中華民國血脂及動脈硬化學會111年度會員大會暨第二十一屆台北國際血管分子生物學研討會

The Annual Scientific Meeting of Taiwan Society of Lipids & Atherosclerosis 2022 and The 21st Taipei International Vascular Biology Sympoisum

2022 跨越性別、運動保健、身心安康

September 17th-18th (SAT-SUN)

Table of Content

Taiwan Society of Lipids and Atherosclerosis

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Welcome Message

Dear Colleagues and Friends,

On behalf of the of Taiwan Society of Lipids & Atherosclerosis, it gives us a great pleasure and honor to invite you to the 2022 Annul meeting of Taiwan Society of Lipids & Atherosclerosis. We are excited about the opportunities of holding an innovative hybrid conference and reach a wider audience that a conference can possibly include. Participants from around the world are expected to actively participate in this event.

The meeting shares an insight into the innovative research in Lipids & Atherosclerosis. Participating at 2022 TSLA Annul meeting allows you to discuss the latest advances in Lipids & Atherosclerosi and receive state-of-the-art clinical and basic science updates. There are 20 sections in this meeting, and you will be able to interact with high-level speakers easily and connect virtually with your peers.

We look forward to an exciting meeting, and we are confident that you will gain new knowledge.

Yours sincerely,

Po-Hsun Huang

Po-Hsun Huang, M.D., Ph.D.

President, Taiwan Society of Lipids & Atherosclerosis

Program Overview

Saturday, September 17th, 2022

	801 講堂	802 講堂
09:00-12:00		
12:00-14:00		
14:00-14:30	**Plenary Session (I)** 14:00-16:10	**姜必寧得獎者演講** 14:00-14:50
14:30-15:00		
15:00-15:30		
15:30-16:00		
16:00-16:30	Coffee Break 16:10-16:20	**Symposium (I)** **科技部演講** 14:50-17:40
16:30-17:00	**Plenary Session (II)** 16:20-17:40	
17:00-17:30		
17:30-18:00	**Dinner Symposium (I)** **(TSH Biopharm)** 17:50-18:30	**Dinner Symposium (II)** **(Novartis)** 17:40-19:20
18:00-18:30		
18:30-19:00		
19:00-19:30		

Sunday, September 18th, 2022

<table>
<tr><th></th><th>801 講堂</th><th>802 講堂</th><th>803 講堂</th></tr>
<tr><td>08:30-09:00</td><td></td><td></td><td rowspan="17">Symposium (IV)
心血管疾病防治繼續教育課程
08:20-16:20</td></tr>
<tr><td>09:00-09:30</td><td rowspan="3">The 22th Taipei International Vascular Biology Symposium
Plenary Session
09:00-10:50</td><td rowspan="2">Symposium (II)
DM Symposium
09:00-10:50</td></tr>
<tr><td>09:30-10:00</td></tr>
<tr><td>10:00-10:30</td></tr>
<tr><td>10:30-11:00</td><td></td><td>Coffee Break</td></tr>
<tr><td>11:00-11:30</td><td>The Assembly Member Meeting of Taiwan Society of Lipids & Atherosclerosis
11:00-11:30</td><td rowspan="3">Symposium (II)
Nutrition and Diet
11:00-12:45</td></tr>
<tr><td>11:30-12:00</td><td>Research Award & Poster Competition
11:30-12:00</td></tr>
<tr><td>12:00-12:30</td><td rowspan="4">Lunch Symposium (I)
12:00-14:10</td></tr>
<tr><td>12:30-13:00</td><td rowspan="2">Lunch Symposium (II)
(Tanabe)
12:45-13:50</td></tr>
<tr><td>13:00-13:30</td></tr>
<tr><td>13:30-14:00</td><td>Coffee Break</td></tr>
<tr><td>14:00-14:30</td><td>Coffee Break</td><td rowspan="3">TALE&TSLA Joint Symposium
14:00-15:40</td></tr>
<tr><td>14:30-15:00</td><td rowspan="3">KSoLA&TSLA Joint Symposium
14:30-15:40</td></tr>
<tr><td>15:00-15:30</td></tr>
<tr><td>15:30-16:00</td><td rowspan="2"></td><td rowspan="2"></td></tr>
<tr><td>16:00-16:30</td></tr>
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September 17th (Saturday) Room 801

Plenary Session (I) 14:00-16:10

女性相關的心臟病/運動與心血管事件的正向與反面
Non-Pharmacological Interventions to Reduce the Risk for Cardiovascular Disease

Time	S_No.	Topic & Speaker	Moderator
14:00-14:05		Opening Remarks (Pre-vote)	黃柏勳 理事長
Are There Gender Differences in the LDL-C Targets for the Prevention of Cardiovascular Disease? **預防心血管疾病的 LDL-C 目標是否存在性別差異?**			
14:05-14:23	P1-1	Pros 賀立婷 醫師	
14:23-14:41	P1-2	Cons 曹承榮 副院長	吳彥雯 理事
14:41-14:46		Discussion (Post-vote)	
Is Intermittent Fasting Good for the Prevention of Cardiovascular Disease? **間歇性禁食對預防心血管疾病有好處嗎?**			
14:46-15:04	P1-3	Pros 張瑋婷 醫師	
15:04-15:22	P1-4	Cons 柯宗佑 醫師	陳柏升 理事
15:22-15:27		Discussion (Post-vote)	
Is Long-Distance Running Good for the Prevention of Cardiovascular Disease? **長跑對預防心血管疾病有好處嗎?**			
15:27-15:45	P1-5	Pros 葉志凡 副秘書長	
15:45-16:03	P1-6	Cons 王朝永 副秘書長	黃金洲 副秘書長
16:03-16:10		Discussion (Post-vote)	

賀立婷 醫師

Education and Training

- National Cheng Kung University Medical College
- 2007-2010 National Taiwan University Hospital, Department of Internal Medicine, Resident
- 2010-2012 National Taiwan University Hospital, Cardiovascular Division, Fellowship
- 2012- National Taiwan University Hospital, Cardiovascular Center, Department of Internal Medicine, Attending physician
- 2015- Institute of Epidemiology and Preventive Medicine, National Taiwan University

Licensing

- 2007 Board of physician
- 2010 Board of internal medicine
- 2012 Board of cardiology
- 2013 Board of critical care medicine
- 2015 Board of cardiac electrophysiology and interventions

Clinical Specialty

General cardiology, cardiac arrhythmia, cardiac critical care medicine, device implantation, simple and complex arrhythmia ablation.

PL1-1

ARE THERE GENDER DIFFERENCES IN THE LDL-C TARGETS FOR THE PREVENTION OF CARDIOVASCULAR DISEASE? - PROS

賀立婷

生理男性與生理女性在血脂肪代謝本質上不一樣，而相同血脂肪濃度所帶來之心血管風險在男女亦是不同。男女在血脂肪控制上的順應性和完成度也不同。因此我方主張，預防心血管疾病的 LDL-C 目標是存在性別差異的。

曹承榮 副院長

CURRENT PROFESSIONAL EXPERIENCE

2021- 副院長 衛福部豐原醫院
2022- 委員 教育委員會，台灣心肌梗塞學會
2019- 委員 財務/學術委員會，台灣臺灣介入性心臟血管醫學會
2009- 臨床助理教授 國防醫學大學，醫學院
2007- 部定講師 陽明大學，醫學院，內科學系

EDUCATION BACKGROUND

June, 1995 高雄醫學大學醫學系畢業（M.D.）
June, 2017 東海大學高階醫務管理碩士在職專班（EMHA）

BOARD CERTIFICATION

November, 2000 中華民國內科醫學會內科專科醫師及專科指導醫師 (#5791)
November, 2004 台灣心臟學會心臟內科專科醫師 (#S1081)
November, 2007 中華民國心臟學會介入性專科醫師(DC0075)

PAST PROFESSIONAL EXPERIENCE

2016-21 醫務秘書 衛福部豐原醫院
2014-16 副秘書長 中華民國心臟學會
委員 中華民國心臟學會學術委員會，肺動脈高壓小組
2012-21 主任 衛福部豐原醫院 心臟科，研究部
2012-14 副秘書長 中華民國心臟學會
2012-14 委員 政策委員會，台灣臺灣介入性心臟血管醫學會
學術委員會，中華民國心臟學會
2007-08 幹事 台灣臺灣介入性心臟血管醫學會
2007-11 中區總幹事 台灣臺灣介入性心臟血管醫學會
2009-11 主任 台中榮民總醫院心臟科病房
2005-09 臨床講師 國防醫學大學，醫學院

PL1-2

ARE THERE GENDER DIFFERENCES IN THE LDL-C TARGETS FOR THE PREVENTION OF CARDIOVASCULAR DISEASE? - CONS

曹承榮

Although women are at lower risk of occurrence of but at higher risk of complications from cardiovascular disease, they have traditionally been underrepresented in clinical trials of statin therapy. In addition, some trials of statins have shown less compelling benefits in women compared with men; however, an updated pooled analysis of trials focusing on outcomes in women suggests that the clinical benefits of statin treatment are comparable between men and women.

In view of the conflicting data regarding the clinical benefit of LDL-cholesterol lowering in women, I will examine the efficacy and safety of lipid-lowering agents in large-RCTs that had robust effects on LDL-cholesterol lowering and robust representation from this patient subgroups.

張瑋婷 醫師

Education and Experience

- **2000/9 – 2007/6** **Department of Medicine, National Cheng Kung University, Tainan, Taiwan**
  - *Doctor of Medicine, 2007*
- **2013/9 –2014/8** **Brigham and Women's Hospital, Harvard University, MA, USA**
  - *Research Fellow, Cardiac Muscle Research Laboratory*
- **2019/8 –** **Graduate Institute of Clinical Medicine, National Cheng Kung University, Taiwan**
  - *PhD candidate*

Professional Experience

- **2014/8-** **Chi-Mei Medical Center, Tainan, Taiwan**
  - *Attending physician*, Department of Cardiology
- **2020/08-** **Southern Taiwan University of Science and Technology**
  - *Associate Professor,* Department of Biotechnology

Awards and Honors

- **2017-2019** **The best annual research award in Chi-Mei Medical Center**
- **2018** **TA-YOU WU MEMORIAL AWARD (吳大猷先生紀念獎)**
- **2017** **Young investigator award in Taiwan Society of Cardiology**

PL1-3

IS INTERMITTENT FASTING GOOD FOR THE PREVENTION OF CARDIOVASCULAR DISEASE? - PROS

張瑋婷

To be presented

柯宗佑 醫師

Present position

Attending physician, Division of Cardiology,
Department of Internal Medicine, National Taiwan University Hospital,
Taipei, Taiwan

Education and training

2003.Sep. to 2010.June	National Taiwan University, College of medicine
2009.May to 2010.June	Internship, National Taiwan University Hospital
2011.July to 2014.June	Residency, Department of Internal Medicine National Taiwan University Hospital
2011.July to 2014.June	Cardiology Fellowship, Department of Internal Medicine, National Taiwan University Hospital
2017.Aug.~	National Taiwan University, College of Medicine Graduate Institute of Clinical Medicine

Experience:

2011.July to 2014.June	Resident, Department of Internal Medicine National Taiwan University Hospital,
2011.July to 2014.June	Cardiology Fellow, Department of Internal Medicine, National Taiwan University Hospital
2017.Nov. to 2018.Dec	Attending physician, Division of Cardiology, Department of Internal Medicine, National Taiwan University Hospital, Hsinchu Branch, Hsinchu, Taiwan.
2020.Jan to 2021.Jan	Attending physician, Division of Cardiology, Department of Internal Medicine, National Taiwan University Hospital- HsinChu Biomedical Park branch, HsinChu, Taiwan.
2021.Jan to present	Attending physician, Division of Cardiology, Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan

Major fields of interest:

Coronary Intervention, chronic total occlusion, complex PCI
Structural Heart Disease, transcatheter aortic valve implantation

PL1-4

IS INTERMITTENT FASTING GOOD FOR THE PREVENTION OF CARDIOVASCULAR DISEASE? - CONS

柯宗佑

To be presented

葉志凡 副秘書長

Current position

- Attending physician, Division of Cardiology and Cardiovascular Center, Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan
- Clinical lecturer, College of Medicine, National Taiwan University

Education

- 2000/7-2007/6 MD, Fu-Jen Catholic University, New Taipei City
- 2015/9-2022/1 PhD, Department and Graduate institute of Pharmacology, College of Medicine, National Taiwan University, Taipei

Career/Academic Appointments

- 2005/7-2005/8 Exchange student, University of Houston, Texas
- 2006/6-2007/6 Intern, National Taiwan University Hospital, Taipei
- 2008/7-2013/6 Resident, Department of Internal Medicine, National Taiwan University Hospital, Taipei
- 2011/7-2013/6 Clinical fellow, Division of Cardiology, Department of Internal Medicine, National Taiwan University Hospital, Taipei
- 2021/1-2022/2 Attending physician, Division of Cardiology, Department of Internal Medicine, National Taiwan University Biomedical Park Hospital Chu-Tung Campus
- 2018/11-2020/11 Visiting scholar, The University of Chicago
- 2013/7-Present Attending physician, Division of Cardiology, Department of Internal Medicine, National Taiwan University Hospital, Taipei
- 2015/9-Present Clinical lecturer, College of Medicine, National Taiwan University

Administrative Positions

- 2021/10-Present Deputy Secretary General, Taiwan Society of Lipids & Atherosclerosis
- 2022/4-Present Member of International and Cross Strait Committee, Taiwan Society of Cardiovascular Interventions

PL1-5

IS LONG-DISTANCE RUNNING GOOD FOR THE PREVENTION OF CARDIOVASCULAR DISEASE? - PROS

葉志凡

It is well established that physical activity has substantial health benefits. As result, multiple guidelines have recommended the frequency and duration of physical exercise to reduce cardiovascular events. Recently, long-distance running has become more popular despite some concerns about its possible harmful effects on cardiovascular system. There are still controversial opinions and findings regarding the net effects of long distance running on cardiovascular (CV) system. Here I am going to discuss the benefits and harms of long-distance running on CV system in the perspectives of hemodynamics, cardiac rhythms and arterial health. I will further discuss what is the optimal running strategy to benefit the CV system.

