Name: Elly Sau-Wai NGAN
Address: Rm5-08, 5/F, The Hong Kong Jockey Club Building for Interdisciplinary Research, 5 Sassoon Road, Hong Kong
Phone: (852) 2831 5410
Email: engan@ hku.hk

EDUCATION

2000 Ph.D. Department of Zoology, University of Hong Kong
1995 B.Sc.(*Hons*) in Molecular Biology, Hong Kong University of Science & Technology

EMPLOYMENT AND RESEARCH EXPERIENCE

2015-present Associate Professor: Department of Surgery, University of Hong Kong
2009-2015 Assistant Professor: Department of Surgery, University of Hong Kong
2004-2009 Research Assistant Professor: Department of Surgery, University of Hong Kong
2002-2004 Postdoctoral Fellow: Department of Obstetrics & Gynaecology, University of Hong Kong
2000-2002 Postdoctoral Fellow: Department of Cellular & Molecular Biology, Baylor College of Medicine

RESEARCH OUPUT

Book chapters/Review articles

1. Lui, K.N. Tam, P.K. **Ngan, E.S**.* 2018 Update on the Role of Stem Cells in the Treatment of Hirschsprung Disease. European Journal of Pediatric Surgery, 28(3): 215-221. (corresponding author)

2. **Ngan, E.S.*** 2015. Heterogeneity of neuroblastoma. *Oncoscience, 2015 Aug 24;2(10):837-8*. (corresponding author)

3. Liu, J.A, **Ngan, E.S.*** 2013. Hedgehog and Notch signaling in enteric nervous system development. *Neurosignals*, 22(1):1-13. (corresponding author)

4. Yung, J.S., Tam, P.K., and **Ngan, E.S.*** 2013. Pluripotent stem cell for modeling neurological diseases. *Exp Cell Res* 319:177-184. (corresponding author)

5. **Ngan, E.S.**, Kim, K.H., and Hui, C.C. 2013. Sonic Hedgehog Signaling and VACTERL Association. *Mol Syndromol* 4:32-45.

6. Chow, K.H., Tam, P.K., and **Ngan, E.S.***. Neural crest and Hirschsprung's disease. 2012. Stem Cells and Human Diseases. Srivastava, Rakesh K.; Shankar, Sharmila (Eds.) Springer. ISBN 978-94-007-2800-4 Chapter 16. (corresponding author)

7. **Ngan, E.S.***, and Tam, P.K. 2008. Prokineticin-signaling pathway. *The international journal of biochemistry & cell biology* 40:1679-1684. (corresponding author)

8. Chua, S.S., Ma, Z., **Ngan, E.**, and Tsai, S.Y. 2004. Cdc25B as a steroid receptor coactivator. *Vitam Horm* 68:231-256.

9. **Ngan, E.S.**, Schillinger, K., DeMayo, F., and Tsai, S.Y. 2002. Apr. The mifepristone-inducible gene regulatory system in mouse models of disease and gene therapy. *Seminars in cell & developmental biology* 13:143-149.

Journal publications (listed in Appendix I)

H index: 21 (from manuscripts published after 1999)

66 publications, 33 as first/corresponding author, and 33 as contributing author.

From **Appendix I**:
Publication **# 5** (*Gastroenterology 2015 1837-1848.e5*) was highlighted in "Covering the cover" and "Editorials" of the journal.

Publications **#9** (*Oncogene* 2013 32:4086-4099), **#15** (*Exp Cell Res* 2013 319:177-184) and **#22** (*J Clin Invest.* 2011 121:3467-3478) have been cited by review articles published in *Nature Reviews Cancer* and *Nature Gastroenterology*

Publication **#28** (*J Natl Cancer Inst*. 2009 101:162-75) was evaluated as **Must Read** by the Faculty of 1000 Medicine (Gilbert Cote: 9 Feb 2009; Giancarlo Vecchio: 27 Feb 2009; Paolo Emidio Macchia: 28 Sep 2009).

Conference papers (listed in Appendix II)
6 conference papers. 23 presented orally. 26 Travel award/invited talks

TECHNOLOGY TRANSFER

Patents and agreements

- **Participation agreement** and sponsorship between HKU, Guangzhao SurExam Bio-Tech company and Hong Kong Thyroid and hernia centre for the development of "A risk assessment kit for Goiter and Thyroid Cancer".

Publications
The publications below were selected for the SciBX:
Science–Business eXchange is a groundbreaking weekly publication that provides a timely, concise and understandable analysis of the scientific content and commercial potential of the most important translational research papers from across the life science literature. The editorial team at SciBX mines thousands of articles across the literature each week and distill the flood of information down to the 25 most important developments. And by reporting the industry viewpoint on the key papers, SciBX provides a unique and essential scientific and commercial perspective on today's breakthrough science.

- **Science-Business eXchange** SciBX 2(26); doi:10.1038/scibx.2009.226. (publication #21).
- **Science-Business eXchange** SciBX 2:02/19/2009. (publication #22).

KNOWLEDGE TRANSFER

1. TVB media interview 24th April, 2017
2. "Stem Cell Based Model for Identification of Novel DNA Changes in Patients with Hirschsprung Disease". Press release. 5th April, 2017
3. "Novel DNA Changes in Patients with Hirschsprung disease that disrupt the development of the enteric nervous system". Press release. 27th August, 2015.
4. Stem Cell Knowledge Exchange Program: from the scientific cutting edge to experience 幹細胞知識交流計劃：體驗科學頂尖領域 June 2012
5. "Premature Development of Nerve-supporting Cells as a Cause for Hirschsprung's disease". Press release. 22nd August, 2011.
6. RTHK Health Programme "Ad Wiser" (精靈一點) on Thyroid cancer. 5 March, 2009.
7. "An Inherited Gene Change Associated with Goiter and Thyroid Cancer" Press Conference. 19 February, 2009.

INVITED LECTURES AND SEMINARS

1. Pluripotent stem cell-based model of Hirschsprung Disease. The 5th Symposium on Development of the Enteric Nervous System: cells, signals, gene and therapy, ENS 2018, Boston, USA. 8-11 April 2018.
2. Restoration of neural crest cell function in human induced pluripotent stem cells via CRISPR/Cas9, the 2017 Annual Meeting of Indonesian Society of Human Genetics (INaSHG), Yogyakarta, Indonesia October 2017. **(*Keynote Lecture*)**
3. iPSC models for studying neural crest. Symposium on "Reparative Medicine and Beyond", Ming Wai Lau Centre for Reparative Medicine, Karolinska Institutet-Hong Kong, Feb 2017.
4. Using Pluripotent Stem cells to model neurodevelopmental disease: Hirschsprung disease. The Developing Brains, The Nobel Forum, Stockholm, Sweden Aug 2016
5. Neurocristopathy: Hirschrung disease. IAS Focused Program: Frontiers in Stem Cell Research, HKUST, Hong Kong Jan 2016.

6. Neural Crest Cells & Hirschsprung disease. Symposium on Stem Cells, Reproduction, Development and Disease, HKU, Hong Kong. Dec 2015.

7. Disease Models for Neurocristopathies. SRT symposium, HKU, Hong Kong. Mar 2014.

8. Prokineticin signaling and *de novo* population of c-KIT expressing cells in neuroblastoma progression. The 72nd Annual Meeting of the Japanese Cancer Association, Yokohama, Japan. Oct 2013.

9. Modeling Hirschsprung's disease using patient specific iPSC. ASI, Stem Cells: Niches, Regeneration & Repair, Hong Kong. Mar 2013.

10. Hedgehog and Notch signaling in neural crest development. KI-HKU Course for Nervous System Development, HKU, Hong Kong. Apr 2012.

11. Niches for neuroblastoma. ASI, Hong Kong. Jan 2012.

12. Neural crest: stem cells and disease. KI - Hong Kong Regenerative Medicine Workshop. Karolinska Institutet, Stockholm, Sweden. Sep 2011.

13. Neural crest fate determination and disease modeling. Centre for iPS research and application (CiRA), Kyoto University, Japan. Sept 2011.

14. Neural crest specification and modeling of neural crest disorders. SRT symposium, Hong Kong. Feb 2011.

15. Neural crest stem cells and skin-derived neural crest-related precursor cells. Inaugural symposium on stem cell and regenerative medicine program, Hong Kong. Nov 2009.

16. Thyroid Transcription factor-1 (TTF-1) mutation in Multinodular Goitre and Papillary Thyroid Carcinoma Patients. HKICC, Hong Kong. Nov 2009.

17. Neural crest and neurocristopathy. Nankai University, Tianjin, China. Sept 2008.

18. Prokineticins in Hirschsprung disease and neuroblastoma. International HSCR consortium meeting, Hong Kong. Jun 2008.

19. Neural crest cells and the associated diseases. Chiba Cancer Research Center, Chiba, Japan. Jan 2008.

20. Prokineticin signaling in neural crest cells during embryogenesis and tumorigenesis. SurExam Serial Lecture. Guangzhou SurExam, China. Jan 2008.

21. Prokineticin signaling in neuroblastoma cancer stem cells and tumor progression. Surgical Forum, Department of Surgery, Hong Kong. Jan 2008.

22. Prokineticin in neuroblastoma and neuroblastoma cancer stem cells. HKICC, Hong Kong. Nov 2007.

23. Prokineticin signaling: a potential therapeutic target for neuroblastoma. 5th Annual Congress of International Drug Discovery Science and Technology (IDDST), Xi'an, China. Oct 2007.

24. Prokineticin signaling in normal growth and tumorigenesis. 12th World Congress on Advances in Oncology and 10th International Symposium on Molecular Medicine, Greece. (co-chairperson of the session) Sept 2007.

25. Signaling mechanisms regulating neural crest cells: in growth and tumorigenesis. Stem Cell workshop, SRT of Development and Reproduction, Hong Kong. 2006.

26. Prokineticin signaling in neural crest and associated diseases. Surgical Forum, Department of Surgery, Hong Kong. 2006.

