

**Chien-Ling HUANG**  
**(Associate Professor and Programme Leader)**



[Last update: 15 July 2022]

**QUALIFICATIONS:** PD Fellow (CGU/Taiwan; UCC/Ireland), 2009-2015  
PhD (Biomedical Sciences), Chang Gung University (CGU), 2009  
MSc (Medical Biotechnology), CGU, 2004  
BSc (Medical Biotechnology and Laboratory Science), CGU, 2002  
Licensed Medical Technologist (Taiwan), 2002

**BRIEF OUTLINE OF EXPERIENCE AND POSTS HELD:**

2022-present **Associate Professor**, Department of Health Technology and Informatics (HTI), The Hong Kong Polytechnic University (PolyU), Hong Kong

2020-present **Programme Leader** of MSc in Medical Laboratory Science, HTI, PolyU

2015-2022 **Assistant Professor**, Department of Health Technology and Informatics (HTI), The Hong Kong Polytechnic University (PolyU), Hong Kong

2014-2015 **Senior Post-Doctoral Researcher**, Centre for Research in Vascular Biology (CRVB), University College Cork (UCC), Cork, Ireland

2011-2014 **Post-Doctoral Researcher**, CRVB, UCC, Cork, Ireland

2009-2011 **Post-Doctoral Fellow**, CGU, Tao-Yuan, Taiwan

**RESEARCH INTERESTS:**

**Haematology & Molecular diagnostics:** non-coding RNAs in blood malignancy and COVID-19; high-throughput sequencing (i.e. scRNA-seq and clinical WGS)

**Stem cell technology & Functional genomics:** stem cell differentiation and reprogramming; gene regulation in complex diseases (i.e. vascular disease and myopia)

**SERVICE TO PROFESSIONAL & SCIENTIFIC BODIES, CONSULTANCY, MEMBERSHIP OF PROFESSIONAL & LEARNED SOCIETIES:**

**Contributions to professional service –**

Position	Journal/ International Society	Duration
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Editor	Journal of Natural Science, Biology and Medicine	2015 – present
Associate Editor	Frontiers in Medicine/ Frontiers in Medical Technology	2020 – present
Review Editor	Frontiers in Genetics	2020 – present
Topic Editor	Biomedicines (Non-Coding RNA as Promising Biomarker for Disease Diagnosis and Prognosis)	2021 – present
Topic Editor	Frontiers in Medicine (Women in Science - Hematology 2021)	2021 – 2022
Editorial Board Member	Asia-Pacific Journal of Blood Types and Genes	2016 – 2019
Member	International Society of Stem Cell Research (ISSCR)	2018 – present
Member	The RNA Society	2019 – present

**Contributions to PolyU – (since 2015 joining in PolyU)**

Position	Department/ Faculty/ University	Duration
(Department)		
Programme Leader	MSc in Medical Laboratory Science	2020 – present
Departmental Enrollment Officer	BSc in Medical Laboratory Science (2015-2019) MSc in Medical Laboratory Science (2019-present)	2015 – present
Student Exchange Officer	Overseas Placement Coordinator (2015-present) Student Exchange Officer (2021-present)	2015 – present
Subject Leader (for 5 subjects)	Molecular Diagnosis of Human Disease (HTI44002) (2015-present) Haematology: Concepts & Principles (HTI34010) (2020-present) Interpretative & Practical Haematology (HTI34011) (2020-present) Clinical Applications of Molecular Diagnosis in Health Care (HTI5620) (2021-present) Evidence-based Traditional Chinese Medicine (HTI5618) (2021-present)	2015 – present
Deputy Programme Leader	BSc in Medical Laboratory Science	2015 – 2020
Elective Member	Departmental Management Committee (DMC)	2016 – 2018
(Faculty)		
Visiting Lecturer	DHSc in Medical Laboratory Science (For thesis supervision and assessment)	2018 – present
(University)		
Core Member/ Lead Investigator	Management Committee, Research Institute of Future Food	2021 – present

Member	Committee on General University Requirements, Academic Planning and Regulations Committee	2020 – 2021
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**AWARDS:**

**Funded Projects** (since 2015 joining in PolyU)

**Total number of grants: 32**

I am the (co-)Principal Investigator for 19 grants (59%).

Nine grants (28%) are external grants.

**Total amount of grants: HK\$96.2 million**

Total amount of grants with me as the PI/co-PI: HK\$76.1 million

Total amounts of external grants: HK\$48.0 million

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**GRF** stands for General Research Fund. **HMRF** stands for Health and Medical Research Fund. **ITC** is Innovation and Technology Commission and **RTH-ITF** stands Research Talent Hub for ITF projects. **ITF-MRP** is the Innovation and Technology Fund - Midstream Research Programme for Universities. **NSFC** is National Natural Science Foundation of China and it is the national organization directly affiliated to China's State Council. **ITF-TCFS** is the Innovation and Technology Fund - Technology Cooperation Funding Scheme. All these are *competitive external grants*.