王朝永 副秘書長

單位

林口長庚紀念醫院 / 長庚大學

職稱

心臟內科主治醫師 / 醫學院 助理教授 / 醫師研究員

學歷

長庚大學醫學系

林口長庚紀念醫院 實習醫師

工作經歷

- 1999/07–2002/06 林口長庚紀念醫院 內科部住院醫師
- 2002/07–2004/06 林口長庚紀念醫院 心臟內科臨床研究員
- 2005/03–2008/02 Vascular Medicine Laboratory, Brigham and Women’ s Hospital,
- 2004/07–2009/07 林口長庚紀念醫院 心臟內科主治醫師
- 2009/07～迄今 林口長庚紀念醫院 心臟內科助理教授
- 2014/02～迄今 長庚大學醫學院 助理教授

PL1-6

IS LONG-DISTANCE RUNNING GOOD FOR THE PREVENTION OF CARDIOVASCULAR DISEASE? - CONS

王朝永

”我們贏了！”菲利普德斯(Philippides)在西元前 500 年從馬拉松跑了 40 公里到雅典宣布希臘軍隊戰勝波斯人後去世，這是體育運動中第一次有紀錄的心源性猝死。美國內戰的第二年，1862 年，當時達科斯塔(Jacob Mendes Da Costa)醫師首次描述“士兵心碎症候群”，因為長期軍事行動的過度體力消耗引起呼吸困難、心悸、心動過速和頭暈的心臟病。從此多年來對心臟是否會因為過度運動或訓練的爭論就一直得不到解答。

1892 年奧斯陸醫師（Sir William Osler）記錄了運動會造成心臟肥大及肥厚，1896 年現代奧運開始之後，美國醫學雜誌 JAMA 以及刺絡針 Lancet 就發表了許多重要的文章討論長期的運動訓練以及競技的運動訓練對心臟及人體的危險。運動對心臟的好壞爭論一直延續到了近代，兩大派的醫師們有主張運動的對心臟的危險的，也有主張不運動的危險的，有部分的醫師也認為，因為不運動對身體有很多壞處，所以運動可能是有益處的。

1979 年美國總統卡特在十公里慢跑中突然倒下，之後對運動造成的心臟猝死及有關的研究更開始非常的熱門，對於運動當下對心臟的危險及運動後的長期心臟變化有了更多的討論。

現代因為有了心臟超音波、心電圖、基因檢測、心導管以及對各種心臟病生理的了解，在運動當下及運動後，以及短期和長期對心血管的影響，以及年齡及性別的差異都有長足的了解。

September 17th (Saturday) *Room 801*

Plenary Session (II) *16:20-17:40*

Plenary Session (II)			
Time	**S_No.**	**Topic & Speaker**	**Moderator**
16:20-16:50	P2-1	Optimal Strategy for Dyslipdemia Patients with Multiple CVD Risk Factors 王俊力 醫師	謝宜璋 常務理事
16:50-17:00		Discussion	
17:00-17:30	P2-2	Precision Medicine: A Better Treatment for Dyslipidemia Patients 劉秉彥 秘書長	侯嘉殷 理事
17:30-17:40		Panel Discussion & Closing Remarks	

王俊力 醫師

現職

- 林口長庚心臟內科系非侵襲性心血管中心主任
- 心臟內科教授級主治醫師
- 長庚大學醫學系教授

學歷

台北醫學大學醫學系

經歷

- 美國明尼蘇達州梅約醫院（MAYO Clinic）研究員
- 日本神戶市立中央市民病院進修
- 林口長庚心臟內一科主治醫師
- 林口長庚心臟內一科住院醫師
- 林口長庚內科部住院醫師

學會與認證

- 超音波專業醫師
- 中華民國心臟學會專科指導醫師
- 中華民國心臟學會專科醫師
- 內科專科醫師

PL2-1

OPTIMAL STRATEGY FOR DYSLIPDEMIA PATIENTS WITH MULTIPLE CVD RISK FACTORS

王俊力

依 2019 ESC 歐洲心臟學會的治療指引建議，已發生過心肌梗塞、穩定或不穩定心絞痛、中風、以及冠狀動脈或其他動脈血管再通術等 ASCVD 動脈粥樣硬化性心血管疾病的患者，皆屬 very high risk 的病人，在次級預防的治療上，指引建議在低密度膽固醇的指標設定應可以 baseline 降低 50%而且低於 55 mg/dL 為目標。

另外，針對所有急性冠心症的病人，只要沒有禁忌症或 statin 不耐受的診斷，指引都建議不論病人低密度膽固醇的 baseline 數值，都應盡早處方高強度 statin。

所以，statin 仍是目前降血脂治療上第一線的首選藥物。且針對已發生重大心血管事件的非常高風險病人，依最新的 2019 ESC 歐洲心臟學會的治療指引建議，優先考慮處方高強度 statin 或是最大可耐受劑量的 statin 是合理及可以考慮的。

劉秉彥 秘書長

現任

成大醫院臨床醫學研究中心主任 (2019/08-迄今)
成功大學臨床醫學研究所所長 (2019/08-迄今)
成功大學臨床醫學研究所教授 (2015/8-迄今)
成大醫院心臟血管內科主治醫師 (2000/08-迄今)

學歷

國立成功大學臨床醫學研究所博士
私立高雄醫學大學醫學系

專長

心臟血管疾病
高血壓藥物治療
動脈硬化基因及藥物研究
心導管檢查及介入性治療
降血脂藥物治療及研究
抗凝血及抗血小板藥物治療及研究
心肌梗死及冠心症治療

PL2-2

PRECISION MEDICINE: A BETTER TREATMENT FOR DYSLIPIDEMIA PATIENTS

劉秉彥

Cardiovascular disease, including atherosclerotic cardiovascular disease (ASCVD), is one of the major leading causes of death in Taiwan. The causal link of LDL-C and ASCVD was further proved in many clinical trials showing that intensive reduction of LDL-C is an effective therapy to attenuate the progression of coronary atherosclerosis and improve CV outcomes. Recently, Taiwan Society of Lipids and Atherosclerosis associated with various Taiwanese societies to publish and update the lipid guidelines for high risk patients.

In high risk patients, coronary artery disease (CAD) / acute coronary syndrome (ACS), peripheral artery disease (PAD) and ischemic stroke based on the scientific evidence from recently published clinical trials recommended LDL target-C less than 70mg/dL would have better outcomes. Statin played a big role in lipid-lowering strategy.

Among all the statins, Lipitor has mountain of evidence demonstrating safety and efficacy across a broad range of patient types, including more than 20 years post approval data generation and publication. Lipitor has lots of classic studies for high risk patients like IDEAL, SPARCL, MIRACL etc.. By precise choosing medicine for dyslipidemia patients, it could help them reduce their MACE and have better life.

September 17th (Saturday) *Room 801*

Dinner Symposium (I) - TSH Biopharm *17:40-18:30*

Dinner Symposium (I) - TSH Biopharm			
Time	**S_No.**	**Topic & Speaker**	**Moderator**
17:40-17:45		Opening Remarks	
17:45-18:15	DS1-1	Why Should We Consider Strongly Rosuvastatin Ezetimibe Fixed-Dose Combination? Prof. Sang-Hyun Kim	林宗憲 理事
18:15-18:25		Panel Discussion	
18:25-18:30		Closing Remarks	

Prof. Sang-Hyun Kim

BOARD CERTIFICATION

- 1991 ~ present Korean Board of Medical Doctor
- 1996 ~ present Korean Board of Internal Medicine
- 2001 ~ present Korean Board of Cardiologist

EDUCATION

- Mar. 1985 - Feb. 1987 Pre-medical Course, College of Natural Science, Seoul National University
- Mar. 1987 - Feb. 1991 Seoul National University College of Medicine (Medical doctor, M.D.)
- Mar. 1999 - Feb. 2001 Postgraduate School, Seoul National University(Master of Medical Science)
- Mar. 2001 - Feb. 2005 Postgraduate School, Seoul National University (Ph.D. of Medical Science)

BRIEF CHRONOLOGY of TRAINING AND EMPLOYMENT

- Mar. 1991 - Feb. 1992 Internship (Seoul National University Hospital, Seoul, Korea)
- Mar. 1992 - Feb. 1996 Residency : Internal Medicine (Seoul National University Hospital, Seoul, Korea)
- Mar. 1996 - Apr. 1999 Nonsan Public Healthcare Center, Department of Internal Medicine
- May. 1999 - Apr. 2000 Fellowship in Cardiology (Seoul National University Hospital, Seoul, Korea)
- May. 2000 - Present Professor of Internal Medicine (Cardiology) Seoul Metropolitan Government Seoul National University Boramae Medical Center
- Aug. 2003 - Oct. 2007 Assistant professor of Seoul National University College of Medicine (SNUCM)
- Oct. 2007 - Sep.2012 Associate professor of Seoul National University College of Medicine (SNUCM)
- Sep 2012 – Present Professor of Seoul National University College of Medicine (SNUCM) Seoul Metropolitan Government - Seoul National University Boramae Medical Center
- Jan 2013 - Aug 2016 Director of Cardiology, Seoul Metropolitan Government - Seoul National University Boramae Medical Center
- Jan 2005 - Present Professor of Cardiology, Seoul Metropolitan Government - Seoul National University Boramae Medical Center

DS1-1

WHY SHOULD WE CONSIDER STRONGLY ROSUVASTATIN EZETIMIBE FIXED-DOSE COMBINATION?

Sang-Hyun Kim

Still, the death rate of cardiovascular disease is second only to cancer, regardless of gender. So all dyslipidemia guidelines also recommend aggressive management of LDL-C. As shown by several studies, the lower LDL-C, the fewer CV Outcome. The use of PCSK9 inhibitor or Ezetimibe as well as statin in lowering LDL-C is also known to reduce the incidence of cardiovascular Event. In addition, IMPROVE-IT Study, JUPITER study, and PROVE-IT TIMI 22 study also showed that reducing LDL-C by 40 mg/dL did not cause safety concerns. Therefore, it is important to lower LDL-C as much as possible, especially in patients with diabetes, LDL-C should be managed more strictly. In a study of ASCVD high-risk patients, rosuvastatin 10 mg showed significant LDL-C reduction after 6 weeks of administration than Atorvastatin 20 mg. And rosuvastatin and Ezetimibe combination therapy also showed much stronger LDL-C reduction in Diabetes group than Non-diabetes group in Korea data. Based on these findings, rosuvastatin seems to be a little useful for high-risk patient.

In a study of diabetic patients who have experienced Acute Myocardial Infarction, hydrophilic statins were associated with a lower risk of admission for HF than lipophilic statins.. In other Korea Study, hydrophilic statin proves significant cardiovascular reduction effect. So hydrophilic statin use may be a better choice than lipophilic statin to reduce cardiovascular events in Asian diabetic patients.

September 17th (Saturday) *Room 802*

姜必寧得獎者演講 *14:00-14:50*

姜必寧得獎者演講			
Time	**S_No.**	**Topic & Speaker**	**Moderator**
14:00-14:20	A1-1	非編碼 RNAs 與擴張型心肌病 陳琛 教授	
14:20-14:40	A1-2	Apply AI in echocardiography 黃睦翔 醫師	林幸榮 名譽理事
14:40-14:50		Panel Discussion	

陳琛 教授

華中科技大學同濟醫學院附屬同濟醫院心內科

目前擔任中國病理生理學會心血管專業委員會(暨國際心臟研究會中國分會)青年工作委員會委員、國際心臟研究會中國轉化醫學工作委員會常務委員、中國醫療保健國際交流促進會心血管疾病預防與治療分會青年委員會委員。

主要從事分子心臟病學及相關轉化研究，2018 年獲得國家自然基金委“優秀青年基金”。發現了線粒體及細胞核內非編碼 RNAs 在心血管疾病中的作用及機制(Circulation. 2016 ; Circulation Research. 2019, 2021)，及線粒體自噬在心肌重構中的重要作用及機制(Circulation Research. 2018) 。作為第一或通訊作者已在 Circulation 和 Circulation Research 等頂級專業雜誌發表 SCI 論文 40 餘篇，受到國際學術界權威認可，研究結果被納入歐洲指南，多次受邀在國際學術會議予以大會報告，參與編寫“十二五”國家重點圖書《血管生物學(第二版)》。先後主持多項國家及省部級課題，已獲得授權非編碼 RNAs 相關國家發明專利 5 項，作為主要研究者已開展註冊臨床試驗 1 項。作為參與完成人獲得 2010 年度教育部高等學校科學研究優秀成果獎(科學技術)自然科學獎一等獎和 2010 年度湖北省科學技術獎勵自然科學獎一等獎。

A1-1

非編碼 RNAS 與擴張型心肌病

陳琛

To be presented

黃睦翔 醫師

CURRENT POSITION

Attending Physician, Division of Cardiology, Department of Internal Medicine, National Cheng Kung University Hospital

EDUCATION

2002-2009 M.D., National Cheng Kung University, Tainan, Taiwan

2018-2020 M.S.., Department of Computer Science and Information Engineering, National Cheng Kung University, Tainan, Taiwan

2021-Present Ph.D., Department of Statistics, College of Management, National Cheng Kung University, Tainan, Taiwan.

CLINICAL TRAINING

2008-2009 Internship, National Cheng Kung University Hospital.

2010-2013 Resident in Internal Medicine, Department of Internal Medicine, National Cheng Kung University Hospital.

2013-2015 Chief residence Fellow, Division of Cardiology, Department of Internal Medicine, National Cheng Kung University Hospital.

2015- Present Attending physician Division of Cardiology, Department of Internal Medicine, National Cheng Kung University Hospital, Tainan, Taiwan.

SPECIALTIES

- Echocardiography
- Image analysis, computer vision and pattern recognition
- Statistics
- Bioinformatics retrieval
- Interventional cardiology

A1-2

APPLY AI IN ECHOCARDIOGRAPHY

黃睦翔

Echocardiography is broadly used in clinical practice, given its great advantage of non-invasive characteristic, it provides both precious structural and functional information about heart, that would eventually lead to many different clinical decisions. In recent years, deep neural networks have been applied to several clinical tasks including automated echocardiography analysis. Models ranged from image acquisition, rare disease detection, quantification tasks (eg. left ventricular ejection fraction), as well as structure heart disease (eg, valvular heart disease) have been reported. Therefore, maybe in near future, we may have fully automated image acquisition and analysis in daily practice. However, AI model inherited certain limitations, in which perhaps the most famous one is its shortage of ‘reliability’, hence was referred as ‘black box’. Although after some model modification or algorithm, we may get the ‘heatmap’ to know where the information existed in the input images, yet we still don’t realize what ‘kind’ of information exactly extracted from there. Moreover, deep neural network models were usually validated through internal cross-validation and external validated through other independent similar data. However, the performance in external data may be fluctuated given different clinical settings, which limited its clinical application. In this brief report, its my pleasure to present the recent update of AI application in echocardiography.

