

A special opportunity to hear from a
world renowned leader
in Reproductive Genetics

THE HEATON LECTURE

The Brave New World of Reproductive Genetics

BIOTECHNOLOGY AGAIN MEETS BIOETHICS

1:30 – 2:30 pm
Saturday June 14, 2008

Hensel Phelps Auditorium West
Research Building 1 North (RC1)
Anschutz Medical Campus
University of Colorado Denver

Presented by: Mark Hughes, MD PhD
Genesis Genetics Institute
Detroit, Michigan

Moderator: William Schlaff, MD
Professor, Vice Chair Dept of Ob/Gyn
Chief – Reproductive Endocrinology
UCD School of Medicine

For more information, please call 303-724-2028

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Mark Hughes, MD PhD

Professor Mark Hughes graduated in Biology and Chemistry from St. Johns University and received a Masters in Biophysics at Stanford University, followed by a PhD in Molecular Biochemistry at the University of Arizona Medical Center.

Professor Hughes completed his MD at Baylor, followed by training in Internal Medicine and clinical subspecialty training at Duke University. He returned to Baylor's newly formed Genetics Institute led by Thomas Caskey. Among his accomplishments was the realization that single cells could be molecularly data mined for diagnostic advantage: This led to a multi-year collaboration with IVF clinicians and embryologists at the Hammersmith Hospital in London; the field of Preimplantation Genetics was born. In 1993 Hughes' research was recognized by Science magazine as being one of the "ten most significant advances" in all of science that year; spanning all the physical, biological and mathematical sciences.

Professor Hughes was recruited to be one of the first 11 members of the Human Genome Institute at NIH and to lead the section on Translational Genomic Diagnostics. He also chaired Human Genetics at Georgetown University. Doctor Hughes then moved to Michigan to take a position as Professor and Director of Molecular Medicine and Genetics, Professor of OB-Gyn, and Professor of Pathology. He was named as the Director of the state's 'Life Sciences Genomics Hub', a \$68M initiative where genomics, proteomics and bioinformatics merge in the field of molecular medicine.

Hughes' work has centered on understanding gene expression in the early human embryo. Professor Hughes, along with Professor Lord Robert Winston and Dr. Alan Handyside developed and performed the world's first 22 cases of Preimplantation Genetic Diagnosis. Dr. Hughes continues to push the frontiers of this technology and guide it in all its ethical ramifications, while he has expanded this work to systems-wide molecular understanding of early embryo development. He has appeared on a 2-hour BBC special, "Good Morning America", the "Today show", "CBS Evening News", "Oprah Winfrey", the "Lehrer News Hour", and been the subject of television newsmagazine segments for 60 Minutes and 20/20, and full hour programs on the Discovery Channel. Four years ago, he moved the PGD aspects of his work into the Genesis Genetics Institute where the diagnostic aspects of PGD are provided to over 170 human reproductive centers in North America and Europe.

Preimplantation genetic diagnosis (PGD) is a technique used to identify genetic defects in embryos created through in vitro fertilization (IVF) before transferring them into the uterus.