**(a) External grants – as a Principal Investigator or Co-Principal Investigator**

<b>Summary:</b>		Amount in HK\$ (duration)
Total numbers of grants = 6		
Total amounts of grants = HK\$40,876,426	Source	
1. <b>Unveiling the regulatory elements contributing to pathogenesis and therapeutic resistance of chronic myeloid leukaemia: functional dissection of novel long non-coding RNA regulatory networks (2022, PI)</b>	GRF	1,013,276 (30 months)
2. <b>The 3P (Prevention, Protection and Promotion) approach as a novel and effective strategy to prevent infection and enhance recovery in individuals with COVID-19 (Co-PI; PI: Prof. David MAN, RS)</b>	HMRF Commissioned Research	28,349,650 (Theme B- 5,241,050/ 3 years)
<b>(Theme B) Development of precision prognostic and diagnostic biomarkers for the personalised treatment and monitoring of COVID-19 patients (2021, Theme B – Chief Investigator)</b>		
3. <b>Myopia mechanisms – multiomics (2020, important support through Centre for Eye and Vision Research</b>	ITC & RTH-ITF (Health@InnoHK;	~9,040,000 (5 years/

	Limited, Hong Kong Science Park, RP1.6 – PI)	obtained by SO)	project)
4.	<b>Unveiling the novel molecular mechanisms in regulating COVID-19 induced innate immune response and hypercoagulopathy</b> (2020, PI/Chief Supervisor)	Hong Kong PhD Fellowship Scheme	967,500 (3 years)
5.	<b>Evaluating the diagnostic yield of using low-pass whole-genome sequencing to identify chromosome abnormalities in paediatric patients with developmental defects</b> (2019, PI)	HMRF	1,206,000 (3 years)
6.	<b>Regulation of smooth muscle progenitor cell-derived vascular tissues by myocardin-mediated long non-coding RNA and its implications for bio-engineering</b> (2018, PI)	NSFC	~300,000 (3 years)

### (b) External grants – as a Co-investigator

<b>Summary:</b>			Amount in HK\$ (duration)
Total numbers of grants = 3			
Total amounts of grants = HK\$7,173,744		Source	
1.	<b>Single-cell droplet RNA sequencing platform based on DNA-encoded nanoparticles for pediatric neuroblastoma research</b> (2022) PI: Prof. YANG Mo (The Hong Kong Polytechnic University)	ITF-TCFS	2,126,000 (2 years)
2.	<b>Developing a novel liquid biopsy-based molecular assay for the diagnosis tuberculosis</b> (2021) PI: Prof. YIP SP (The Hong Kong Polytechnic University)	ITF-MRP	2,299,860 (2 years)
3.	<b>A low-cost handheld device for decentralised detection of SARS-CoV-2 and host response in COVID-19 patients: Development and evaluation</b> (2020) PI: Prof. YIP SP (The Hong Kong Polytechnic University)	HMRF Commissioned Research	2,716,484 (1.5 years)

### (c) Internal grants – as a Principal Investigator or Co-Principal Investigator

<b>Summary:</b>			Amount in HK\$ (duration)
Total numbers of grants = 13			
Total amounts of grants = HK\$35,271,687		Source	
1.	<b>Funding Support for Large Research Project</b> (2022, PI)	One-line Budget	250,000 (4 years)
2.	<b>Establishment of research institute for future food</b> (2021, Co-PI; PI: Dr. WONG KH, ABCT)	Funding for Research Institute	30,000,000 (3 years)