September 17th (Saturday) *Room 802*

Symposium (I) *14:50-17:40*

科技部演講：科技界的女英雄們
Heroines in Science

Time	S_No.	Topic & Speaker	Moderator
14:50-15:00		Opening Remarks	
15:00-15:30	S1-1	My Evolving Research From Plants to Animal Models of Human Cardiovascular Disease 我從植物到人類心血管疾病動物模式之研究轉換 林秀芳 所長	蔡佳醍 教授
15:30-15:45		Discussion	
15:45-16:15	S1-2	AI in Drug Discovery 曾宇鳳 教授	葉宏一 副院長
16:15-16:30		Discussion	
16:30-16:40		Coffee Break	
16:40-17:10	S1-3	Multidisciplinary Collaboration : Nursing Profession in AIoT in Infectious Diseases Prevention 跨領域合作：護理專業在防疫物聯網的定位 柯乃熒 特聘教授	劉秉彥 秘書長
17:10-17:30		Panel Discussion	
17:30-17:40		Closing Remarks	黃柏勳 理事長

林秀芳 所長

EDUCATION

1988	Ph.D.	Biology University of Houston, Houston, TX, USA
1980	M.S.	Plant physiology National Taiwan University, Taipei, Taiwan
1977	B.S.	Botany National Taiwan University, Taipei, Taiwan

POSITIONS

2017/09-present	Director, Institute of Cellular and System Medicine, National Health Research Institutes, Zhunan, Taiwan
2016/05-2017/08	Acting Director, Institute of Cellular and System Medicine, National Health Research Institutes, Zhunan, Taiwan
2012/08-2016/05	Deputy Director, Institute of Cellular and System Medicine, National Health Research Institutes, Zhunan, Taiwan
2012/09-2014/06	Acting Director Institute of Cellular and System Medicine, National Health Research Institutes, Zhunan, Taiwan
2012/01-present	Investigator, Institute of Cellular and System Medicine, National Health Research Institutes, Zhunan, Taiwan
2008/03-2011/12	Associate Investigator, Institute of Cellular and System Medicine, National Health Research Institutes, Zhunan, Taiwan
2007/03-2008/03	Associate Investigator, Cardiovascular and Blood Medical Research Center, National Health Research Institutes, Zhunan, Taiwan
2004/04-2007/03	Assistant Professor of Medicine, Department of Medicine Harvard Medical School and Brigham and Women's Hospital, Boston, MA, USA
2000-2004	Instructor in Medicine, Department of Medicine Harvard Medical School and Brigham and Women's Hospital, Boston, MA, USA
1995-1999	Research Associate Cardiovascular Biology Laboratory, Harvard School of Public Health, Boston, MA, USA
1991-1994	Research Fellow, Nutrition Harvard School of Public Health, Boston, MA, USA
1989-1991	Research Fellow, Biochemistry and Molecular Biology University of Texas Medical School at Houston, Houston, TX, USA

S1-1

MY EVOLVING RESEARCH FROM PLANTS TO ANIMAL MODELS OF HUMAN CARDIOVASCULAR DISEASE

林秀芳

Life is full of twists and turns. I had never thought that I would become an independent investigator and have a research career. During the old era when the college entrance score determined which college one would enter and career mentoring was not so available, I did not think much of my academic interest. My score got me into the Department of Botany, National Taiwan University, so I started to study plant biology and pursued further for a master's degree. After got married and my husband entered graduate school at the University of Minnesota, Twin Cities, I applied for the university's PhD program in plant physiology. However, just living in the extreme cold dry weather for a quarter, I had to follow my husband's move to Houston and started PhD program again in the University of Houston. Unexpectedly, my daughter was born when I was still in graduate school. Being a student, wife, and mother, my life was very busy and good time management became an important survival factor. Houston is very hot and humid, especially when the greenhouse I needed to work in was on the roof and was even hotter. After six years, I decided to make a change for myself, and pursued my postdoctoral training in molecular biology at the University of Texas Medical School at Houston. Although it is a completely different field and I had to start from scratch, in retrospect, I think it was a good switch, because molecular cloning paved the way for genetically engineered mouse models later on. After 2 years of postdoc, I had to move again because my husband took a position in Boston. I think that's what a traditional married woman does, following husband around. Nevertheless, every crisis is also an opportunity. I eventually found a postdoc position at Harvard, first studying a mitochondrial enzyme and then cardiovascular biology. During this time, mammalian cells and mice became the major experimental materials. Using molecular cloning technology, I generated transgenic and knockout mice as cardiovascular disease models for investigating genes of interest. With my efforts, I received funding from several funding agencies, including NIH, and gradually moved up the ladder, and became Assistant Professor of Medicine at Harvard Medical School. By chance, I was recruited back to Taiwan in 2007 and joined NHRI to continue my research career. I feel that despite my research career was delayed due to many moves out of family reasons, my efforts did not go in vain. I eventually become an independent investigator and have a research career of my own.

曾宇鳳 教授

2020 – Associate Chairman, Department of Computer Science and Information Engineering, National Taiwan University

2019 – Center Scientists, National Center for Theoretical Sciences, Physics Division (NCTS Physics)

2019 – Ministry of Science and Technology Science Park Application Review Committee

2018 – Chairman, Asia SPARK Regional Committee

2018 – Global SPARK executive committee

2017 – Director, SPARK Taiwan

2017 – Research Fellow, National Applied Research Laboratories, Taiwan

2016 – Associate Director, The Neurobiology and Cognitive Science Center, National Taiwan University

2014 – Professor, Graduate Institute of Biomedical Electronics, and Bioinformatics, Department of Computer Science and Information Engineering, School of Pharmacy, National Taiwan University, Taiwan

2010 – Program Chair, Drug Discovery Symposium, American Chemical Society National Meetings

2009 – Principal Investigator, Metabolomics Core Laboratory, Genomic Center, National Taiwan University

S1-2

AI IN DRUG DISCOVERY

曾宇鳳

In this lecture, Prof. Tseng will be giving a talk on A.I. in drug discovery, a case for schizophrenia. Artificial intelligence has been a buzzword recently. How it was applied to real drug discovery remains unknown to most people, even researchers. This talk will use our drug development and discovery case for schizophrenia treatment as an example to bring a real-world application to the audience

柯乃熒 特聘教授

現任：

- 成功大學醫學院國際事務分處副院長
- 行政院衛福部愛滋病防治及感染者權益保障會-衛生教育組召集人 2022.01 ~ 迄今
- 行政院外交部性別平等專案小組委員 2021.04 ~ 迄今
- 台南市政府性別平等教育委員會政策組召集人 2022.01 ~ 迄今
- 台南市政府毒品危害防制中心委員 2021.07 ~ 迄今
- 台南市政府衛生局登革熱防治諮詢專家 2019.07 ~ 2019.12
- 高雄市政府衛生局愛滋病防治諮詢小組委員
- 國家衛生研究院蚊媒防治中心諮詢專家
- 台灣愛滋病護理學會第五屆理事長 2021.03 ~ 迄今
- 台灣愛之希望協會創會人暨秘書長 1999.09 ~ 迄今
- 台灣愛滋病學會理事 2022.03 ~ 迄今
- 台南市政府衛生局愛滋病防治諮詢小組委員 2021.03 ~ 迄今

學歷：

美國華盛頓大學護理研究所博士 1999.09 ~ 2003.06

經歷：

- 成功大學醫學院護理系特聘教授暨系主任 2019.08 ~ 2022.07
- 亞太護理教育聯盟創辦人暨首任理事長 2019.09 ~ 2022.03
- 國立成功大學附設醫院護理部副主任 2015.09 ~ 2019.01
- 國立成功大學衛生保健組組長 2014.02 ~ 2016.02
- 衛生署愛滋病防治及感染者權益保障委員會政策組召集人 2020.01 ~ 2021.12
- 教育部第六屆性別平等教育委員會委員 2014.01 ~ 2015.12
- 教育部學校衛生暨安全委員會委員 2014.12 ~ 2015.12
- 高雄市政府衛生局愛滋病防治諮詢小組委員
- 高雄市政府毒品危害防制中心委員 2013.12 ~ 2015.12
- 台灣愛滋病學會副秘書長 2004.12 ~ 2016.02

專長：

愛滋病/性病、新興傳染病、防疫物聯網、婦女健康、性別研究

S1-3

MULTIDISCIPLINARY COLLABORATION : NURSING PROFESSION IN AIOT IN INFECTIOUS DISEASES PREVENTION

柯乃熒

To be presented

September 17th (Saturday) *Room 802*

Dinner Symposium (II) - Novartis *17:40-19:20*

Dinner Symposium (II) - Novartis			
Time	**S_No.**	**Topic & Speaker**	**Moderator**
17:40-17:45		Opening Remarks	
17:45-18:15	DS2-1	Redefining Intensive LDL-C Management in High CV Risk Patients: How Can We Translate Guideline into Clinical Practice? Prof. Ulf Landmesser	黃柏勳 理事長
18:15-18:45	DS2-2	Integrated Lipid Management Across The Patient Journey: How to Optimize Lipid Care Pathway for ASCVD Patients? 林肇鋒 副秘書長	葉宏一 名譽理事
18:45-19:05		Panel Discussion	
19:05-19:20		Closing Remarks	

Prof. Ulf Landmesser

Professor Ulf Landmesser acts since October 2014 as Chairman of the Department of Cardiology at the Charité – Universitätsmedizin Berlin and since 2016 as Medical Di-rector of the Charité Center for Cardiovascular Medicine. In June 2022 he became also director of the newly established Friede Springer – Car-diovascular Prevention Center.

After his medical studies at the Medical School of Hannover (Germany), the University of Connecticut in Farmington (USA) and the National Heart&Lung Institute in London (UK), he specialized in Internal Medicine and Cardiology at the Medical School of Han-nover. In 2000/2001 he performed a post-doctoral fellowship focusing on vascular bi-ology at the Department of Cardiology at the Emory University School of Medicine, Atlanta (USA) as a scholar of the Alexander von Humboldt Foundation and received the Outstanding Fellows in Cardiology Special Recognition Award.

In 2007, he was called as Senior Consultant Cardiologist with a focus on acute and interventional cardiology and as director of translational cardiovascular research to the Department of Cardiology at the University Hospital of Zurich (Switzerland), where he later acted as Vice-Chairman of the Department of Cardiology.

He serves as a Member of the Editorial Board of the International Journal of Cardiology and since 2008 Professor Landmesser serves as Deputy Editor of the European Heart Journal, the leading cardiovascular journal in Europe.

He has a particular research interest in translational and clinical development of novel therapeutic and management strategies for prevention and treatment of atherosclerotic cardiovascular disease.

He has more than 500 publications and an h-index of 99. He has contributed to several ESC/ EAS guidelines and EAS consensus papers. Since 2019 is under the 1%-Highly Cited Researchers.

DS2-1

REDEFINING INTENSIVE LDL-C MANAGEMENT IN HIGH CV RISK PATIENTS: HOW CAN WE TRANSLATE GUIDELINE INTO CLINICAL PRACTICE?

Ulf Landmesser

The DA VINCI study demonstrated that the majority of prescribed therapies for lipid-lowering in Europe is monotherapy with statins and only one-third of patients met their LDL-C goal. That means there's a gap between guideline and clinical practice. "How can we translate guideline into clinical practice" is a critical issue. Prof. Landmesser will give an overview of the latest lipid guideline and the guideline adherence in a real world. Then, he will discuss the current barriers for implementing lipid guideline in clinical practice and share his strategies to help patients achieve their individualized LDL-C goal.

林肇鋒 醫師

現職

馬偕醫學院醫學系部定副教授
馬偕紀念醫院心血管中心/心臟內科 資深主治醫師
中華民國血脂及動脈硬化學會 副秘書長
台灣老人急重症醫學會官方雜誌執行編輯
臺灣介入性心臟血管醫學會編輯暨登錄委員會委員
中華民國心臟學會第二十七屆預防心臟學委員會委員

學歷

台北醫學大學癌症生物學與藥物研發博士
國立陽明大學醫學系學士

經歷

馬偕紀念醫院內科部住院醫師
馬偕紀念醫院內科部心臟內科總住院醫師
花蓮門諾醫院心臟內科主治醫師
衛生福利部雙和醫院心臟內科主治醫師
日本豊橋心臟中心研修複雜性心導管技術
日本鎌谷綜合病院研修複雜性心導管技術

臨床專長

心臟血管醫學
血脂醫學
心導管介入手術

學術研究

心肌梗塞與心肌梗塞後心臟纖維化
心血管藥物研究
高血脂與動脈硬化研究
健保資料庫大數據分析研究

DS2-2

INTEGRATED LIPID MANAGEMENT ACROSS THE PATIENT JOURNEY: HOW TO OPTIMIZE LIPID CARE PATHWAY FOR ASCVD PATIENTS?

林肇鋒

The reduction of lipid levels has been shown to prevent cardiovascular disease at individual and population level. Evidence-based guidelines for lipid therapy exist. While lipid care is sufficient for many, some individuals have medication side effects or underlying severe lipid conditions that make management more difficult. Severe lipid conditions require dedicated care for identification, early intervention, and management. Dr. Lin will give an overview of Taiwan latest lipid guideline and share the lipid clinic experience in MMH which includes why and how to initiate the lipid clinic. At last, he will share the impact of the lipid clinic in improving the clinical outcome of patients.

September 18th (Sunday) *Room 801*

Plenary Session (III) *09:00-10:50*

The 21st Taipei International Vascular Biology Symposium
Plenary Session
COVID-19 疫情下如何改善血管健康
International Symposium on Vascular Health under COVID-19 Status

Time	S_No.	Topic & Speaker	Moderator
09:00-09:05		Opening Remarks	黃柏勳 理事長
09:05-09:35	P3-1	Updated Research on Statin and Atherosclerosis: What is the Role of Statin for Primary Prevention? Prof. Masataka Sata	林幸榮 名譽理事
09:35-09:40		Discussion	
09:40-10:10	P3-2	Precision Nanomedicine Treating Vascular Diseases Prof. Yun Fang	江福田 常務監事
10:10-10:15		Discussion	
10:15-10:45	P3-3	Plasmid DNA-based Gene Therapy: From Regenerative Medicine to Vaccine for COVID-19 Prof. Ryuichi Morishita	陳肇文 名譽理事
10:45-10:50		Discussion	

The Assembly Member Meeting *11:00-11:30*

The Assembly Member Meeting of Taiwan Society of Lipids and Atherosclerosis

Prof. Masataka Sata

- Professor and Chairman, Department of Cardiovascular Medicine
- Institute of Biomedical Sciences, Tokushima University Graduate School, Japan

DEGREE:

University of Tokyo	B.S.	1984	Biology
University of Tokyo	M.D.	1988	Medicine
University of Tokyo	Ph.D.	1999	Cardiovascular Medicine

PROFESSIONAL CAREER:

Attending Physician: The University of Tokyo Hospital Cardiology
1998-2002

Assistant Professor: University of Tokyo Graduate School of Medicine
Department of Cardiovascular Medicine
2002-2004

Associate Professor: University of Tokyo Graduate School of Medicine
Department of Advanced Clinical Science and Therapeutics
2004-2008

Professor: Department of Cardiovascular Medicine
Institute of Biomedical Sciences
The University of Tokushima Graduate School
2008-

P3-1

UPDATED RESEARCH ON STATIN AND ATHEROSCLEROSIS: WHAT IS THE ROLE OF STATIN FOR PRIMARY PREVENTION?

Masataka Sata

Recent evidence suggests that acute coronary syndrome (ACS) is caused by acute thrombosis of coronary artery. Thrombosis results from rupture or erosion of atherosclerotic lesions, which cause mild narrowing of the lumen. Vulnerable plaques are pathologically characterized by positive remodeling, increased lipid content, thinning of fibrous cap, decreased smooth muscle cell content, and decreased collagen content. Efforts have been made to detect vulnerable plaques by using biomarkers or imaging techniques, but there is no established method to predicate ACS accurately.

Various activated inflammatory cells, apoptosis of smooth muscle cells, degradation of collagen by matrix metalloproteinase, increased coagulability by increased expression of tissue factor and PAI-1, intra-plaque hemorrhage are reported to play important roles in the pathogenesis of plaque instability. However, the molecular mechanism of chronic sterile inflammation in the vasculature and plaque destabilization is not fully understood. We are investigating molecular mechanisms of atherosclerosis and strategies to prevent cardiovascular events by controlling lifestyle-related diseases.

