD He, XQ Yao, Y Huang</td>
<td>Vasorelaxant, anti-proliferative, and antioxidant activities of ligustrum purpurascens extract and phenylethanoid glycosides</td>
<td>114</td>
</tr>
<tr>
<td>C Fu, CM Cao, J Zhang, Q Xia</td>
<td>Tumor necrosis factor improves myocardial recovery after ischemia/reperfusion in rat</td>
<td>114</td>
</tr>
<tr>
<td>G.M. Hatch and F.Y. Xu</td>
<td>Etomoxir regulation of de novo phospholipid biosynthesis in H9c2 cardiac myoblast cells</td>
<td>114</td>
</tr>
<tr>
<td>Chen Ruizhen, Yang Yingzhen, Go Qi, Wang Xiunuan, Ge Junbo</td>
<td>Detecting various viruses genes in myocardium</td>
<td>114</td>
</tr>
<tr>
<td>Liping Bu, Yingzhen Yang, Junbo Ge, et al.</td>
<td>The effect of interferon on cardiac function and autoimmune antibody in dilated cardiomyopathy</td>
<td>115</td>
</tr>
<tr>
<td>J Kay, OH Kwok, CH Lee, WF Lam, SB Yip, WH Chow</td>
<td>Intra-aortic balloon counterpulsation in high risk percutaneous coronary intervention: a single center experience</td>
<td>115</td>
</tr>
<tr>
<td>J Chau, B Cheung, SM McGhee, IJ Lauder, CP Lau, CR Kumana</td>
<td>Cost-benefit analysis of the care study applied to Hong Kong patients</td>
<td>116</td>
</tr>
<tr>
<td>Wu Suhua, Ma Hong, Wang Yeshong et. al.</td>
<td>Electrophysiological features in AV nodal reentrant tachycardia with continuous AV node function curves</td>
<td>116</td>
</tr>
<tr>
<td>J. Uhanova, L.L. Roos</td>
<td>The impact of socioeconomic status on clinical features and outcomes of acute myocardial infarction</td>
<td>117</td>
</tr>
<tr>
<td>Yanyan Xiao, Ling Han</td>
<td>Clinical analysis of 130 cases of secundum atrial septal defect companioned with pulmonary hypertension</td>
<td>118</td>
</tr>
<tr>
<td>Tang Shunrong, Ye Jing and Wang Lihong</td>
<td>Changes of respiratory function in patient of ventricular septal defect with pulmonary hypertension prior and post bypass</td>
<td>118</td>
</tr>
<tr>
<td>BMY Cheung, HF Tse, CR Kumana, CP Lau</td>
<td>Left ventricular mass is related to blood pressure and body weight</td>
<td>118</td>
</tr>
<tr>
<td>TC Lam, BMY Cheung, SSM Chung*, CP Lau</td>
<td>Age is a strong cardiovascular risk factor in hypertensive patients</td>
<td>118</td>
</tr>
<tr>
<td>GYY Ho, PPY Ng, BMY Cheung, CY Law, SM McGhee, CR Kumana, CP Lau</td>
<td>Effectiveness of low sodium diet in hypertension</td>
<td>119</td>
</tr>
<tr>
<td>M-L Fung, J.-S. Ye. and P.C.W. Fung</td>
<td>Hypoxia-induced nitric oxide generation in the rat carotid body adapted to chronic hypoxia</td>
<td>119</td>
</tr>
<tr>
<td>Authors</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Guo Qi, Peng Tianqing, Liu Gongxin, Yang Yingzhen And Gu Quanbao</td>
<td>Different effects of Nifedipine, Verapamil and Diltiazem on cultured rat heart cells infected with coxsackievirus B3</td>
<td>119</td>
</tr>
<tr>
<td>Yuhong Niu, Yingzhen Yang, Junbo Ge, et al</td>
<td>Detection of enterovirus capsid protein VP1 in myocardium tissue of mice infected with coxsackievirus B3</td>
<td>119</td>
</tr>
<tr>
<td>Jian-Hua Zhu, Li Zhang, Jun-Zhu Chen</td>
<td>Homocysteine induces interleukin-6 expression in rat vascular smooth muscle cells via activation of nuclear factor-κB</td>
<td>120</td>
</tr>
<tr>
<td>Tan JN, Han L, Long C</td>
<td>Protective effects of estradiol on immature myocardium</td>
<td>120</td>
</tr>
<tr>
<td>HY Chan, XQ Yao, SY Tsang, GW He, BP Bourreau*, FL Chan, Y Huang</td>
<td>Synergistic interaction between β-agonists and 17β-estradiol in blood vessels</td>
<td>120</td>
</tr>
<tr>
<td>CH Tsang, ZY Zhen, XQ Yao, WKK Ho, Q Chang, Y Huang</td>
<td>Involvement of endothelial nitric oxide in aortic relaxation induced by an extract from hawthorn drink</td>
<td>120</td>
</tr>
<tr>
<td>KKW Au-Yeung¹, K O¹, DY Zhu², YL Siow</td>
<td>Cardioprotective effect of Magnesium Tanshinoate B: selective inhibition on stress-activated protein kinase isoforms</td>