	<b>Reprogramming of nutritional and metabolic microenvironments to target vascular injury triggered in coronavirus disease (2021, PI)</b>	(sub-project)	1,500,000 (2 years)
3.	<b>Functional role of the novel long non-coding RNA LNC000093 in modulating drug resistance and tumour microenvironment in chronic myelogenous leukaemia (2021, PI)</b>	Fund for GRF Project Rated 3.5	100,000 (2 years)
4.	<b>Molecular and functional characterization of copy number variants in high myopia (2020, PI/Chief Supervisor)</b>	Collaborative PhD Training Programme with SUSTech	~588,000 (4 years)
5.	<b>Establish human pluripotent stem cell- derived bone marrow-on-a-chip for studying the molecular insights of myeloproliferative neoplasms (MPNs) (2019, PI)</b>	Griffith U and PolyU CRG	100,000 (2 years)
6.	<b>Long non-coding RNA-mediated signaling interactome for stem/progenitor cell-based vascular regeneration: A pilot study (2019, PI)</b>	Fund for GRF Project Rated 3.5	100,000 (1.5 years)
7.	<b>Development and applications of CNV calling pipelines for bulk and single-cell whole-genome sequencing data (2019, PI/Chief Supervisor)</b>	Collaborative PhD Training Programme with SUSTech	~588,000 (4 years)
8.	<b>Direct photoreceptor differentiation of human mesenchymal stem cells by manipulating miRNA-lncRNA-mRNA triplet (2018, PI)</b>	Griffith U and PolyU CRG	120,000 (2 years)
9.	<b>Exploring the role of JAK2-mediated lncRNAs in myeloproliferative neoplasms (2017, PI)</b>	Fund for ECS Project Rated 3.5	123,502 (2 years)
10.	<b>Functional characterization of H19/microRNA-675/RUNX1 axis in normal and malignant haematopoietic systems (2017, PI/Chief Supervisor)</b>	Other External Funded Project (for PhD study)	~213,400 (3 years)
11.	<b>Genetic regulation and biological significance of key lncRNAome in myeloproliferative neoplasms (2016, PI)</b>	Departmental Start-Up Fund	600,000 (3 years)
12.	<b>Exploring novel regulatory roles of long non-coding RNAs associated with myeloproliferative neoplasms (2016, PI/Chief Supervisor)</b>	Other External Funded Project (for PhD study)	~284,530 (4 years)
13.	<b>Live-cell functional analysis under mechanical shear flow (2015, PI)</b>	Large Equipment Fund	2,204,255 (2 years)

**(d) Internal grants – as a Co-investigator**

<b>Summary:</b>		Amount in
Total numbers of grants = 10		HK\$
Total amounts of grants = HK\$12,955,429	Source	(duration)

1.	<b>Evaluation of the performance of a RT-LAMP assay for rapid diagnosis of SARS-CoV-2 in the emergency department of Queen Mary Hospital (2022)</b> PI: Prof. YIP SP (HTI)	VP's Reserve	1,500,000 (1 year)
2.	<b>Short-read next-generation sequencing (NGS) platform (2022)</b> PI: Prof. ZHANG Weixiong (HTI)	Large Equipment Fund	3,997,044 (1 year)
3.	<b>Sample processing, validation and QC platform (2022)</b> PI: Prof. ZHANG Weixiong (HTI)	Large Equipment Fund	2,141,361 (1 year)
4.	<b>New approach and effective strategies to enhance rehabilitation and recovery of persons with COVID-19 (2022)</b> PI: Prof. MAN Wai Kwong (RS)	One-line Budget	200,000 (5 years)
5.	<b>Single cell analysis platform (2022)</b> PI: Prof. LEUNG Yun Chung (ULS)	Large Equipment Fund	801,840 (1 year)
6.	<b>Decentralized COVID-19 testing using fluorescent nanoprobe (2021)</b> PI: Dr. LEE MH (BME)	Inter-Faculty Collaboration Scheme	498,584 (1.5 years)
7.	<b>Smart Technology for Future Food Industry (2021)</b> PI: Dr. WONG KH (ABCT)	Funding for Research Institutes	1,500,000 (2 years)
8.	<b>Molecular and functional characterization of the novel miRNA-mRNA interactome in acute myeloid leukemia (2018)</b> PI: Prof. YIP SP (HTI)	Postdoctoral Fellowships Scheme	630,000 (2 years)
9.	<b>Development and validation of a novel single-tube molecular diagnostic assay for routine detection of JAK2, MPL and CALR mutations in patients suspected of myeloproliferative neoplasms (2017)</b> PI: Prof. YIP SP (HTI)	Strategic Development Special Project	1,581,600 (2 years)
10.	<b>Genetic susceptibility to myopia: From fine-mapping of selected GWAS signals to functional characterisation (2017)</b> PI: Prof. YIP SP (HTI)	Fund for GRF Project Rated 3.5	105,000 (2 years)

**Teaching grants – as a Principal Investigator or Co-investigator**

<b>Summary:</b>			Amount in HK\$ (duration)
Total numbers of grants = 6			
Total amounts of grants = HK\$3,417,857		Source	
1.	<b>Enhancement plan on new internationalisation at home elements for subjects (2021, PI)</b>	EDC	110,000 (1 year)
2.	<b>Creating an inter-disciplinary and intercultural learning environment for teaching (2021, Co-I)</b>	Special Grant for VTL by UGC (External)	1,500,000 (2 years)
3.	<b>High-capacity pathology whole slide scanner (2021, Co-I)</b>	Large Equipment Fund for Teaching	1,000,000 (1 year)
4.	<b>Developing a repository of digitised virtual slides to promote active learning in haematology diagnostics via flipped practical approach (2017, Co-PI)</b>	Teaching Development Grant	149,940 (2 years)
5.	<b>Internationalising the Student Learning Experience Project (2016, PI)</b>	Teaching Development Grant	127,157 (1 year)
6.	<b>Establishing platelet/whole blood optical lumi-aggregometer (2016, PI)</b>	Large Equipment Fund for Teaching	530,760 (1 year)

