

A Proposal for an International Symposium on Vascular Biology

- Name of Meeting:** **Vascular Biology 2011**
- Organizers:** Vascular Biology Research Group, CMU
Center for Faculty Development, CMU
Center for International Affairs, CMU
Taiwan Department of Health Clinical Trial and Research Center
of Excellence on Stroke and Neurological Diseases
Taiwan Department of Health, China Medical University Hospital,
Cancer Research Center of Excellence
- Venue:** Li-fu teaching building, room 105, China Medical University,
Taichung
- Date:** January 15, 2011
- Speakers and hosts:** See list in page 3.

Premise and Purpose:

Why vascular biology?

Considerable global attention has been made to study in a systematic way the structure and functional correlates of blood vessel with a long-range objective to better understand the control mechanisms of vascular tissue which are relevant to the effective management and treatment of cardiovascular diseases in our economically affluent society, including the current Taiwan society. Rapid development in basic science research in vascular biology (including studies on vascular smooth muscle cells, endothelial cells, vascular innervation, and more recently on perivascular fibroblasts and adipocytes) has led to rational and effective treatment of cardiovascular diseases, such as **hypertension, diabetes mellitus, stroke and atherosclerosis**. Typically, the better understanding of the role of calcium ions on vascular smooth muscle and cardiac muscle function in the 1970s has led to the development of **calcium antagonists** as antihypertensive and anti-arrhythmic drugs. Vascular endothelium has been regarded for decades as an inert organ separating vascular smooth muscles from the blood milieu. However, the discovery of endothelium as an active paracrine organ in the fine regulation of nitric oxide (NO)-mediated vasodilatation in

1980s resulted in NO being the molecular of the year in 1996 and **Nobel Prize** was awarded to three vascular biologists to honor the discover of NO. Excessive generation of NO through cytokine-induced activation of its inducible enzyme, nitric oxide synthase, has also been linked to endotoxic shock. In recent years, other seemingly inert vascular cellular constituents, such as fibroblasts and adipocytes are also gaining special attention as a novel trend of vascular research. In fact, these cells are also implicated in the oxidative stress (tissue damage as a result of excessive formation of reactive oxygen species (ROS), such as superoxide anion as the primary ROS, which may also contribute to the etiology of hypertension.

Why in Taiwan?

Death from all these cardiovascular diseases have been the number one cause of death at the global level and it has recently even superseded the mortality and morbidity of cancer in Taiwan. The aging society, generally poor dietary control of public, dormant life style lacking exercise and work-related stress have collectively contributed to those cardiovascular diseases in Taiwan, like in many other developed countries. For example, metabolic syndrome and obesity are convincingly linked to vascular complications and become an increasingly active area of vascular research in Japan and North America, this aspect of research is currently rather merger in Taiwan. Therefore, organizing an international symposium would be timely and important to stimulate more attention in vascular research in Taiwan. In fact, the chief coordinator of this Vascular Biology 2007 symposium, Prof. David CY Kwan, has been a member of the Canadian Hypertension Society and was a national recipient of the Society's prestigious Young Investigator Award in 1987. He helped established the Institute of Cardiovascular Sciences and Medicine in 1996 when he was the Chair Professor of Physiology at the University of Hong Kong. He is also a member of the Asia Group of Vascular Biology as well as the International Society of Vascular Biology. This nature of scientific society on basic vascular biology is non-existent in Taiwan and needs to be cultivated. Therefore, this meeting is held in Taiwan to put vascular biologists in Taiwan together to promote better exchange of ideas and interact with those from Canada, Hong Kong, USA and Japan.

Anticipated outcome

It is anticipated that this symposium will broaden the perspectives in the topical areas of vascular biology, to stimulate better cooperation in vascular research within Taiwan and promote better interaction with vascular scientists at the global level. We also anticipate that this symposium would result in future exchange of graduate research students and faculties between vascular research centers in Taiwan and other countries. The above anticipated outcome is highly feasible, because all but one of the foreign speakers is of

Chinese ethnic origin, thus making future exchange interaction relatively easier and convenient. All foreign speakers are of high caliber in their own field of interest in vascular biology representing countries of active vascular biology research.