PRIZES AND AWARDS

2017	International Society of Differentiation – Sessions/ Symposia Organization (ISDSO) Award by the International Society of Differentiation
2015	The Best Research Output Prize, Department of Surgery The Best Research Output Prize, SRT of Development & Reproduction
2013	Travel grant award, The Japanese Cancer Association, Japan
2012	Outstanding Basic Research Paper, Department of Surgery, University of Hong Kong
2011	Young invited speaker award, Asia Interchange Scholarship Japan Fund, Japan
2011	SRT D & R Best Research Output Award, University of Hong Kong
2008	Outstanding Presentation Award, 1st class. The 3rd Cross-strait Symposium on Pediatric Oncology, Shanghai, China
2008	International Travel Grant Award, ANR2008, Asian Children's Care League - JAPAN (ACCL), Chiba, Japan
2007	Outstanding Presentation Award, 12th World Congress on Advances in Oncology and 10th International Symposium on Molecular Medicine, Greece.
2007	The Best Poster Presentation, MGH-HKU-Nature China Forum 2007, HK
2002	Travel Award, Endocrine Society, Endo 2002, San Francisco, CA
2001	AstraZeneca Travel Grant Award, Endocrine Society, Endo 2001, Denver, CO
2000-2002	Croucher Foundation Fellowship, Hong Kong
2000	Fogarty Fellowship from NCI, Frederick, MD (declined)
1998-1999	J.G. Philips Memorial Scholarship, HK
1999	Travel Grant from the Society for the Study of Endocrinology, Metabolism and Reproduction, HK

WORKSHOPS/TRAINING

2012	KI-HKU Course for Nervous System Development, HKU, HK
2011	Induced pluripotent stem cell workshop, Centre for iPS research and application (CiRA), Kyoto University, Japan.
2011	KI - Hong Kong Regenerative Medicine Workshop, Karolinska Institutet, Stockholm, Sweden
2005	Spiral cord injury impactor training workshop, HKU, HK

FUNDING

(**HK$12.84 million** secured as PI &

as co-PI in four collaborative grants of **HK$74.96 million and RMB20 million**)

Grants obtained as Principal Investigator (PI)

Externally peered-reviewed

2018 GRF HKU 17110818 Genetic study on the novel roles of vinculin in enteric and cardiac neural crest cell development and the associated congenital diseases. HK$972,000 (PI) (2019-2021)

2017 LDS Seed Funding for Stem Cell and Regenerative Medicine Research (LDS-IS-2016/17) Impactful scheme: Neural crest cells and enteric nervous system: development, disease modeling and tissue repair. HK$3,000,000 (PI) (2017-2020)

UICP (UIM/299): Establishment of new treatment strategy for neurological diseases using patient specific induced pluripotent stem cells and high-resolution single cell sequencing. HK$7,600,000 (co-PI) (2017-2019)

2016 GRF HKU17112416: Kinesin family member protein 7 (KIF7) in ciliopathy associated gut motility disorders. HK$961,033 (2017-2019)

HMRF 03143236: Reading Hedgehog signaling in enteric neural crest cells: implications in Hirschsprung disease. HK$1,200,000 (2016-2018)

2015 GRF HKU17109215: Genetic interaction between SUFU, GLI2 and βTrCP in medulloblastoma tumorigenesis. HK$969,066 (2015-2018)

HMRF 02132396: Human stem cell based model for studying neuronal versus glial lineage differentiation of neural crest cells: implication in Hirschsprung disease. HK$1,000,000 (2015-2017)

2014 GRF HKU17116914: Genetic analysis of interaction between Sufu, Gli and Sox10 in Hedgehog mediated gliogenesis of enteric neural crest cells. HK$748,278 (2015-17)

TRS T12C-714/14: Genetics and functional genomics of neural crest stem cells and associated disease: Hirschsprung disease. HK$62,360,000 (2015-2019) (co-PI)

2013 HMRF 01121476: Potential use of patient specific induced-pluriopotent stem cell (iPSC) to define genetic lesions contributing to the disease phenotypes of syndromic Hirschsprung (HSCR). HK$989,760 (2014-2015)

2011 SK Yee Medical Research Fund 2011: Neural crest-derived cells: Role in functional repair of the nervous system. HK$5,000,000 (2012-2015)(co-PI)

2010 Children's Cancer Foundation Paediatric Oncology Research Grant: Krüppel-like factor 4 in neuroblastoma regression: from clinic to lab and back to clinic. HK$ 500,000 (2011-2014)

GRF HKU 775710M Premature gliogenesis of enteric neural crest cells induced by aberrant Sonic hedgehog-Notch signalling: a cause of Hirschsprung disease? HK$1,200,000 (2011-2013)

2009 GRF HKU 7739/09M: Prokineticin signaling in neuroblastoma. HK$755,760 (2010-2011)

2008 GRF HKU 7728/08M: Thyroid transcription factor-1 (TTF-1), a potential susceptibility gene for familial papillary thyroid carcinoma. HK$1,512,274 (2009-2011)

2007 National basic research fund 973 (2007-2010) 2007CB914801: Multiple approaches to gain insight into neuroblastoma regression. RMB300,000 (PI of a subtheme)

Internally peered-reviewed

2018 HKU Seed Funding Programme for Basic Research 201711159114. Defining enteric nervous system specific regulatory regions in human enteric neural crest cells. HK$111,050

2017 HKU Seed Funding Programme for Basic Research 201611159030. Roles of Vinculin in enteric and cardiac neural crest during enteric nervous system and heart development. HK$66,490

2016 HKU Seed Funding Programme for Basic Research 201511159025 Establishment of a disease model for constipation using Kinesin family member protein 7 (KIF7) knockout mice. HK$ 68,980

2015 HKU Seed Funding Programme for Basic Research 201411159014. Oncogenic function of Sufu in Medulloblastoma tumorigenesis. HK$82,600

2014 HKU Seed Funding Programme for Basic Research 201310159002. Coordinated action of Sufu, Gli and Sox10 in Hedgehog mediated gliogenesis of enteric neural crest cells. HK$47,900

2013 HKU Seed Funding Programme for Basic Research 201210159033. Gli and Sox10 interaction in enteric neural crest cell lineage determination. HK$100,900

2012 HKU Seed Funding Programme for Basic Research 201110159005. Roles of c-KIT expressing cells in neuroblastoma heterogeneity. HK$61,000

2011 HKU Seed Funding Programme for Basic Research 201011159143. Use of human iPSC-derived neural crest for studying functional implications of RET mutations identified in Hirschsprung's patient. HK$58,000

2010 HKU Seed Funding Programme for Basic Research 200910159025. Implication of Hedgehog signaling in premature gliogenesis of neural crest cells. HK$67,000

HKU Seed Funding Programme for Applied Research 200902160006. Small molecule inhibitors for use in the treatments for thyroid diseases. HK$100,000

2009 HKU Seed Funding Programme for Basic Research 200809159011. Prokineticin signaling in Neuroblastoma stem cell. HK$70,000

2007 HKU Seed Funding Programme for Basic Research 200611159030. Is thyroid transcription factor (TTF-1) the susceptibility gene for familial papillary thyroid carcinoma (PTC) predisposition. HK$80,000

2006 HKU Seed Funding Programme for Basic Research 200511159037. Novel Function (s) of Prokineticins in Neural Crest Stem Cells. HK$120,000

2005 HKU Seed Funding Programme for Basic Research 200411159052. Sonic hedgehog (Shh) signaling in the enteric neural crest cells. HK$120,000

Grants as Co-investigator

Externally peered-reviewed

2014 GRF HKU17119514: Using genome-editing system to establish human stem cell-based disease model for studying Hirschsprung's (HSCR) associated genetic lesions: HK$1,150,642 (2015-2017) (PI: Prof. PKH Tam)

2008 GRF HKU 7650/08M: Fine mapping of Hirschsprung's disease loci on the 3p21 and 9q31candidate regions, HK$ 566,774 (2009-2011) (PI: Dr. MM Garcia-Barcelo)

2007 GRF HKU 7654/07M: Functional evaluation of RET coding and non-coding sequence mutations in Hirschsprung's disease, HK$: 984,259 (2008-2010) (PI: Dr. MM Garcia-Barcelo)

2004 GRF HKU 7339/06M: Investigation of cell autonomous function of Hedgehog signaling on vagal neural crest cells by conditional knockout of Smoothened in mice, HK$ 1,279,500 (2007-2009) (PI: Dr. VCH Lui)

2004 GRF HKU 7395/04M: Endocrine gland derived vascular endothelial growth factor (EG-VEGF) in human endometrium. HK$ 809,000. (2004-2005) (PI: Prof. PC Ho)

Internally peered-reviewed

2015 Small Project Funding 201409176143. Application of the CRISPR Cas9 system to establish a neural crest specific human embryonic stem cell reporter line. HK$42,256 (PI: Dr. PL Lai)

Small Project Funding 201409176161. Establishment of a live cell detection system for human pluriopotent stem cell differentiation assay. HK$42,256 (PI: Dr. ST Lau)

2014 HKU Seed Funding Programme for Basic Research 201311159012. Generation of isogenic human embryonic stem cells for modeling Hirschsprung's disease. HK$83,800. (PI: Prof. PKH Tam)

2013 HKU Small Project Funding 201209176156. Generation of a neuronal reporter cell-line by TALEN mediated gene targeting in human iPS cell. HK$76,920. (PI: Dr. PL Lai)

HKU Small Project Funding 201209176119. Combination treatment of anti-GD2 antibody ch14.18 with Prokineticin antagonist PC-1 for neuroblastoma. HK$74,150. (PI: Dr. ST Lau)

2012 KE Impact Project Funding: KE-IP-2012/13-40: Stem Cell Knowledge Exchange Program: from the scientific cutting edge to experience 幹細胞知識交流計劃：體驗科學頂尖領域 HK$100,000 (PI: Prof Ronald Li)

2011 HKU Small Project Funding 201007176021. The role of Krüppel-like factor 4 in neuroblastoma regression. HK$56,457 (PI: Dr. ST Lau)

2010 HKU Seed Funding Programme for Basic Research 200910159040. Functional characterization of the V226L, H347Y, and P356L NRG1 mutations identified in Hirschsprung's disease patients. HK$61,000 (PI: Dr. MM Garcia-Barcelo)

2004 HKU Seed Funding Programme for Basic Research. Role(s) of endocrine gland derived vascular endothelial growth factor (EG-VEGF) in endometrial angiogenesis and embryo development. HK$120,000(PI: Dr. CKF Lee)

TEACHING AND SUPERVISION

Undergraduate teaching

Curriculum design
Course coordinator: BBMS3012 Stem cell and Regenerative medicine (2016-present), School of Biomedical Science, Faculty of Medicine

PBL Case Writer: MBBSI Introduction to the Art and Science of Medicine Block (2012-present), Faculty of Medicine

Lectures
Stem cell and Regenerative medicine (BBMS3012), (2016-present), School of Biomedical Science
Human Biology (BBMS1001) (2012-present), Department of Anatomy
Bioinformatics course BIOC3808-A (1rst semester 2010/11), Department of Biochemistry
Bioinformatics course BIOC3808-A (1rst semester 2009/10), Department of Biochemistry

Tutorials/Practical
Common Curriculum Course CCST1001 Living with stem cells (2011/12)

Problem based learning
BDSIII (2014- present), Faculty of Dentistry
MBBSI (2nd Semester 2009-2013), Faculty of Medicine

Other teaching duties

- Invited lecturer for a postgraduate course in Karolinska Instutet, Stockholm, Sweden (Aug-Sep 2016)
- TEC chair/Internal examiner of 3 PhD or 4 MPhil students
- Academic Advisor for MBBS student (2012/13)
- Facilitator for Case-based workshop on research integrity (Sept 2012)
- Basic research introduction course for postgraduates and surgeons (2004, 2006, 2008, 2009).
- Seminars given at the Surgical Forum, Department of Surgery, HKU 2007.
- Seminars given at the Advanced Study Institute meetings (2006-present).
- Departmental Journal Club
- Seminar given at the periodical meetings of the Strategic Research Theme for Genomics and of the Centre for Reproduction, Birth and Growth.