**Research publications** (Total >40 peer-reviewed publications)

<b>SCI Journal Paper</b>		Impact factor	Best ranking
<b>(*Corresponding authors)</b>			
1.	Gavriilaki E*, <b>Huang CL</b> , Nayak L. Editorial: Women in Science - Hematology 2021. <i>Front. Med.</i> 9: 926204, 2022. [My contribution: Editing the collected manuscripts, drafting the manuscript, intellectual input and critical review/revision of manuscript.]	<b>5.058</b> (2021)	57/172 (33.1%)
2.	Hsieh YT, Tu HF, Yang MH, Chen YF, Lan XY, <b>Huang CL</b> , Chen HM, Li WC*. Mitochondrial genome and its regulator TFAM modulates head and neck tumorigenesis through intracellular metabolic reprogramming and activation of oncogenic effectors. <i>Cell Death Dis.</i> 12:961, 2021. [My contribution: Intellectual input and critical review/revision of manuscript.]	<b>9.705</b> (2021)	35/194 (18.0%)

3. Meng F, Siu GK, Mok BW, Sun J, Fung KSC, Lam JY, Wong NK, Gedefaw L, Luo S, Lee TMH, Yip SP\*, **Huang CL\***. Viral microRNAs encoded by nucleocapsid gene of SARS-CoV-2 are detected during infection, and targeting metabolic pathways in host cells. *Cells*. 10:1762, 2021. **7.666** 51/194  
(2021) (26.3%)

[My contribution: Study design, securing funds, drafting the whole manuscript, intellectual input and critical review/revision of manuscript.]
4. Wong NK, Luo S, Chow EYD, Meng F, Adesanya A, Sun J, Ma HMH, Jin W, Li WC, Yip SP\*, **Huang CL\***. The tyrosine kinase-driven networks of novel long non-coding RNAs and their molecular targets in myeloproliferative neoplasms. *Front. Cell Dev. Biol.* 9:643043, 2021. **6.081** 6/39  
(2021) **(15.4%)**

[My contribution: Study design, securing funds, drafting the whole manuscript, intellectual input and critical review/revision of manuscript.]
5. Gedefaw L, Ullah S, Leung PHM, Cai Y, Yip SP\*, **Huang CL\***. Inflammasome activation-induced hypercoagulopathy: Impact on cardiovascular dysfunction triggered in COVID-19 patients. *Cells*. 10:916, 2021. **7.666** 51/194  
(2021) (26.3%)

[My contribution: Study design, securing funds, intellectual input and critical review/revision of manuscript.]
6. Gedefaw L, Ullah S, Lee TMH, Yip SP\*, **Huang CL\***. Targeting Inflammasome activation in COVID-19: Delivery of RNA interference-based therapeutic molecules. *Biomedicines*. 9:1823, 2021. **4.757** 121/296  
(2021) (40.9%)

[My contribution: Study design, securing funds, intellectual input and critical review/revision of manuscript.]
7. Chen SG, Ugwu F, Li WC, Caplice NM, Petcu EB, Yip SP\*, **Huang CL\***. Vascular tissue engineering: Advanced techniques and gene editing in stem cells for graft generation. *Tissue Eng Part B Rev.* 27:14-28, 2021. **7.376** 7/29  
(2021) **(24.1%)**

[My contribution: Study design, securing funds, intellectual input and critical review/revision of manuscript.]
8. Lan XY, Chung TT, **Huang CL**, Lee YJ, Li WC\*. Traditional herbal medicine mediated regulations during head and neck carcinogenesis. *Biomolecules*. 10:1321, 2020. **6.064** 75/296  
(2021) **(25.3%)**

[My contribution: Intellectual input and critical review/revision of manuscript.]
9. Li WC\*, Huang CH, Hsieh YT, Chen TY, Cheng LH, Chen CY, Liu CJ, Chen HM, **Huang CL**, Lo JF, Chang KW. Regulatory role of hexokinase 2 in modulating head and neck tumorigenesis. *Front. Oncol.* 10:176, 2020. **5.738** 78/245  
(2021) (31.8%)

[My contribution: Intellectual input and critical review/revision of manuscript.]
10. Leung KH, Luo S, Kwarteng R, Chen SG, Yap MKH, **Huang CL\***, Yip SP\*. The myopia susceptibility locus vasoactive intestinal peptide receptor 2 (VIPR2) contains variants with opposite effects. *Sci. Rep.* 9:18165, 2019. **4.996** 19/73  
(2021) (26.0%)

[My contribution: Study design, securing funds, intellectual input, and critical review/revision of manuscript.]
11. Wong NK, **Huang CL\***, Islam R, Yip SP\*. Long non-coding RNAs in hematological malignancies: Translating basic techniques into diagnostic and therapeutic strategies. *J Hematol Oncol.* 11:131, 2018. **23.168** 4/78  
(2021) **(5.1%)**

[My contribution: Study design, securing funds, intellectual input, drafting the whole manuscript, and critical review/revision of manuscript.]



