

**LEE Cheuk-Lun, Keith**  
(Assistant Professor)



### Qualifications

- 2009 PhD (Obstetrics & Gynaecology / Chemistry), The University of Hong Kong  
2009 Exchange PhD student (Molecular Biosciences) Imperial College, UK
- 2006 MPhil (Zoology), The University of Hong Kong
- 2003 BSc (Food and Nutritional Science, First Class Honor), The University of Hong Kong

### Brief Outline of Experience and Posts Held:

- 2024-Present**      **The Hong Kong Polytechnic University**  
Assistant Professor (Department of Health Technology and Informatics)
- 2023-2024      The University of Hong Kong  
Research Officer (Obstetrics & Gynaecology)
- 2019-2023      The University of Hong Kong  
Research Assistant Professor (Obstetrics & Gynaecology)
- 2019-2024      The University of Hong Kong–Shenzhen Hospital  
Honorary Research Associate 榮譽副研究員 (HKU-Shenzhen Hospital, 2019/4-2024/2)
- 2017-2018      University of Cambridge, UK  
Visiting Research Fellow (Center for Trophoblast Research)

### Professional Qualifications, Membership, and Certificates

- The Australasian Association for Clinical Biochemistry and Laboratory Medicine (AACB) - Associated member (Membership Number: 24805, Member Since: 16/07/2019)
- Hong Kong Nutrition Association - Nutritionist (Membership no. N671, Member Since: 24/05/2021)
- Certified analysis operator in andrology lab (HKU-QMH CARE)
- Council member of The Hong Kong Society of Endocrinology, Metabolism and Reproduction
- Certificate of Internal Audit of ISO 15189:2007 Laboratory Quality Management Standard
- Certificate of Good Clinical Practice

## Research Interests:

- Organoid and trophoblast stem cell models
- Placenta development and reproductive biology
- Glycobiology
- Extracellular vesicle biology

## Awards

2018	The University of Hong Kong	<b>Doris Zimmern HKU-Cambridge Hughes Hall Fellowship</b>
2017	The University of Hong Kong	<b>University of Hong Kong-China Medical Board Grants</b>
2011	The University of Hong Kong	<b>Strategic Research Areas and Themes (Development and Reproduction) Best Research Output Award - 2nd Prize</b>
2008	The University of Hong Kong	<b>Research Postgraduate Exchange Scholarship</b>
2008	The University of Hong Kong	<b>Wong Ching Yee Medical Scholarship</b>

## Research

- Published > 70 research articles, H-index = 25 (ResearchGate); H-index = 27 (Google Scholar)
- Full list in ResearchGate (<https://www.researchgate.net/profile/Cheuk-Lun-Lee>)
- ORCID ([orcid.org/0000-0003-1553-3478](https://orcid.org/0000-0003-1553-3478))
- Invited reviewer/review editor of academic journals (e.g., Cell Press Community; Frontiers Community; Immunology and Cell Biology; Placenta; Journal of Reproductive Immunology; etc.)

## Selected Publications

(# first author, \* corresponding author)

1. Zhong J<sup>#</sup>, Li J, Burton GJ, Koistinen H, Cheung KW, Ng EHY, Yao Y, Yeung WSB, **Lee CL\***, Chiu PCN\*. The functional roles of protein glycosylation in human feto-maternal crosstalk. **Human Reproduction Update**. 2024 Jan 3. 30(1):81-108. doi: 10.1093/humupd/dmad024 (Impact factor 2022: 13.3, Rank: 1/85 - Q1, OBSTETRICS & GYNECOLOGY)
2. Zhang Q<sup>#</sup>, **Lee CL<sup>#</sup>**, Tingyu Yang<sup>#</sup>, Li J, Zeng Q, Liu X, Liu Z, Ruan D, Li Z, Kan ASY, Cheung KW, Mak ASL, Ng VWY, Zhao H, Fan X, Duan YG, Zhong L, Chen M, Du M, Li RHW, Liu P, Ng EHY, Yeung WSB, Gao Y\*, Yao Y\*, Chiu PCN\*. Adrenomedullin has a pivotal role in trophoblast differentiation: A promising nanotechnology-based therapeutic target for preeclampsia. **Science Advances**. 2023 Nov 3. 9(44):eadi4777. doi: 10.1126/sciadv.adi4777. (Impact factor 2022: 13.6, Rank: 7/73 - Q1, MULTIDISCIPLINARY SCIENCES)
3. Ruan D<sup>#</sup>, Ye ZW<sup>#</sup>, Yuan S<sup>#</sup>, Li Z<sup>#</sup>, Zhang W<sup>#</sup>, Ong CP, Tang K, Tam TTKK, Guo J, Xuan Y, Huang Y, Zhang Q, **Lee CL**, Lu L, Chiu PCN, Yeung WSB, Liu F\*, Jin DY\*, Liu P\*. Human early syncytiotrophoblasts are highly susceptible to SARS-CoV-2 infection. **Cell Reports Medicine**. 2022 Dec 20. 3(12):100849. doi: 10.1016/j.xcrm.2022.100849. (Impact factor 2022: 14.3, Rank: 5/136 - Q1, MEDICINE, RESEARCH & EXPERIMENTAL)
4. **Lee CL<sup>#</sup>\***, Chen Z<sup>#</sup>, Zhang Q<sup>#</sup>, Guo Y, Ng VWY, Zhang B, Bai K, Ruan D, Kan ASY, Cheung KW, Mak ASL, Yeung WSB, Su