Supervision

Current: 5 PhD students as principal supervisor (PS). 1 MPhil and 2 PhD students as active co-supervisor. 1 BBMS undergraduate student.
Past:
2 PhD students, 4 MPhil and seven final year students as PS and 3 PhD and 3 MPhil students as co-supervisor.
I also trained overseas visiting students who joint our laboratory for a few months (Miss CHOW Vici Samantha, University of Toronto, Canada and Mr. LI Raymond, Imperial College, UK).

PhD student YUNG, Jasmine Sum-Yee was awarded with:

- Best Abstract Award on "Generation of patient-specific iPSCs for Hirschsprung's disease modelling." in the Days of Molecular Medicine 2011: Re-engineering Regenerative Medicine, November 2011, Hong Kong.

- Best Poster Presentation on "Modelling Hirschsprung's disease using patient-specific iPS cells" in the 17th Research Postgraduate Symposium, The University of Hong Kong, December 2012, Hong Kong

- The Hong Kong PhD Fellowship by the Hong Kong Research Grants Council 2011-2014

PhD student LIU, Jessica Aijia was awarded with:

- Best Poster Presentation on "Hedgehog signaling mediators: Sufu and Kif7 in enteric neural crest cell development" in the 17th Research Postgraduate Symposium, The University of Hong Kong, December 2012, Hong Kong
- Best Presentation Award on "Perturbed SUFU-GLI-SOX10 regulatory network underlies defective enteric nervous system development and Hirschsprung disease" in the 19th Research Postgraduate Symposium, The University of Hong Kong, December 2014, Hong Kong
- YS and Christabel Lung Postgraduate Scholarship 2014/15
- Merit Award in the Scientific Imaging Competition organized by the Centre for Reproduction, Development and Growth, Strategic Research Theme of Development and Reproduction and Faculty Core Facility of the LKS Faculty of Medicine 2014, HKU.

- 2016 Young scientist award (Honorable mention), the Hong Kong Institution of Science

PhD student ZHOU, Tingwen was awarded with:

- Best Poster Presentation on "Genetic approach for studying Kinesin family member 7 (Kif7) in mouse enteric nervous system development" in the 21st Research Postgraduate Symposium, The University of Hong Kong, December 2016, Hong Kong

PhD student LUI, Kathy Nga-Chu was awarded with:

- The Hong Kong PhD Fellowship by the Hong Kong Research Grants Council 2018-2021

ADMINISTRATION

- Member of Departmental Consultation Panel on application for promotion (2017)
- Internal reviewer for the General Research Fund (GRF) grant applications (2009-present).
- Problem-based Learning Sub-Committee members, Faculty of Medicine, HKU (2014-2016)
- Organizer/chair of the Journal Club in the Department of Surgery (2013-present)
- Invited judge, Hong Kong Student Scientific Project 2013
- Committee Member of the Stem Cell Consortium (2012/13).
- Co-opted member of the Small Project Funding sub-Group, URC Sub-Committee for Internal Support of Research Projects, HKU (2011-2013)
- Advisor, Hong Kong Student Scientific Project (2012)

- ***External examiner:***
  - External examiner for a PhD thesis, the School of Biomedical Science, the Chinese University of Hong Kong (2018)
  - External examiner for a MPhil thesis, the Department of Paediatrics, the Chinese University of Hong Kong (2017)
  - External examiner for a PhD thesis, the School of Biomedical Science, the Chinese University of Hong Kong (2016)

- ***Organizing committee member of conferences:***
  - Member of the international organization committee of the 5th International Symposium on Development of the Enteric Nervous System: Cells, Signals, Genes and Therapy (2018)
  - Member of organization committee of TRS symposium 2016 "Nervous systems: development and diseases" (2016)
  - Member of organization committee of TRS symposium 2016 "Genetics & Functional Genomics of Development & Diseases" (2015)
  - Member of organization committee of EMBO 2014 "Stem cells and epigenetics in cancer" (2014)
  - Organizer of Knowledge exchange program "Stem Cell Knowledge Exchange Program: from the scientific cutting edge to experience". (2012-13)
  - Organizer of the KI-HKU Course for Nervous System Development, HKU, HK (2012)

- Organizer of the 4th Cross Strait Symposium of Paediatric Oncology, Hong Kong (2010)

- **Editorship**
  Editorial board member of:
  - Scientific Reports (Board area: Stem Cells and Development) by Nature group (IF:5.578)
  - The Journal of Pediatric Biochemistry
  - International Journal of Gastroenterology Disorders & Therapy ISSN: 2393-8498

- **Reviewer for Journals**
  - Gastroenterology
  - Cancer Research
  - Leukemia
  - Journal of Biological Chemistry
  - Endocrinology
  - Molecular Biology Reports
  - Molecular Neurobiology
  - Journal of Medical Genetics
  - Endocrine-related Cancer
  - PLoS One
  - Drug Discovery Today: Disease Models
  - Journal of Medical Genetics
  - Anti-Cancer Drugs
  - BBA - Molecular Basis of Disease
  - Cellular and Molecular life sciences
  - Genetics and Molecular Biology
  - World Journal of Gastroenterology
  - Journal of Pediatric Surgery
  - Expert Opinion on Therapeutic Targets
  - Current Pharmacogenomics and Personalized Medicine
  - Neurogastroenterology & Motility
  - Pediatric Surgery International

- **Reviewer for grant bodies**

  - Research Foundation Flanders – Fonds Wetenschappelijk Onderzoek FWO, Odysseus Program (Belgium) (2012)

  - Research Foundation Flanders – Fonds Wetenschappelijk Onderzoek FWO (Belgium) (2011)

  - Grant Agency of the Academy of Sciences of the Czech Republic (2008)

MEMBERSHIP OF SCIENTIFIC SOCIETIES

- Member of the International Society of Differentiation (2016-present)
- Member of the International Society of Stem Cell Research (2004-present)

- Member of Center for Reproduction Development and Growth (2004-2016)
- Member of the Stem Cell Consortium (2010-present)
- Member of the Strategic Research Theme for Stem Cells (2010-present)
- Member of the Strategic Research Theme for Development (2010-present)
- Associated member of Cancer Centre (2009-present)
- Member of American Society of Cancer Research (2004/2005)

APPENDIX I: PUBLICATIONS (JOURNALS, REVIEW ACTRICLES, BOOK CHAPTER)

H index: 21 (includes manuscripts published only after 1999)

C: citations; **IF:** Impact factor;

Citations indices (includes manuscripts published only after **1999**)	
	Total
Citations	1,214
h-index	21

* denotes corresponding author

Year	No	Publications	IF	C
2018	**1.**	Lau, S.T., Li, Z., Lai, F.P., Lui, K.N., Li, P., Munera, J.O., Pan, G., Mahe, M.M., Tam, P.K., Wells, J.M., **Ngan, E.S.*** 2018 Activation of Hedgehog signaling improves neural crest derivation from human pluripotent stem cells as revealed by single-cell transcriptomics and a human innervated colonic organoid model.		
	2.	Tang, C.S., Li, P., Lai, F.P., Fu, A.X., Lau, S.T., So, M.T., Lui, K.N.C., Li,Z., Zhuang, X., Yu, M., Liu, X., Ngo, N.D., Miao, X., Zhang, X., Yi, B., Tang, S., Sun, X., Zhang, F., Liu, H., Liu, Q., Zhang, R., Wang, H., Huang, L., Dong, X., Tou, J., Cheah, K.S.E., Yang, W., Yuan, Z., Yip, K.Y.L., Sham, P.C., Tam, P. K.H., Garcia-Barcelo, M.M., **Ngan, E.S.*** 2018 Identification of Genes Associated with Hirschsprung Disease, Based on Whole-genome Sequence Analysis, and Potential Effects on Enteric Nervous System Development. *Gastroenterology. in press*	**20.77**	
	3.	Tong, M., Che, N., Zhou, L., Luk, S.T., Kau, P.W., Chai, S., **Ngan, E.S.**, Lo, C.M., Man, K., Ding, J., Lee, T.K., Ma, S. 2018 Efficacy of annexin A3 blockade in sensitizing hepatocellular carcinoma to sorafenib and regorafenib. *J Hepatol S0168-8278(18)32119-6*	**12.486**	
	4.	Lui, K.N. Tam, P.K. **Ngan, E.S.*** 2018 Update on the Role of Stem Cells in the Treatment of Hirschsprung Disease. *European Journal of Pediatric Surgery, 28(3): 215-221.*	**1.3**	
	5.	Tang, C.S., Zhuang, X., Lam, W.Y., **Ngan, E.S.**, Hsu, J.S., Yu, M., So, M., Cherny, S.S., Ngo, N.D., Sham, P.C., Tam, P.K., Garcia-Barcelo, M.M. Uncovering the genetic lesions underlying the most severe form of Hirschsprung disease by whole-genome sequencing. 2018 *Eur J Hum Genet. 26(6):818-826.*	**4.287**	