It is established that statins are very effective in primary prevention as well as in secondary prevention. In this seminar, I would like to update researches on statin and atherosclerosis. Particularly, I will focus on the role of statin for primary prevention.

Prof. Yun Fang

Current Position

Associate Professor of Medicine, University of Chicago

Education

National Taiwan University, Taiwan,	BS	Microbiology & Plant Pathology 1999
University of Pennsylvania, USA,	MS	Biotechnology 2002
University of Pennsylvania, USA,	PhD	Bioengineering 2006
University of Pennsylvania, USA,	Postdoctoral Fellow Medicine and Engineering 2012	

Research Summary

My research foci are mechano-transduction mechanisms by which cells sense and convert environmental mechanical stimuli into biological signaling and novel nanomedicine approaches that target dysregulated mechano-sensing pathways. Cellular mechanotransduction is instrumental to embryogenesis and physiological control of tissue homeostasis; abnormal cell responses to mechanical forces promote pathologies associated with numerous human diseases. This is especially important in the vasculature, where environmental mechanical stimuli produce cellular responses in endothelial cells at arterial curvatures and bifurcations by locally disturbed blood flow to induce atherosclerosis. A similar cascade appears to be induced in acute lung injury where it is the increased cyclic stretch that is the trigger. My research program at the University of Chicago focuses on the molecular understanding of endothelial homeostasis governed by mechanical forces, with emphasis upon regulation of non-coding genome, transcription factors, G protein signaling, and genetic variance. Another major research goal is to develop innovative nanomedicine-based therapeutic strategies to treat dysregulated mechano-sensing mechanisms causing vascular diseases. Key Words: microRNA, non-coding RNA, human genetics, enhancer biology, vascular biology, nanotechnology, nanomedicine, mechanotransduction, atherosclerosis, acute lung injury

P3-2

PRECISION NANOMEDICINE TREATING VASCULAR DISEASES

Yun Fang

Vascular disease is a leading cause of human morbidity and mortality and current vascular therapies mainly target systematic risk factors (e.g. hypercholesterolemia and hypertension) but not the diseased vasculature. Atherosclerosis preferentially develops at arterial curvatures and bifurcations where disturbed blood flow activates endothelium, leading to peripheral artery disease, carotid artery disease and ischemic stroke. Nevertheless; existing atherosclerosis therapies mainly treat systematic risk factors but not the vasculature per se. This underscores the significance and unique opportunity to identify and target novel mechanosensitive mechanisms in activated endothelium subjected to disturbed blood flow. Our objectives are to (1) delineate novel endothelial mechano-sensing mechanisms and (2) devise innovative precision nanomedicine approaches targeting these disease-causing mechano-sensitive pathways. Using multiple new transgenic mouse lines, our studies demonstrated that disturbed flow (DF) significantly increases the endothelial expression of TXNDC5 (thioredoxin domain containing 5) and microRNA-92a (miR-92a), two atherogenic molecules driving atherogenesis. Mechanistically, DF-induced TXNDC5 increases proteasome-mediated degradation of heat shock factor 1 and consequently promotes eNOS/NOS3 protein degradation. Meanwhile, DF induces endothelial miR-92a to suppress key anti-inflammatory molecules such as KLF2, KLF4, and PLPP3. We successfully formulated nanoparticles to deliver TXNDC5-targeting CRISPR/Cas9 plasmids driven by an endothelium-specific promoter (CDH5), which effectively deleted endothelial TXNDC5 expression and reduced atherosclerosis in Apoe-/- mice. Moreover, VCAM1-tageting polyelectrolyte complex micelles were engineered to selectively deliver miR-92a inhibitors to inflamed endothelium, which markedly decreased arterial stenosis and atherosclerosis in Apoe-/- mice. These results provide a proof-of-principle that innovative targeted nanomedicine approaches can be devised for vascular wall-based therapies treating vascular disease.

Prof. Ryuichi Morishita

Carrier:

- 4/81-3/87 MD(3/87) Osaka University Medical School, Osaka, Japan
- 4/87-3/91 PhD(3/91) Osaka University Medical School, Osaka, Japan
- 4/91-8/91 Postdoctoral FellowOsaka University Medical School
- 8/91-4/94 Postdoctoral FellowStanford University School of Medicine, Division of Cardiovascular Medicine
- 5/94-96/9 Senior Research Associate, Osaka University Medical School
- 5/94-96/8 Visiting Instructor Stanford University School of Medicine
- 4/95-96/9 Research Fellow of the J apan Society for the Promotion of Science
- 10/96-10/98 Assistant Professor, Department of Geriatric Medicine (T. Ogihara), Osaka University Medical School
- 5/94-present Chief, Section of Gene Therapy, Department of Geriatric Medicine (T. Ogihara), Osaka University Medical School
- 10/98-03/2004 Associate Professor, Department of Geriatric Medicine (T. Ogihara), Osaka University Medical School
- 10/98-03/2004 Associate Professor, Division of Gene Therapy Science (Y. Kaneda), Osaka University Medical School
- 10/98-03/2004 Chief, Section of Cardiovascular Medicine, Division of Gene Therapy Science (Y. Kaneda), Osaka University Medical School
- 01/2000-present Visiting Professor The University of Hong Kong
- 03/2003-present Professor, Department of Clinical Gene Therapy, Osaka University Medical School

P3-3

PLASMID DNA-BASED GENE THERAPY: FROM REGENERATIVE MEDICINE TO VACCINE FOR COVID-19

Ryuichi Morishita

Gene therapy has emerged as a novel therapy to treat various diseases. Especially, Adenovirus vectors, and mRNA technology have been used to develop new types of vaccines against covid-19, and practical application has rapidly progressed. During next decade, gene therapy would become new generation of medicine. One of the promising area is to promote angiogenesis in patients with critical limb ischemia (CLI) caused by peripheral artery disease. We focused on hepatocyte growth factor (HGF) as pro-angiogenic factors. In phase III clinical trial, naked plasmid DNA encoding HGF showed the safety and their potential for symptomatic improvement in CLI patients. Based on phase III data, HGF gene therapy drug, Collategene, has been approved by PMDA in Japan. Collategene was launched in Japan market as the first gene therapy drug at 2019. In this session, we would like to discuss about future application of HGF gene therapy.

In addition, we recently focused on the therapeutic vaccination which has extended its scope from infectious diseases to chronic diseases. We reported that angiotensin (Ang) II vaccine for hypertension successfully attenuated the high blood pressure in animal models (PLoS One 2013, Sci Rep 2017, Stroke 2017). Increasing the effectiveness of drug adherence interventions may have a great impact on the health of the population, because approximately 50% may not take medications. This poor adherence to medication leads to increased morbidity and death. As a result, the vaccine-induced anti-Ang II antibodies can efficiently ameliorate Ang II-induced high blood pressure and perivascular fibrosis in mice. Phase I/II clinical trial demonstrated good safety profile and the production of antibody against Ang II. In next step, we will start phase IIb study to test the anti-hypertensive efficacy. Based on plasmid DNA platform technology, we have applied to develop DNA vaccine against COVID-19. Successfully, we have developed DNA vaccine against SARS-Cov2. As the safety profile of DNA vaccine was very well, in this lecture, I would like to discuss about DNA vaccine against various diseases.

September 18th (Sunday) *Room 801*

Research Award & Poster Competition *11:30-12:00*

Research Award & Poster Competition			
Time	**S_No.**	**Topic & Speaker**	**Moderator**
11:30-11:45	A2-1	Broaden the Horizons of Nuclear Myocardial Imaging and Circulating Biomarkers in Coronary Artery Disease 吳彥雯 醫師	林幸榮 名譽理事
11:45-11:50	A2-2	Plasma Metabolomic Profiles Associated with Hypertension and Blood Pressure in Response to Thiazide Diuretics 黃金洲 醫師	
11:50-11:55	A2-3	MiR-21 Upregulation Exacerbates Pressure Overloadinduced Cardiac hypertrophy in Aged Hearts 張瑋婷 醫師	
11:55-12:00	A2-4	Ranolazine Improves Insulin Resistance by Normalization of the Ca2+/calmodulin Kinase II (CaMKII) Pathway on Cardiomyocytes 黃瀞瑩 會員	

吳彥雯 醫師

現職

- 亞東紀念醫院心臟血管醫學中心主任 2020/07迄今
- 亞東紀念醫院心臟血管心臟血管內科主任 2012/08迄今
- 亞東紀念醫院心臟血管心臟內科/核子醫學科主治醫師 2012/03迄今
- 陽明大學醫學院醫學系兼任教授 2018/08迄今
- 臺大醫院核子醫學部/心臟內科兼任主治醫師 2012/03 迄今

學歷

- 國立臺灣大學醫學系學士 1990/09至1997/06
- 國立臺灣大學臨床醫學研究所碩士班碩士 2000/09 至2002/06
- 國立臺灣大學臨床醫學研究所博士班博士 2002/09至 2009/01

專長

- Cardiology
- Internal Medicine
- Nuclear Medicine
- Molecular Imaging

學術團體/職務

- 中華民國核醫學會常務理事 2018/11迄今
- 中華民國核醫學會 (核醫心臟委員會)主任委員 2018/11迄今
- 台灣動脈硬化暨血管病醫學會理事 2018/07迄今
- 中華民國血脂及動脈硬化學會理事 2018/10迄今
- 台灣高血壓學會理事 2019/01迄今
- 財團法人中華民國心臟基金會副執行長 2018/06迄今
- 台灣血脂衛教協會秘書長 2019/03迄今
- 台灣健康醫學協會理事 2020/06迄今

A2-1

BROADEN THE HORIZONS OF NUCLEAR MYOCARDIAL IMAGING AND CIRCULATING BIOMARKERS IN CORONARY ARTERY DISEASE

吳彥雯

The strength of the nuclear myocardial imaging is the functional quantitative approach. My serial studies showed that ECG-gated, attenuation correction approaches, phase analysis and absolute myocardial flow measurement could improve the diagnostic accuracy and prognostic value of single photon emission tomography, especially in multivessel disease, microvascular disease, and heart failure. Our team further demonstrated that glucose metabolism of left and right ventricles links to the prognosis in patients with heart failure with reduced ejection fraction and ischemic cardiomyopathy, using dynamic F-18 FDG positron emission tomography. Higher RV and LV MRGlu values, lower LVEF and dilated LV end-diastolic volume were associated with poor overall survival and cardiac outcomes. RV glucose utilization was positively correlated with RV pressure overload, but not LVEF. In addition, myocardial glucose utilization was influenced by substrates and medications, including statins and DPP4i.

On the other hand, we evaluated the correlations of fatty-acid-binding protein 4 (FABP4), FABP3, high-sensitivity creatine kinase-MB, and tenascin-C levels with the cardiovascular outcomes in patients with stable coronary artery disease (National Taiwan Biosignature Research), and we found the independent prognostic values of these circulating biomarkers. Our team tried to explore the pathophysiology and mechanisms of FABP4 and FABP3 in atherosclerosis using translational approaches. The serial studies aid to clarify the clinical impacts of these novel biomarkers and to find potential therapeutic targets for atherosclerosis in the future.

黃金洲 副秘書長

現職

- 台北榮民總醫院教學部主治醫師
- 台北榮民總醫院內科部心臟內科兼任主治醫師
- 國立陽明大學內科學科兼任助理教授

學位

- 國立陽明大學藥理研究所博士 (2010~2014)
- 國立陽明大學醫學系學士 (1994~2001)

教職

- 國立陽明大學內科學科兼任副教授

經歷

- 德國柏林心臟醫學中心 (2008/5~2008/6)
- 臺北榮總內科部心臟內科臨床研究員 (2007)
- 臺北榮總內科部心臟內科總醫師 (2005)
- 臺北榮總內科部住院醫師 (2002)

專長學科

- 成人心臟內科 Cardiology
- 高血壓 Hypertension
- 高血脂 Hyperlipidemia
- 心導管介入性治療 Invasive Treatment in Catheterization
- 醫學教育 Medical Education

A2-2

PLASMA METABOLOMIC PROFILES ASSOCIATED WITH HYPERTENSION AND BLOOD PRESSURE IN RESPONSE TO THIAZIDE DIURETICS

Chin-Chou Huang, Yi-Long Huang, Chao-Hsiung Lin, Jaw-Wen Chen

Introduction: This study aimed to identify the metabolomic alterations associated with hypertension (HTN) and blood pressure (BP) response to thiazide diuretics.
Methods: A total of 50 participants previously untreated for HTN were prospectively recruited. After a 2-week adjustment of lifestyle, 30 participants with systolic BP ≥140 mmHg and/or diastolic BP ≥90 mmHg were classified into the HTN group and prescribed hydrochlorothiazide (HCTZ) 50 mg per day for 2 weeks. The remaining 20 participants with relatively normal BPs were assigned to the normotension group. Metabolomic profiles related to BP response to thiazide diuretics were analyzed.
Results: A total of 73 differential metabolites were found to be associated with HTN, whereas 27 metabolites were significantly changed upon HCTZ treatment (HCTZ-sensitive metabolites). Among them, 7 metabolites (aspartate, histidine, C5-DC, C5-M-DC, C14:1, phosphatidylcholine ae C34:1, and phosphatidylcholine ae C34:3) were positively associated with HTN, but their high abundance was inversely reduced upon HCTZ treatment (HCTZ-reduced/HTN-associated metabolites). Moreover, multivariate analysis of 20 metabolites whose baseline levels were associated with BP response revealed that aspartate, glutamate, lysophosphatidylcholine C16:0, lysophosphatidylcholine C20:3, and sphingomyelin C24:1 were independently related to systolic BP reduction, and lysophosphatidylcholine C20:3 was independently associated with diastolic BP reduction.
Conclusion: We identified 5 metabolites independently related to the BP changes with HCTZ treatment. The advanced biomarker profile for the thiazide-induced metabolomic changes may provide a clue to further explore the complex and mixed effects of thiazide treatment in clinical setting.