R, Yang Q, Chen M, Du MR, Jian Z, Fan X\*, Chiu PCN\*. Dysregulation of CD147 complex confers defective placental development: a pathogenesis of early-onset preeclampsia. Clinical and Translational Medicine. 2022 Jun. 12(6):e826. doi: 10.1002/ctm2.826. (Impact factor 2022: 10.6, Rank: 14/136 - Q1 MEDICINE, RESEARCH & EXPERIMENTAL)

5. Bai K#, Lee CL#\*, Liu X, Li J, Cao D, Zhang L, Hu DH, Li H, Hou Y, Xu Y, Kan ASY, Cheung KW, Ng EHY, Yeung WSB, Chiu PCN\*. Human placental exosomes induce maternal systemic immune tolerance by reprogramming circulating monocytes. Journal of Nanobiotechnology. 2022 Feb 18. 20(1):86. doi: 10.1186/s12951-022-01283-2. (Impact factor 2022: 10.2, Rank: 12/156 - Q1 BIOTECHNOLOGY & APPLIED MICROBIOLOGY)
6. Leung TY#, Lee CL, Tian X, Lam KKW, Li RHW, Ng EHY, Yeung WSB\*, Chiu PCN\*. Simulating nature in sperm selection for assisted reproduction. Nature Reviews Urology. 2022 Jan. 19(1):16-36. doi: 10.1038/s41585-021-00530-9. (Impact factor 2022: 15.3, Rank: 4/88 - Q1 UROLOGY & NEPHROLOGY)
7. Li SS#, Ip CKM#, Tang MYH, Tong Y, Zhang JW, Hassan AA, Mak ASC, Yung S, Chan TM, Ip PP, Lee CL, Chiu PCN, Lee LTO, Zeng JZ, Shum HC\*, Wong AST\*. Sialyl Lewisx-P-selectin cascade mediates tumor-mesothelial adhesion in ascitic fluid shear flow. Nature Communications. 2019 Jun 3. 10(1):2406. doi: 10.1038/s41467-019-10334-6. (Impact factor 2022: 16.6, Rank: 6/73 - Q1 MULTIDISCIPLINARY SCIENCES)
8. Pang PC#, Chiu PCN#, Lee CL, Chang LY, Panico M, Morris HR, Haslam SM, Khoo KH, Clark GF\*, Yeung WSB, Dell A\*. Human Sperm Binding Is Mediated by the Sialyl-Lewisx Oligosaccharide on the Zona Pellucida. Science. 2011 Sep 23. 333(6050):1761-4. doi: 10.1126/science.1207438. (Impact factor 2022: 56.9, [Press release](#), Rank: 2/73 - Q1 MULTIDISCIPLINARY SCIENCES).