2017	**6.**	Lai, F.P., Lau, S.T., Wong, J.W, Gui, H., Wang, X.R., Zhou, T., Lai, W.H., Tse, H.F., Tam, P.K., Garcia-Barcelo, M.M., **Ngan, E.S.*** Correction of Hirschsprung-Associated Mutations in Human Induced Pluripotent Stem Cells Via Clustered Regularly Interspaced Short Palindromic Repeats/Cas9, Restores Neural Crest Cell Function. 2017 *Gastroenterology. 153(1):139-153.e8*	**20.77**	**11**
	7.	Gui, H.S., Schriemer, D., Cheng, W.C., Chauhan, R.K., Antinolo, G., Berrios, C., Bleda, M., Brooks, A.S., Brouwer, R.W.W., Burns, A.,J., Cherny,S.S., Dopazo, J., Eggen, B.J.L., Griseri, P., Jalloh, B., Le, T.L., Lui, V.C.H., Luzon-Toro, B., Matera, I., **Ngan, E.S.**, Pelet, A., Ruiz-Ferrer, M.R., Sham, P.C., Shepherd, I.T., So, M.T., Sribudiani, Y., Tang, C.S.M., van den Hout, M.C., vanIjcken, W.F.J., Verheij J Amiel, J., Borrego, S., Cecherini, I., Chakravarti, A., Lyonnet, S, Tam, P.K.H., Garcia-Barcelo, M.M., Hofstra, R.M.W. 2017 Whole exome sequencing coupled with unbiased functional analysis reveals new Hirschsprung disease genes. *Genome Biology18(1):48.*	**11.313**	**13**
	8.	Wang, X.Q., Lo, C.M., Chen, L., **Ngan, E.S.**, Xu, A. and Poon, R. 2017. CDK1-PDK1-PI3K/Akt signaling pathway regulates embryonic and induced pluripotency. *Cell death Differ 24(1):38-48.*	**8.218**	**3**
2016	**9.**	Burns, A.J., Goldstein, A.M., Newgreen, D.F., Stamp L., Schäfer, K.H., Metzger, M., Hotta R., Young, H.M., Andrews, P.W., Thapar, N., Belkind-Gerson, J., Bondurand, N., Bornstein, J.C., Chan, W.Y., Cheah, K., Gershon, M.D., Heuckeroth, R.O., Hofstra, R.M., Just, L., Kapur, R.P., King, S.K., McCann, C.J., Nagy. N., **Ngan, E.**, Obermayr, F., Pachnis, V., Pasricha, P.J., Sham, M.H., Tam, P., Berghe, P.V. 2016. White paper on guidelines concerning enteric nervous system stem cell therapy for enteric neuropathies. *Dev Biol.* 417(2):229-51.	**3.547**	**30**
2015	**10.**	Liu, J.A., Lai, F.P., Gui, H, Sham, M.H., Tam, P.K., Garcia-Barcelo, M.M., Hui, C.C., **Ngan, E.S.*** 2015. Identification of GLI Mutations in Patients with Hirschsprung Disease That Disrupt Enteric Nervous System Development in Mice. *Gastroenterology 149(7):1837-1848.e5.* (corresponding author) (Highlighted in "Covering the cover" and "Editorials")	**20.77**	**17**
	11.	**Ngan, E.S.** Heterogeneity of neuroblastoma. Oncoscience. 2015 Aug 24;2(10):837-8.		**1**
	12.	Lau, S.T., Hansford, L.M., Chan, W.K., Chan, G.C., Wan, T.S., Wong, K.K., Kaplan, D.R., Tam, P.K., **Ngan, E.S.*** 2015. Prokineticin signaling is required for the maintenance of a *de novo* population of c-KIT positive cells to sustain neuroblastoma progression. *Oncogene*, *34: 1019-1034.* (corresponding author)	**8.459**	**6**
	13.	Lau, S.T., Zhou, T., Liu, J.A., Fung, E.Y., Che, C.M., Lang, B. H., **Ngan, E.S.*** 2015. Dysregulation of Clathrin promotes thyroid cell growth and contributes to multinodular goiter pathogenesis. *BBA-Molecular Basis of Disease*, *852:1676-1686*. (corresponding author)	**4.882**	**4**
2013	**14.**	Shum, C.K., Lau, S.T., Tsoi, L.L., Chan, L.K., Yam, J.W., Ohira, M., Nakagawara, A., Tam, P.K., and **Ngan, E.S.*** 2013 Aug. Kruppel-like factor 4 (KLF4) suppresses neuroblastoma cell growth and determines non-tumorigenic lineage differentiation. *Oncogene* 32:4086-4099. (corresponding author)	**8.459**	**21**

	15.	Cheng, G., Tang, C.S., Wong, E.H., Cheng, W.W., So, M.T., Miao, X., Zhang, R., Cui, L., Liu, X., **Ngan, E.S.**, Lui, V.C., Chung, P.H., Chan, I.H., Liu, J., Zhong, W., Xia, H., Yu, J., Qiu, X., Wu, X.Z., Wang, B., Dong, X., Tou, J., Huang, L., Yi, B., Ren, H., Chan, E.K., Ye, K., PF, O.R., Wong, K.K., Sham, P.C., Cherny, S.S., Tam, P.K., and Garcia-Barcelo, M.M. 2013. Common genetic variants regulating ADD3 gene expression alter biliary atresia risk. *J Hepatol*. 59(6):1285-91.	**12.486**	**34**
	16.	Kwok, C.K., Tam, P.K., and **Ngan, E.S.*** 2013. Potential use of skin-derived precursors (SKPs) in establishing a cell-based treatment model for Hirschsprung's disease. *J Pediatr Surg* 48:619-628. (corresponding author)	**1.387**	**12**
	17.	Wong, E.H., Cui, L., Ng, C.L., Tang, C.S., Liu, X.L., So, M.T., Yip, B.H., Cheng, G., Zhang, R., Tang, W.K., Yang, W., Lau, Y.L., Baum, L., Kwan, P., Sun, L.D., Zuo, X.B., Ren, Y.Q., Yin, X.Y., Miao, X.P., Liu, J., Lui, V.C., **Ngan, E.S.**, Yuan, Z.W., Zhang, S.W., Xia, J., Wang, H., Sun, X.B., Wang, R., Chang, T., Chan, I.H., Chung, P.H., Zhang, X.J., Wong, K.K., Cherny, S.S., Sham, P.C., Tam, P.K., and Garcia-Barcelo, M.M. 2013. Genome-wide copy number variation study in anorectal malformations. *Hum Mol Genet* 22:621-631.	**6.393**	**10**
	18.	Gui H, Tang WK, So MT, Proitsi P, Sham PC, Tam PK, **Ngan ES**,* Cherny SS, Garcia-Barceló MM. 2013 RET and NRG1 interplay in Hirschsprung disease. *Hum Genet. 132(5):591-600.* (corresponding author)	**4.522**	**28**
	19.	Liu, J.A, **Ngan, E.S.*** 2013. Hedgehog and Notch signaling in enteric nervous system development. *Neurosignals*, 22(1):1-13. (corresponding author)	**2.000**	**12**
	20.	Yung, J.S., Tam, P.K., and **Ngan, E.S.*** 2013. Pluripotent stem cell for modeling neurological diseases. *Exp Cell Res* 319:177-184. (corresponding author)	**3.246**	**7**
	21.	**Ngan, E.S.**, Kim, K.H., and Hui, C.C. 2013. Sonic Hedgehog Signaling and VACTERL Association. *Mol Syndromol* 4:32-45.	**2.63**	**20**
2012	**22.**	Leon, T.Y., So, M.T., Lui, V.C., Hofstra, R.M., Tam, P.K., **Ngan, E.S.***, and Garcia-Barcelo, M.M. 2012. Functional analyses of RET mutations in Chinese Hirschsprung disease patients. *Birth defects research. Part A, Clinical and molecular teratology* 94:47-51. (corresponding author)	**3.146**	**4**
	23.	Tang, C.S., Cheng, G., So, M.T., Yip, B.H., Miao, X.P., Wong, E.H., **Ngan, E.S.**, Lui, V.C., Song, Y.Q., Chan, D., Cheung, K., Yuan, Z.W., Lei, L., Chung, P.H., Liu, X.L., Wong, K.K., Marshall, C.R., Scherer, S., Cherny, S.S., Sham, P.C., Tam, P.K., and Garcia-Barcelo, M.M. 2012. Genome-Wide Copy Number Analysis Uncovers a New HSCR Gene: NRG3. *PLoS genetics* 8:e1002687.	**7.528**	**40**
	24.	Tang, C.S., **Ngan, E.S.**, Tang, W.K., So, M.T., Cheng, G., Miao, X.P., Leon, T.Y., Leung, B.M., Hui, K.J., Lui, V.H., Chen, Y., Chan, I.H., Chung, P.H., Liu, X.L., Wong, K.K., Sham, P.C., Cherny, S.S., Tam, P.K., and Garcia-Barcelo, M.M. 2012. Mutations in the NRG1 gene are associated with Hirschsprung disease. *Human genetics* 131:67-76.	**4.522**	**19**
	25.	Tse, E.Y., Ko, F.C., Tung, E.K., Chan, L.K., Lee, T.K., **Ngan, E.S.**, Man, K., Wong, A.S., Ng, I.O., and Yam, J.W. 2012. Caveolin-1 overexpression is	**7.429**	**59**

associated with hepatocellular carcinoma tumourigenesis and metastasis. *The Journal of pathology* 226:645-653.