Keywords: Blood pressure, metabolomics, hydrochlorothiazide, hypertension

張瑋婷 醫師

Education and Experience

- **2000/9 – 2007/6** **Department of Medicine, National Cheng Kung University, Tainan, Taiwan**
  - *Doctor of Medicine, 2007*
- **2013/9 –2014/8** **Brigham and Women's Hospital, Harvard University, MA, USA**
  - *Research Fellow, Cardiac Muscle Research Laboratory*
- **2019/8 –** **Graduate Institute of Clinical Medicine, National Cheng Kung University, Taiwan**
  - *PhD candidate*

Professional Experience

- **2014/8-** **Chi-Mei Medical Center, Tainan, Taiwan**
  - *Attending physician*, Department of Cardiology
- **2020/08-** **Southern Taiwan University of Science and Technology**
  - *Associate Professor,* Department of Biotechnology

Awards and Honors

- **2017-2019** **The best annual research award in Chi-Mei Medical Center**
- **2018** **TA-YOU WU MEMORIAL AWARD (吳大猷先生紀念獎)**
- **2017** **Young investigator award in Taiwan Society of Cardiology**

A2-3

MIR-21 UPREGULATION EXACERBATES PRESSURE OVERLOADINDUCED CARDIAC HYPERTROPHY IN AGED HEARTS

Wei-Ting Chang, Jhih-Yuan Shih, Yu-Wen Lin, Tzu-Ling Huang, Zhih-Cherng Chen, Ping Yen Liu

Young and aging hearts undergo different remodeling post pressure overload, but the regulator that determines responses to pressure overload at different ages remains unknown. With an angiotensin II (Ang II)-induced hypertensive model, miR-21 knockout mice (miR-21-/-) were observed regarding the effects of miR-21 on hypertension-induced cardiac remodeling in young (12 week-old) and old (50 week-old) mice. Although the aged heart represented a more significant hypertrophy and was associated with a higher expression of miR-21, in miR-21-/- mice, Ang II-induced cardiac hypertrophy was attenuated. Upon results of cardiac-specific arrays in miR-21-overexpressing cardiomyocytes, we found a significant downregulation of S100a8. In both in vitro and in vivo models, miR-21/S100a8/NF-κB/NFAT pathway was observed to be associated with pressure overload-induced hypertrophic remodeling in aged hearts. To further investigate whether circulating miR-21 could be a biomarker reflecting the aged associated cardiac remodeling, we prospectively collected clinical and echocardiographic information of patients at young (<65 y/o) and old ages (≥65 y/o) with and without hypertension. Among 108 patients, aged subjects presented with a significantly higher expression of circulating miR-21, which was positively correlated with left ventricular wall thickness. Collectively, miR-21 was associated with a prominently hypertrophic response in aged hearts under pressure overload. Further studies should focus on therapeutic potentials of miR-21.

Key words: miR-21, aging, cardiac hypertrophy, hypertension, pressure overload

黃瀞瑩

學歷

2015.09 ~ 2018.06 國立中興大學生物科技學士學位學程
2020.09 ~ 國立成功大學 臨床醫學所碩士班
心臟內科劉秉彥醫師實驗室

榮譽

2022.07 參與第十二屆臨床醫學研究所聯合教學研究研討會口頭競賽 - 第二名

研究經驗

2016 大學專題研究
利用不同大腸桿菌勝任細胞表現茲卡病毒衣殼蛋白
Expression of zika virus capsid protein in different competent cell of Escherichia coli

著作

林珊夢, 簡啟民, 黃瀞瑩, 孫心慈, 侯明宏 (2020)。標靶核殼蛋白非典型蛋白質間交介面開發抗冠狀病毒藥物。中國化學會-化學 。79 (4)，333-342

A2-4

RANOLAZINE IMPROVES INSULIN RESISTANCE BY NORMALIZATION OF THE CA2+/CALMODULIN KINASE II (CAMKII) PATHWAY ON CARDIOMYOCYTES

Ching-Ying Huang, Ping-Yen Liu

Several cardiovascular medications may affect glycemic control. Ranolazine, a late sodium channel blocker, is an FDA approved antianginal medication, provides beneficial glycemic management based on previous preclinical studies. We, herein, aim to figure out the underlying mechanism.

Palmitic acid-induced insulin resistance cardiomyocytes were used to determine that Ranolazine can balance the substrate utilization by decreasing the expression of the fatty acid synthesis enzyme, acetyl-CoA carboxylase (ACC) and increasing the exocytosis of glucose transporter 4 (GLUT4). We further demonstrated that Ranolazine could maintain Ca2+ homeostasis by normalizing the increased Ca2+ concentration in diabetic settings. Ranolazine also decreased the activation of Ca2+/calmodulin kinase II (CaMKII) pathway triggered by the palmitic acid. CaMKII involved in contraction induced GLUT4 translocation, independent of insulin signaling pathway.

Our findings identified that Ranolazine ameliorates the impaired cardiac metabolism and improves Ca2+ mishandling on insulin-resistance cardiomyocytes. Whether the improved substrate utilization was mediated by CaMKII warranted further investigation.

September 18th (Sunday) *Room 801*

Luncheon Symposium (I) *12:00-14:10*

Luncheon Symposium (I)			
Time	**S_No.**	**Topic & Speaker**	**Moderator**
12:00-12:30	LS1-1	Treat Earlier, Choose Optimal Lipid Management for Your ACS Patient to Prevent Recurrent CV Event (Sanofi) 王宇澄 監事	徐國基 理事
12:30-12:40		Discussion	
12:40-13:10	LS1-2	Raise The Bar of Protection for Coronary and Peripheral Artery Disease (CAD/PAD) with Dual Pathway Inhibition Treatment (Bayer) 林宗憲 理事	黃柏勳 理事長
13:10-13:20		Discussion	
13:20-14:00	LS1-3	Optimizing Outcome in High-risk Patients: Should We Start with Combination Lipid Lowering Treatment Earlier? (Organon) 吳家棟 醫師	李貽恒 名譽理事
14:00-14:10		Discussion	

王宇澄 醫師

學歷

- 陽明大學醫學系醫學士(1994-2000)
- 中國醫藥大學臨床醫學研究所博士(2010-2016)
- 美國德州心臟醫學中心 Texas Heart Institute 研究員 (2011-2012)

現職

- 教育部定助理教授(2017-迄今)
- 亞洲大學生物科技學系專任助理教授(2016-迄今)
- 亞洲大學附屬醫院內科部副主任 (2018-迄今)
- 亞洲大學附屬醫院心臟科主任(2016-迄今)
- 中國醫藥大學附設醫院心臟血管系兼任主治醫師(2019-迄今)
- 中國醫藥大學附設醫院心臟血管系心臟預防醫學科主任 (2015-2019)
- 中華民國心臟學會副秘書長 (2018-迄今)
- 中華民國心臟學會甄審委員會委員(2016-迄今)
- 中華民國心臟學會國際交流委員會委員(2018-迄今)
- 臺灣介入性心臟血管醫學會編輯暨登錄委員會委員(2018-迄今)
- 台灣高血壓學會學術委員會委員(2016-迄今)

經歷

- 台大醫院內科住院醫師 (2003-2006)
- 台大醫院心臟內科研究醫師 (2006-2008)
- 中國醫藥大學附設醫院心臟內科主治醫師 (2008-迄今)
- 中華民國心臟內科專科醫師 (2008-迄今)
- 中華民國心臟學會心臟內科介入性次專科醫師 (2009-迄今)
- 中華民國心臟學會專科指導醫師 (2015-迄今)
- 亞洲大學附屬醫院醫務秘書(2016-2018)
- 台灣介入性心臟血管醫學會副秘書長 (2014-2016)
- 中華民國心臟學會高血壓委員會委員(2016-2018)

LS1-1
TREAT EARLIER, CHOOSE OPTIMAL LIPID MANAGEMENT FOR YOUR ACS PATIENT TO PREVENT RECURRENT CV EVENT

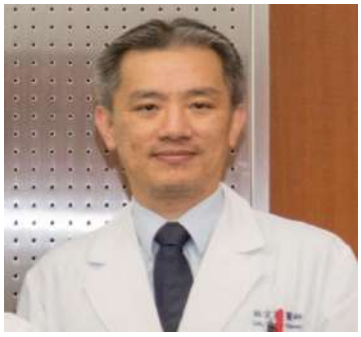
王宇澄

The 2019 ESC/EAS guidelines for dyslipidaemia management emphasized the need to lower low-density lipoprotein cholesterol (LDL-C) as much as possible to prevent atherosclerotic cardiovascular disease. The Taiwan lipid guidelines have also been updated in 2022, and the treatment standards for LDL-C are more stringent in high-risk patients.

However, the real-world data show that poor LDL-C goal attainment is an issue across all categories of high-risk and very-high-risk patients. To achieve best practice, a personalized approach to LDL-C management is needed in high and very-high-risk patients, especially patients with ACS, the key challenge for clinicians is to reduce their risk of recurrent events and the associated burden of hospitalization, revascularization and intensive clinical management.

In today's symposium, we will discuss about the optimal lipid management for ACS patient and share the actual clinical cases of physician. Explain we should have the strictest lipid control goal for extremely high-risk patients and discuss about the optimal timing to add on PCSK9i.

林宗憲 醫師



Education

- September 1989 – June 1996
  Department Of Medicine, Kaohsiung Medical College, M.D. Degree
- September 1999 – June 2002
  Graduate Institute Of Clinical Medicine, Kaohsiung Medical University, Master Of Science Degree (Msc)
- September 2003 – June 2007
  Graduate Institute Of Clinical Medicine, Kaohsiung Medical University, Phd Degree

Current Position

- August 2013 – Present
  Professor, Department Of Internal Medicine, Faculty Of Medicine, College Of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan, R.O.C. (教字第 021006 號)
- August 2018-
  Chief, Division Of Cardiology, Department Of Internal Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, R.O.C.
- November 2018-
  Medical Secretary, Department Of Superintendent, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, R.O.C.
- August 2001 –
  Attending Physician, Division Of Cardiology, Department Of Internal Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, R.O.C.
- May 2020 ~ April 2022
  27th Executive (理事), Taiwan Society Of Cardiology (TSOC)
- Dec 2018 ~ Nov 2020
  7th Executive (理事), Taiwan Hypertension Society (THS)
- Jan 2015-
  Deputy Editor In Chief, Acta Cardiologica Sinca (SCI)

LS1-2

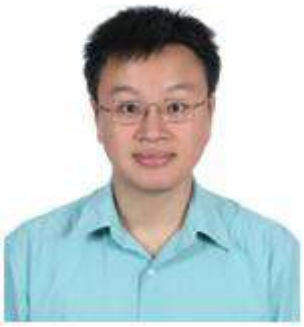
RAISE THE BAR OF PROTECTION FOR CORONARY AND PERIPHERAL ARTERY DISEASE (CAD/PAD) WITH DUAL PATHWAY INHIBITION TREATMENT

林宗憲

冠狀動脈疾病(CAD)患者常同時伴隨著其他動脈相關疾病，包括周邊動脈(PAD)或腦動脈等，此類高風險患者死亡率及發生心血管事件的風險將顯著提升，在臨床上的治療一直存在相當的挑戰。

PAD 是指除冠狀動脈之外的主動脈及其分支動脈的周邊動脈阻塞疾病，可發生在頸動脈、椎動脈、上肢動脈、腸繫膜動脈、腎動脈及下肢動脈，2010 年統計全球約有近 2 億人有周邊動派阻塞疾病。PAD 於下肢臨床症狀包括下肢間歇性跛行、疼痛、甚至皮膚潰瘍及壞疽等等，對患者生活品質影響顯著。過往無論是在介入治療後或是慢性期期間治療選項皆相當有限，在 2021 年七月取得健保正式給付以 rivaroxaban 加上 Aspirin 為組合之新的治療方式 Dual Pathway Inhibition (DPI)，相較於單獨使用 Aspirin，DPI 在治療冠狀動脈疾病上可以顯著減少重大心血管不良事件風險 (MACE) 及死亡率。且證實在 PAD 介入治療後及慢性期使用皆能降低患者的下肢缺血不良事件發生，甚至減少重大截肢風險。DPI 提供高缺血性風險患者新的治療選項，此題目將進一步探討如何在臨床運用 DPI 讓患者獲得更佳的保護。

吳家棟 醫師



學歷

長庚大學 醫學系 1993-2000

經歷

實習醫師: 林口長庚紀念醫院 1999/7-2000/6

住院醫師: 林口長庚紀念醫院 2000/8-2003/7

住院總醫師: 林口長庚紀念醫院 2003/8-2004/7

心臟內科研究醫師: 林口長庚紀念醫院 2004/8-2005/7

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心臟內科主治醫師: 林口長庚紀念醫院 2005/8-迄今

心臟內科系心臟血管內科病房主任: 林口長庚紀念醫院 2014/8-迄今

專業研究領域

臨床及基礎電生理學

心肌纖維化之機轉

心房顫動病理學

心臟再同步化治療(cardiac resynchronization therapy)之結果及效果

LS1-3

OPTIMIZING OUTCOME IN HIGH-RISK PATIENTS: SHOULD WE START WITH COMBINATION LIPID LOWERING TREATMENT EARLIER?

吳家棟

According to ESC/EAS Guidelines for the management of dyslipidemia, the total CV risk estimate is part of a continuum. Not only should those at high risk be identified and managed, but those at moderate risk should also receive professional advice regarding lifestyle changes; in some cases, drug therapy will be needed to reduce atherosclerotic risk. Low-risk people should be given advice to help them maintain this status. Thus, the intensity of preventive actions should be tailored to the patient's total CV risk.

LDL-C lowering represents the primary target for reducing CV risk, and it is the primary target lipid-lowering therapy in patients with DM. Multiplying the proportional reduction in low-density lipoprotein cholesterol by a person's baseline LDL-C level estimates the expected absolute reduction in LDL-C that is likely to be achieved with that therapy. Because each 1.0 mmol/L absolute reduction in low-density lipoprotein cholesterol is associated with a 20% reduction in the risk of cardiovascular events, larger absolute reductions in LDL-C may lead to larger proportional reductions in risk.

Although LDL-C goals are attained with monotherapy in many patients, a significant proportion of patients at high-risk or with very high LDL-C levels need additional treatment. In this case, combination therapy is reasonable. In patients at very-high risk and with persistent high-risk despite being treated with a maximally tolerated statin, combination with ezetimibe is recommended.

The expected clinical benefit of treatment to lower the LDL-C level of any person can be estimated; it depends on the intensity of therapy, the baseline LDL-C level, and the baseline estimated risk of ASCVD. This simple algorithm can be used to help clinicians select the appropriate therapy and quantify the expected benefits of LDL-C-lowering therapy at the right time and at the right approach to help inform discussions with patients.

