

Fertility Specialist Teams with Hollywood to Capture Highest Resolution Images Ever of Eggs, Sperm, and Embryos: First 5K Ultra-HD Images of Human Development

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SALT LAKE CITY, UT – Doctors at the annual meeting of the American Society for Reproductive Medicine got a glimpse into the future of women’s health with the presentation of the first-ever 5K ultra-HD video footage of eggs, sperm, and embryos – a resolution previously thought to be impossible for these tiny living cells.

Steven F. Palter, MD, a reproductive endocrinologist and fertility specialist and the medical and scientific director at Gold Coast IVF, in Woodbury NY, spearheaded this international study in conjunction with IVI, one of the largest IVF centers in the world. For the first time ever, this international team of IVF specialists has joined forces with RED Digital Cinema Camera Company, the leading digital movie camera company, to use cutting-edge Hollywood imaging tools to look into the earliest moments of human development.

RED is a Hollywood powerhouse that has provided the ultra high-resolution digital cameras that are transforming the art of cinema, wielded by leading Hollywood directors such as Peter Jackson and Stephen Soderbergh and used to film hits including *The Martian*, *Star Wars: The Force Awakens*, and *The Hobbit*. In previously describing this technology, Mr. Soderbergh said, “This is the camera I’ve been waiting for my whole career: it is going to change everything....Shooting with it is like hearing the Beatles for the first time.”

For this study, a special imaging system was designed, using RED’s Epic Camera, to capture imaging using ultra high definition next generation digital video: a resolution of 5K video at 5120 x 2700. A custom designed coupling system developed by Dr. Palter allowed imaging through a specialized embryo microscope. 860 recordings of eggs sperm and embryos were made during IVF. Embryos were observed through the first five days of human development at 400x960x magnification. The final images then were magnified digitally many times more on 55 inch 4k observation screens, producing the highest magnification and resolution video of these human cells which yielded observations of new cellular details.

Dr. Palter, who performed the world’s first 4K super high-definition (HD) laparoscopy and the first-ever HD video surgery, is a pioneer in the world of surgical imaging and fertility technology. Now, he has turned the revolutionary power of Hollywood cameras to reveal the secrets of the earliest days of human development.

“The images are the sharpest, most revealing images of eggs, sperm, and embryos ever created anywhere,” Dr. Palter said. “At this level, we are exploring a new frontier of knowledge about

human reproduction. It's an unexplored, uncharted world and we saw new details of the cells never seen before.”

Dr. Palter has been repeatedly honored for his prize-winning work on the development of high-definition video endoscopy, adaptation of non-medical technology to medical use, and new media in medicine. He frequently shares his vision for the impact of future technology on medicine through his research and his many presentations of ground-breaking developments in research, education, and clinical practice.

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