Anticipated participants

All basic research scientists, clinical scientists and research graduate students (in both M.Sc. and Ph.D. Programs) in the field of vascular biology in various disciplines of biomedicine (physiology, pharmacology, immunology, molecular biology, cardiology, neuroscience and endocrinology) in government research institutes, universities, hospitals and research centers.

Scientific Program (2011)

| Time | Event/title | Speaker | Moderator |
|----------------------|---|---|-----------------------|
| 08:30 – 09:00 | Registration | | |
| 09:00 - 09:05 | Welcoming speech | Prof. CY Kwan (關超然) | |
| 09:05 - 09:15 | Opening speech | Prof. JT Huang (黃榮村) Prof. YT. Lee (李源德) | Prof. CY Kwan (關超然) |
| 09:15 – 09:45 | Sympathetic control of the cerebral circulation | Prof. JF Lee (李哲夫) (TCU, Hualien) | Prof. CY Kwan (關超然) |
| 09:45 - 10:15 | Prostaglandins and the trafficking of leukocytes through the vascular endothelium | Prof. Akos Heinemann (Graz, Austria) | Dr. YM Leung (梁育民) |
| 10:15 - 10:45 | Coffee break | | |
| 10:45 - 11:15 | The molecular mechanism of the anti-oxidative effect of propofol in cardiovascular system | Dr. KL Wong (黃家樂) (CMUH, Taichung) | Dr. SC Wu (吳世銓) |
| 11:15 – 11:45 | Chloride channels in the regulation of vascular function | Prof. DY Duan (段大躍) (Nevada, USA) | Prof. CY Kwan (關超然) |
| 11:45 - 12:15 | Study on endothelial function in cardiac surgery. | Prof. GW He (何國偉) (Tianjin, China) | Prof. CY Kwan (關超然) |
| Lunch | Lunch boxes | | |
| 13:30 - 14:00 | Tanshinone IIA prevents doxorubicin-induced cardiomyocyte apoptosis through Akt-dependent pathway | Prof. TH Cheng(鄭志鴻) (CMU, Taichung) | Prof. JJ Chen (陳錦澤) |
| 14:00 - 14:30 | The role of imidazoline receptor and the regulation of vascular tone. | Prof. JT Cheng(鄭瑞棠) (CJCU, Tainan) | Prof. CH Wu (吳介信) |
| 14:30 - 15:00 | Methyl palmitate, a potent vasodilator, is released in the rat retina | Dr. YC Lee (李原傑) (TCH, Hualien) | Prof. JF Lee (李哲夫) |
| 15:00 - 15:30 | Coffee break | | |
| 15:30 - 16:00 | Adipocyte-derived factor(s) acting on blood vessels: challenging a grey area | Dr. Peter NH To (涂念騫) (CMU, Taichung) | Prof. Paul Chan (陳保羅) |
| 16:00 - 16:30 | Akt Mediates 17 β -Estradiol and/or Estrogen Receptor α Inhibition of LPS-Induced Tumor Necrosis Factor- α Expression and Myocardial Cell Apoptosis through Suppression of JNK1/2-NF κ B Pathway | Prof. CY Huang (黃志揚) (CMU, Taichung) | Prof. WC Shen (沈茂忠) |
| 16:30 - 17:00 | Closing remark | Prof. CY Kwan | |

