CURRICULUM VITAE

Heng Chew Kiat

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Department of Paediatrics
Yong Loo Lin School of Medicine
National University of Singapore
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Singapore 119228

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Education

Ph.D. (NUS) **1996**
Department of Paediatrics
Thesis: Candidate genes for coronary artery disease

BSc (Hons) (NUS) **1990**
Department of Microbiology
Thesis: Detection and Isolation of *H pylori*

Research Interests

Genetic epidemiology of cardiovascular diseases

Working Experience

2008 – present	Research Associate Professor	Paediatrics, NUS
2003 – 2008	Senior Research Scientist	Paediatrics, NUS
1996 - 2002	Research Scientist	Paediatrics, NUS
2002 – 2013	Teaching Faculty	Life Science Module, NUS
2007 – present	Teaching Faculty	Graduate Programme in YLL School of Medicine, NUS
2002 – 2008	Teaching Faculty	Graduate Programme in Bioengineering, NUS
2000	Visiting Fellow	Dept of Epidemiology School of Public Health, Johns Hopkins University, Baltimore, USA
1997	Exchange Scholar	Dept. of Human Genetics, School of Public Health University of Pittsburgh, USA
1996	Senior Laboratory Technologist	Paediatrics, NUS
1990-95	Laboratory Technologist	Paediatrics, NUS

Leadership/Administrative Experience

2020 – present Assistant Dean, Graduate Studies

Yong Loo Lin School of Medicine, NUS

2008 – present	Research Director, Department of Paediatrics
2005 – present	Laboratory Director, Department of Paediatrics
2001 - present	Director, Genomics Services Laboratory
1999 – 2010	Chairman, Department of Paediatrics Safety Committee
2007 – 2010	Crisis Management Team member, School of Medicine
2009 – 2012	Research Task Force member, School of Medicine
2016- present	Deputy Chairman (Graduate Education), Yong Loo Lin School of Medicine Graduate Program Committee
2009- 2015	School Graduate Programme Committee member, School of Medicine
2011	NUS President's Graduate Fellowship and Lee Kong Chian Graduate Scholarship Selection Committee
1999 – 2005	Member, National University Hospital Radiation Safety Committee

Industry Experience

2020 – present	Founder, Health Beta Pte Ltd
2015 – present	Founder, Cardiogenomics Pte Ltd
2014 – 2020	Founder and Director, SenseGenomics Pte Ltd
2008 - Present	Genetics Consultant to River Valley High School for Biomedical Research Projects
2012-2015	Molecular Genetics consultant to Food and Nutrition Research Institute, Ministry of Health, Philippines
2009 - present	Genetics Consultant, Novena Heart Centre
2015 – present	Genetics Consultant, AIT Ventures
2004 – 2008	Molecular Biology consultant to SiMEMS Pte Ltd
2007	Molecular Biology consultant to Opaldia Limited, UK
2007	Molecular Biology consultant to Institute of Microelectronics, Singapore

Research Grants Held as Principal Investigator or Co-PI

1. Investigation of a novel protein ADTRP and its role in coronary artery disease (MOE2015-T2-1-096)
2. Molecular Mechanism of Inflammation (HUJ-CREATE Programme of the National Research Foundation, Project Number 370062002).

3. Investigation of the role of serum amyloid A in atherosclerosis through initiation of apotosis (NMRC/EDG/1041/2011)
4. Centre Grant - National University Heart Centre (NMRC)
5. Platelet gene expression profiling of patients with poor response to P2Y12 receptor inhibition (NMRC)
6. A genetic epidemiological investigation of a novel variant in the Serum Amyloid A1 gene and its role in coronary artery disease (NMRC/1155/2008)
7. Identification of Novel Genetic Determinants of Atrial Fibrillation in an Asian Population (NMRC)
8. Development Of A Universal Microarray Format For Multiplexed Genotyping Of Candidate Genes For Coronary Artery Disease (NUS, ARF)
9. Novel genetic variation screening in the newly cloned acyl coenzyme A cholesterol acyltransferase 2 (ACAT2) gene in the three ethnic groups in Singapore and their impact on plasma lipid factors in relation to coronary artery disease ((NMRC/0408/2000)
10. Development of a complex disease risk assessment system (CD-RAS) as exemplified by the coronary artery disease risk assessment (CADRA) system (A*STAR) (NSTB EMT/00/022)
11. Micro Viral RNA Extractor (A*STAR) (NSTB EMT/00/022)
12. BioMEMS for Cells Characterization (SERC 022 107 0008)
13. DNA micro extraction system (A*STAR)
14. Genetics of Cardiovascular Disorders (DSO 20030260-R3)
15. BioMEMS Consortium – Viral RNA Micro Extraction System (A*STAR, Exploit)