	26.	Chow, K.H., Tam, P.K., and **Ngan, E.S.***. Neural crest and Hirschsprung's disease. 2012. Stem Cells and Human Diseases. Srivastava, Rakesh K.; Shankar, Sharmila (Eds.) Springer. ISBN 978-94-007-2800-4 Chapter 16. (corresponding author)	**n.a.**	**n.a.**
2011	**27.**	**Ngan, E.S.***, Garcia-Barcelo, M.M., Yip, B.H., Poon, H.C., Lau, S.T., Kwok, C.K., Sat, E., Sham, M.H., Wong, K.K., Wainwright, B.J., Cherny, S.S., Hui, C.C., Sham, P.C., Lui, V.C., and Tam, P.K. 2011. Hedgehog/Notch-induced premature gliogenesis represents a new disease mechanism for Hirschsprung disease in mice and humans. *The Journal of clinical investigation* 121:3467-3478. (corresponding author)	**13.215**	**47**
	28.	So, M.T., Leon, T.Y., Cheng, G., Tang, C.S., Miao, X.P., Cornes, B.K., Diem, N.N., Cui, L., **Ngan, E.S.**, Lui, V.C., Wu, X.Z., Wang, B., Wang, H., Yuan, Z.W., Huang, L.M., Li, L., Xia, H., Zhu, D., Liu, J., Nguyen, T.L., Chan, I.H., Chung, P.H., Liu, X.L., Zhang, R., Wong, K.K., Sham, P.C., Cherny, S.S., Tam, P.K., and Garcia-Barcelo, M.M. 2011. RET mutational spectrum in Hirschsprung disease: evaluation of 601 Chinese patients. *PloS one* 6:e28986.	**3.234**	**10**
	29.	Tang, C.S., Tang, W.K., So, M.T., Miao, X.P., Leung, B.M., Yip, B.H., Leon, T.Y., **Ngan, E.S.**, Lui, V.C., Chen, Y., Chan, I.H., Chung, P.H., Liu, X.L., Wu, X.Z., Wong, K.K., Sham, P.C., Cherny, S.S., Tam, P.K., and Garcia-Barcelo, M.M. 2011. Fine mapping of the NRG1 Hirschsprung's disease locus. *PloS one* 6:e16181.	**3.234**	**26**
2010	**30.**	Miao, X., Leon, T.Y., **Ngan, E.S.**, So, M.T., Yuan, Z.W., Lui, V.C., Chen, Y., Wong, K.K., Tam, P.K., and Garcia-Barcelo, M. 2010. Reduced RET expression in gut tissue of individuals carrying risk alleles of Hirschsprung's disease. *Human molecular genetics* 19:1461-1467.	**6.393**	**45**
	31.	Garcia-Barcelo, M.M., Yeung, M.Y., Miao, X.P., Tang, C.S., Cheng, G., So, M.T., **Ngan, E.S.**, Lui, V.C., Chen, Y., Liu, X.L., Hui, K.J., Li, L., Guo, W.H., Sun, X.B., Tou, J.F., Chan, K.W., Wu, X.Z., Song, Y.Q., Chan, D., Cheung, K., Chung, P.H., Wong, K.K., Sham, P.C., Cherny, S.S., and Tam, P.K. 2010. Genome-wide association study identifies a susceptibility locus for biliary atresia on 10q24.2. *Human molecular genetics* 19:2917-2925.	**6.393**	**39**
	32.	Miao, X., Garcia-Barcelo, M.M., So, M.T., Tang, W.K., Dong, X., Wang, B., Mao, J., **Ngan, E.S.**, Chen, Y., Lui, V.C., Wong, K.K., Liu, L., and Tam, P.K. 2010. Lack of association between nNOS -84G>A polymorphism and risk of infantile hypertrophic pyloric stenosis in a Chinese population. *Journal of pediatric surgery* 45:709-713.	**1.387**	**11**
2009	**33.**	**Ngan, E.S.***, Lang, B.H., Liu, T., Shum, C.K., So, M.T., Lau, D.K., Leon, T.Y., Cherny, S.S., Tsai, S.Y., Lo, C.Y., Khoo, U.S., Tam, P.K., and Garcia-Barcelo, M.M. 2009. Feb 4. A germline mutation (A339V) in thyroid transcription factor-1 (TITF-1/NKX2.1) in patients with multinodular goiter and papillary thyroid carcinoma. *Journal of the National Cancer Institute* 101:162-175. (*This paper*	**12.583**	**39**

was cited as Must Read paper by Faculty of 1000 Medicine) (corresponding author)

	34.	Garcia-Barcelo, M.M., Tang, C.S., **Ngan, E.S.**, Lui, V.C., Chen, Y., So, M.T., Leon, T.Y., Miao, X.P., Shum, C.K., Liu, F.Q., Yeung, M.Y., Yuan, Z.W., Guo, W.H., Liu, L., Sun, X.B., Huang, L.M., Tou, J.F., Song, Y.Q., Chan, D., Cheung, K.M., Wong, K.K., Cherny, S.S., Sham, P.C., and Tam, P.K. 2009. Feb 24. Genome-wide association study identifies NRG1 as a susceptibility locus for Hirschsprung's disease. *Proceedings of the National Academy of Sciences of the United States of America* 106:2694-2699.	**9.674**	**134**
	35.	Leon, T.Y., **Ngan, E.S.**, Poon, H.C., So, M.T., Lui, V.C., Tam, P.K., and Garcia-Barcelo, M.M. 2009. Transcriptional regulation of RET by Nkx2-1, Phox2b, Sox10, and Pax3. *Journal of pediatric surgery* 44:1904-1912.	**1.387**	**24**
	36.	Chan, K.Y., Liu, W., Long, J.R., Yip, S.P., Chan, S.Y., Shu, X.O., Chua, D.T., Cheung, A.N., Ching, J.C., Cai, H., Au, G.K., Chan, M., Foo, W., Ngan, H.Y., Gao, Y.T., **Ngan, E.S.**, Garcia-Barcelo, M.M., Zheng, W., and Khoo, U.S. 2009. Jan. Functional polymorphisms in the BRCA1 promoter influence transcription and are associated with decreased risk for breast cancer in Chinese women. *Journal of medical genetics* 46:32-39.	**5.703**	**26**
	37.	Garcia-Barcelo, M.M., Lui, V.C., So, M.T., Miao, X., Leon, T.Y., Yuan, Z.W., **Ngan, E.S.**, Ehsan, T., Chung, P.H., Khong, P.L., Wong, K.K., and Tam, P.K. 2009. Oct. MNX1 (HLXB9) mutations in Currarino patients. *Journal of pediatric surgery* 44:1892-1898.	**1.387**	**11**
2008	**38.**	**Ngan, E.S.***, Shum, C.K., Poon, H.C., Sham, M.H., Garcia-Barcelo, M.M., Lui, V.C., and Tam, P.K. 2008. Mar. Prokineticin-1 (Prok-1) works coordinately with glial cell line-derived neurotrophic factor (GDNF) to mediate proliferation and differentiation of enteric neural crest cells. *Biochimica et biophysica acta* 1783:467-478. (corresponding author)	**5.019**	**42**
	39.	Garcia-Barcelo, M.M., Wong, K.K., Lui, V.C., Yuan, Z.W., So, M.T., **Ngan, E.S.**, Miao, X.P., Chung, P.H., Khong, P.L., and Tam, P.K. 2008. Dec 15. Identification of a HOXD13 mutation in a VACTERL patient. *American journal of medical genetics. Part A* 146A:3181-3185.	**2.304**	**75**
	40.	Garcia-Barcelo, M.M., Lau, D.K., **Ngan, E.S.**, Leon, T.Y., Liu, T., So, M., Miao, X., Lui, V.C., Wong, K.K., Ganster, R.W., Cass, D.T., Croaker, G.D., and Tam, P.K. 2008. Mar. Evaluation of the NK2 homeobox 1 gene (NKX2-1) as a Hirschsprung's disease locus. *Annals of human genetics* 72:170-177.	**2.215**	**8**
	41.	Garcia-Barcelo, M.M., Fong, P.Y., Tang, C.S., Miao, X.P., So, M.T., Yuan, Z.W., Li, L., Guo, W.H., Liu, L., Wang, B., Sun, X.B., Huang, L.M., Tou, J.F., Wong, K.K., **Ngan, E.S.**, Lui, V.C., Cherny, S.S., Sham, P.C., and Tam, P.K. 2008. Jul. Mapping of a Hirschsprung's disease locus in 3p21. *European journal of human genetics : EJHG* 16:833-840.	**4.225**	**16**
	42.	Garcia-Barcelo, M.M., Fong, P.Y., Tang, C.S., Miao, X.P., So, M.T., Yuan, Z.W., Li, L., Guo, W.H., Liu, L., Wang, B., Sun, X.B., Huang, L.M., Tou, J.F., Wong, K.K., **Ngan, E.S.**, Lui, V.C., Cherny, S.S., Sham, P.C., and Tam, P.K.	**3.146**	**15**

2008. Mutational analysis of SHH and GLI3 in anorectal malformations. Birth Defects Res A Clin Mol Teratol. Sep;82(9):644-8

	43.	**Ngan, E.S.***, and Tam, P.K. 2008. Prokineticin-signaling pathway. *The international journal of biochemistry & cell biology* 40:1679-1684. (corresponding author)	**4.331**	**45**
2007	**44.**	**Ngan, E.S.***, Sit, F.Y., Lee, K., Miao, X., Yuan, Z., Wang, W., Nicholls, J.M., Wong, K.K., Garcia-Barcelo, M., Lui, V.C., and Tam, P.K. 2007. Feb 1. Implications of endocrine gland-derived vascular endothelial growth factor/prokineticin-1 signaling in human neuroblastoma progression. *Clinical cancer research* 13:868-875. (corresponding author)	**8.193**	**41**
	45.	**Ngan, E.S.***, Lee, K.Y., Sit, F.Y., Poon, H.C., Chan, J.K., Sham, M.H., Lui, V.C., and Tam, P.K. 2007. Apr. Prokineticin-1 modulates proliferation and differentiation of enteric neural crest cells. *Biochimica et biophysica acta* 1773:536-545. (corresponding author)	**5.019**	**32**
	46.	Garcia-Barcelo, M.M., Miao, X., Lui, V.C., So, M.T., **Ngan, E.S.**, Leon, T.Y., Lau, D.K., Liu, T.T., Lao, X., Guo, W., Holden, W.T., Moore, J., and Tam, P.K. 2007. Jul. Correlation between genetic variations in Hox clusters and Hirschsprung's disease. *Annals of human genetics* 71:526-536.	**2.215**	**20**
	47.	Garcia-Barcelo, M.M., Lau, D.K., **Ngan, E.S.**, Leon, T.Y., Liu, T.T., So, M.T., Miao, X.P., Lui, V.C., Wong, K.K., Ganster, R.W., Cass, D.T., Croaker, G.D., and Tam, P.K. 2007. Nov. Evaluation of the thyroid transcription factor-1 gene (TITF1) as a Hirschsprung's disease locus. *Annals of human genetics* 71:746-754.	**2.215**	**14**
	48.	**Ngan, E.S.**, Garcia-Barcelo, M.M., Lui, V.C. and Tam, P.K. Prokineticin signaling in normal growth and tumorigenesis. 2007 International Journal of Molecular Medicine. 20(S1):S132. (corresponding author)	**1.875**	**0**
	49.	Liu, T.T., **Ngan, E.S.**, So, M.T., Tsai, S.Y., Lo, C.Y., Khoo, U.S., Tam, P.K., Garcia-Barcelo, M.M. Identification and characterization of a germine mutation in thyroid transcription factor 1 (TTF-1) implicated in the carcinogenesis of papillary thyroid carcinoma. 2007 International Journal of Molecular Medicine. 20(S1):S177. (corresponding author)	**1.875**	**0**
2006	**50.**	**Ngan, E.S.***, Lee, K.Y., Yeung, W.S., Ngan, H.Y., Ng, E.H., and Ho, P.C. 2006. Jan. Endocrine gland-derived vascular endothelial growth factor is expressed in human peri-implantation endometrium, but not in endometrial carcinoma. *Endocrinology* 147:88-95. (corresponding author)	**4.644**	**38**
	51.	Garcia-Barcelo, M.M., Lau, D.K., **Ngan, E.S.**, Leon, T.Y., Liu, T.T., So, M.T., Miao, X.P., Lui, V.C., Wong, K.K., Ganster, R.W., Cass, D.T., Croaker, G.D., and Tam, P.K. 2007. Nov. Evaluation of the thyroid transcription factor-1 gene (TITF1) as a Hirschsprung's disease locus. *Annals of human genetics* 71:746-754.	**2.215**	**14**
2005	**52.**	Yam, J.W., Chan, K.W., **Ngan, E.S.**, and Hsiao, W.L. 2005. Aug 29. Genomic structure, alternative splicing and tissue expression of rFrp/sFRP-4, the rat frizzled related protein gene. *Gene* 357:55-62.	**2.196**	**9**