List of speakers (2011)

| Name | Country | Institute | Lecture title |
|--|----------------|--|---|
| Prof. Akos Heinemann | Austria | Institute of Experimental and Clinical Pharmacology, Medical University of Graz | Prostaglandins and the trafficking of leukocytes through the vascular endothelium |
| Prof. DY Duan 段大躍 Da-yue Duan | USA | Department of Pharmacology, School of Medicine, University of Nevada, Reno | Chloride channels in the regulation of vascular function |
| Prof. GW He 何國偉 Guo-wei He | China | TEDA Intn'l Cardiovascular Hospital., Nankai University(南開大学), Tianjin, China | Study on endothelial function in cardiac surgery. |
| | Taiwan | | |
| Prof. JF Lee 李哲夫 Jer-Fu Lee | Hualien | College of Life Science, Tzu Chi University | Sympathetic control of the cerebral circulation |
| Dr. KL Wong (Associate Professor) 黃家樂 Kar-Lok Wong | Taichung | Department of Anesthesia, Pain Service and Critical Care Medicine, China Medical University Hospital | The molecular mechanism of the anti-oxidative effect of propofol in cardiovascular system |
| Prof. TH Cheng 鄭志鴻 Tzu-Hung Cheng | Taichung | Department of Biological Science and Technology, College of Life Sciences, China Medical University | Tanshinone IIA prevents doxorubicin-induced cardiomyocyte apoptosis through Akt-dependent pathway |
| Prof. JT Cheng 鄭瑞棠 Juei-Tang Cheng | Tainan | Institute of Medical Research, Chang Jung Christian University | The role of imidazoline receptor and the regulation of vascular tone. |
| Dr. YC Lee (Assistant Professor) 李原傑 Yuan-Chieh Lee | Hualien | School of Medicine, Tzu Chi University | Methyl palmitate, a potent vasodilator, is released in the rat retina |
| Dr. NH To 涂念騫 Nam-Hin To | Taichung | China Medical University | Adipocyte-derived factor(s) acting on blood vessels: challenging a grey area |
| Prof. CY Huang 黃志揚 Chih-Yang Huang | Taichung | Graduate Institute of Basic Medical Science, China Medical University | Akt Mediates 17β-Estradiol and/or Estrogen Receptor α Inhibition of LPS-Induced Tumor Necrosis Factor-α Expression and Myocardial Cell Apoptosis through Suppression of JNK1/2-NFκB Pathway |

Scientific Program (2010)

| Time | Event/title | Speaker | Moderator |
|----------------------|---|---------------------------------------|-----------------------------|
| 08:30 – 09:00 | Registration | | |
| 09:00 - 09:05 | Welcoming speech | Dr. CY Kwan (關超然 教授) | |
| 09:05 - 09:15 | Opening speech | Vic-President Y.H. Lee | Dr. C.Y. Kwan |
| 09:15 – 09:45 | Importance of adipose-vascular axis in vascular medicine. | Dr. Y. Huang (Hong Kong) | Dr. C.Y. Kwan |
| 09:45 - 10:10 | Oxygen-sensing in tension response of the pig coronary artert. | Dr. Y. Ishida (Japan) | Dr. Y Sakai |
| 10:10 - 10:40 | Coffee break | | |
| 10:40 - 11:05 | Pharmacological characterization of the mechanisms of the antioxidant effects of boldine in hypertensive rats. | Dr. M. R. Mustafa (Malaysia) | Dr. W Hintz |
| 11:05 – 11:30 | Will hydrogen sulfide be a potent antihypertensive drug? | Dr. J. S. Bian (Singapore) | Dr. Paul Chan |
| 11:30 - 12:00 | Dual vascular effects of the crude aqueous extract of luobuma, an antihypertensive herb of Xinjiang origin. | Mr. T.C. Ku Ms. Y.S. Lau | Dr. W.T. Hsieh (謝文聰 副教授) |
| Lunch | | Lunch boxes | |
| 13:00 - 13:25 | Variation in Contractile Responses of Vascular Smooth Muscle isolated from Ovariectomized Rats. | Dr. Y Sakai (Japan) | Dr. J.G. Chung (鍾景光 教授) |
| 13:25 - 13:50 | Regional difference in the vascular effects of perivascular adipose tissues. | Dr. F.I., Achike (Malaysia) | Dr. W Hintz |
| 13:50 - 14:15 | C-reactive protein enhances the expression of mineralocorticoid receptor and transforming growth factor-beta1 in HL1 atrial cardiomytes and atrial fibroblasts. | Dr. K.C. Ueng (翁國昌 醫師) (Taiwan) | Dr. M.C. Lee (李孟智 教授) |
| 14:15 - 14:30 | Coffee break | | |
| 14:30 - 14:55 | Platelets in thrombosis, inflammation, and angiogenesis: Lessens from gene deficient mice. | Dr. H.Y Ni (Canada) | Dr. C.Y. Kwan |
| 14:55 - 15:20 | Dysfunction of endothelial cells of microvessels induced by exposure to arsenic. | Dr. Jay S.C. Chen (Taiwan) | Dr. C.Y. Kwan |
| 15:20 - 15:30 | Closing remark | Dr. CY Kwan | |