September 18th (Sunday) *Room 801*

KSoLA&TSLA Joint Symposium *14:30-15:40*

性別是否影響治療
Gender Difference in Pharmaceutical Therapy

Time	S_No.	Topic & Speaker	Moderator
14:30-14:40		Opening Remarks	
14:40-15:00	J1-1	Gender Disparity in Anti-dyslipidemic Medications Prof. Hack-Lyoung Kim	鄭建興 監事
15:00-15:10		Discussion	
15:10-15:30	J1-2	Lipid profile, Statin Use and Atherosclerotic Cardiovascular Disease by Sex Prof. Seong-Mi Park	楊鎧鍵 監事
15:30-15:40		Panel Discussion & Closing Remarks	

Prof. Hack-Lyoung Kim

EDUCATION

- Mar. 1997 – Feb. 2003 College of Medicine, Chonnam National University, Gwangju, Korea
- Sep. 2008 – Feb. 2011 MBA, Sunkyunkwan University, Seoul, Korea
- Mar. 2011 – Aug. 2013 Postgraduate School, Seoul National University (Ph.D. in Medical Science, Research title: therapeutic effects of udenafil on pressure overload cardiac hypertrophy)

TRAINING and BRIEF CHRONOLOGY of EMPLOYMENT

- Mar. 2003 – Feb. 2004 Internship, Seoul National University Hospital, Seoul, Korea
- Mar. 2004 – Feb. 2008 Residency in Internal Medicine, Seoul National University Hospital, Seoul, Korea
- Apr. 2008 – Apr. 2009 Military Medical Officer, Captain, JSA (Joint Security Area), Korea
- May 2009 – Apr. 2011 Military Medical Officer, Captain, Division of Cardiology, Department of Internal Medicine, Armed Forces Seoul Hospital, Seoul, Korea
- May 2011– Feb. 2012 Clinical Fellow in Cardiology, Seoul National University Hospital, Seoul, Korea
- Mar. 2012 – Oct. 2012 Clinical Fellow in Cardiology, Seoul Metropolitan Government Seoul National University Boramae Medical Center, Seoul, Korea
- Sep. 2012 – Feb. 2018 Assistant professor of Seoul National University College of Medicine, Seoul Metropolitan Government - Seoul National University Boramae Hospital
- Mar. 2018 – Present Associate professor of Seoul National University College of Medicine, Seoul Metropolitan Government - Seoul National University Boramae Hospital

J1-1

GENDER DISPARITY IN ANTI-DYSLIPIDEMIC MEDICATIONS

Hack-Lyoung Kim

Dyslipidemia increases the risk of cardiovascular disease by initiating and developing arteriosclerosis. Based on the results of many clinical studies, the use of statin targeting LDL-C has been proven to be very effective in the reduction of LDL-C level and cardiovascular risk. Current guidelines recommend the use of high intensity statin especially in patients with dyslipidemia at a high cardiovascular risk. It was reported that the statin response to LDL-C and cardiovascular risk reductions are similar between men and women. However, there is a gender disparity in anti-dyslipidemic medications in both primary and secondary prevention settings. Some studies have shown that gender differences in the prescription of cardiovascular medications exist among patients at high risk or with established cardiovascular disease in primary care, with a lower prevalence of statins prescription in women than in men. Even after acute myocardial infarction, statin prescription rate was lower in women compared to men. It is known that women experience more side effects from statin use than men. Women also stop taking statins more often than men. Far fewer women are participating in statin clinical trials. Following several factors are associated with lower use of statins in women: 1) diagnostic uncertainty and delay in women, 2) low socioeconomic status, 3) less evidence from clinical trials (statin efficacy was mainly obtained from the male-dominated studies), and 4) small body side and more frequent side effects. Education and intervention targeted both patients and physicians should be continued to improve adherence to current medication guidelines in women.

Prof. Seong-Mi Park

EDUCATIONAL BACKGROUND

- M.D. & Bachelor in Medical Science, PhD in Medical Science, Korea University, Seoul, Korea
- Research fellowship, Cardiovascular Department, Echocardiography Lab.
  Mayo Clinic, Rochester, Minnesota, US
- Visiting Scholar, Women's Heart Center, Heart Institute, Cedars-Sinai Medical Center, Los Angeles, US

PROFESSIONAL CAREER, CURRENT

- Professor, Division of Cardiology, Korea University Medicine
- Editor-in-Chief, the International Journal of Heart Failure
- Director, Research Committee, Women's Heart Disease Research Working Group, Korean Society of Cardiology
- Director, Education Committee, Korean Society of CardioMetabolic Syndrome
- Director, Research Committee, Cardio-Oncology Research Working Group, Korean Society of Cardiology
- Director with Special Mission, Korean Society of Echocardiography
- Member, Scientific Committee, Korean Society of Internal Medicine
- Member, Research Committee, Korean Society of Hypertension

RESEARCH FIELD

- Heart failure
- Hypertension
- Ischemic Heart Disease
- Echocardiography
- Women's Heart
- Metabolic Syndrome

J1-2

LIPID PROFILE, STATIN USE AND ATHEROSCLEROTIC CARDIOVASCULAR DISEASE BY SEX

Seong-Mi Park

Dyslipidemia is one of the main risk factors for atherosclerotic cardiovascular disease (ASCVD). Among various lipid parameters, high total cholesterol and LDL-C, and low HDL-C were known to be associated with the development of ASCVD. Also, other lipid parameters like non-HDL-C, total cholesterol to HDL-C ratio, and LDL-C to HDL-C ratio gained attention as an alternative treatment target, and better predictors of ASCVD compared to LDL-C. There are major sex differences in lipid and lipoprotein metabolism that contribute to sex-differences in ASCVD risk. The mechanisms for these sex differences are complex and involve hormonal effects. Statin is proven to be effective in reducing cardiovascular mortality in several large-scale randomized control studies and meta-analyses. It is widely prescribed for primary and secondary prevention of ASCVD. Although the use of statin is recommended for all patients with an intermediate or high risk for ASCVD, research has shown that women receive less aggressive lipid management compared with men, despite evidence of similar benefits. We will discuss the relation of lipid profile and statin use to ASCVD by sex.

September 18th (Sunday) *Room 802*

Symposium (II) *09:00-10:40*

DM Symposium			
Time	**S_No.**	**Topic & Speaker**	**Moderator**
09:00-09:05		Opening Remarks	
09:05-09:25	S2-1	Sex Differences of the Diabetic Heart 朱志勳 醫師	
09:25-09:30		Discussion	許惠恒 醫師
09:30-09:50	S2-2	Sex differences in Micro- and Macro-Vascular Complications of Diabetes Mellitus 范綱志 醫師	
09:50-09:55		Discussion	
09:55-10:15	S2-3	How Gender Differences Influence Glycemic Managements 郭錦松 醫師	
10:15-10:20		Discussion	陳榮福 醫師
10:20-10:40	S2-4	Effects of Mental Stresses on Diabetes Managements 李奕德 主任	

朱志勳 醫師

高雄榮民總醫院新陳代謝科主治醫師

學歷

2006	中山大學生物科學研究所碩士在職專班	碩士
1990	中國醫藥學院醫學系	學士

經歷

2021/2~	中山大學生物醫學研究所	合聘副教授
2020~2021	輔英科技大學	副教授
2014/9~2021/9	高雄榮民總醫院新陳代謝科	主任
2019~	中華民國糖尿病學會	理事
2017~	中華民國糖尿病衛教學會	理事

S2-1

SEX DIFFERENCES OF THE DIABETIC HEART

朱志勳

Extensive clinical evidence shows that women of reproductive age are less prone to atherosclerotic heart disease than men. Women have a nearly decade-long delay in first myocardial infarction compared to men. Furthermore, at any given age, women have a lower risk of cardiovascular disease relative to men. However, in reproductive age women, the presence of diabetes totally negates this protection from atherosclerotic heart disease, and diabetic women are more severely affected than men.

A meta-analysis reported a greater risk of incident coronary artery disease in diabetic women compared to men with diabetes. The authors concluded that a greater deterioration in and more prolonged exposure to cardiovascular risk factors among prediabetic women compared with men, possibly driven by greater levels of adiposity, may be responsible for the excess risk of diabetes-related coronary artery disease in women. Consistent with this possibility, accumulating evidence supports the hypothesis that for women to become diabetic, their metabolic and cardiovascular risk factor profile must deteriorate to a greater extent than men's.

Levels of abdominal adiposity, inflammation, insulin resistance, diastolic blood pressure, atherogenic lipids, endothelial dysfunction and coagulation deteriorated to a greater extent between diabetic and non-diabetic women than between diabetic and non-diabetic men. In the transition from normoglycemia to overt diabetes, there is an earlier, greater and more prolonged decline in metabolic homeostasis leading to a deleterious burden of cardiometabolic risk factors in women compared to men.

The combined effect of these multiple cardiometabolic risk factors in diabetic women may explain the stronger impact of diabetes on cardiovascular events in women as compared to men rather than the effect of diabetes per se. This reinforces the necessity of early screening for at-risk women in young adulthood for sex-based preventive intervention.

范綱志 醫師

現職

- 國立台灣大學醫學院附設醫院新竹台大分院 內分泌新陳代謝科 主任
- 國立台灣大學醫學院 內科 臨床講師
- 中華民國糖尿病衛教學會 副秘書長
- 中華民國糖尿病學會 副秘書長

學歷

- 國立台灣大學醫學院臨床醫學研究所 博士班候選人
- 國立台灣大學醫學院臨床醫學研究所 碩士畢業
- 輔仁大學醫學院醫學系畢業

經歷

- 國立台灣大學醫學院附設醫院內分泌新陳代謝科研修醫師
- 國立台灣大學醫學院附設醫院內科部教學總醫師代表
- 國立台灣大學醫學院附設醫院內科部住院醫師
- 國立台灣大學醫學院附設醫院年度最佳實習醫師

S2-2

SEX DIFFERENCES IN MICRO- AND MACRO-VASCULAR COMPLICATIONS OF DIABETES MELLITUS

范綱志

血管併發症是第 1 型 (T1DM) 或第 2 型 (T2DM) 糖尿病男性和女性發病率和死亡率的主要原因，然而小血管併發症(腎病、神經病和視網膜病)和大血管併發症(冠心病、心肌梗塞、周邊動脈疾病和中風)的患病率、進展和病理生理學在兩種性別中是不同的。一般來說，男性患糖尿病小血管併發症的風險似乎更高，而女性大血管併發症的預後可能更差。有趣的是，在沒有糖尿病的情況下，與男性相比，女性在其一生的大部分時間裡患小血管或大血管併發症的風險要低得多。因此，與男性相比，糖尿病的存在使女性發生血管併發症的風險更大，本綜述討論了一些潛在原因，包括性激素的貢獻和性別特異性風險因素。越來越多的證據表明，性激素在調節心血管功能方面發揮著重要作用。雖然雌激素通常被認為具有心臟保護作用，而雄激素對心血管健康有害，但最近的研究結果對這些假設提出了挑戰，並證明了性激素對組織的作用之多樣性和複雜性。雖然在了解糖尿病血管併發症的病理生理學中性別差異的潛在機制方面取得了一些進展，但仍然存在許多問題和爭議。了解這些機制，對未來研究可能有助於糖尿病微血管和大血管併發症的個別化和性別特異性治療。

郭錦松 醫師

現職：

- 臺北榮民總醫院 內分泌暨新陳代謝科 主治醫師
- 臺北榮民總醫院 內分泌暨新陳代謝科 A113 病房主任
- 國立陽明交通大學醫學院 醫學系助理教授
- 國防醫學院醫學系臨床教授
- 中華民國內分泌學會監事
- 中華民國糖尿病衛教學會理事
- 台灣甲狀腺協會理事長
- 台灣糖尿病協會理事
- 中華民國內分泌暨糖尿病學會官方雜誌(Formosan Journal of Endocrinology and Metabolism) 執行編輯
- 臨床醫學月刊 副主編輯
- 台北市醫師公會會員服務委員會委員

學歷：

- 國立陽明大學臨床醫學研究所博士
- 國立陽明醫學院 醫學士

經歷：

- 臺北榮民總醫院 住院醫師、總醫師
- 大林慈濟醫院內分泌暨新陳代謝科主任
- 慈濟大學醫學院 內科助理教授
- 美國加州大學爾灣分校內分泌,糖尿病,暨新陳代謝科 研究員
- 中華民國內分泌學會副秘書長

S2-3

HOW GENDER DIFFERENCES INFLUENCE GLYCEMIC MANAGEMENTS

郭錦松

性激素會影響整個生命中的行為，而身體變化可能會對生活方式、社會角色和心理健康產生影響。此外，環境也可以通過表觀遺傳機制影響生物。正如內分泌干擾物所表現的以性別特異性方式調節生物表型的強大能力是可能的。因此，大多數的慢性病都發現受到生物和環境因素的影響，證實了女性和男性之間存在許多社會和生物因素的相互作用。

李奕德 主任

現任：

臺中榮民總醫院內分泌暨新陳代謝科主任

陽明交通大學醫學系兼任教授

學歷：

國立陽明大學醫學系畢業

中山醫學大學醫學研究所碩士

中山醫學大學醫學研究所博士

經歷：

臺中榮民總醫院內科住院醫師

中山醫學大學附設醫院內分泌暨新陳代謝科主治醫師

臺中榮民總醫院內分泌暨新陳代謝科主治醫師

美國加州 Cedars-Sinai Medical Center 進修一年

S2-4

EFFECTS OF MENTAL STRESSES ON DIABETES MANAGEMENTS

李奕德

壓力是生活中不可避免的事件。壓力可視為是會威脅體內平衡的一種狀態。我們體內能量與代謝的平衡對健康極為重要，面對壓力來源時，神經內分泌系統所做的反應目的在應對這些變化，以產生滿足增加需求的能力來應變。然而在長期壓力反應下，此等的生理變化也會是健康的風險。如腎上腺素的分泌會造成血糖上升，長期的壓力甚至會改變飲食的喜好習慣。另一方面，人體也有一些重要蛋白，除了可維持神經系統運作，亦可維持能量平衡。過去我們研究發現女性護理人員，血中腦源性神經營養因子（brain-derived neurotrophic factor）較低者，輪班後的 pulse pressure 較大。另外，有糖尿病或代謝症候群的患者，經過運動後，血中腦源性神經營養因子會上升，也會有較少的憂鬱症狀表現。血中腦源性神經營養因子上升甚至跟慢性發炎因子或長期死亡率減少有關。在國外也有針對糖尿病女性減少壓力的研究，發現壓力指數減少可下降糖化血色素。所以在現代緊張的生活環境下，心靈壓力的調控對健康更是重要。

September 18th (Sunday) *Room 802*

Symposium (III) *11:00-12:45*

Nutrition and Diet			
Time	**S_No.**	**Topic & Speaker**	**Moderator**
11:00-11:05		Opening Remarks	
11:05-11:35	S3-1	Strategies for cardiovascular diseases prevention and management and dietitians' role in Japan Prof. Shigeru Yamamoto	章樂綺 理事
11:35-12:05	S3-2	Nutrition Timing to Exercise 郭家驊 教授	潘文涵 理事
12:05-12:35	S3-3	運動對糖尿病和脂肪肝療效之實證醫學 劉燦宏 副院長	蔡一賢 理事
12:35-12:45		Panel Discussion & Closing Remarks	

Prof. Shigeru Yamamoto

Affiliations

- Professor of Jumonji U,
- Professor Emeritus of Tokushima U,
- Professor Emeritus of Ochanomizu U,
- Honorable Professor of Hanoi Medical U

Education

- BS in Nutrition from Tokushima U,
- MS in Nutrition from Columbia U (Fulbright scholar) ,
- PhD in Nutrition from Tokushima U

Research has focused on public nutrition and published more than 500 articles in international and domestic journals and books.

Other

Supervision of more than 300 Japanese and international graduate students.
1998 Academic Prize of Japanese Society of Food and Nutrition
1999 Academic Prize of Japanese Dietetic Association
2007- 2010 Chairperson of Board for Japanese School Lunch DRIs,
2009 Secretary General of ICD Yokohama,
2009 President's Award at the 50th Anniversary of the Japan Dietetic Association,
2010 Japanese Minister of Education Award
2010 International Advisor at ICN Thailand
2010, 2014 Advisor of Asian Dietetic Association, Thailand and Taiwan
2011 Vietnam Minister of Health Award 2011.