	53.	**Ngan, E.S.**, Lui, V.C., Lau, D.K., Garcia-Barcelo, M.M, Sham, M.H., Tam, P.K. 2005 Transcription profiling of enteric neural crest cell. Mechanisms of Development. 122(S1):S179. (corresponding author)	**3.26**	**0**
	54.	Law, M.M., Tsang, W.H., **Ngan, E.S.**, Lui, V.C. and Sham, M.H. 2005 Abnormal enteric ganglia development in a Sox 10 mouse mutant generated by gene targeting. Mechanisms of Development. 122(S1):S177.	**3.26**	**0**
2004	**55.**	Chua, S.S., Ma, Z., **Ngan, E.**, and Tsai, S.Y. 2004. Cdc25B as a steroid receptor coactivator. *Vitam Horm* 68:231-256.	**2.296**	**40**
2003	**56.**	Hoo, R.L., **Ngan, E.S.**, Leung, P.C., and Chow, B.K. 2003. Feb. Two Inr elements are important for mediating the activity of the proximal promoter of the human gonadotropin-releasing hormone receptor gene. *Endocrinology* 144:518-527. (co-first author)	**4.644**	**5**
	57.	**Ngan, E.S.**, Hashimoto, Y., Ma, Z.Q., Tsai, M.J., and Tsai, S.Y. 2003. Feb 6. Overexpression of Cdc25B, an androgen receptor coactivator, in prostate cancer. *Oncogene* 22:734-739.	**8.559**	**87**
2002	**58.**	**Ngan, E.S.**, Ma, Z.Q., Chua, S.S., DeMayo, F.J., and Tsai, S.Y. 2002. Aug 20. Inducible expression of FGF-3 in mouse mammary gland. *Proceedings of the National Academy of Sciences of the United States of America* 99:11187-11192.	**9.674**	**16**
	59.	**Ngan, E.S.**, Schillinger, K., DeMayo, F., and Tsai, S.Y. 2002. Apr. The mifepristone-inducible gene regulatory system in mouse models of disease and gene therapy. *Seminars in cell & developmental biology* 13:143-149.	**6.202**	**22**
2001	**60.**	Ma, Z.Q., Liu, Z., **Ngan, E.S.**, and Tsai, S.Y. 2001. Dec. Cdc25B functions as a novel coactivator for the steroid receptors. *Molecular and cellular biology* 21:8056-8067.	**4.777**	**42**
	61.	**Ngan, E.S.**, Leung, P.C., and Chow, B.K. 2001. May 15. Interplay of pituitary adenylate cyclase-activating polypeptide with a silencer element to regulate the upstream promoter of the human gonadotropin-releasing hormone receptor gene. *Molecular and cellular endocrinology* 176:135-144.	**4.241**	**20**
2000	**62.**	Cheng, K.W., **Ngan, E.S.**, Kang, S.K., Chow, B.K., and Leung, P.C. 2000. Oct. Transcriptional down-regulation of human gonadotropin-releasing hormone (GnRH) receptor gene by GnRH: role of protein kinase C and activating protein 1. *Endocrinology* 141:3611-3622.	**4.644**	**49**
	63.	Kang, S.K., Cheng, K.W., **Ngan, E.S.**, Chow, B.K., Choi, K.C., and Leung, P.C. 2000. Apr 25. Differential expression of human gonadotropin-releasing hormone receptor gene in pituitary and ovarian cells. *Molecular and cellular endocrinology* 162:157-166.	**4.241**	**28**
	64.	**Ngan, E.S.**, Leung, P.C., and Chow, B.K. 2000. Apr 21. Identification of an upstream promoter in the human gonadotropin-releasing hormone receptor gene. *Biochemical and biophysical research communications* 270:766-772.	**2.406**	**14**

1999	**65.**	**Ngan, E.S.**, Cheng, P.K., Leung, P.C., and Chow, B.K. 1999. Jun. Steroidogenic factor-1 interacts with a gonadotrope-specific element within the first exon of the human gonadotropin-releasing hormone receptor gene to mediate gonadotrope-specific expression. *Endocrinology* 140:2452-2462.	**4.644**	**67**
	66.	**Ngan, E.S.**, Chow, L.S., Tse, D.L., Du, X., Wei, Y., Mojsov, S., and Chow, B.K. 1999. Sep 3. Functional studies of a glucagon receptor isolated from frog Rana tigrina rugulosa: implications on the molecular evolution of glucagon receptors in vertebrates. *FEBS letters* 457:499-504.	**3.582**	**18**
	67.	Ho, P.K., Fong, R.S., Kai, H.S., Lau, E.H., **Ngan, E.S.**, Cotton, C.U., and Chow, B.K. 1999. Jul 23. The human secretin receptor gene: genomic organization and promoter characterization. *FEBS letters* 455:209-214.	**3.582**	**15**
1998	**68.**	**Ngan, E.S.**, Cheng, P.K., Leung, P.C. and Chow, B.K. 1998 Regulation of the gonadotrope specific expression of the human gonadotropin-releasing hormone receptor gene by steroidogenic factor-1. Recent Progress in Molecular and Comparative Endocrinology eds: HB Kwon, JMP Joss, Slshii p339-347	**n.a.**	**n.a.**

APPENDIX II: CONFERENCE PAPERS

Oral Presentation:

1. Tam, P.K. and **Ngan, E.S**. Pluripotent stem cells to neural crest: the journey so far. 2018 JMCB Symposium: Looking into Complex Diseases. Shanghai, China.

2. **Ngan, E.S.** 2018 Pluripotent stem cell-based model of Hirschsprung Disease. The 5th symposium of the Enteric Nervous System: cells, signals, gene and therapy, Boston, USA. ***(Invited speaker)***

3. Zhou, T., Lai, F.P.L., Lau, S.T., Hui, C.C., **Ngan, E.S.** 2018 Regulation of Neuronal Progenitors of the Enteric Nervous System by Kinesin Family Member 7 - GLI Family Zinc Finger 2 mediated Hedgehog Pathway. The 5th symposium of the Enteric Nervous System: cells, signals, gene and therapy, Boston, USA. ***(Selected oral)***

4. **Ngan, E.S**. Restoration of neural crest cell function in human induced pluripotent stem cells via CRISPR/Cas9, the 2017 Annual Meeting of Indonesian Society of Human Genetics (INaSHG), Yogyakarta, Indonesia October 2017. ***(Keynote Lecture)***

5. **Ngan, E.S.** 2017 iPSC models for studying neural crest Symposium on Reparative medicine and beyond, Hong Kong. ***(Invited speaker)***

6. Liu, J.A., Lai, F.P., Gui, H, Sham, M.H., Garcia-Barcelo, M.M., Hui, C.C., **Ngan, E.S.** 2015 Perturbed SUFU-GLI-SOX10 regulatory network underlies defective enteric nervous system development and Hirschsprung disease. The 4th International Symposium 'Development of the enteric nervous system: cells, signals, genes and therapy' Rotterdam, Netherlands.

7. Liu, J.A., Lau, S.T., Wong, J.K., Brisco, J., Hui, C.C., Garcia-Barceló, M.M. **Ngan, E.S.** and Tam, P.K. 2014 GLI, a family of novel Hirschsprung genes: discovery and mechanisms. Annual Meeting of British Association of Paediatric Surgeons 2014, Edinburg, Scotland.

8. **Ngan, E.S.** 2013. Prokineticin signaling and *de novo* population of c-KIT expressing cells in neuroblastoma progression. The 72nd Annual Meeting of the Japanese Cancer Association, Yokohama, Japan. ***(Invited speaker)***

9. **Ngan, E.S.**, Garcia-Barceló, M.M. and Tam, P.K. 2012 Hedgehog-Notch induced premature gliogenesis: a new disease mechanism for Hirschsprung's disease. The 3rd International Symposium on Development of Enteric Nervous System, Cell, Signals and Genes, Hong Kong. ***(Invited speaker)***

10. Lau ST, Kwok CKM, Tam PK and **Ngan, E.S.** 2011 Dynamic regulation of c-KIT expressing cells in neuroblastoma. The 53rd Annual Meeting of the Japanese Society of Pediatric Hematology and Oncology. Tokyo, Japan. ***(Invited speaker)***

11. **Ngan, E.S.**, Lau, S.T., Ohira, M., Nakagawara, A. and Tam, P.K. 2011. Kruppel-like factor 4 in neuroblastoma. The 70th Annual Meeting of the Japanese Cancer Association (JCA), Nagoya, Japan. ***(Invited speaker)***

12. Tsoi, L.L., Ohira, M., Nakagawara, A., Tam, P.K., and **Ngan, E.S.** 2010. Krüppel-like factor 4 (KLF4) in neuroblastoma. The 4th Cross Strait Symposium of Paediatric Oncology, Hong Kong.

13. Lau, S.T., Wo, J.Y., Kaplan, D.R., Tam, P.K. and **Ngan, E.S.**. 2010. Prokineticin-1 promotes growth of neuroblastoma tumor initiating cells. The 4th Cross Strait Symposium of Paediatric Oncology, Hong Kong.

14. Lau, S.T., Wo, J.Y., Kaplan, D.R., Tam, P.K. and **Ngan, E.S.** 2010. Prokineticin-1 in malignant neuroblastoma subpopulations and tumor progression. Hong Kong International Cancer Congress, Hong Kong.