## Research Grant Records

### Principal Investigator

1. Lee CL, Cheung KW, Chiu PCN, Chow FWN. Early-pregnancy prediction of preeclampsia using maternal serum levels of sialylated S100 calcium-binding protein A9 and alpha-2 Heremans-Schmid glycoprotein. Health and Medical Research Fund. (HKD 946,888). 11222186.
2. Lee CL, Chan RWS, Chiu PCN, Ng EHY. The maternal contribution to preeclampsia: A perspective from endometrial gland development and functions. Research Grants Council - General research Fund. 2023/34 exercise, (HKD 1,484,248). 17110423. (Initial PI)
3. Lee CL, Chiu PCN, Cheung KW. Placental extracellular vesicle-derived siglec-6 and CD147 on the early detection of preeclampsia. Health and Medical Research Fund. 7/2022-6/2025 (HKD 1,110,692). 09202056. (Initial PI)
4. Lee CL, Chiu PCN, Ng EHY, Yeung WSB. The role of endoglandular trophoblast in placenta development and its association with preeclampsia. Research Grants Council - General research Fund. 1/2021-12/2023 (HKD 1,182,701). 17115320. (Initial PI)
5. Lee CL. The role of CD147 on the vascular remodeling function of human extravillous trophoblast and its association with preeclampsia. National Natural Science Foundation of China (国家自然科学基金-面上项目). 1/2020-12/2023

(RMB 550,000). 81971396.

6. **李卓倫**, 趙志昂, 段永剛, 張晴晴, 白昆峰, 董洋. 可溶性細胞外基質金屬蛋白酶誘導因子對調節絨毛外滋養層細胞的功能及其與胎盤相關妊娠併發症的關係. 香港大學深圳醫院「高水準醫院」建設科研培育計劃 2019. (RMB 400,000). HKUSZH201902015

Co-Investigator

7. Jiang L, Lee KF, Li HWR, **Lee CL**, Cao DD. The Investigation on the Dysregulated of CD8+ T Cell Phenotypes in the Repeated Implantation Failure Patients. Health and Medical Research Fund. (HKD 1,419,796). 11222196.
8. Chow FWN, Siu GKH, Luk KS, Buck Amy, Lai CKC, Lee YL, **Lee CL**, Tsang CC. Circulating small RNA-based diagnostics for differentiation of Candida species in candidemia. Health and Medical Research Fund. 08/2023-08/2026 (HKD 1,200,000). 22210432.
9. Chiu PCN, **Lee CL**, Ng, EHY, Ruan D. The role of adrenomedullin on trophoblast differentiation and its association with early-onset preeclampsia. Research Grants Council - General research Fund. 09/2022-08/2025 (HKD 1,169,026). 17112822.
10. Chiu PCN, Yeung WSB, Ng EHY, **Lee CL**. The role of sialyl-Lewis(x) interaction on the selection of fertilization competent sperm and its potential application in assisted reproduction treatment. Health and Medical Research Fund 9/2020-2/2023 (HKD 976,320). 07182446.
11. Chiu PCN, Burton B, **Lee CL**, Ng EHY. Hormonal regulation of decidual glycodelin-A glycosylation and its implication in the pathogenesis of early-onset preeclampsia. Research Grants Council - General research Fund. 1/2020-12/2022. (HKD 1,113,869). 17115619.
12. Lee CKF, Ng EHY, Yeung WSB, **Lee CL**. Investigation on Lactobacillus, lactate, and pH changes in regulating human endometrial receptivity and predicting pregnancy outcomes. Health and Medical Research Fund 5/2019-4/2023 (HKD 1,382,680). 16172101.
13. 段永剛, **李卓倫**, 高晶, 趙志昂, 白昆峰, 張晴晴, 楊樹標. CCR6/CCL20 透過 CatSper1 訊號途徑調控精子功能與受精過程的分子機制研究. 香港大學深圳醫院高水準醫院建設科研培育計畫 2019. (RMB 380,000)
14. 趙志昂, **李卓倫**, 段永剛, 高晶, 梁紫瑩, 張晴晴, 趙志昂, 白昆峰. 理解人類精子-透明帶結合機制及其對臨床輔助生殖治療中分離有受精能力精子的作用. 香港大學深圳醫院高水準醫院建設科研培育計畫 2019. (RMB 470,000)
15. Ng EHY, Chiu PCN, **Lee CL**. The regulatory role of placenta-derived extracellular vesicles on the differentiation and functions of human decidual macrophages. Research Grants Council - General research Fund. 1/2018-12/2020 (HKD 1,008,089). 17118917.
16. Chiu PCN, **Lee CL**, Wong AST. The role of glycodelin-A on the vascular remodeling function of decidual natural killer cells during early pregnancy and its association with preeclampsia. Research Grants Council - General research Fund. 1/2016-12/2018 (HKD 1,064,451). 17122415.
17. Ng EHY, Chiu PCN, **Lee CL**, Yeung WSB. Control of human decidual macrophage differentiation by glycodelin-A.

Research Grants Council - General research Fund. 9/2012-8/2015 (HKD 1,297,160). 774212.