12. Yau MY, Lu X, **Huang CL**, Wong CM\*. Long non-coding RNAs in obesity- induced cancer. *Non-Coding RNA*. 4:19, 2018. [*New SCI Journal*]
- [My contribution: Intellectual input and critical review of manuscript.]
13. Turner EC<sup>#</sup>, **Huang CL**<sup>#</sup>, Sawhney N, Govindarajan K, Clover AJ, Martin K, Browne TC, Whelan D, Kumar AH, Mackrill JJ, Wang S, Schmeckpeper J, Stocca A, Pierce WG, Leblond AL, Cai L, O'Sullivan DM, Buneker CK, Choi J, MacSharry J, Ikeda Y, Russell SJ, Caplice NM\*. A novel selectable Islet 1 positive progenitor cell reprogrammed to expandable and functional smooth muscle cells. *Stem Cells*. 34:1354-68, 2016. (**#co-First authors**)
- [My contribution: Study design, perform experiments, intellectual input, drafting the whole manuscript, critical review/revision of manuscript.]
14. **Huang CL**, Leblond AL, Turner EC, Kumar AH, Martin K, Whelan D, O'Sullivan DM, Caplice NM\*. Synthetic chemically modified mRNA-based delivery of cytoprotective factor promotes early cardiomyocyte survival post-acute myocardial infarction. *Mol Pharm*. 12:991-6, 2015.
- [My contribution: Study design, perform experiments, intellectual input, drafting the whole manuscript, and critical review/revision of manuscript.]
15. Ali MT, Martin K, Kumar AH, Cavallin E, Pierrou S, Gleeson BM, McPheat WL, Turner EC, **Huang CL**, Khider W, Vaughan C, Caplice NM\*. A novel CX3CR1 antagonist eluting stent reduces stenosis by targeting inflammation. *Biomaterials*. 69:22-9, 2015.
- [My contribution: Study design, perform experiments, intellectual input and critical review/revision of manuscript.]
16. Tsai HJ<sup>#</sup>, **Huang CL**<sup>#</sup>, Huang DY, Lin CC, Cooper JA, Cheng JC, Tseng C-P\*. Disabled-2 is required for efficient haemostasis and platelet activation by thrombin in mouse. *Arterioscler Thromb Vasc Biol*. 34:2404-12, 2014. (**#co-First authors**)
- [My contribution: Study design, perform experiments, intellectual input, draft and critical review/revision of manuscript.]
17. Kumar AH, Martin K, Doyle B, **Huang CL**, Krishnan G, Ali MT, Skelding KA, Wang S, Gleeson BM, Jahangeer S, Ritman EL, Russell SJ, Caplice NM\*. Intravascular cell-delivery device for therapeutic VEGF-induced angiogenesis in chronic vascular occlusion. *Biomaterials*. 35:9012-22, 2014.
- [My contribution: Study design, perform experiments, intellectual input and critical review/revision of manuscript.]
18. Martin K, **Huang CL**, Caplice NM\*. Regenerative approaches to post-myocardial infarction heart failure. *Curr Pharm Des*. 20:1930-40, 2014.
- [My contribution: Study design, intellectual input, draft and critical review/revision of manuscript.]
19. Turner EC\*, **Huang CL**, Govindarajan K, Caplice NM. Identification of a Klf4-dependent upstream repressor region mediating transcriptional regulation of the myocardin gene in human smooth muscle cells. *Biochim Biophys Acta. - Gene Regulatory Mechanisms*. 1829:1191-201, 2013.
- [My contribution: Study design, perform experiments, intellectual input and critical review/revision of manuscript.]