15. **Ngan, E.S.**, Lau, C., Woo, J.Y., Chan, W.K., Chan, G.C., Wang, Y., Kaplan, D.R. and Tam, P.K. 2010 Endocrine-gland vascular endothelial growth factor (EG-VEGF) in neuroblastoma tumor initiating cells. Advances in Neuroblastoma Research, OR13, Stockholm, Sweden.

16. **Ngan, E.S.**, Sit, F.Y., Lee, K.Y., Miao, X.P., Yuan, Z., Wang, W., Nicholls, J.M., Wong, K.Y., Garcia-Barcelo, M.M., Lui, V.C., Tam, P.K. 2008. Prokineticin Signaling in Neuroblastoma. Shanghai, China. ***(Outstanding Presentation Award)***.

17. Tam, P.K., Poon, H.C., Lui, V.C. and **Ngan, E.S.**. 2008 Sonic Hedgehog regulates enteric neural crest cell numbers by up-regulation of Delta-Like 1 (DLL1). American Academy of Pediatrics 2008 National Conference, Boston, USA.

18. Tam, P.K., Wong, K.K., Ohira, M., Nakagawara, A. and **Ngan, E.S.**. 2008 Kruppel-Like Factor 4 (KLF4): A potential tumor suppressor gene for the neuroblastoma. American Academy of Pediatrics 2008 National Conference, Boston, USA.

19. **Ngan, E.S.** and Tam, P.K. Implication of Prokineticin signaling in neuroblastoma cancer stem cells and tumor progression. 2008 41st Annual Pacific Association of Pediatric Surgeons Conference, USA.

20. **Ngan, E.S**. Garcia-Barcelo, M.M., Liu, V.C., Tam, P.K. 2007 Prokineticin Signaling in normal growth and tumorigenesis. 12th World Congress on Advances in Oncology and 10th International Symposium on Molecular Medicine, Greece. ***(Outstanding Presentation Award)***

21. Liu, T.T., **Ngan, E.S.**, So, M.T., Tsai, S.Y., Lo, C.Y., Khoo, U.S., Tam, P.K., Garcia-Barcelo, M.M. 2007 Identification and characterization of a germline mutation in thyroid transcription factor 1 (TTF-1) implicated in the carcinogenesis of papillary thyroid carcinoma. 12th World Congress on Advances in Oncology and 10th International Symposium on Molecular Medicine, Crete, Greece.

22. Lau, K.C., Garcia-Barcelo, M.M., Leon, Y.Y., So, M.T., Miao, X., **Ngan, E.S.**, Lui, V.C., Cass, D.T., Croaker, G.D. and Tam, P.K. 2006 Evaluation of thyroid transcription factor 1 (TTF-1) as a Hirschsprung's disease (HSCR) locus by mutation analysis, 39th Annual Meeting of the Pacific Association of Pediatric Surgeons, Taipei, Taiwan.

23. **Ngan, E.S.**, Ng, E.Y., Ngan, H.Y., Yeung, W.S. and Ho, P.C. 2004 Endocrine gland derived vasculare endothelial growth factor (EG-VEGF) in human endometrium. Symposium on Reproductive Health, Macau, China.

24. **Ngan, E.S.**, Ma, Z.Q., Chua, S.S., DeMayo, F.J. and Tsai, S.Y. 2002 Mammary gland specific nducible expression of FGF-3 in mouse. Endo ’02, the 84rd annual meeting of the Endocrine Society. OR-890. ***(Travel Award)***

25. **Ngan, E.S.**, Cheng, P.K., Leung, P.C. and Chow, B.K. 1998 Steroidogenic factor-1 interacts with a gonadotrope specific element within the first exon of the human gonadotropin releasing

hormone receptor gene to mediate gonadotrope specific expression. In Programme, the 3rd international symposium of Asia and Oceania Society for Comparative Endocrinology. S1-2.

Poster Presentation:

26. Li, Z, Lau, S.T., Lai, P.L., Tam, P.K., **Ngan, E.S**. Single-cell RNA sequencing reveals differentiation trajectories directing human neural crest formation and differentiation. ISSCR 2018 Annual meeting, Melbourne, Australia. T-2025.

27. Lau, S.T., Lui, N.C., Lai, P.L., Tam, P.K., **Ngan, E.S**. Modeling Hirschsprung disease with human pluripotent stem cell derived colonic organoids. ISSCR 2018 Annual meeting, Melbourne, Australia. F-2077.

28. Lai, P.L., Lau, S.T., Li, Z. and **Ngan, E.S.** GLI3 suppresses the early development of human enteric neural crest cells by inducing premature neuronal differentiation. The 5th International Symposium on Development of the Enteric Nervous System: Cells, Signals, Genes and Therapy, Boston, USA 2018. **(*Poster Presentation Award*)**

29. Lau ST, Lui NC, Lai PL, Tam PK, Ngan ES. Human pluripotent stem-cell based colonic organoids for modeling Hirschsprung disease. 5th International Symposium, Development of the Enteric Nervous System: Cells, Signals, Genes and Therapies. Boston, USA 2018. **(*Poster Presentation Award*)**

30. Li, P., Tang, C., Lau, S.T., Lai, F.P.L., Lui, K., Tam, P., Garcia-Barcelo, M., **Ngan, E.S.** iPSC-based disease model reveals defective APP processing by BACE2 as a novel disease mechanism underlying Hirschsprung. The 5th International Symposium on Development of the Enteric Nervous System, Boston, MA, USA 2018 #49.

31. Wang, X., Zhou,T., Li, P., **Ngan, E.S.** Vinculin is implicated in Cardiac and Enteric Neural Crest Cell Development and the Associated Neurocristopathies. The 5th International Symposium on Development of the Enteric Nervous System, Boston, MA, USA 2018.

32. **Ngan, E.S.**, Tam, P.K., Lau, S.T., Lai, F.P., and Garcia-Barcelo M.M. 2017 Potential Use of Patient Specific Induced-Pluriopotent Stem Cell (iPSC) to Define Genetic Lesions Contributing to the Disease Phenotypes of Hirschsprung (HSCR). Health Research Symposium 2017. Hong Kong #0002

33. Zhou, T.W., Lai, F.P., Hui C.C. and **Ngan, E.S**. 2017 Loss of Kinesin family member 7 (Kif7) in enteric neural crest interrupts the gangliogenesis of enteric nervous system. Gordon Research Conference: Neural Crest & Cranial Placodes Insights into Gene Networks, Disease Models and Evolutionary Mechanisms of Neural Crest and Cranial Placode Development. Ventura, USA #44

34. Lau, S.T., Lai, F.P., and **Ngan, E.S.** 2017 CRISPR-Cas9 mediated correction of Hirschsprung-associated mutations in human iPSC restores neural crest cell functions. EMBO conference: Advances in Stem Cells and Regenerative Medicine. Heidelberg, Germany, #145.

35. Lau, S.T., Lai, F.P., Tam, P.K and **Ngan, E.S**. 2016 Studying the impact of *RET* mutations in Hirschsprung disease pathogenesis using induced pluripotent stem cells. The 14th annual meeting of the International Society for Stem Cell Research Annual Meeting, San Francesco, USA W2105.

36. Lau, S.T., Lai, F.P. and **Ngan, E.S**. 2016. Investigating the implications of RET variant/mutation in Hirschsprung disease pathogenesis using patient-specific iPSC. CiRA/ISSCR 2016 International Symposium: Pluripotency: From Basic Science to Therapeutic Applications International Symposium, Kyoto, Japan 1801201.

37. Lai, F.P., Lau, S.T. and **Ngan, E.S**. 2016. Generation of isogenic iPSC with RET mutation using CRISPR-Cas9. CiRA/ISSCR 2016 International Symposium: Pluripotency: From Basic Science to Therapeutic Applications International Symposium, Kyoto, Japan 1801251.

38. Liu, J.A., Lai, F.P., Hui, C.C., **Ngan, E.S**. 2015. SUFU-GLI-SOX10 in enteric nervous system development and Hirschsprung disease. The 13th annual meeting of the International Society for Stem Cell Research Annual Meeting, Stockholm, Sweden W-1216.

39. Yung, J.S., Tse, H.F., Tam, P.K and **Ngan, E.S.** 2014 A Patient-Specific iPSC Model For Studying the Pathophysiology of Hirschsprung's Disease. The 12th annual meeting of the International Society for Stem Cell Research Annual Meeting, Vancouver, Canada F-2227.

40. Liu, J.A., Lau S.T., Wong, J.K., Briscoe, J., Hui, C.C., **Ngan, E.S.** 2014 Dysregulation of Gli signaling underlies defective enteric nervous system development. The 12th annual meeting of the International Society for Stem Cell Research Annual Meeting, Vancouver, Canada T-1026.

41. Lau, S.T., Hansford, L.M., Kaplan, D.R., **Ngan, E.S.** 2014 Self-renewal of a *de novo* population of c-KIT$^+$ cells confers a sustainable growth of neuroblastoma. The 12th annual meeting of the International Society for Stem Cell Research Annual Meeting, Vancouver, Canada T-1108.

42. Yung, J.S., Wong, J.K., Lau, S.T., Tse, H.F., Tam, P.K., Garcia-Barcelo, M.M. and **Ngan, E.S.** 2013 Potential use of patient specific induced-pluriopotent stem cell (iPSC) to delineate the molecular pathogenesis of syndromic Hirschsprung (HSCR). The 11th annual meeting of the International Society for Stem Cell Research Annual Meeting, Boston, USA T-2014.

43. Lau, S.T., **Ngan, E.S.** 2013 De novo population of c-KIT expressing cells sustains neuroblastoma progression. EMBL conference: Stem Cells in Cancer and Regenerative Medicine, Germany.

44. Yung, J.S., Tse, H.F., Tam, P.K. and **Ngan, E.S.** 2012 iPS cell-derived neural crest cells from a patient with Hirschsprung's disease show a reduced differentiation plasticity. The 10th annual meeting of the International Society for Stem Cell Research Annual Meeting, Yokohama, Japan F-1077.

45. Yung, J.S., Tse, H.F., Tam, P.K. and **Ngan, E.S.** 2012 Estabishing a patient-specific iPSC model for Hirschsprung's disease and other neural crest-associated diseases. The 10th annual meeting of the International Society for Stem Cell Research Annual Meeting, Yokohama, Japan F-3266.