List of speakers (2010)

| Name | Country | Institute | Lecture title |
|--------------------------------|------------------|---|---|
| <i>Huang Y</i> | <i>Hong Kong</i> | Chinese Univ. of Hong Kong Dept of Physiology | Importance of adipose-vascular axis in vascular medicine. |
| <i>Mustafa R</i> | <i>Malaysia</i> | University of Malaya PROFESSOR & HEAD Dept. of Pharmacology Faculty of Medicine | Pharmacological characterization of the mechanisms of the antioxidant effects of boldine in hypertensive rats. |
| <i>Achike FI</i> | <i>Malaysia</i> | Intl Medical University Dept. Pharmacology | Regional difference in the vascular effects of perivascular adipose tissues. |
| <i>Ishida Y.</i> | <i>Japan</i> | Bunkyo Gakuin University Professor Laboratory of Physiology and Pharmacology Department of Physical Therapy Faculty of Health Science Technology | Oxygen-sensing in tension response of the pig coronary artert. |
| <i>Sakai Y</i> | <i>Japan</i> | Bunkyo Gakuin University Professor Department of Physical Therapy Faculty of Health Science Technology | Oxygen-sensing in tension response of the pig coronary artert. |
| <i>Bian JS</i> | <i>Singapore</i> | Natl Univ. Singapore Dept. Pharmacology Faculty of Medicine | Will hydrogen sulfide be a potent antihypertensive drug? |
| <i>Ni H.Y</i> | <i>Canada</i> | University of Toronto, <i>Canada</i> Department of Laboratory Medicine and Pathobiology | Platelets in thrombosis, inflammation, and angiogenesis: Lessons from gene deficient mice. |
| | | | |
| <i>Ueng K.C.</i> <i>翁國昌</i> | <i>Taichung</i> | Chung-Shan Medical University, Taiwan. Associate professor of Medicine | C-reactive protein enhances the expression of mineralocorticoid receptor and transforming growth factor-beta1 in HL1 atrial cardiomytes and atrial fibroblasts. |
| <i>Chen Jay S.C.</i> | <i>Kaohsiung</i> | Kaohsiung Medical Uni. Graduate Institute of Medicine. | Dysfunction of endothelial cells of microvessels induced by exposure to arsenic. |

Scientific Program (2009)

| Time | Event/title | Speaker | Moderator |
|----------------------|---|------------------|----------------|
| 09:00 - 09:30 | Registration | | |
| 09:30 - 09:40 | Opening speech | Prof. Kwan, CY | |
| 09:40 - 10:20 | Revisit of endothelium-derived contracting factors” | Prof. Huang Y | Prof. Kwan, CY |
| 10:20 – 10:40 | Coffee break | | |
| 10:40 - 11:20 | Reversal of endothelial dysfunction induced by β -NADH following treatment with the methanolic extract of <i>Phoebe grandis</i> in the isolated rat aorta | Prof. Mustafa R | Prof. Kwan, CY |
| 11:20 - 12:00 | The Role of False Lumen Size in Prediction of In-Hospital Complications After Acute Type B Aortic Dissection | Jan-Yow Chen, MD | Prof. Shen,WC |