Total grant awarded: $>7 million

Research Grants Held as Collaborator

1. Development of DNA microarrays for biomedical applications (NUS, ARF)
2. Characterisation of lipid-related coronary risk genetic markers in the three ethnic groups of Singapore: a study in cord blood (NMRC).
3. Prediction of coronary risk by molecular variation of the apolipoprotein(a) gene: A case-control study with adults and newborns of the three ethnic groups in Singapore (NMRC).
4. Haemostatic, fibrinolytic and antithrombotic factor profile and coronary risk in Singapore newborns and their molecular control (NMRC)
5. A Singapore nation-wide study in childhood acute lymphoblastic leukaemia incorporating minimal residual disease based risk-stratification, pharmacogenomic study of thiopurine methyltransferase deficiency and establishment of a cell bank. (NMRC)

6. Genetic polymorphisms of candidate genes in chromosome 5q31-33 in atopic and allergic rhinitis in Singapore population. (NUS, ARF)
7. Hypertension genes in Chinese adults with obesity and the metabolic syndrome (HYGENE-COMS). (NMRC).
8. A Genome-Wide Association Study on Atopy and Allergic Diseases in Singapore.(Biomedical Research Council, Singapore Immunology Network)
9. Genetics of Atopy and Allergic Airway Disease in Singapore (NMRC)

National / International recognition for research

Research awards or prizes

1. University of Pittsburgh Exchange Scholarship, 1997 to carry out apolipoprotein (a) phenotyping in Dr Ilyas Kamboh's Lab in the Department of Human Genetics.

2. Best Paediatric Medical Paper Award, "Monocyte HLA-DR expression in critically ill children with systemic inflammatory response syndrome", 24th Australian & New Zealand Annual Scientific Meeting on Intensive Care, 14-17th Oct 1999.

2. Co author of Young Investigator Award, "Predicting risk of death in our local Paediatric Intensive Care Unit at the National University Hospital", Western Pacific Association of Critical Care: 11th annual Congress, 29 Nov to 3 Dec 2000, Singapore.

3. 2001 Baxter Healthcare Prize in Pediatric Dialysis Research Award, "Risk factors for cardiovascular abnormalities in children on dialysis". 12th Annual Pediatric Dialysis Symposium at the 21st Annual Conference on Dialysis, February 19-21 2001, New Orleans, Louisiana, USA.

4. Singapore Science and Engineering Fair 2003 Gold Award (31 July – 2 August 2003). Hong Enping, Nieh Chih Chiang, Heng Chew Kiat. Optimisation of Genomic DNA Extraction by Thermal Oxide Silicon Wafer

5. Professor Jocelyn Hicks Best Poster Award 2005, Siti Rafeah, Shuli Zhou, Hui-Jen Lye, Chin-Chin Lim, Levent Yobas, Hongmiao Ji, Saxon Liw, Yu Chen, Wing-Cheong Hui, Sek-Man Wong, Tit-Meng Lim, Chew-Kiat Heng_ "An Automated Nucleic Acid Extraction And Amplification Lab-On-A-Chip System For Pathogen Detection".10th International Congress of Pediatric Laboratory Medicine (ICPLM), 3 - 6, September 2005, Raffles City Convention Centre.

6. Singapore Science and Engineering Fair 2008 Merit Award (5-6 March 2008). Cheng Chris-Tin, Leow Koon Yeow, Heng Chew Kiat. Identification of a novel single nucleotide polymorphism in the Serum Amyloid A gene.