20. Hung WS<sup>#</sup>, **Huang CL**<sup>#</sup>, Fan JT<sup>#</sup>, Huang DY, Yeh CF, Cheng JC, Tseng C-P\*. The endocytic adaptor protein Disabled-2 is required for cellular uptake of fibrinogen. *Biochim Biophys Acta. - Molecular Cell Research*. 1823:1778-88, 2012. (**#co-First authors**) **5.011** 110/296 (2021) (37.2%)  
[My contribution: Study design, perform experiments, intellectual input, draft and critical review/revision of manuscript.]
21. **Huang CL**, Cheng JC, Kitajima K, Nakano T, Yeh CF, Chong KY, Tseng C-P\*. Disabled-2 is required for mesoderm differentiation of murine embryonic stem cells. *J Cell Physiol*. 225:92-105, 2010. **6.513** 10/81 (2021) (**12.3%**)  
[My contribution: Study design, perform experiments, intellectual input, draft and critical review/revision of manuscript.]
22. Tseng WL, **Huang CL**, Chong KY, Liao CH, Stern A, Cheng JC, Tseng C-P\*. Reelin is a platelet protein and functions as a positive regulator of platelet spreading on fibrinogen. *Cell Mol Life Sci*. 67:641-53, 2010. **9.237** 34/296 (2021) (**11.5%**)  
[My contribution: Study design, perform experiments, intellectual input, draft and critical review/revision of manuscript.]
23. **Huang CL**, Cheng JC, Stern A, Hsieh JT, Liao CH, Tseng C-P\*. Disabled-2 is a novel integrin  $\alpha$ IIb-binding protein that negatively regulates platelet-fibrinogen interactions and platelet aggregation. *J Cell Sci*. 119:4420-30, 2006. **5.235** 87/194 (2021) (44.8%)  
[My contribution: Study design, perform experiments, intellectual input, draft and critical review/revision of manuscript.]
24. Cheng JC, **Huang CL**, Lin CC, Chen CC, Chang YC, Chang SS, Tseng C-P\*. Rapid detection and identification of clinically important bacteria by high-resolution melting analysis after broad-range ribosomal RNA real-time PCR. *Clin Chem*. 52:1997-2004, 2006. **12.167** 1/29 (2021) (**3.4%**)  
[My contribution: Study design, perform experiments, intellectual input, draft and critical review/revision of manuscript.]
25. Zhou J, Hernandez G, Tu SW, **Huang CL**, Tseng C-P, Hsieh JT\*. The role of DOC-2/DAB2 in modulating androgen receptor-mediated cell growth via the nongenomic c-Src-mediated pathway in normal prostatic epithelium and cancer. *Cancer Res*. 65:9906-13, 2005. **13.312** 20/245 (2021) (**8.2%**)  
[My contribution: Perform experiments, intellectual input and critical review/revision of manuscript.]
26. Tseng C-P\*, Chang P, **Huang CL**, Cheng JC, Chang SS. Autocrine signaling of platelet-derived growth factor regulates disabled-2 expression during megakaryocytic differentiation of K562 cells. *FEBS Letters*. 579:4395-401, 2005. **3.864** 27/72 (2021) (37.5%)  
[My contribution: Study design, perform experiments, intellectual input and critical review/revision of manuscript.]
27. Tseng C-P\*, **Huang CL**, Chong KY, Hung IJ, Chiu DT. Rapid detection of glucose-6-phosphate dehydrogenase gene mutations by denaturing high-performance liquid chromatography. *Clin Biochem*. 38:973-80, 2005. **3.625** 11/29 (2021) (37.9%)  
[My contribution: Perform experiments, intellectual input and critical review/revision of manuscript.]
28. **Huang CL**, Cheng JC, Liao CH, Stern A, Hsieh JT, Wang CH, Hsu HL, Tseng C-P\*. Disabled-2 is a negative regulator of integrin  $\alpha$ IIb $\beta$ 3-mediated fibrinogen adhesion and cell signaling. *J Biol Chem*. 279:42279-89, 2004. **5.486** 94/296 (2021) (31.8%)  
[My contribution: Study design, perform experiments, intellectual input, draft and critical review/revision of manuscript.]

29. Tseng C-P\*, **Huang CL**, Huang CH, Stern A, Cheng JC, Tseng CH, and Chiu DT. Disabled-2 small interfering RNA modulates cellular adhesive function and MAPK activity during megakaryocytic differentiation of K562 cells. *FEBS Letters*. 541:21-7, 2003. **3.864** 27/72  
(2021) (37.5%)

[My contribution: Study design, perform experiments, intellectual input and critical review/revision of manuscript.]

