The biotechnology of the human embryo

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Complex approaches of embryo engineering, collectively named the biotechnology of the human embryo, are becoming an essential part of reproductive medicine. They include preimplantation diagnosis; reproductive cloning; interspecies chimaeras; artificial gametes; embryo editing; mitochondrial transfer; stem cell technologies and iPSC. Their impact on broad aspects of human health, reproductive and therapeutic medicine will be discussed in this presentation.

Speaker Biography

Vasil Galat is an Assistant Professor in the Department of Pathology at Northwestern University's Feinberg School of Medicine and director of SMCRI Stem Cell Facility. He has previously worked clinically in IVF programs and preimplantation diagnosis. He has an extensive expertise in stem cell research and was the first to introduce human embryonic stem cells harboring mutations specific for human diseases thus opening a new field of research for developmental diseases currently known as disease in the dish. He has published widely on subjects ranging from embryology to the directed differentiation of iPSCs. The recent achievement of his lab in producing hematopoietic cells from pluripotent cells provides a promising therapeutic tool for the cure of cancers and some other blood-immune related disorders.

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