7. Singapore Medical Association Clinical Research Award (2014) Ke TJ, Dorajoo R, Han Y, Khor CC, van Dam R, Yuan JM, Koh WP, Liu JJ, Teo YY, Goh DYT, Tai

ES, Wong TY, Friedlander Y, Heng CK. Associations of SNPs in peroxisome proliferator activated receptors with high density lipoprotein, and gene-gene interactions in Singaporean Chinese.

8. Research Excellence Award, 2019. Yong Loo Lin School of Medicine, NUS

Service as a reviewer

Journals

American Journal of Cardiology
European Heart Journal
Human Genetics
Clinical Biochemistry
Life Sciences
Primates
Annals, Academy of Medicine, Singapore
Medicinal Chemistry Reviews-Online

Grant Agencies

U.S.-Israel Binational Science Foundation
European Science Foundation (AXA Research Fund)
Council for Scientific and Industrial Research (CSIR), South Africa
NMRC
BMRC (A*STAR)
Singapore Millennium Foundation

Textbooks

Genetics and Genomics in Medicine by Tom Strachan, Garland Sciences 2014.

Invited presentations at scientific meetings/workshops

1. Lecture "Evolution of the apoB gene and coronary artery disease" 30 July 1997. Department of Human Genetics Seminar, University of Pittsburgh.

2. Plenary lecture on PCR technology at the 8th ASEAN Conference in Medical Laboratory Technology (Brunei Darussalam, 5-9 September 1999)

3. Guest Speaker for "Workshop on Molecular Biology in Medicine" at Research Institute of Diponegoro University (Indonesia, 14-16 Feb 2000).

4. Plenary Lecture: PCR technology in research and clinical diagnosis. In Programme and Abstract Book of 23rd World Congress of Medical Technology, 28 June -3 July 1998, pp55.

5. Symposium: The influence of apolipoprotein E polymorphism on plasma lipid profile. In Programme and Abstract Book of 23rd World Congress of Medical

Technology, 28 June -3 July 1998, pp63.

6. Lecture: Medical Microbiology. Life Science Course for Defence Science Organization. April 2000.

7. Lecture: Medical Microbiology. Life Science Course for Defence Science Organization. 5 April 2001.

8. Lecture: “Simultaneous genotyping of 30 genetic risk markers of coronary artery disease with the gene chip technology” Paediatrics CME Talk. 22 December 2001. Department of Paediatrics, NUS. (This talk is accredited by the Singapore Medical Council for 1 CME point).

9. Plenary Lecture: Chip-based genotyping using Arrayed-Primer Extension (APEX) 1st Singapore Microarray Meeting. 26 Jan 2002, National Cancer Centre.

10. Lecture: Gene Chip Technology. Life Science Course for Software Engineering Singapore. 4 July 2002, SES Systems Pte Ltd, a subsidiary of ST Engineering.

11. Plenary Lecture: Overview of DNA microarray and its application in Genotyping. 1st BFIG Workshop on DNA microarrays. 3-4 October 2002, National University of Singapore.

12. Plenary Lecture: Overview of DNA microarray and its application in Genotyping. 2st BFIG Workshop on DNA microarrays. February 2003, National University of Singapore.

13. Plenary Lecture: Gene Chip and Coronary Heart Disease Risk Assessment. Science Focus 2003. 8 December 2003, National University of Singapore.

14. Lecture: “Lab-on-a-Chip Devices for DNA Extraction and Amplification” 24, August 2004. University Medical Center, Utrecht, the Netherlands.

15. Lecture: “Chip-based automated DNA extraction” Paediatrics CME Talk. 27 December 2004. Department of Paediatrics, NUS. (This talk is accredited by the Singapore Medical Council for 1 CME point)

16. Lecture: “Coronary Artery Disease Risk – Is it predictable by genotypes?” A*STAR Singapore-Bangalore Biomedical Symposium, 9 September 2005 Biopolis, Singapore.

17. Lecture: ”The effects of a high-fibre vs high-fat diet on gene expression profiles– a study in the mouse model” Paediatrics CME Talk. 21 December 2005. Department of Paediatrics, NUS. (This talk is accredited by the Singapore Medical Council for 1 CME point)

18. Lecture “Coronary Artery Disease Risk – Is it predictable by genotypes” COFM Professional Updates. 24 March 2006, Department of COFM, Yong Loo Lin School of Medicine, NUS. (This talk is accredited by the Singapore Medical Council for 1 CME point)

19. Panellist “What are the key factors governing the commercial success of a diagnostic product – Views from the investors and developers” Diagnostic Asia 27-28 March 2007.