**Abstracts (refereed conferences)**

1. Sun J, **Huang CL**, Luk HM, Meng F, Lo FM, Yip SP. Copy number variations identified using whole-genome sequencing as genetic markers for pediatrics patients with developmental defects. *Eur. J. Hum. Genet.* 2022.
2. Wong N, Meng F, Adesanya AE, Yip SP, **Huang CL**. The novel H19/miR-675-5p/LNC000093-mediated non-coding RNA pathway regulates treatment response in BCR-ABL1-positive CML cells. *FASEB Journal* 2021.
3. Yip SP, Leung KH, Luo S, Kwarteng R, Chen S, Yap KH, **Huang CL**. The vasoactive intestinal peptide receptor 2 (VIPR2) gene, a myopia susceptibility locus, contains variants showing opposite effects. *Genetics Society of Australasia Conference* 2019.
4. **Huang CL**, Leblond AL, Turner EC, Kumar AHS, Martin K, Whelan D, O'Sullivan DM, Caplice NM. Synthetic modified RNA driven delivery of insulin-like growth factor-1 promotes early cardiomyocytes survival post-acute myocardial infarction. *Circulation* 2014.

**Award:** Young Investigator Travel Awards from AHA to CLH.

5. Turner EC, **Huang CL**, Sawhney N, Govindarajan K, Kumar AHS, Clover JP, Martin K, Leblond AL, Wang S, and Caplice NM. Identification of a novel adult smooth muscle-like stem/progenitor cell that facilitates formation of tissue engineered vascular tissue for use as vascular grafts in vivo. *Circ Res.* 2013.

**Award:** Young Investigator Travel Awards from AHA to ECT.

6. Tsai HJ, **Huang CL**, Huang DY, Lin CC, Cooper JA, Cheng JC, and Tseng C-P. Disabled-2 is required for efficient platelet activation by thrombin in mouse. *J Thromb Haemost.* 2013.

**Award:** Travel Grants/Awards from ISTH to HJT.

7. **Huang CL**, Tsai HJ, Lin CC, Chang YW, Cooper JA, Cheng JC, and Tseng C-P. *In vivo* role of Disabled-2 (DAB2) in haemostasis and platelet function: studies using a megakaryocyte lineage- restricted DAB2 knockout. *J Thromb Haemost.* 2011.

**Award:** Young Investigator Awards from ISTH to CLH.

8. **Huang CL**, Cheng JC, Liu SY, Tseng C-P. Identification of a novel tumor necrosis factor receptor- associated factor 6-binding partner that is a potential lysine-63 linked ubiquitination substrate. *Cancer Res.* 2010.

**Award:** Travel Grants/Awards to CLH- National Science Council (NSC-99-2914-I-182-003-A1).

9. **Huang CL**, Cheng JC, Lin CC, and Tseng C-P. Disabled-2 is a key regulator during mesodermal differentiation and megakaryopoiesis of murine embryonic stem cells. *J Thromb Haemost.* 2009.

**Award:** Travel Grants/Awards to CLH- Foundation for the advancement of outstanding scholarship; The Chinese Society of Cell and Molecular Biology.

10. **Huang CL**, Cheng JC, and Tseng C-P. Platelet protein Disabled-2 is required for embryonic stem cell-derived mesoderm formation and megakaryocytic differentiation. *J Thromb Haemost.* 2007.

**Award:** Travel Grants/Awards to CLH- National Science Council (NSC-96-2922-I-182-005);

The Chinese Society of Cell and Molecular Biology.

11. Tseng C-P, **Huang CL**, Cheng JC, Liao CH. Disabled-2 is a secreted anti-adhesive molecule during platelet activation and aggregation. *J Thromb Haemost.* 2005.

**Award:** Travel Grants/Awards from ISTH to CPT.

## **Postgraduate Students Supervised**

### ***PhD students***

#### **Supervision activities:**

- (1) Regular Saturday lab meetings with Prof Shea Ping YIP and research postgraduate students
- (2) WhatsApp group with research postgraduate students for immediate communications
- (3) Face-to-face discussions with individual research postgraduate student (~1 session per week for each student)

#### **(Chief supervisor)**

**WONG Nonthaphat** (2016-2022) (**PhD Awarded**, with **Faculty Distinguished Thesis Award**)

Project Title: *Exploring Novel Regulatory Roles of Long Non-Coding RNAs Associated with Myeloproliferative Neoplasms*

**ADESANYA Adenike** (2017-present)

Project Title: *Functional Characterization of H19/MicroRNA-675/RUNX1 Axis in Normal and Malignant Haematopoietic Systems*

**SUN Jiahong** (2019-present) (Now in SUSTech, co-supervisor: Dr Wenfei JIN)

Project Title: *Development and Applications of CNV Calling Pipelines for Bulk and Single-cell Whole-Genome Sequencing Data*

**BIMEREW Lealem** (2020-present) (**Hong Kong PhD Fellowship**)

Project Title: *Unveiling the Novel Molecular Mechanisms in Regulating COVID-19 Induced Innate Immune Response and Hypercoagulopathy*

**ZHANG Shijing** (2020-present) (SUSTech co-supervisor: Dr Wenfei JIN)

Project Title: *Molecular and Functional Characterization of Copy Number Variants in High Myopia*

