



## Linda Giudice

Stanley McCormick Memorial Professor in the School of Medicine, Emerita  
Obstetrics & Gynecology

 NIH Biosketch available Online

### CONTACT INFORMATION

- **Alternate Contact**

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### Bio

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#### ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Obstetrics & Gynecology
- Member, Bio-X

#### ADMINISTRATIVE APPOINTMENTS

- Director, Reproductive Endocrinology & Infertility (REI) Laboratory, Stanford University Medical Center, (1987-2005)
- Director, Reproductive Endocrinology & Infertility Fellowship, Stanford University School of Medicine, (1994-2005)
- Director, Division of Reproductive Endocrinology & Infertility, Dept OB/GYN Stanford University School of Medicine, (1995-2005)
- Director, Center for Research on Reproduction and Women's Health and Genomic Medicine, Stanford University School of Medicine, (1996-2005)
- Associate Chair of Research, Stanford University School of Medicine - Obstetrics & Gynecology, (1998-2005)
- Director, Women's Health @ Stanford, Stanford University School of Medicine, (2001-2005)
- Board of Directors, Society for Women's Health Research, (2002-2007)
- Director, Women's Health Scholarly Concentration, Stanford University School of Medicine, (2003-2005)
- Board of Directors, American Society for Reproductive Medicine, (2004-2007)

#### HONORS AND AWARDS

- President's Achievement Award, Society for Gynecologic Investigation (1998)
- Stanley McCormick Endowed Professorship, Stanford University School of Medicine (December 2001 - present)
- Elected Member, Institute of Medicine, National Academy of Sciences (2002 - present)
- Excellence in Teaching Award, Stanford University School of Medicine (2003-2004)
- Best Doctors in America, San Francisco Magazine (2004-2005)

#### PROFESSIONAL EDUCATION

- MD, Stanford University, Medicine (1982)
- PhD, UCLA, Biochemistry (1977)

## LINKS

- Women's Health @ Stanford: <http://womenshealth.stanford.edu>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Our laboratory has had a long-standing interest in the role of normal and abnormal endometrial development and its relevance to implantation, miscarriage, fetal growth, and endometriosis in humans. We also have studied mechanisms underlying ovarian follicle development and steroidogenesis.

We study the roles of the insulin-like growth factor (IGF) system and the Wnt family in human endometrium, the role of the IGF system in human trophoblast invasion and function, and have numerous ongoing studies on functional genomics of human reproductive tissues.

We have pursued gene discovery in the window of implantation in endometrium from normal women and in women with endometrial disorders, including endometriosis, repetitive miscarriage, and unexplained infertility. We have also performed molecular profiling of human endometrium across the menstrual cycle and in these disease states. These studies have resulted in identification of markers of diseases of the endometrium and potential targets for therapies.

Our lab has also conducted molecular profiling of human placental trophoblasts at different gestational ages and in pregnancy disorders, as well as human oviduct under different hormonal conditions and disease states.

In addition, we study mechanisms underlying endometrial differentiation in response to steroid hormones, placental hypoxia and fetal growth, and cross-talk between the placenta and the maternal decidua, as well as putative endometrial stem cells and their relevance to endometrial regeneration and endometrial disorders.

Our studies in the ovary focus on the IGF system, using a mouse model in which PAPP-A has been deleted by homologous recombination.

## Teaching

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### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Molecular and Genetic Medicine (Fellowship Program)

## Publications

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### PUBLICATIONS

- **Developmental Response to Hypoxia** *FASEB J*  
Huang S-T J, Vo KC, Lyell DJ, Faessen GH, Tulac S, Giaccia AJ, Giudice LC  
2004; 18: 148-1365
- **Microarray expression profiling reveals candidate genes for human uterine receptivity** *Am J Pharmacogenomics*  
Giudice LC  
2004; 4: 299-312
- **Endometriosis** *Lancet (Seminar)*  
Giudice LC, Kao LC  
2004; 364: 1789-1799
- **Activation of the protein kinase A in human endometrial stromal cells reveals sequential categorical gene regulation.** *Physiologic Genomics*  
Tierney EP, Tulac S, Huang S-T J, Giudice LC  
2003; 16: 47-66
- **Expression profiling of endometrium from women with endometriosis reveals candidate genes for disease-based implantation failure and infertility** *Endocrinology*  
Kao LC, Germeyer A, Tulac S, Lobo S, Yang JP, Taylor RN, Osteen K, Lessey BD, Giudice LC  
2003; 144: 2870-2881
- **Identification, characterization, and regulation of the canonical Wnt signaling pathway in human endometrium** *J Clin Endocrinol Metab*  
Tulac S, Kao LK, Nayak N, Giudice LC

2003; 88: 3860-3868

- **Global gene profiling in human endometrium during the window of implantation** *Endocrinology*  
Kao LC, Yang J-P, Tulac S, Suh DS, Taylor RN, Osteen K, Lessey BD, Giudice LC  
2002; 143: 2119-2138
- **Hypoxia regulates insulin-like growth factor-binding protein 1 in human fetal hepatocytes in primary culture: Suggestive molecular mechanisms for in utero fetal growth restriction caused by uteroplacental insufficiency** *JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM*  
Popovici, R. M., Lu, M., Bhatia, S., Faessen, G. H., Giaccia, A. J., Giudice, L. C.  
2001; 86 (6): 2653-2659
- **Pregnancy-associated plasma protein-A is the insulin-like growth factor binding protein-4 protease secreted by human ovarian granulosa cells and is a marker of dominant follicle selection and the corpus luteum.** *ENDOCRINOLOGY*  
Conover, C. A., Faessen, G. F., Ilg, K. E., Chandrasekher, Y. A., Christiansen, M., Overgaard, M. T., Oxvig, C., Giudice, L. C.  
2001; 142 (5): 2155-2158
- **Insulin-like growth factor (IGF)-II inhibition of endometrial stromal cell tissue inhibitor of metalloproteinase-3 and IGF-binding protein-1 suggests paracrine interactions at the decidua : trophoblast interface during human implantation** *JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM*  
Irwin, J. C., Suen, L. F., Faessen, G. H., Popovici, R. M., Giudice, L. C.  
2001; 86 (5): 2060-2064
- **Discovery of new inducible genes in in vitro decidualized human endometrial stromal cells using microarray technology** *ENDOCRINOLOGY*  
Popovici, R. M., Kao, L. C., Giudice, L. C.  
2000; 141 (9): 3510-3513
- **Human placental trophoblasts secrete a disintegrin metalloproteinase very similar to the insulin-like growth factor binding protein-3 protease in human pregnancy serum** *ENDOCRINOLOGY*  
Irwin, J. C., Suen, L. F., Chen, B. H., Martin, R., Cannon, P., Deal, C. L., Giudice, L. C.  
2000; 141 (2): 666-674
- **Hypoxia stimulates insulin-like growth factor binding protein 1 (IGFBP-1) gene expression in HepG2 cells: A possible model for IGFBP-1 expression in fetal hypoxia** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Tazuke, S. I., Mazure, N. M., Sugawara, J., Carland, G., Faessen, G. H., Suen, L. F., Irwin, J. C., Powell, D. R., Giaccia, A. J., Giudice, L. C.  
1998; 95 (17): 10188-10193