20. Lecture “Predicting coronary artery disease risk: How much has genetic information contributed? Diagnostic Asia 2008, 27-28 May 2008.

21. Lecture “Assessing genetic risk of coronary artery disease” Department of Molecular Medicine, Uppsala University, Sweden, 12 May 2008.

22. Panellist “Assessing the pace of personalized medicine in Asia” Diagnostic and Medical Devices Asia, 25-26 March 2009..

23. Lecture “Identifying predictive biomarkers to facilitate prediction of coronary artery disease risk” Diagnostic and Medical Devices Asia, 25-26 March 2009.

24. Lecture “Genetics In Cardiovascular Disease – Is there a role in clinical practice” Second Annual Cardiovascular Symposium, Singapore, 18 April 2009. (This talk is accredited by the Singapore Medical Council for 2 CME points)

25. Lecture “Predicting heart disease risk using genetic and environmental risk factors” Pharma R&D Partnering World Asia 2010, 17-18 March 2010.

26. Lecture “Genetics of Coronary Artery Disease – How far has GWAS led us?” Joint Scientific Symposium on Cellular and Molecular Mechanisms of Inflammation, Singapore, 26 July 2011.

27. Lecture “Association of a single nucleotide polymorphism rs6903956 in Chromosome 6p24.1 with Coronary Artery Disease” Joint Scientific Symposium on Cellular and Molecular Mechanisms of Inflammation, Jerusalem, Israel, 28 June 2012.

28. Lecture “Genetics of Coronary Artery Disease CREATE Joint Symposium – Research Innovation in Infectious & Inflammatory Diseases, Singapore 8-9 July 2013.

29. “Genetics of Coronary Artery Disease and Its Intermediate Traits” Research Innovation in Inflammation & Disease. NUS-HUJ-CREATE with the Medicinal Bioconvergence Research Center of Korea (BIOCON), Singapore 25 July 2014.

30. “Genetic Risk Factors for Coronary Artery Disease Among Singaporeans” 21st Asian Pacific Society of Cardiology Congress. Singapore, 13-15 July 2017

Teaching

1. Functional Genomics (BY4107) for BSc(Hons) 2001-2003
2. Functional Genomics (BL4265) for BSc(Hons) 2003-2004
3. Advanced Molecular Biology (BN5103) for MSc/PhD (Bioengineering) 2002-2008
4. Genetic Medicine In the Post-Genomic Era (LSM4225) 2009- present

5. Cardiovascular and Metabolic Diseases (MDG5222) 2012 - present

4. Research students supervised:

1 Doctor of Medicine candidate

Name	Graduation Year	First job after graduation
Professor Quek Swee Chye	2003	Associate Professor, NUS

14 PhDs

Name	Graduation Year	First job after graduation
Dr Jenny Tan Hui Hui	2006	Post doc fellow with Genome Institute of Singapore
Dr Li Jingguang	2006	Post doc fellow with Nanyang Technological University, Singapore
Dr He Xuelian	2007	Post doc fellow with Institute of Molecular and Cell Biology, A*STAR, Singapore
Dr Wong Chee Furng	2007	Post doc fellow with Bioprocessing Technology Institute, A*STAR Singapore
Dr Zhao Yulan	2008	Lecturer, Advanced Institute of NBIC Integrated Drug Discovery and Development, East China Normal University, Shanghai, China. Now Associate Professor
Dr Chan Mei Yen	2008	Senior Lecturer, University of New Castle, UK. Currently Associate Professor
Dr Lee Ai Cheng	2009	Research Scientist, Siemens Singapore
Dr William Chong	2011	Research Biologist, Bioprocessing Technology Institute
Dr Leow Koon Yeow	2012	Product Specialist, Life Technologies
Dr Li Hongzhe	2012	Post-doc, Lund University, Sweden
Dr Loo Xiu Ling, Evelyn	2012	Research Fellow, NUS/A*STAR
Dr Ke Tingjing	2014	Scientist, Vishuo Biomedical
Dr Han Yi	2017	Post-doc, University of Southern California
Dr Chang Xuling	2017	MOE Post-doc, NUSMED
Ms Zhang Qianyun	Current PhD student	Civil servant, China