S3-1

STRATEGIES FOR CARDIOVASCULAR DISEASES PREVENTION AND MANAGEMENT AND DIETITIANS' ROLE IN JAPAN

Shigeru Yamamoto

To be presented

郭家驊 教授

現職

台北市立大學運動科學研究所特聘教授

學歷

Ph.D. University of Texas at Austin

專長

運動營養學

人體衰老細胞

學術團體職務

台灣運動營養學會榮譽理事長

亞洲運動營養學會會長 (President, Asian Nutrition Society for Sports & Health)

Fellow, American College of Sports Medicine

S3-2

NUTRITION TIMING TO EXERCISE

郭家驊

體重成長過快與肥胖，為心血管功能退化的主因。運動過程由於全身血管與組織承受較大的物理性挑戰，健康程度較差的衰老幹細胞迅速被免疫系統識別、吞噬與更新。這個過程近似在體內進行一次達爾文式適者生存不適者淘汰的篩選過程，使得被挑戰的血管與組織衰老細胞減少，使被挑戰的組織能更新；運動強度低，細胞汰換更新效果相對欠佳。運動所產生的短暫組織發炎，誘使來自骨髓的幹細胞釋放到血液中被吸引到發炎位置，讓短暫發炎的組織與血管內皮迅速再生，達到組織年輕化的效果。然而，這個更新過程需要碳資源與氮資源的迅速供應，這也是運動前後須使養分儘速到達挑戰組織的主要原因。延遲營養補充時間已證明使運動所造成的增肌減脂的效果不如預期，特別對 70 歲以上的高齡者之增肌效果將歸零。補充足夠量的蛋白質，且能快速吸收迅速到達發炎位置，將使發炎時間縮短，體能迅速恢復。

這個調適過程是以合成性激素(如性賀爾蒙、胰島素)製造充足為前提。對低於 65 歲的成年人，非運動訓練期間應減少蛋白質攝取，避免體重成長過快。該階段蛋白質攝取高於總熱量 10% 者死亡率相對較高，與動物隨機分配壽命研究結果一致。因此，運動前後應考慮營養補充成分是否能快速被吸收，來使增肌減脂效果最佳化。

劉燦宏 副院長

現職

台北醫學大學 醫學系教授
衛生福利部雙和醫院 醫務副院長
國家衛生研究院 合聘研究員
中華民國肥胖研究學會 理事長
台灣肥胖醫學會 理事
台灣復健醫學會 理事

學歷

國立陽明大學 公共衛生博士
國立陽明大學 醫務管理碩士
臺北醫學大學 醫學士
美國哥倫比亞大學 博士後研究員

經歷

台北醫學大學醫學院 副院長
台北醫學大學 醫學系主任

S3-3

運動對糖尿病和脂肪肝療效之實證醫學

劉燦宏

演說內容依據實證文獻回顧探討運動介入在糖尿病與脂肪肝治療所扮演的角色。

以糖尿病的患者而言，現有的證據顯示定期運動對於改善血糖控制、幫助維持體重以及降低心血管疾病和總體死亡率的風險有正向意義。因此，鼓勵絕大多數的患者，尤其是久坐不動的成年人，開始進行溫和的運動計劃，並逐漸增加至每週進行至少 150 分鐘的中等強度有氧運動。此外，在沒有禁忌症的情況下，鼓勵每週另外進行至少兩次的阻力訓練。

以脂肪肝的患者而言，證據顯示應該以減重及降低體脂為目的來進行飲食控制及運動。建議患者應開始進行有氧運動或合併阻力運動的運動計畫。此外，間歇性高強度運動亦有證據顯示能夠改善體重、體脂與脂肪肝。然而，於酒精性脂肪肝的患者，有證據顯示酒精的攝取將顯著的降低運動帶來的幫助，因此戒酒仍是他們最重要的任務。

September 18th (Sunday) *Room 802*

Luncheon Symposium (II) - Tanabe *12:45-13:50*

Luncheon Symposium (II) - Tanabe			
Time	**S_No.**	**Topic & Speaker**	**Moderator**
12:45-12:50		Opening Remarks	
12:50-13:15	LS2-1	The Earlier, The Better: Primary Prevention Lipid Treatment in Taiwan 黃金洲 副秘書長	林維文 監事
13:15-13:20		Discussion	
13:20-13:45	LS2-2	Maximizing Statin Benefit of Treating Patients with Dyslipidemia for Primary Prevention 王宇澄 監事	劉秉彥 秘書長
13:45-13:50		Panel Discussion & Closing Remarks	

黃金洲 副秘書長

現職

- 台北榮民總醫院教學部主治醫師
- 台北榮民總醫院內科部心臟內科兼任主治醫師
- 國立陽明大學內科學科兼任助理教授

學位

- 國立陽明大學藥理研究所博士 (2010~2014)
- 國立陽明大學醫學系學士 (1994~2001)

教職

- 國立陽明大學內科學科兼任副教授

經歷

- 德國柏林心臟醫學中心 (2008/5~2008/6)
- 臺北榮總內科部心臟內科臨床研究員 (2007)
- 臺北榮總內科部心臟內科總醫師 (2005)
- 臺北榮總內科部住院醫師 (2002)

專長學科

- 成人心臟內科 Cardiology
- 高血壓 Hypertension
- 高血脂 Hyperlipidemia
- 心導管介入性治療 Invasive Treatment in Catheterization
- 醫學教育 Medical Education

LS2-1
THE EARLIER, THE BETTER: PRIMARY PREVENTION LIPID TREATMENT IN TAIWAN

黃金洲

在台灣，中華民國血脂及動脈硬化學會於 2022 年重新制定了<台灣心血管疾病初級預防血脂臨床治療指引>，其中新增危險因子定義，將新陳代謝症候群列為第六個危險因子，同時將 CKD, DM 和 LDL-C 大於 190mg/dL 的病人列為三個高危險的初級預防患者，建議 LDL-C 控制在 100mg/dL 以下。且將非高風險的病人分為三個層級，有兩個危險因子的病人 LDL-C 起始治療標準從 130mg/dL 下修至 115mg/dL。有一個危險因子的病人從 160mg/dL 下修至 130mg/dL，而沒有任何危險因子的病人則從 190mg/dL 下修至 160mg/dL。

Statin 類藥物廣泛被使用在高血脂、高膽固醇的病人身上，已經有許多的證據顯示 statin 類藥物可以降低 LDL-C 和減少心血管疾病的發生機會，然而初級預防的病人不只要考量療效，同時應該兼顧安全性。許多研究也指出，隨著 Statin 使用的時間越長、劑量越高，越容易發展成新生糖尿病，而肌肉痠痛也是 Statin 常見的副作用。因此對於初級預防的病人，我們是否更應該選擇安全與療效都能兼顧的 Statin 呢?

除了讓醫師依據指引提供病人最適切的臨床治療建議外，也希望透過<台灣心血管疾病初級預防血脂臨床治療指引>藉此提升血脂治療的品質，改善國人心血管疾病治療的預後，更重視初級預防的保護。The earlier, the better.

王宇澄 醫師

學歷

- 陽明大學醫學系醫學士(1994-2000)
- 中國醫藥大學臨床醫學研究所博士(2010-2016)
- 美國德州心臟醫學中心 Texas Heart Institute 研究員 (2011-2012)

現職

- 教育部定助理教授(2017-迄今)
- 亞洲大學生物科技學系專任助理教授(2016-迄今)
- 亞洲大學附屬醫院內科部副主任 (2018-迄今)
- 亞洲大學附屬醫院心臟科主任(2016-迄今)
- 中國醫藥大學附設醫院心臟血管系兼任主治醫師(2019-迄今)
- 中國醫藥大學附設醫院心臟血管系心臟預防醫學科主任 (2015-2019)
- 中華民國心臟學會副秘書長 (2018-迄今)
- 中華民國心臟學會甄審委員會委員(2016-迄今)
- 中華民國心臟學會國際交流委員會委員(2018-迄今)
- 臺灣介入性心臟血管醫學會編輯暨登錄委員會委員(2018-迄今)
- 台灣高血壓學會學術委員會委員(2016-迄今)

經歷

- 台大醫院內科住院醫師 (2003-2006)
- 台大醫院心臟內科研究醫師 (2006-2008)
- 中國醫藥大學附設醫院心臟內科主治醫師 (2008-迄今)
- 中華民國心臟內科專科醫師 (2008-迄今)
- 中華民國心臟學會心臟內科介入性次專科醫師 (2009-迄今)
- 中華民國心臟學會專科指導醫師 (2015-迄今)
- 亞洲大學附屬醫院醫務秘書(2016-2018)
- 台灣介入性心臟血管醫學會副秘書長 (2014-2016)
- 中華民國心臟學會高血壓委員會委員(2016-2018)

LS2-2
MAXIMIZING STATIN BENEFIT OF TREATING PATIENTS WITH DYSLIPIDEMIA FOR PRIMARY PREVENTION

王宇澄

網路上不少傳言宣稱 statins 有嚴重副作用，例如肌肉痛、無力、視力模糊、頭痛，甚至肝發炎、糖尿病。葉宏一表示，就現有證據來看，statins 在心血管疾病的眾多藥品中，安全性相對較高。服用 statins 控制血脂給心血管病人帶來的好處，比引發糖尿病的壞處要多得多。

服用 statins 雖然約 10%病人有肌肉痠痛或無力的症狀，但大多是輕微的，只有 3%的病人無法耐受而需停藥；statins 會導致糖尿病更不必驚慌。Statins 有機會造成糖化血色素升高，但臨床實驗顯示上升的數字只有零點幾，例如由 6.5 上升到 6.6，「不是 statins 單獨引起糖尿病，而是病人體質本來就傾向罹病，statins 只是可能將發病時間稍微向前拉。」

Livalo 是唯一仿單當中明確註明不會有明顯造成新生糖尿病的 Statin，適合用在初級預防的病人，安全與療效兼顧。

September 18th (Sunday) *Room 802*

TALE&TSLA Joint Symposium *14:00-15:40*

Nutraceuticals for Cardiovascular Diseases

Time	S_No.	Topic & Speaker	Moderator
14:00-14:10		Opening Remarks	
14:10-14:30	J2-1	Icosapent Ethyl(EPA) and Cardiovascular Outcomes- Insights From Recent Clinical Trials 吳卓鍇 醫師	吳造中 理事長
14:30-14:40		Discussion	
14:40-15:00	J2-2	Probiotics 吳彥雯 秘書長/常務理事	
15:00-15:10		Discussion	
15:10-15:30	J2-3	Genistein 劉秉彥 秘書長	黃柏勳 理事長
15:30-15:40		Panel Discussion & Closing Remarks	

吳卓鏘 醫師

現職：

- 台大醫院內科部主治醫師
- 台大醫學院內科臨床副教授

學歷：

- 國立台灣大學醫學系學士
- 國立台灣大學醫學院臨床醫學研究所碩士
- 國立台灣大學醫學院臨床醫學研究所博士

經歷：

- 台大醫院內科部住院醫師
- 台大醫院內科部總醫師及心臟科研究員
- 台大醫院雲林分院心臟內科主治醫師
- 台大醫學院內科講師，助理教授
- 台大醫院內科部主治醫師
- 中華民國心臟學會心臟衰竭委員會委員
- 中華民國心臟學會心臟專科指導醫師
- 中華民國重症醫學會重症專科指導醫師

個人專長：

- 心導管術
- 心血管疾病
- 舒張性心衰竭
- 肺動脈高壓
- 高血壓
- 分子生物學

J2-1

ICOSAPENT ETHYL(EPA) AND CARDIOVASCULAR OUTCOMES- INSIGHTS FROM RECENT CLINICAL TRIALS

吳卓鍇

To be presented

吳彥雯 醫師

現職

- 亞東紀念醫院心臟血管醫學中心主任 2020/07迄今
- 亞東紀念醫院心臟血管心臟血管內科主任 2012/08迄今
- 亞東紀念醫院心臟血管心臟內科/核子醫學科主治醫師 2012/03迄今
- 陽明大學醫學院醫學系兼任教授 2018/08迄今
- 臺大醫院核子醫學部/心臟內科兼任主治醫師 2012/03 迄今

學歷

- 國立臺灣大學醫學系學士 1990/09至1997/06
- 國立臺灣大學臨床醫學研究所碩士班碩士 2000/09 至2002/06
- 國立臺灣大學臨床醫學研究所博士班博士 2002/09至 2009/01

專長

- Cardiology
- Internal Medicine
- Nuclear Medicine
- Molecular Imaging

學術團體/職務

- 中華民國核醫學會常務理事 2018/11迄今
- 中華民國核醫學會 (核醫心臟委員會)主任委員 2018/11迄今
- 台灣動脈硬化暨血管病醫學會理事 2018/07迄今
- 中華民國血脂及動脈硬化學會理事 2018/10迄今
- 台灣高血壓學會理事 2019/01迄今
- 財團法人中華民國心臟基金會副執行長 2018/06迄今
- 台灣血脂衛教協會秘書長 2019/03迄今
- 台灣健康醫學協會理事 2020/06迄今

J2-2

PROBIOTICS

吳彥雯

To be presented

劉秉彥 秘書長

現任

成大醫院臨床醫學研究中心主任 (2019/08-迄今)
成功大學臨床醫學研究所所長 (2019/08-迄今)
成功大學臨床醫學研究所教授 (2015/8-迄今)
成大醫院心臟血管內科主治醫師 (2000/08-迄今)

學歷

國立成功大學臨床醫學研究所博士
私立高雄醫學大學醫學系

專長

心臟血管疾病
高血壓藥物治療
動脈硬化基因及藥物研究
心導管檢查及介入性治療
降血脂藥物治療及研究
抗凝血及抗血小板藥物治療及研究
心肌梗死及冠心症治療

J2-3

GENISTEIN

劉秉彥

To be presented

September 18th (Sunday) *Room 803*

Symposium (IV) *08:20-16:20*

心血管疾病防治網繼續教育課程

Time	S_No.	Topic & Speaker
08:20-08:30		Opening Remarks 黃柏勳 理事長
08:30-09:20	S4-1	What is the Recommended Healthy Lifestyle for My Cardiovascular Disease Patients 吳彥雯 醫師
09:20-09:30		Discussion
09:30-10:20	S4-2	New Recommended Dyslipidemia Management in 2022 李貽恒 醫師
10:20-10:30		Discussion
10:30-11:20	S4-3	New Development of Acute Coronary Syndrome Treatment in 2022 王宇澄 醫師
11:20-11:30		Discussion
11:30-12:20	S4-4	New Development of Hypertension Treatment in 2022 鄭浩民 醫師
12:20-12:30		Discussion
12:30-13:30		Lunch
13:30-14:20	S4-5	New Development of Stroke Prevention for Atrial Fibrillation in 2022 趙子凡 醫師
14:20-14:30		Discussion
14:30-15:20	S4-6	New Development of Peripheral Artery Disease Treatment in 2022 許栢超 醫師
15:20-15:30		Discussion
15:30-16:20	S4-7	New Development of Diabetes Treatment in 2022 王治元 醫師
16:20		Discussion & Closing

吳彥雯 醫師

現職

- 亞東紀念醫院心臟血管醫學中心主任 2020/07迄今
- 亞東紀念醫院心臟血管心臟血管內科主任 2012/08迄今
- 亞東紀念醫院心臟血管心臟內科/核子醫學科主治醫師 2012/03迄今
- 陽明大學醫學院醫學系兼任教授 2018/08迄今
- 臺大醫院核子醫學部/心臟內科兼任主治醫師 2012/03 迄今

學歷

- 國立臺灣大學醫學系學士 1990/09至1997/06
- 國立臺灣大學臨床醫學研究所碩士班碩士 2000/09 至2002/06
- 國立臺灣大學臨床醫學研究所博士班博士 2002/09至 2009/01

專長

- Cardiology
- Internal Medicine
- Nuclear Medicine
- Molecular Imaging

學術團體/職務

- 中華民國核醫學會常務理事 2018/11迄今
- 中華民國核醫學會 (核醫心臟委員會)主任委員 2018/11迄今
- 台灣動脈硬化暨血管病醫學會理事 2018/07迄今
- 中華民國血脂及動脈硬化學會理事 2018/10迄今
- 台灣高血壓學會理事 2019/01迄今
- 財團法人中華民國心臟基金會副執行長 2018/06迄今
- 台灣血脂衛教協會秘書長 2019/03迄今
- 台灣健康醫學協會理事 2020/06迄今

S4-1
WHAT IS THE RECOMMENDED HEALTHY LIFESTYLE FOR MY CARDIOVASCULAR DISEASE PATIENTS

吳彥雯

Despite major efforts to reduce atherosclerotic cardiovascular disease (ASCVD) burden with conventional risk factor control, significant residual risk remains. Recent evidence on non-traditional determinants of cardiometabolic health has advanced our understanding of lifestyle-disease interactions. Chronic exposure to environmental stressors like poor diet quality, sedentarism, ambient air pollution and noise, sleep deprivation and psychosocial stress affect numerous traditional and non-traditional intermediary pathways related to ASCVD. Lifestyle behaviors influence ASCVD risk.

