

Short Bio

[Professor. Richard KW CHOY]

Richard KW CHOY is currently Professor in the Department of Obstetrics & Gynaecology, and the founder of the Preimplantation Genetic Testing (PGT) Laboratory and the Prenatal Genetic Diagnosis Centre (PGDC) at Chinese University of Hong Kong (CUHK), serving now as the Deputy Director in charge of laboratory services. The PGT and PGDC are both one of the most active and productive centers in Asia, serving as a tertiary referral and training center for PGT and prenatal testing for both the public and private clinical sectors in Hong Kong, mainland China and Asia. As a pioneer in PGT and prenatal diagnosis, his team utilizes state-of-the-art genomic technologies, including chromosomal microarray analysis (CMA) and genome sequencing, and we first reported the outcome of a multi-center mosaic embryo transfer pregnancy outcome in Asia and the contribution of pathogenic chromosome copy number variants (CNVs) in fetus with high nuchal translucency. In 2021, he established the Fertility Preservation Research Centre to enhance the outcome of in-vitro fertilization pregnancies.

His achievements include over 225 publications in international peer-reviewed journals, with several landmark papers uncovering the contribution of CNVs in fetuses with structural malformations, and an H-index of 40. Recently, his laboratory pioneered the novel application of Low-pass whole-genome sequencing (Low-pass WGS) method which can detect balanced chromosomal structural variants (SVs) or rearrangements that contribute to human diseases.

He received over 45 competitive research grants as PI or co-PI from Hong Kong UGC, NSFC in China, and NIH in US in a scale of 0.5 million to 35 million HKD, and a recent 10-million-dollar donation for my work on reproductive genetics. In acknowledgment of his contributions to genetics, he received the Excellent Research Award from the Food and Health Bureau, and an international Outstanding Contributions Award for Prevention and Control of Birth Defects.

He has served as organizing committee member/scientific adviser/chairperson in seven international professional and academic meetings since 2010 including the Asia Pacific Congress in Maternal and Fetal Medicine, Vice-President of the Hong Kong Society of Genetics Counselling and Board Member of the Hong Kong Society of Medical Genetics. In addition, he serves as editorial board member of Human Genetics and Prenatal Diagnosis. He has also provided consultancy service to the industry on trials of new instruments and platforms intended for clinical laboratory service in and outside Hong Kong.