3 Master of Science candidate

Name	Graduation Year	First job after graduation
Dr Suman Lal	2005	Research Fellow with National Cancer Centre, Singapore. Currently an entrepreuneur

Ms Tan Si Zhen	2012	Forensic Scientist, Health Science Authority, Singapore
Ms Naeimeh Tayebi	2013	PhD student, Germany. Currently post-doc in Hospital for SickKids, Toronto, Canada.

1 Master of Engineering candidate

Name	**Graduation Year**	**First job after graduation**
Mr Chin Wei Chian	2002	Software Engineer, Defence Science Organization, Singapore

4 Bachelor of Science (Hons) research projects

Ms Phua Sze Ping
Ms Tan Lay Pheng
Ms Clarice Chen
Ms Melissa Lin

Patents Filed

1. Single Silicon Wafer Fabrication of Integrated Micro-Fluidic System:
   Inventors:
   Quanbo Zou, Yu Chen, Janak Singh, Tit-Meng Lim, Tie Yan, **Chew-Kiat Heng**
   Joint US Patent Application No. 10/147,006 Filed on 16 May 2002

2. Shallow Multi-well Plastic Chip For Thermal Multiplexing
   Inventors :
   Yubo Miao, Yu Chen, Tit Meng Lim, **Chew Kiat Heng**
   US Provisional Application No: 60/456,929 filed 24 March 2003
   US Application No: 10/613,599 filed 3 Jul 2003,

3. Nucleic Acid Purification Chip
   Inventors :
   Victor Samper, Hong-Miao Ji, Yu Chen, **Chew-Kiat Heng**, Tit-Meng Lim.
   US Provi Application filed on 30 Dec 2003

4. Methods for assessing risk of diseases with multiple contributing factors
   Inventors: **Chew-Kiat Heng**, Javier F Cabrera, Chen-Khong Tham
   U.S. Patent Application No. 10/634,145, 4 August 2003
   US patent Application No: US2005/0032066 A1 File date: 3 August 2004, Pub date 10 Feb 2005.

5. An Innovative Signal Amplification Strategy Using TdT (Terminal Deoxy-ribonucleotidyl Transferase)-Assisted Probe Elongation (TAPE)
   Inventors: Jingguang Li, **Chew-Kiat Heng**
   U.S. Provisional Patent Application No 60/636,384 filed on 15 December 2004.

6. Bio-Conjugated Carbon Nanotubes Based Labels
   Inventors: Ai-Cheng Lee, Tit-Meng Lim, Jianshan Ye, **Chew-Kiat Heng**
   U.S. Provisional Patent Application No 60/636,384 filed on 26 August 2005

7. Immobilization unit and device for isolation of nucleic acid molecules.
   Inventors: Hongmiao Ji, Levent Yobas, Yu Chen, Wing Cheong Hui , **Chew Kiat Heng**, Tit Meng Lim
   PCT Patent Application No PCT/SG2005/000374 file on 28 October 2005

8. Shallow Multi-well plastic chip for thermal multiplexing
   SG Patent No 114901 (Application No 200504630-5 filed on 23 March 2004)
   Inventors: Miao Yubo, Chen Yu, Lim Tit Meng (NUS), **Heng Chew Kiat** (NUS)
   SG Patent No: 114901
   Date of Grant: 28 September 2007

Service to Profession/Industry

a. Judge, Singapore Science and Engineering Fair (2010- present)

b. H3 Examiner (Ministry of Education) (2011 – 2016)

c. Mentor - Industrial attachment students taking life sciences/biotech courses from the polytechnics:

