

Faculty Name:

Mijo Simunovic

Faculty Email:

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Lab:

Laboratory of Synthetic Organogenesis

Project Title:

Modeling feto-maternal interface with highly engineered organoids

Description:

The correct placenta development at the onset of embryo implantation into the uterus is critical to establishing a successful pregnancy. Disruptions in this process are the leading cause of recurrent implantation failure, miscarriages, and a host of other obstetric disorders. Pregnancy-related maternal death has more than doubled since 1987 yet we are still in the dark on the molecular mechanism of embryo implantation and placenta specification. In our lab we use pluripotent stem cells, advanced tissue engineering and CRISPR screening approaches to dissect the molecular and signaling pathways in early embryogenesis and organogenesis. A summer student would join a team of graduate students and postdocs in developing tissue engineering approaches to modeling the feto-maternal interface in vitro.

Location of Research:

On-site

of hrs/week:

40

Department/Program:

Chemical Engineering

Eligibility:

BS, Third Year, BS, Fourth Year

To apply, please contact:

ms6051@columbia.edu