Lunch (Lunch box)

| | | | |
|----------------------|--|-----------------------|----------------|
| 13:00 - 13:40 | Arrhythmogenesis in the Superior Vena Cava | Kuan-Cheng Chang M.D. | Prof. Shen,WC |
| 13:40 - 14:20 | Oxygen-sensing in tension response of the pig coronary artery | Prof. Ishida Y | Prof. Sakai Y |
| 14:20 - 15:00 | Regulation of Toll-like Receptor | Prof. Chi-Yuan Li | Prof. Shen,WC |
| 15:00 - 15:20 | Coffee break | | |
| 15:20 - 16:00 | Alterations of contractile responses in vascular smooth muscle isolated from ovariectomized rats | Prof. Sakai Y | Dr. Leung, YM |
| 16:00 – 16:40 | Regulation of vascular reactivity by perivascular fat tissues: implication on vascular diseases in obesity | Prof. Kwan, CY | Dr. Leung, YM |
| 16:40 - 17:00 | Closing remark | | Prof. Kwan, CY |

List of speakers (2009)

| Name | Country | Institute | Lecture title |
|----------------------------------|------------------|---|---|
| <i>Huang Y</i> | Hong Kong | Chinese Univ. of Hong Kong Dept of Physiology | Revisit of endothelium-derived contracting factors" |
| <i>Mustafa R</i> | Malaysia | University of Malaya PROFESSOR & HEAD Dept. of Pharmacology Faculty of Medicine | Reversal of endothelial dysfunction induced by β -NADH following treatment with the methanolic extract of <i>Phoebe grandis</i> in the isolated rat aorta |
| <i>Yukisato I</i> | Japan | Bunkyo Gakuin University Professor Laboratory of Physiology and Pharmacology Department of Physical Therapy Faculty of Health Science Technology | Oxygen-sensing in tension response of the pig coronary artery |
| <i>Sakai Y</i> | Japan | Bunkyo Gakuin University Professor Department of Physical Therapy Faculty of Health Science Technology | Alterations of contractile responses in vascular smooth muscle isolated from ovariectomized rats |
| | | | |
| <i>Jan-Yow Chen</i> (陳建佑) | Taichung | Attending Physician, Division of Cardiology, Department of Medicine, China Medical University Hospital | The Role of False Lumen Size in Prediction of In-Hospital Complications After Acute Type B Aortic Dissection |
| <i>Kuan-Cheng Chang</i> (張坤正) | Taichung | Associate Professor, School of Medicine, China Medical University, Chief of Cardiology, China Medical University Hospital | Arrhythmogenesis in the Superior Vena Cava |
| <i>Chi-Yuan Li</i> (李繼源) | Taichung | Graduate Institute of Clinical Medical Science, China Medical University; Department of Anesthesia, Pain Service and Critical Care Medicine, China Medical University Hospital; Taichung, Taiwan. | Regulation of Toll-like Receptor |
| <i>Kwan, CY</i> (關超然) | Taichung | China Medical University Professor & Director Department of Medicine, Faculty of Health Sciences Center for Faculty Department Center for International Affairs | Regulation of vascular reactivity by perivascular fat tissues: implication on vascular diseases in obesity |

Scientific Program (2008)