1. Choo Poh Heok	Temasek Polytechnic (1999/2000)
2. Ooi Soo Fern	Temasek Polytechnic (1999/2000)
3. Boey Hui Kuang Adrian	Singapore Polytechnic (May – Dec, 2001)
4. Chan Jianxiong	Singapore Polytechnic (May – Dec 2001)
5. Ivan Hong Hee Kean	Singapore Polytechnic (May – Dec 2001)
6. Siti Rafeah Bte Mohamed Rafei	Temasek Polytechnic (Nov 2000 to Jan 2001)
7. Liew Shunzhong Max	Temasek Polytechnic (Nov 2000 to Jan 2001)
8. Farahdilla Ariffin	Ngee Ann Polytechnic (May – July 2001)
9. Oliver Lum	Singapore Polytechnic (May- July 2001)
10. Zhou Shu Li	Singapore Polytechnic (May – July 2002)
11. Amy Gan	Singapore Polytechnic (Nov02 -July 2003)
12. Cheong Qi Fang	Temasek Polytechnic (24 Nov03–10Apr 04)

d. Mentor - Bachelor of Science research projects students from NTU

1. Ms Lim Wan'E	(Jan – Apr 2009)
2. Ms Abigail Huang Yong Ping	(Jan – Apr 2009)

c. Mentor - junior college students in Science Research Programme

1. Hong En Ping — Raffles Junior College (2002)
   Gold Medalist, Singapore Science and Engineering Fair 2003

2. Nieh Chih Chiang — Raffles Junior College (2002)
   Gold Medalist,, Singapore Science and Engineering Fair 2003

3. Sherman Loo — Hwa Chong Junior College (2003)

4. Shawn Tan — Raffles Junior College (2004)

5. Edlyn Lee — Hwa Chong Junior College (2004)

6. Jason Pek — Raffles Junior College (2005)

7. Toh Jia Yi — Raffles Junior College (2006)

8. Chris Tin Tan — Raffles Junior College (2007)
   Merit Award, Singapore Science and Engineering Fair 2008

9. Audrey Kang — Raffles Junior College (2008)

10. Suzanne Teo — Raffles Junior College (2008)

11. Shen Weiwei River Valley High School (2009)

12. Xu Jinjing River Valley High School (2009)

13. Sherrie Lim River Valley High School (2009)

14. Low Zun Siong River Valley High School (2009)

15. Emily Tey River Valley High School (2009)

16. Shermian Koh River Valley High School (2009)

17. Wah Wen Rui River Valley High School (2009)

18. Pamela Leong River Valley High School (2009)

19. Madeline Lien River Valley High School (2009)

20. Deborah Loh Yu Chin Hwa Chong Institution (2010)

21. Janice Ang River Valley High School (2010)

22. Tracy Koh River Valley High School (2010)

23. Lee Zi Ning River Valley High School (2010)

24. Kim Jimin Raffles Junior College (2011)

25. Lim You Sheng River Valley High School (2011)

26. Ching Zi Hao River Valley High School (2011)

27. Low Mei Ling River Valley High School (2011)
Singapore Science and Engineering Fair Finalist 2012

28. Lai En Chuen River Valley High School (2011)
Singapore Science and Engineering Fair Finalist 2012

29. Chong Kai Xin River Valley High School (2011)
Singapore Science and Engineering Fair Finalist 2012

30. Jonathan Phua Kia Sheng Hwa Chong Institution (2012)
Singapore Science and Engineering Fair Finalist 2012

31. Wong Yan Zhi Hwa Chong Institution (2012)
Singapore Science and Engineering Fair Finalist 2012

32. Soh Hui Ling Hwa Chong Institution (2012)

33. Madeleine Tan Qiao Si River Valley High School (2012)
Singapore Science and Engineering Fair Finalist 2013

34. Esther Zeng Hui River Valley High School (2012)
Singapore Science and Engineering Fair Finalist 2013

35. Chan Jia Qi River Valley High School (2012)
Singapore Science and Engineering Fair Finalist 2013

36. Tan Xue Hui River Valley High School (2013)
Singapore Science and Engineering Fair Finalist 2014

37. Chua Chen Xi Kasia River Valley High School (2013)
Singapore Science and Engineering Fair Finalist 2014

38. Eng Ming Hui River Valley High School (2013)
Singapore Science and Engineering Fair Finalist 2014

39. Wendy Ling River Valley High School (2014)
Silver Medalist, Singapore Science and Engineering Fair 2015

40. Edna Ng Yu Chen River Valley High School (2014)
Silver Medalist, Singapore Science and Engineering Fair 2015

41. Teoh Wei Shan River Valley High School (2014)
Silver Medalist, Singapore Science and Engineering Fair 2015

42. Gao Fangjiao Raffles Institution (Junior College) 2014

43. Lee Xin Min Raffles Institution (Junior College) 2014

44. Kendy Chan Gui Fang River Valley High School (2015)
Silver Medalist,
1st Prize, The Chapter of Clinician Scientist Award
Singapore Science and Engineering Fair 2016

