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REPRODUCTION AND DEVELOPMENT

**Principal Investigator**

Professor Ronald Wang

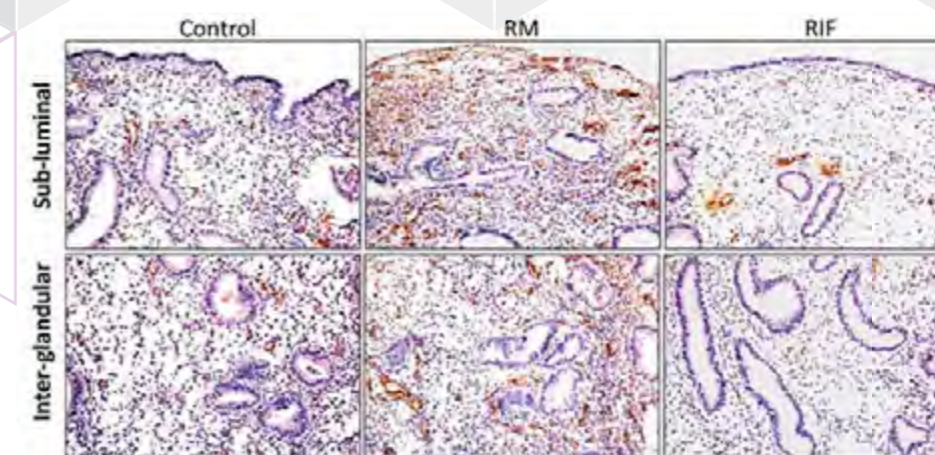
Team

Hui Xu, Nina Chu, Gene Chi Wai Man, Alex Bo Liang, Simon Long Cui, Linda Ling Wu, Derek Jianzhang Wang, Sabrina Yang, Alan Wing Kwong Chan, Emma Yujing Xiong, Fangrong Wu, Ricky Qi Wu, Zinnat Hasina, Ying He, Melody Di Mao

Research Progress Summary

Professor Ronald Wang and his team from the Department of Obstetrics and Gynaecology specialise in the field of reproduction and development. It covers a wide spectrum of clinical, basic and genetic studies of female and male reproduction, as well as embryo and fetal development in human and mice. For the reproduction aspect, the research team focused on studying diseases in endometrium, including recurrent reproductive failure (e.g. recurrent miscarriage and recurrent implantation failure), endometriosis (e.g. angiogenesis, immunosuppression), endometrial cancer (e.g. lncRNA and HIF α dysregulation), etc. For the development aspect, the team focused on the abnormal neurodevelopmental mechanism (e.g. cerebellar ataxia, Down's syndrome), embryopathy in maternal disease (e.g. pregestational and gestational diabetes), placental function (e.g. preeclampsia, hormonal expression), drug safety during pregnancy (e.g. melamine, Chinese herbal medicine), etc.

In 2016, the team has published eight papers (four with the Institute acknowledged, one as first / corresponding author), one book chapter and three papers accepted. The team also obtained nine research grants (three as Principal Investigator including one Health and Medical Research Fund, one CUHK Direct Grant and one CUHK Professional Enhancement Fund; and the other six as Co-Investigator including one General Research Fund, one Health and Medical Research Fund, two Innovation and Technology Fund, and two The Hong Kong Obstetrical & Gynaecological Trust Fund. Prof. Wang also named as one of the awardees of a National Award from Ministry of Education, China.