| Time | Event/title | Speaker | Moderator |
|----------------------|---|---------------------|---|
| 08:30 - 08:50 | Registration | | |
| 08:50 - 09:00 | Opening speech | President Huang, JT | Prof. Kwan, CY |
| 09:00 - 09:15 | An integrated approach to the multiplicity of vascular structure and function in biomedical research and its clinical significance. | Prof. Kwan, CY | To be named |
| 09:15 - 09:45 | Isoprotanes and the lung: markers or mediators of oxidative stress? | Prof. Jassen, L | |
| 09:45 - 10:15 | Vascular signalling mediated by gaseous sulfide | Dr. Bian, JS | |
| 10:15 - 10:45 | Coffee break | | |
| 10:45 - 11:15 | Novel vascular actions of perivascular adipose tissues | Dr. To, NH, Peter | Dr. Jong GP Director, Internal Med 803 Hospital; |
| 11:15 - 11:45 | Role of EGF receptor trans-activation in endothelin-1 expression induced by leptin in rat aortic smooth muscle cells. | Dr., Cheng, TH | |
| 11:45 - 12:15 | Vascular gender difference after caloric restriction | Prof. Lau, YT | |

Lunch Lunch boxes

| | | | |
|----------------------|--|----------------|---|
| 13:15 - 13:45 | Oxidative Stress and Endothelial Dysfunction in Diabetes | Prof. Huang, Y | Dr. Wu HC Chairman, Dept. Med. CMU |
| 13:45 - 14:15 | Characterization of a novel compound <i>OSU-03012</i> affecting signal transduction leading to vascular smooth muscle cell proliferation | Prof. Wu, CH | |
| 14:15 - 14:45 | Pending | Prof. Chan P | |
| 14:45 - 15:15 | Coffee break | | |
| 15:15 - 15:45 | Mechanisms of vascular action of Ang-II in health and diseases | Dr. Achike, FI | To be named |
| 15:45 - 16:15 | Effects of propofol on cyclic strain-induced endothelin-1 expression in human umbilical vein endothelial cells | Dr. Wong KL | |
| 16:15 - 16:45 | New development of vascular signalling: role of fibroblasts | Dt. Wang, HD | |
| 16:45 - 17:15 | Closing remark | | Prof. Kwan, CY |

List of speakers (2008)

| Name | Country | Institute | Lecture title |
|-------------------|------------------|---|---|
| <i>Bian JS</i> | Singapore | Natl Univ. Singapore Dept. Pharmacology Faculty of Medicine | Vascular signalling mediated by gaseous sulfide |
| <i>Wang HD</i> | Canada | Brock University Dept. Community Health Sciences | New development of vascular signalling: role of fibroblasts |
| <i>Achike FI</i> | Malaysia | Intl Medical University Dept. Pharmacology | Mechanisms of vascular action of Ag-II in health and diseases |
| <i>Huang Y</i> | Hong Kong | Chinese U of Hong Kong Assoc. Dean of Research, Faculty of Medicine | Oxidative Stress and Endothelial Dysfunction in Diabetes |
| <i>Janssen, L</i> | Canada | McMaster University Dept. Medicine, Respiratory Unit, Faculty of Health Sciences | Isoprotanes and the lung: markers or mediators of oxidative stress? |
| | | | |
| <i>To, NH</i> | Taichung | Taichung Hospital Attending Cardiologist | Novel vascular actions of perivascular adipose tissues |
| <i>Cheng TH</i> | Taichung | CMU, Biotechnol | Role of EGF receptor trans-activation in endothelin-1 expression induced by leptin in rat aortic smooth muscle cells. |
| <i>Wu CH</i> | Taichung | CMU, Chair, Dept. Pharmacy | Vascular restenosis and drug treatment |
| <i>Wong KL</i> | Taichung | CMU Hospital, Dept. Anesthesia | Effects of propofol on cyclic strain-induced endothelin-1 expression in human umbilical vein endothelial cells |
| <i>Lau YT</i> | Taipei | Chang-Gung University, Assoc. Dean, Medicine | Vascular gender difference after caloric restriction |
| <i>Chan P</i> | Taipei | TMU, WanFang Hosp Chief Cardiologist | Pending |