45. Koo Fang Ru River Valley High School (2015)
Silver Medalist,
1st Prize, The Chapter of Clinician Scientist Award
Singapore Science and Engineering Fair 2016

46. Chong Shu Chen River Valley High School (2015)
Silver Medalist,
1st Prize, The Chapter of Clinician Scientist Award
Singapore Science and Engineering Fair 2016

d. I assisted Media Corp in the production of “Emily’s World” in January 2004. This is a children’s educational programme that explains the science behind things that children encounter on a daily basis. In the production, I acted as a professor who explained DNA and genetics to Emily, an animated cartoon character.

e. I assisted Channel U in April 2004 in their production of “New Frontier”, a documentary showcasing technologies invented in Singapore in which our automated DNA extraction chip was featured.

f. I was the genetics expert interviewed by Channel News Asia’s production of the documentary “Chasing Happiness” in December 2012.

PUBLICATION LIST

INTERNATIONAL REFEREED JOURNALS

1. Saha N, Tay JSH, **Heng CK**, SE Humphries (1993). DNA polymorphisms of the apolipoprotein B gene are associated with obesity and serum lipids in healthy Indians of Singapore. *Clin Genet* 44: 113-120.

2. Saha N, Liu Y, **Heng CK**, Hong S, Low PS, Tay JSH (1994). Association of factor VII genotypes with plasma factor VII activity and antigen levels in healthy Indian adults and interaction with triglycerides. *Arterioscler Thromb* 14:1923-27

3. Gajra B, Candlish JK, Saha N, **Heng CK**, Soemantri AG, Tay JSH (1994). Influence of polymorphisms for apolipoprotein B (*ins/del*, *Xba*I, *EcoR*I) and E on serum lipids and apolipoproteins in a Javanese population. *Genet Epidemiol* 11: 19-27.

4. **Heng CK**, Saha N, Tay JSH (1995). Lack of Association of apolipoprotein E polymorphism with plasma Lp(a) levels in the Chinese. *Clin Genet*: 48:113-19.

5. Saha N, **Heng CK**, Mozoomdar BP, Reuben EM, Soh HT, Low PS, Tay JSH, Liu Y, Hong S (1995). Racial variation of Factor VII activity and antigen levels and their correlates in healthy Chinese and Indians at low and high risk for coronary heart disease. *Atherosclerosis* 117: 33-42.

6. **Heng CK** (1996). Lipid risk factors of coronary artery disease. *J Med Lab Sc* 10:1-9.

7. Low PS, **Heng CK**, N Saha, Tay JSH (1996). Racial variation of cord plasma lipoprotein(a) levels in relation to coronary risk level: a study in three ethnic groups of Singapore. *Pediatr Res* 40: 718-722.

8. **Heng CK**, Saha N, Low PS. (1997) Dyslipidaemia in Asia: Is there an ethnic difference? *Medical Progress* 24: 7-13.

9. **Heng CK**, Saha N, Tay JSH, Low PS (1997). Plasma lipoprotein(a) levels in the Chinese from China and Singapore. *Ann Acad Med Singapore.* 26:303-307.

10. Gajra B, Candlish JK, **Heng CK**, Mak JW, Saha N (1997). Genotype associations among seven apolipoprotein B polymorphisms in a population of Orang Asli ("aborigines") of West Malaysia. *Hum Biol* 69:629-640.

11. **Heng CK**, Saha N, Low PS (1999). Evolution of the apolipoprotein B gene and coronary artery disease: A study in low and high risk Asians. *Ann Hum Genet* 63: 45-62.

12. **Heng CK** (1999). PCR technology in research and clinical diagnosis – an illustrative overview. *J Med Lab Sc* 13:1-7.