Physiological and Pathological Endometrium Angiogenesis in Fertile Control, Unexplained Recurrent Miscarriage (RM) and Recurrent Implantation Failure (RIF)

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Recognitions

Awards and Fellowships

Member's Full Name	Details
Ronald Wang	Higher Education Outstanding Scientific Research Output Awards 2015 by China Ministry of Education (February 2016) 教育部高等學校科學研究優秀成果獎-科技進步獎-推廣類二等獎 - 吳效科、劉建平、鄒偉、吳泰相、盧美松、吳鴻裕、黃志超、韓鳳娟、張躍輝及匡洪影中醫臨床研究標準化建立及其在婦科的應用和發展

Grants and Consultancy

Full Name of PI	Project Title	Funding Source	Start Date (dd/mm/yyyy)	End Date (dd/mm/yyyy)	Amount (HK\$)
Gene Chi Wai Man	Anti-angiogenic Potential of the Green Tea Polyphenol (-)-Epigallocatechin-3-gallate Toward Endometrial Cancer Cells	The Hong Kong Obstetrical & Gynaecological Trust Fund	01/01/2017	31/12/2017	35,000
Ronald Wang (Co-I)	The Impact of Gestational Diabetes Mellitus and Vitamin D Deficiency During Pregnancy on Children's Cardiometabolic Risk and Methylation	Research Grants Council – General Research Fund	01/09/2016	01/09/2018	998,652
Ronald Wang (Co-I)	Transplantation of Vascularised Pancreatic Beta Cells Derived from Human Stem Cells in Type-1 Diabetic Recipients	Food and Health Bureau – Health and Medical Research Fund	01/06/2016	31/05/2018	1,199,992
Ronald Wang	Randomized Double-blinded Placebo Controlled Trial of Green Tea Extract for Endometriosis	Food and Health Bureau – Health and Medical Research Fund	01/06/2016	31/05/2018	1,330,000

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Ronald Wang	Clinical and Genetic Characteristics of Circulating Tumour Cells from Ovarian Cancer Patients Undergoing Chemotherapy: A Pilot Study	CUHK Direct Grant	30/06/2016	29/06/2017	35,000
Ronald Wang (Co-I)	Clinical Evaluations and Applications of Innovative Optical Coherence Tomography Imaging System (OCTISTM) in Gynaecology	Innovation and Technology Fund – Innovation and Technology Support Programme	01/07/2016	30/06/2018	3,000,000
Ronald Wang (Co-I)	The Prevalence of Chronic Endometritis in Women with Recurrent Reproductive Failure and the Host Response in Endometrium	The Hong Kong Obstetrical & Gynaecological Trust Fund	01/03/2016	28/02/2017	50,000
Ronald Wang	Funding in Principle for 2016 BIO International Convention, San Francisco, USA	CUHK Professional Enhancement Fund	06/06/2016	09/06/2016	22,086
Ronald Wang (Co-I)	“Bone Cubic”™ Secondary Development - Therapeutic Effects of “Bone Cubic”™ Combined with Anti-resorption / Anabolic Agent in the Treatment of Osteoporotic and Non-osteoporotic Fractures	Innovation and Technology Fund – University-Industry Collaboration Programme	01/03/2016	31/08/2017	2,035,495



Publications

A. Journal Papers

1. Wu L, Cui L, Tam WH, Ma RC, Wang CC. Genetic variants associated with gestational diabetes mellitus: a meta-analysis and subgroup analysis. *Scientific Reports*. 2016; 6:30539.
2. Tang T, Deng Y, Chen J, Zhao Y, Yue RF, Choy KW, Wang CC, Du Q, Xu Y, Han LX, Chung TK. Local administration of siRNA through Microneedle: Optimization, Bio-distribution, Tumor Suppression and Toxicity. *Scientific Reports*. 2016; 6:30430.
3. Wang B, Lee WY, Huang B, Zhang JF, Wu TY, Jiang XH, Wang CC, Li G. Secretome of human fetal mesenchymal stem cell ameliorates replicative senescence. *Stem Cells and Development*. 2016; 25(22):1755-66.
4. Chen XY, Jiang LM, Wang CC, Huang J, Li TC. Hypoxia inducible factor and microvessels in peri-implantation endometrium of women with recurrent miscarriage. *Fertility and Sterility*. 2016; 105(6):1496-502.