<td>121</td>
</tr>
<tr>
<td>Xiaogang Guo, Junzhu Chen, Jianhua Zhu, Shenjiang Hu, Qianmin Tao, Liangrong Zheng, Furong Zhang</td>
<td>Effect of hydrogen peroxide on proliferation of VSMC and mRNA of MMP-2, TIMP-2 in VSMC</td>
<td>121</td>
</tr>
<tr>
<td>G.T.Y. Cheung and Karmin O</td>
<td>Effect of homocysteine on monocyte chemoattractant protein-1 (MCP-1) expression in rat mesangial cells</td>
<td>122</td>
</tr>
<tr>
<td>F.L. Sung and Karmin O</td>
<td>Expression of monocyte chemoattractant protein-1 in ischemic/reperfused rat kidney</td>
<td>122</td>
</tr>
<tr>
<td>Y Gong, H Ji, J Jiang, Z Xu, E Kroeger, GY, Minuk, P Choy</td>
<td>Elevated level of low density lipoprotein and reduced level of high density lipoprotein in bile duct ligated rats</td>
<td>122</td>
</tr>
<tr>
<td>F Gao, SY Zhou, Q Xia</td>
<td>Mechanism of cardiovascular response caused by intracerebroventricular administration of interleukin-2</td>
<td>122</td>
</tr>
<tr>
<td>YY Chen, Q Xia, ZM Qian, CM Cao, YL Shen, YZ Chang, Y Ke</td>
<td>Effect of high iron on expression of divalent metal transporter 1 and cardiac function in rat heart</td>
<td>123</td>
</tr>
<tr>
<td>X Zhang, LL Wang, CM Cao, Y Lu, Q Xia</td>
<td>Depression of meperidine on heart and aorta of rat and the underlying mechanism</td>
<td>123</td>
</tr>
<tr>
<td>CM Cao, Q Xia, S Ye, H Yu, QS Xu, ZG Ye, Y Lu</td>
<td>Interleukin-2 induced endothelium-dependent relaxation of rat thoracic aorta</td>
<td>124</td>
</tr>
<tr>
<td>Y Lu, Q Xia, MH Zhao, CM Cao, JZ Shen</td>
<td>Epidermal growth factor receptor mediated hydrogen peroxide-induced contraction of rat aorta</td>
<td>124</td>
</tr>
<tr>
<td>HD Jiang, Q Xia, WH Xu, CM Cao, J Yang</td>
<td>Cardiac effect of EtOAc extract from <em>dendranthema morfolium</em> (ramat.) tzvel</td>
<td>124</td>
</tr>
<tr>
<td>Authors</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>CM Cao, Q Xia, ZG Ye, YY Chen, YL Shen</td>
<td>Interleukin-2 aggravated the changes in contraction and intracellular calcium induced by anoxia and reoxygenation in rat ventricular myocytes</td>
<td>125</td>
</tr>
<tr>
<td>YQ Yu, Q Xia, RB Zhang</td>
<td>The role of amygdala in the inhibitory effect of somatic afferent inputs on the central pressor response and ITS mechanism</td>
<td>125</td>
</tr>
<tr>
<td>J. Gartshore, F.Y. Xu, J. Jiang, A. Halayko and G.M. Hatch</td>
<td>Regulation of cardiolipin metabolism by PPARα in H9c2 cells</td>
<td>126</td>
</tr>
<tr>
<td>W. Keung and R.Y.K. Man</td>
<td>17β-estradiol is a cyclic AMP elevating agent in porcine coronary arteries</td>
<td>126</td>
</tr>
<tr>
<td>CM Wong, XQ Yao, SY Tsang, Y Huang</td>
<td>Differential effects of 17β-estradiol and progesterone on K&lt;sub&gt;Ca&lt;/sub&gt; and K&lt;sub&gt;V&lt;/sub&gt; channels expressed in <em>xenopus</em> oocytes</td>
<td>126</td>
</tr>
<tr>
<td>J. Ye, G. Dai, J. Sun, R. Summers, L.Yang and R. Deslauriers</td>
<td>Magnetic Resonance imaging and spectroscopy in the development of better techniques for brain protection during cardiac surgery</td>
<td>127</td>
</tr>
<tr>
<td>JW Tam, D Freed, M Moon, G Harding, E Pascoe</td>
<td>Are small prosthetic aortic valves still acceptable today?</td>
<td>127</td>
</tr>
<tr>
<td>Cannus Yu, Hung-Fat Tse, Chu-Pak Lau</td>
<td>Long term outcome of VDD pacing for complete heart block: five year follow-up</td>
<td>127</td>
</tr>
<tr>
<td>Hung-Fat Tse, Cannus Yu, Vella Tsang, Chu-Pak Lau</td>
<td>Effect of left ventricular function on long-term left ventricular pacing and sensing threshold</td>
<td>128</td>
</tr>
<tr>
<td>Cannus Yu, Hung-Fat Tse, Vella Tsang, Chu-Pak Lau</td>
<td>Effect of Ventricular Pacing on QT Dispersion in Patients Implanted with Dual Chamber Pacemaker</td>
<td>128</td>
</tr>
</tbody>
</table>
Publications of ICSM Members in 2001