Scientific Program (2007)

| Time | Event/title | Speaker | Moderator |
|---|---|-------------------------------------|-------------------------|
| 08:30 - 09:00 | Registration | | |
| 09:00 - 09:10 | Opening speech | 張副校長 永賢 | Ms. Hsieh, V |
| 09:10 - 09:15 | Welcoming speech | Prof. Kwan, CY | Ms. Hsieh, V |
| 09:15 - 09:45 | NO as a second messenger in endothelial cells under flow | Dr. Wang, DL (王 寧) | (中國醫藥大學 張副校長 永賢) |
| 09:45 - 10:15 | Alterations of signal transduction in diabetic vascular smooth muscle | Prof. Sakai, Y. (坂井泰) (Japan) | Dr. Leung, YM (梁育民) |
| 10:15 - 10:45 | Coffee break | | |
| 10:45 - 11:15 | The ins and outs of restenosis | Prof. Wu, CH (吳介信) | 高銘欽 教授 |
| 11:15 - 11:45 | Changes of potassium channel in cardiovascular tissues of diabetic animal | Prof. Cheng, JT (鄭瑞棠) | Prof. Lee, YS (李英雄) |
| 11:45 - 12:15 | Ang II induced superoxide mediates ET-1 expression in adventitial fibroblasts. | Dr. Wang, HD (王慧迪) | 林靜茹 助理教授 |
| Lunch announcement (Ms. Hsieh, Vivian) | | | |
| 13:15 - 13:45 | Chinese herbs on smooth muscle cell proliferation: molecular mechanism approach. | Dr. Hong, HJ (洪宏杰) | Dr. Hsieh WC (謝文聰) |
| 13:45 - 14:15 | Heme oxygenase-1 contributes to the cytoprotection of alpha-lipoic acid in vascular smooth muscle cells | Prof. Yen, MH (顏茂雄) | Dr. Wang, Ling (王 寧) |
| 14:15 - 14:45 | Voltage-independent Calcium Entry in Vascular Smooth Muscle | Prof. Huang, Y (黃 聿) (Hong Kong) | Prof. Kwan, CY (關超然) |
| 14:45 - 15:15 | Coffee break | | |
| 15:15 - 15:45 | The role of exercise training in atherosclerosis | Prof. Chang, WC (張文正) | Prof. Wu, CH (吳介信) |
| 15:45 - 16:15 | Neurovascular transmission in cerebral arteries | Prof. Lee, TJF (李哲夫) | 宋鴻樟 院長 |
| 16:15 - 16:45 | Natural derivative iso steviol has potassium channel opening effect on rat aortic smooth muscle cells. | Prof. Chan, P. (陳保羅) | Prof. Cheng, JT |
| 16:45 - 17:15 | GTP cyclohydrolase I and eNOS uncoupling in carotid artery restenosis | Prof. Chen, A (陳豐原) (USA) | Prof. Lee, Tony |
| 17:15 - 17:30 | Closing remark | Prof. Kwan, CY (關超然) | Ms. Hsieh, Vivian |

List of speakers (2007)



International Symposium on Vascular Biology'2007

(Invited Speaker of Symposium)



Dr. Ling Wang
Institute of Biomedical Sciences
Academia Sinica



Prof. Yasushi Sakai
Faculty of Health Science Technology
Bunkyo Gakuin University (Japan)



Prof. Chiu-Yin Kwan
Graduate Institute of
Medical Science (CMU)



Prof. Chieh-Hsi Wu
Department of Biological Science
and Technology (CMU)



Prof. Juei-Tang Cheng
College of Medicine
National Cheng Kung University



Prof. Jer-Fu Lee
College of Life Sciences
Tzu Chi University



Dr. Hui-Di Wang
Faculty of Applied Health Sciences
Brock University (Canada)



Dr. Hong-Jye Hong
School of Chinese Medicine
(CMU)



Prof. Weng-Cheng Chang
School of Sports Medicine
(CMU)



Prof. Mao-Hsiung Yen
Department of Pharmacology
National Defense Medical Center



Prof. Yu Huang
Department of Physiology
Chinese University of Hong Kong

Prof. Paul Chan

Prof. Alex F. Chen
College of Medicine
Michigan State University