Evidence points to partially overlapping mechanisms, including effects on inflammatory and nutrient sensing pathways, endocrine signalling, autonomic function and autophagy. Of particular relevance is the potential of low-risk lifestyle factors to impact on plaque vulnerability through altered adipose tissue and skeletal muscle phenotype and secretome. Whereas most of the modifiable cardiovascular disease risk factors included in the American Heart Association's My Life Check - Life's Simple 7 are evaluated routinely in clinical practice (glucose and lipid profiles, blood pressure, obesity, and smoking and physical activity). In Taiwan, Health Promotion Administration (MOHW) also have recommendations on healthy life style. Low-risk lifestyle factors may cause a set of phenotypic adaptations shifting tissue cross-talk from a proinflammatory milieu conducive for high-risk atherosclerosis to an anti-atherogenic milieu. However, healthy lifestyles are underutilized among high-risk adults.

Cardiovascular prevention efforts have contributed to falling rates of ASCVD over the past five decades. However, contemporary increases in obesity and diabetes have led to a recent slowing in the annual decline of ASCVD death rates. This slowing represents an opportunity to change the ASCVD prevention paradigm, focusing on cultivating cardiovascular wellness in addition to preventing disease is gaining increased traction. With this approach, the goal of ASCVD prevention is shifting to include consideration of both treating "risk factors" and cultivating health factors. Importantly, cardiovascular wellness is more than just the absence of disease and, therefore, risk factors and health factors are not always mere opposites.

We review healthy lifestyle tool, summarize landmark studies of interventions aimed at improving adherence to health factors, and discuss the paradigm for primary and secondary prevention of ASVD that is focused on cultivating cardiovascular wellness through the promotion of health factors. Through scientific evidence, clinical judgment, and discussion between the patient and clinician, we can implement an effective evidence-based strategy of life style modification to reduce CVD risk.

李貽恒 醫師

學歷

- 國立成功大學醫學院基礎醫學研究所博士
- 私立高雄醫學大學醫學系

專長

- 心臟血管疾病

現任

- 成大醫院內科部部主任
- 成大醫院心臟血管科主治醫師
- 成大醫學院內科學科教授

曾任

- 成大醫院心臟血管科主任
- 成大醫學院內科學科副教授

S4-2

NEW RECOMMENDED DYSLIPIDEMIA MANAGEMENT IN 2022

李貽恒

To be presented

王宇澄 醫師

學歷

- 陽明大學醫學系醫學士(1994-2000)
- 中國醫藥大學臨床醫學研究所博士(2010-2016)
- 美國德州心臟醫學中心 Texas Heart Institute 研究員 (2011-2012)

現職

- 教育部定助理教授(2017-迄今)
- 亞洲大學生物科技學系專任助理教授(2016-迄今)
- 亞洲大學附屬醫院內科部副主任 (2018-迄今)
- 亞洲大學附屬醫院心臟科主任(2016-迄今)
- 中國醫藥大學附設醫院心臟血管系兼任主治醫師(2019-迄今)
- 中國醫藥大學附設醫院心臟血管系心臟預防醫學科主任 (2015-2019)
- 中華民國心臟學會副秘書長 (2018-迄今)
- 中華民國心臟學會甄審委員會委員(2016-迄今)
- 中華民國心臟學會國際交流委員會委員(2018-迄今)
- 臺灣介入性心臟血管醫學會編輯暨登錄委員會委員(2018-迄今)
- 台灣高血壓學會學術委員會委員(2016-迄今)

經歷

- 台大醫院內科住院醫師 (2003-2006)
- 台大醫院心臟內科研究醫師 (2006-2008)
- 中國醫藥大學附設醫院心臟內科主治醫師 (2008-迄今)
- 中華民國心臟內科專科醫師 (2008-迄今)
- 中華民國心臟學會心臟內科介入性次專科醫師 (2009-迄今)
- 中華民國心臟學會專科指導醫師 (2015-迄今)
- 亞洲大學附屬醫院醫務秘書(2016-2018)
- 台灣介入性心臟血管醫學會副秘書長 (2014-2016)
- 中華民國心臟學會高血壓委員會委員(2016-2018)

S4-3

NEW DEVELOPMENT OF ACUTE CORONARY SYNDROME TREATMENT IN 2022

王宇澄

To be presented

鄭浩民 醫師

現職

- 臺北榮民總醫院教學部實證醫學中心主任
- 臺北榮民總醫院內科部心臟內科主治醫師

學歷

- 澳洲阿德雷德大學醫學博士
- 國立陽明大學醫學士

重要經歷

- 國立陽明大學醫學系跨領域博士學程專任教授
- 國立陽明大學醫學系教授
- 臺北榮民總醫院教學部實證醫學中心主任
- 臺北榮民總醫院教學部教師培育科主治醫師
- 臺北榮民總醫院內科部心臟內科主治醫師
- 國立陽明大學公共衛生研究所合聘教授
- 國立陽明大學衛生福利研究所合聘教授

研究方向

- 心臟血管血流動力學
- 高血壓
- 心臟超音波
- 實證醫學
- 醫學教育

S4-4

NEW DEVELOPMENT OF HYPERTENSION TREATMENT IN 2022

鄭浩民

To be presented

趙子凡 醫師

- 臺北榮民總醫院心臟內科主治醫師
- 國立陽明大學內科學系副教授
- Chair of the APHRS practical guideline subcommittee
- ESC annual congress – Abstract Grader (2018-2022)
- Section editor of “Thrombosis and Haemostasis”
- Senior editor of “International Journal of Clinical Practice”

Tze-Fan Chao is an Associate Professor at National Yang-Ming University, Taiwan and attending physician at the Division of Cardiology, Taipei Veterans General Hospital. He was trained in medicine and cardiology at the Taipei Veterans General Hospital, Taipei, Taiwan.

Dr Chao’s clinical interest is cardiac electrophysiology, including implantation of permanent pacemakers, implanted cardioverter defibrillators and cardiac resynchronization therapy. His research interests are in the areas of atrial fibrillation, including epidemiology, stroke risk stratification and oral anticoagulants for stroke prevention. He has published more than 80 original articles as first, co-first or corresponding author in SCI journals including *Circulation*, *JACC*, *European Heart Journal*, *Stroke*, *Chest*, *Heart, Journal of the American Heart Association*, *Mayo Clinic Proceedings*, *Thrombosis and Haemostasis, Circulation: Arrhythmia and Electrophysiology*, *Heart Rhythm, and etc*.

Dr Chao is a member of the writing committee for the atrial fibrillation guidelines of the Taiwan Society of Cardiology/Taiwan Heart Rhythm Society and the Asia Pacific Heart Rhythm Society (APHRS). Currently, he is the chair of the APHRS practical guideline subcommittee and section editor of “Thrombosis and Haemostasis”. He is also a reviewer for several international journals, including *Circulation*, *JACC*, *EHJ, and etc*. He has been invited to give lectures at important international conferences, including annual scientific meetings of AHA, ACC, ESC, Heart Rhythm Society, EHRA, APHRS, Asian-Pacific Society on Thrombosis and Hemostasis, International Society on Thrombosis and Haemostasis (ISTH), Cardiostim, Venice arrhythmia, CardioRhythm, and etc.

S4-5

NEW DEVELOPMENT OF STROKE PREVENTION FOR ATRIAL FIBRILLATION IN 2022

趙子凡

Patients with atrial fibrillation (AF) were associated with an increased risk of ischemic stroke, which could be effectively prevented with oral anticoagulants (OACs). The introduction of non-vitamin K antagonist OACs (NOACs) has changed the landscape for stroke prevention in AF by increasing the prescriptions rates of OACs and improved clinical outcomes of AF patients. However, it is a challenge to prevent stroke in some difficult scenarios, such as the elderly, patients with history of intracranial hemorrhage, major bleeding or cancers. More and more real-world data suggested that OACs should still be considered even for very elderly AF patients, and multiple factors, such as comorbidities, renal preservation and bleeding risk should be taken into consideration to optimize AF managements. Also, some new drugs, such as factor XI inhibitors, are intriguing targets for the next generation of anticoagulants which may further change the practice of stroke prevention in AF.

許栢超 醫師

現職

- 高雄醫學大學附設醫院心臟血管內科主治醫師 (2008.8-)
- 高雄醫學大學內科學科教授 (2021.2-) (教字第 145701 號)
- 高雄醫學大學附設醫院內科部副主任 / 高雄醫學大學附設醫院心導管室主任
- 中華民國心臟學會雜誌執行編輯 (2015.1-)
- TSCI 周邊血管介入委員會委員(副主委) /TSOC 介入性心臟學委員會委員

學歷

- 高雄醫學大學醫學系 (1996.9-2003.6)
- 高雄醫學大學醫學研究所臨床醫學組碩士(2008.9-2010.7)
- 高雄醫學大學醫學研究所臨床醫學組博士 (2011.9-2015.1)

經歷

- 高雄醫學大學附設醫院實習醫師 (2002.6- 2003.5)
- 高雄醫學大學附設醫院內科住院醫師 (2003.8- 2006.7)
- 高雄醫學大學附設醫院心臟內科總住院醫師 (2006.8-2008.7)
- 高雄醫學大學附設醫院心臟血管內科主治醫師 (2008.8-)
- 中華民國心臟學會副秘書長 (2014.6- 2016.5)
- 高雄醫學大學內科學科助理教授 (2013.8-2016.7) (助理字第 038346 號)
- 台灣傷口照護學會理事
- 高雄醫學大學內科學科副教授 (2016.8-2021.1) (副字第 143209 號)

學會

- 台灣內科醫學會會員 / 中華民國心臟學會會員
- 台灣心臟超音波學會會員 / 中華民國重症醫學會會員
- 臺灣介入性心臟血管醫學會會員 / 台灣傷口照護學會會員

專長

高血壓、高血脂、心衰竭、心絞痛、心肌梗塞、冠狀動脈疾病、心臟急重症醫療、心臟超音波檢查、周邊血管超音波檢查、心導管及介入性治療、周邊血管介入性治療

S4-6

NEW DEVELOPMENT OF PERIPHERAL ARTERY DISEASE TREATMENT IN 2022

許栢超

Peripheral artery disease (PAD) shares similar major risk factors with coronary artery disease (CAD) and cerebrovascular disease. Patients with PAD have increased cardiovascular morbidity and mortality especially for patients with critical limb ischemia. Major traditional risk factors for PAD include advanced age, hypertension, dyslipidemia, diabetes mellitus, and smoking. In addition, stroke, CAD, chronic kidney disease, races, gender, and heart failure were also reported to be associated with PAD. There are more and more new development treatments for PAD in recent years due to high risk of morbidities and mortality.

Endovascular intervention (EVT) for PAD has also been robustly developed in recent years. Therefore, there are more and more interventionalists involved in this field to improve symptoms, decrease amputation rate, and preserve limbs for the patients.

In this speech, I will review and talk about the new development treatments of PAD including medications, device advance of PAD such as drug-eluting balloon, drug-eluting stent, atherectomy device, thrombectomy device, closure device and so on.

王治元 醫師

Education

1982-1989 M.D. Chung-Shan Medical University, Taiwan
1999-2003 Ph.D. National Taiwan University, Taiwan (Physiology)
2005-2007 EMBA, Graduate Institute of Business Administration, National Taiwan University

Current Position

- Deputy director, Department of Internal Medicine, National Taiwan University Hospital
- Professor, Faculty, Department of Internal Medicine, College of Medicine, National Taiwan University, Taiwan
- Attending, Department of Internal Medicine, National Taiwan University Hospital

Specialty

1993~ Specialty, Taiwan Society of Internal Medicine, Taiwan
1995~ Specialist, Endocrinology and Metabolism, The Endocrinology Society and Diabetes Association of the Republic of China
2005~ Certified Diabetes Educator, Taiwan Association of Diabetes Education, Taiwan

Public Careers

- 1995~1998 Secretary General, The Endocrinology Society of the Republic of China
- 2005~ present Education Committee, The Society of Ultrasound in Medicine, Taiwan
- 2007~ present Board of Directors, Endocrine Society, Taiwan
- 2008~ present Editor, Journal of Medical Ultrasound (West Pacific)
- 2010~ present Board of Directors, Taiwan Association of Diabetic Educator, Taiwan
- 2012~ present Executive editor, Journal of Internal Medicine of Taiwan, Taiwan
- 2014~ present Secretary General, Taiwan Association of Diabetic Educator, Taiwan

S4-7

NEW DEVELOPMENT OF DIABETES TREATMENT IN 2022

王治元

To be presented

VIATRIS 暉致

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維骨力 Viartril-S 250mg / capsule Crystalline Glucosamine Sulphate

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Ogivri 癌吉清凍晶注射劑 440 mg (trastuzumab) Trastuzumab for injection

Fulphila 福富血注射劑 6 mg (pegfilgrastim-jmdb) injection Pegylated Granulocyte Colony Stimulating Factor Injection (PEG-GCSF Injection) 6 mg / 0.6 mL

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The Annual Scientific Meeting of Taiwan Society of Lipids & Atherosclerosis 2022 and The 21st Taipei International Vascular Biology Sympoisum

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