Cheung BMY. C-reactive protein as a risk factor for stable CAD (commentary). *Cardiovascular Risk Factor Digest* 2001; 4 (4): 3.


Fung WH, Sanderson JE. Clinical profile of arrhythmogenic right ventricular cardiomyopathy in Chinese patients. *Int J Cardiol* 2001; 81(1):9-18; discussion, 18-20


Huang XR, Hui CWC, Chen YX, Wong BCY, Fung PCW, Metz C, Cho CH, Hui, WM, Bucala R, Lam SK, Lan HY. Macrophage migration inhibitory factor is an important mediator in the pathogenesis of gastric inflammation. *Gastroenterology* 2001; 121, 619-630.


Kwan CY. Medically related cultural issues can be learned outside the classroom. *Acad Med*. 2001; 76(1):1-3.


Lai WK, Chow L, Tse KF, Lam CS, Wan SH. Experience with 6F guiding catheter for PTCA and stenting. *Journal of Hong Kong College of Cardiology*, 2001; 2: 113


Lam TH, Liu LJ, Janus ED, Lam KSL, Hedley AJ. Fibrinogen, other cardiovascular risk factors and diabetes mellitus in Hong Kong: a community with high prevalence of Type 2 diabetes mellitus and impaired glucose tolerance, *Diabetic Medicine*, 2001; 17: 798-806.


Lee KL, Lau CP. Inappropriate defibrillator therapies: are dual chamber devices providing a remedy? (Editorial) *Journal of Cardiovascular Electrophysiology* 2001; 12,143-144.


Lee NL, Yuen KY, Kumana CR. ß-Lactam Antibiotic and ß-Lactamase Inhibitor Combinations *JAMA* 2001; 285:386-88 (Contempo Updates)


Lo SM, Mo, FM, Ballard HJ. Interstitial adenosine concentration in rat red or white skeletal muscle during systemic hypoxia or contractions. *Experimental Physiology* 2001; 86, 593-598.


Tomlinson B, Lan IW, Hamilton-Craig I. Screening for familial hypercholesterolaemia. Funding is difficult to obtain but screening can be international. *BMJ.* 2001; 322(7293):1061-2.


Tse HF, Cheung BMY, Chan JKF, Lau CP. Long term reliability of serial echocardiographic measurement in detecting regression of left ventricular hypertrophy: comparison with magnetic resonance imaging. *The Hong Kong Practitioner* 2001; 23 (2): 3.


Wan SH, Chow L, Tse KF. Adenosine induced non-pause dependent ventricular tachycardia in structurally normal heart. *Europace,* 2001 2; B: B177

Wan SH. CME-online, where can you get CME on the Internet? *Synapse,* 2001; 4: 11


Yao X, Kwan H, Huang Y. Stretch-sensitive switching among different channel sublevels of an endothelial cation channel. *Biochim Biophys Acta* 2001; ;1511(2):381-90


Financial Report

Grants and donations to the Institute in 2001

The Institute attracted donations from the Croucher Foundation, and from a number of outside companies, which were used to fund the Institute’s programme of scientific meetings and lectures in 2001. Donations from members of the public, towards the ICSM’s research programme, were received after October 2001, and will therefore appear on the next financial statement.

Expenditure by the Institute in 2001

79% of our expenditure in 2001 was on the Fifth Annual Scientific Meeting (although this was fully funded from donations and registration fees). The majority of our remaining expenditure was devoted to research and research-related expenses, and only 1.6% of our expenditure was required for administrative costs. The research grant of $120,000 to the ICSM Research Assistant Professor, Dr. G.R. Li, was awarded from a separate account, which is held by the University of Hong Kong, and does not appear on this statement. Thus, the sum recorded here under “research grants” represents expenditure from research grants awarded to ICSM members in the year 2000, but not fully expended until 2001.

Grants awarded by the Institute in 2001

$120,000 to Dr. G.R. Li for research lab “start-up” funds.

Scientific Meetings of the Institute

All of the Institute’s scientific meetings in 2001 were fully self-funding. The expenses were met by the registration fees paid by the participants in the meetings and by donations to the Institute from companies and foundations wishing to support cardiovascular research and medicine in Hong Kong.