Stanford



Aaron Hsueh

Professor of Obstetrics and Gynecology (Reproductive and Stem Cell Biology), Emeritus

OB-GYN/Reproductive, Perinatal and Stem Cell Biology Research

Bio

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, OB-GYN/Reproductive, Perinatal and Stem Cell Biology Research
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)

LINKS

- Hsueh Lab Home Page: http://reprobio.stanford.edu/hsueh/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

We have been investigating the molecular and cellular mechanisms underlying the hormonal regulation of ovarian follicle growth and differentiation. By expressing recombinant FSH, LH and hCG and producing their mutants, we have designed long-acting agonists as well as deglycosylated antagonists of gonadotropins. We have also cloned human LH and FSH receptors and the expression of these proteins allows analysis of gonadotropin bioactivity in vitro. The extracellular ligand-binding domain of these receptors have been generated and found to be functional antagonists. Clinical syndromes of gain-of-function mutations for the LH receptor have been found in patients with familial male precocious puberty whereas loss-of-function mutations have been found to be the basis of Leydig cell hypoplasia. We are using bioinformatic tools and DNA microarray to analyze polypeptide hormones andtheir receptors in terms of ligand-receptor matching and paracrine interactions.

Publications

PUBLICATIONS

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