46. Yung, J.S., Tse, H.F., Wan, T.S., Tam, P.K. and **Ngan, E.S.** Modelling Hirschsprung's Disease Using Patient-Specific iPS cells. The 3rd International Symposium on Development of the Enteric Nervous System Cells, Signals and Genes, Hong Kong B12

47. Yung, J.S., Chow, K.H., Tse, H.F., Tam, P.K. and **Ngan, E.S.** 2011 Generation of Patient-specific iPSCs for Hirschsprung's Disease Modelling. Days of Molecular Medicine, "Re-engineering Regenerative Medicine" Symposium, Hong Kong. ***(Abstract award)***

48. Chow, K.H., Yung, J.S. and **Ngan, E.S.** 2011 Neural crest derived from Hirschsprung iPS cells show a reduced neural plasticity. Days of Molecular Medicine, "Re-engineering Regenerative Medicine" Symposium, Hong Kong.

49. Lau. S.T., Kwok, C.K., Tam, P.K. and **Ngan, E.S.** 2011 Dynamic regulation of c-KIT^{+} population in neuroblastoma. Hong Kong International Cancer Congress, Hong Kong.

50. Tsoi, L.L., Lau, S.T., Ohira, M., Nakagawara, A., Tam, P.K. and **Ngan, E.S.** 2011 Kruppel-like factor (KLF4) suppresses neuroblastoma growth by promoting smooth-muscle differentiation. International Society for Stem Cell Research Annual Meeting, Toronto, Canada P2105

51. Tsoi, L.S. and **Ngan, E.S.**. 2010. Tumor suppressive functions of Krüppel-like factor 4 (KLF4) in neuroblastoma, Research Postgraduate Symposium, Hong Kong

52. **Ngan, E.S.**, Garcia-Barcelo, M.M., Yip, B.H., Wainwright, B.J., Sham, P.C., Lui, V.C., Tam, P.K. 2010 Hedgehog-Notch induced premature gliogenesis of neural crest: a cause of Hirschsprung disease. International Society for Stem Cell Research Annual Meeting, San Francisco, USA P424

53. **Ngan, E.S.** and Tam, P.K. Prokineticin signaling in the c-kit expressing neuroblastoma cells. 2009 International Society for Stem Cell Research Annual Meeting, Barcelona, Spain P1360

54. Poon, H.C., **Ngan, E.S.**, Sit, F.Y., Hui, C.C., Wainwright, B.J., Sham, M.H., Tam, P.K., Lui, V.C. 2008 Conditional *Ptc1* knockout in vagal neural crest cells causes a reduced proliferation of enteric nervous system progenitors and intestinal hypoganglionosis. 41st Annual meeting for the Japanese Society of Developmental Biologists, Tokushima, Japan 2P114

55. Lui, V.C., Poon, H.C., **Ngan, E.S.**, Tam, P.K. 2008 Cell context dependent Sonic Hedgehog signaling. 41st Annual meeting for the Japanese Society of Developmental Biologists, Tokushima, Japan 1P022

56. **Ngan, E.S.** and Tam, P.K. 2008 Implication of Prokineticin signaling in neuroblastoma cancer stem cell. American Association of Cancer Research Annual meeting, San Diego, USA P3009

57. **Ngan, E.S.**, Poon, H.C., Sham, M.H., Hui, C.C., Wainwright, B.J., Tam, P.K. and Lui, V.C. 2007 Aberrant Krüppel-like factor 4 expression causes proliferation defect in Patched1-/- neural crest cells. 5th International Society for Stem Cell Research Annual Meeting, Cairns, Australia P169

58. **Ngan, E.S.**, Poon, H.C., Sham, M.H., Hui, C.C., Tam, P.K. and Lui, V.C. 2007 Aberrant Klf4 expression and BMP signaling cause proliferation defect in Ptc1-/- neural crest cells. MGH-HKU-Nature China Forum, Hong Kong. P31 ***(Best Poster Presentation Award)***

59. **Ngan, E.S.**, Lee, K.Y., Sit, F.Y., Chan, J.K., Sham, M.H., Lui, V.C., Tam, P.K. 2006 Roles of Prokineticin-1 in enteric nervous system development. 4th International Society for Stem Cell Research Annual Meeting, Toronto. P3-259

60. Lau, D.K., Leon, T.Y., So, M.T., Mao, X.P., **Ngan, E.S.**, Lui, V.C., Garcia-Barcelo, M.M., Tam, P.K. 2006 Evaluation of thyroid transcription factor-1 (TTF-1) as a Hirschsprung's disease locus. Development of the ENS: Cells, signals & genes, New York Academy of Medicine, New York.

61. **Ngan, E.S.**, Lui, V.C., Lau, D.K., Garcia-Barcelo, M.M., Sham, M.H. and Tam, P.K. 2005 Transcriptional profiling of Enteric Neural Crest Cells. 15th International Society of Developmental Biologists Congress, Sydney. 15 - P016.

62. Law, M.M., Tsang, W.H., **Ngan, E.S.**, Lui, V.C. and Sham, M.H. 2005 Abnormal enteric ganglia development in a Sox 10 mouse mutant generated by gene targeting. 15th International Society of Developmental Biologists Congress, Sydney. 15 - P008.

63. Law, M.M., **Ngan, E.S.**, Lui, V.C., Tam, P.K. and Sham, M.H. 2005 The role of Sox 10 on survival and proliferation of enteric neural crest stem cells. 3rd Annual Meeting of International Society for Stem Cell Research, San Francisco.

64. **Ngan, E.S.**, Ng, E.H., Ngan, H.Y. and Yeung, W.S. 2003 Endocrine gland derived vasculare endothelial growth factor (EG-VEGF) in human endometrium. The 15th annual scientific meeting, Hong Kong Society of Endocrinology, Metabolism and Reproduction P20.

65. Lee, K.F., Kowk, K.L., **Ngan, E.S.**, Xu, J.S. and Yeung, W.S. 2003 Demilune cell and parotid protein (Dcpp) message RNA in mouse oviduct: Hormonal regulation and embryo development. The 15th annual scientific meeting, Hong Kong Society of Endocrinology, Metabolism and Reproduction P17.

66. **Ngan, E.S.**, Yeung, W.S. and Lee, K.F. 2003 The Spatial and Temporal Expression of Secretory Proteins in Mouse Oviduct. The 2nd International Conference on the Female Reproductive Tract, Germany P18.

67. Lee, K.F., **Ngan, E.S.**, Chan, C.S. and Yeung, W.S. Molecular characterization of a novel transcript (ODEG0-17) highly expressed in mouse oviduct. The 2nd International Conference on the Female Reproductive Tract P16.

68. **Ngan, E.S.**, Ma, Z.Q., Chua, S.S., DeMayo, F.J. and Tsai, S.Y. 2001 Inducible expression of FGF-3 in mouse mammary gland. The 54th annual symposium on fundamental cancer research: mechanisms for cell growth and differentiation. P-34.

69. **Ngan, E.S.**, Ma, Z.Q., Liu, Z. and Tsai, S.Y. 2001 Cdc25B functions as a novel coactivator for the steroid receptors. Endo ’01, the 83rd annual meeting of the Endocrine Society. P3-598.

70. Ho, P.K., Fong, R.S., Kai, H.S., **Ngan, E.S.**, Lau, E.H. and Chow, B.K. 1999 The human secretin recetpor gene: genomic organization and promoter studies. In Programme, Endo ’99, the 81st annual meeting of the Endocrine Society. P2-299.

71. **Ngan, E.S.**, Leung, P.C. and Chow, B.K. 1999 A constitutive promoter locating at –1727 to –1674 was identified in the human gonadotropin releasing hormone receptor gene. In Programme, Endo ’99, the 81st annual meeting of the Endocrine Society. P3-213.

72. **Ngan, E.S.**, Cheng, P.K., Leung, P.C. and Chow, B.K. 1998 Identification and localization of cis-acting regulatory elements within 2.3kb of the 5’ flanking region of the human gonadotropin-releasing hormone receptor (hGnRHR) gene that are responsible for the basal and gonadotrope specific expression. In Programme, Endo’ 98, the 80th annual meeting of the Endocrine Society. P1-35.

APPENDIX III: LOCAL AND INTERNATIONAL COLLABORATIONS

Main international collaborators

Name collaborator	Institution	Area research	Publications#
Prof. Sophia Tsai	Baylor College of Medicine, USA	PTC	24,46,48,49,50
Prof. Chi-Chu Hui	University of Toronto, Canada	Hedgehog signaling	1,12,18
Prof. David R Kaplan	University of Toronto, Canada	NB	2
Prof. Akira Nakagawara	Chiba Cancer Center, Japan	NB	5
Dr. Miki Ohira	Chiba Cancer Center, Japan	NB	5
Prof. James Briscoe	MRC, London, UK	Hedgehog signaling	-
Prof Brandon J Wainwright	University of Queensland, Australia	Hedgehog signaling	18
Dr. Chad Cowan	Harvard Stem Cell Institute, US	Stem cell	
Dr. Akitsu Hotto	CiRA, Kyoto University, Japan	Stem cell	-
Prof. Robert HOFSTRA	University of Groningen, THE NETHERLANDS	HSCR	13
Prof. James Wells	Cincinnati Children's Hospital Research Foundation, US	Organoids	
Dr. Maxime M Mahe	Inserm, University of Nantes, France	Organoids	
Prof. Guanglin Pan	CAS Key Laboratory of Regenerative Biology, GIBH, China	Stem cell	
Prof. Zenwei YUAN	China Medical University, Shenyang, CHINA	HSCR, NB	8,14,19,21,25,28,30,32,33,35

Note: Numbers refer to journal publications as numbered in the publication list of my c.v.

HKU collaborators			
Name collaborator	Department	Area research	Publications#
Prof. K. CHEAH	Biochemistry	Developmental biology	Co-I in 2014 GRF and TRS
Prof. MH SHAM	Biochemistry	HSCR	18,29,36,44,45
Dr. YQ SONG	Biochemistry	HSCR	14,21,25
Prof. PC Ho	O&G	Endocrinology	41
Prof. W Yeung	O&G	Endocrinology	41
Prof. US KHOO	Pathology	PTC	24
Dr. JW Yam	Pathology	HCC, NB	5, 16,43
Dr. Wanling YANG	Pediatrics	HSCR	8
Dr. S CHERNY	Psychiatry	HSCR	6,8,9,14,15,18,19,20,22,25,32,33
Prof. PC SHAM	Psychiatry	HSCR	6,8,9,14,15,18,19,20,22,25,32,33
Prof. HF Tse	Medicine	Stem cell	-
Dr. B LANG	Surgery (Endocrine)	PTC	3,24

 # Note: Numbers refer to journal publications as numbered in the publication list of my c.v.