**JIANG Zhiwei** (2021-present)

Project Title: *Identification and Functional Analysis of Non-coding RNA-mediated Pathways during Retinal Ganglion Cell Differentiation*

#### **(Co-supervisor)**

**AU Man Ting** (2015-2020) (**PhD Awarded**)

Thesis Title: *Endothelin Receptor Subtypes in Cartilage Homeostasis and Disease*

**MARUF Abdullah** (2016-present) (Thesis Submitted)

Project Title: *Association Study and Functional Characterization of Germline Polymorphisms in Myeloproliferative Neoplasms*

**KWARTENG Regina** (2016-present) (Thesis Submitted)

Project Title: *Association and Functional Studies for Genetic Variants of Refractive errors and Myopia*

**TEREFE Petros** (2018-present)

Project Title: *High-Throughput Functional Dissection of Single Nucleotide Polymorphisms Associated with Philadelphia Chromosome-Negative Myeloproliferative Neoplasms*

**MORILLA Lordjie** (2020-present)

Project Title: *Open Chromatin and Regulatory Network Profiling in Ocular Cells to Infer Functional Roles of Myopia-Associated Genes and Single-Nucleotide Polymorphisms (SNPs)*

### ***DHSc student***

**LIN Wing Keung** (2018-2022) (Thesis Submitted)

Project Title: *Identifying JAK2-V617F-Mediated Long Non-Coding RNAs as New Molecular Targets for Myeloproliferative Neoplasms*

### ***Master students***

**(Completed with Dissertation Thesis; 9 credits)**

**CHEUNG Irene** (2015-2017)

Thesis Title: *Development of a Novel Single-tube Molecular Assay for the Detection of JAK2, MPL and CALR Mutations in Myeloproliferative Neoplasm*

**TAI Wing Yan** (2016-2017)

Thesis Title: *Analysis of Long Non-coding RNA Expression Profiles in Myeloproliferative Neoplasms as Potential Biomarkers for Diagnosis and Treatment Management*

**LIU Ka Na** (2016-2017)

Thesis Title: *To Identify Major SNPs of Long non-coding RNA HOTAIR Contributing to Myeloproliferative Neoplasms in Hong Kong Chinese Population*

**CHAN Edward** (2016-2017)

Thesis Title: *Investigating the Effects of TGF- $\beta$ 1 on Regulating Mesenchymal Stem Cell Differentiation and Immune Response*

**CHAN Harold** (2017-2018)

Thesis Title: *The Roles and Regulatory Features of LncRNA-H19 on Smooth Muscle Cell Differentiation from Human Mesenchymal Stem Cell*

**MA Man Hin** (2018-2019)

Thesis Title: *The Development and Evaluation of Molecular Techniques for the Monitoring of Minimal Residual Disease in Chronic Myelogenous Leukaemia*

**TSE Hing Fung** (2018-2019)

Thesis Title: *Association of Single-nucleotide Polymorphism in the SH2B3 Gene with JAK2 V617F-Positive Myeloproliferative Neoplasms*

**LEE Nga Lam** (2019-2020)

Thesis Title: *The Use of Capture-based Enrichment for Sequencing BCR-ABL1 Breakpoint Region in Chronic Myeloid Leukaemia*

**YEUNG Ka Wa** (2019-2020)

Thesis Title: *Expression and Function of a Novel Long Non-coding RNA Identified in Chronic Myeloid Leukemia: Potential Biomarker and Mechanism*

**CHIU Wai Nam** (2019-2020)

Thesis Title: *The Regulation of Long non-coding RNAs and Toll-like Receptor-4 Signaling in Human Mesenchymal Stem Cell*

**WAN Po Ting** (2019-2021)

Thesis Title: *Functional Study of Associated Variants of TERT Gene Identified in Myeloproliferative Neoplasm Using Dual Luciferase Reporter Assay*

**HE Ling Yu** (2019-2021)

Thesis Title: *Expression Profiling of Thrombotic Related Cytokines and Long Non-Coding RNA H19 in PBMC and Lung Cells after the Activation of SARS-CoV-2*

**LO Wing Hei** (2020-2021)

Thesis Title: *Identification and Verification of Clinically Significant Copy Number Variants (CNVs) Using Low-Pass Whole-Genome Sequencing*

**WONG King Hin** (2020-2021)

Thesis Title: *Evaluating an Ultra-Sensitive Immuno-Assay for D-Dimer Detection in COVID-19 Positive Patients for Coagulopathy Risk Assessment*

### **Research Supervision**

Current supervision as chief supervisor: 2 Postdoc, 5 PhD, 1 DHSc (Dissertation), 6 MSc (Dissertation)

Graduated: 1 PhD (Chief supervisor), 14 MSc (Chief supervisor; with thesis)