13. **Heng CK**, Low PS (2000) Cladistic analysis: Its applications in association studies of complex diseases Ann Acad Med Singapore, 29:313-321.

14. **Heng CK**, Low PS, Saha N (2001). Variations in the promoter region of the Apolipoprotein A-1 gene influence plasma Lipoprotein(a) levels in Asian Indian neonates

from Singapore *Pediatr Res* 49:514-518.

15. Zhang L, **Heng CK**, Tan TW (2001). Cladogrammer: A tool for incorporating polymorphic sites data and haplotype frequencies into cladogram analysis. *Bioinformatics* 17:481-482.

16. Yap HK, Han EJS, **Heng CK**, Gong WK (2001) Risk factors for steroid dependency in children with idiopathic nephritic syndrome. *Pediatr Nephrol* 16:1049-1052.

17. Liu Y, Saha N, **Heng CK**, Hong S, Low PS (2001) Fibrinogen genotypes (alpha and beta) are associated with plasma fibrinogen levels in Chinese. *J Med Genet* 38:e31.

18. Chan PC, **Heng CK**, Tan GH, Goh DYT and Yap HK (2001) Mortality risk models for Paediatric Intensive Care. *Singapore Paediatric Journal*, 43: 6264.

18. Zandi P, Klein AP, Addington AM, Hetmanski JB, Roberts L, Peila R, Shrestha S, Shaw CK, **Heng CK,** Langefeld CD, Beaty TH (2001) Multilocus Linkage Analysis of the German Asthma Data. *Genet Epidemiol* 21 Suppl 1:S210-5.

19. Kham SKY, Tan PL, Tay AHN, **Heng CK**, Yeoh AEJ, Quah TC (2002). A survey of TPMT in a multi-racial Asian population and children with acute lymphoblastic leukemia. *J Pediat Hematol/Oncol*; 24:353-359

20. Liu Y, **Heng CK**, Saha N, Hong S, Low PS (2002) Genotype associations of factor VII gene with plasma factor VII coagulant activity and antigen levels in healthy Chinese. *Blood Coagul Fibrinolysis* 13:217-224.

21. Zou Q, Miao Y, Chen Y, Sridhar U, Chong SC, Chai TC, Yan T, The CHL, Lim TM, **Heng CK** (2002) Micro-assembled multi-chamber thermal cycler for low-cost reaction chip thermal multiplexing. *Sensors and Actuators* A 102:114-121.

22. Chen Y, Miao Y, Samper V, Mustafa F, Zhang QX, **Heng CK**, Lim TM (2002) Microfabrication of a Si mesh structure depth filter. *Proceedings of the Micro Total Analysis Systems 2002*. 2:739-741.

23. Wang GQ, DiPetro M, Roeder K, **Heng CK**, Bunker CH, Hamman RF, Kamboh MI (2003) Cladistic analysis of human apolipoprotein A4 polymorphisms in relation to quantitative plasma lipid risk factors of coronary heart disease. Ann *Hum Genet* 67:107-124.

24. Tan JHH, Low PS, Tan YS, Tong MC, Saha N, Yang HY, **Heng CK** (2003) ABCA1 Gene Polymorphisms and Their Associations with Coronary Artery Disease and Plasma Lipids in Males from 3 Ethnic Populations in Singapore. *Hum Genet* 113 : 106–117.

25. Lim J, Lal S, Ng KC, Ng KS, Saha N, **Heng CK** (2003). Variation of the platelet glycoprotein IIIa $PI^{A1/A2}$ allele frequencies in the three ethnic groups of Singapore. *Int J Cardiol* 90:269-273.

26. Chen SP, Cheung W, **Heng CK**, Jordan SC, Yap HK (2003) Childhood nephrotic syndrome in relapse is associated with down-regulation of monocyte CD14 expression and lipopolysaccharide-induced tumour necrosis factor-α production. *Clin Exp Immunol* 34:111–119.

27. Miao Y, Chen Y, Zou Q, Singh J, Yan T; **Heng CK**, Lim TM (2003) Low cost micro-PCR

array and micro-fluidic integration on single silicon chip. *Int J Comp Engr Sci* 4:231-234.

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