


# Kristofer Meier

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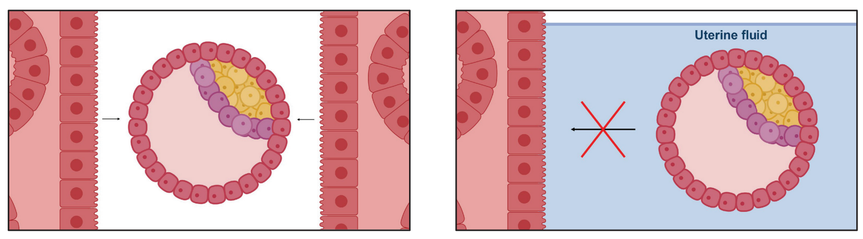
# Influence of Progesterone Receptor on Uterine Fluid Dynamics and Embryo Implantation

Ablating progesterone receptor signaling in the mouse uterine epithelium leads to fluid retention and implantation failure. We study the molecular mechanisms behind this phenomenon to better understand fertility and reproductive health.

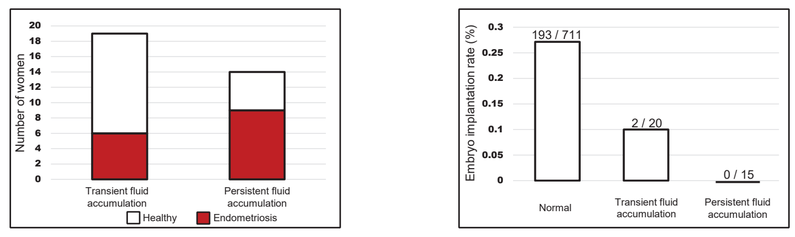
## Fluid accumulation prevents embryo implantation




**Receptive endometrium**

**Fluid retention and implantation failure**

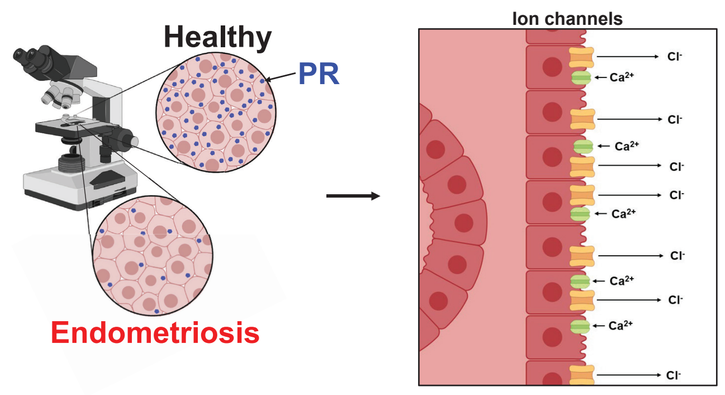
## Fluid accumulation and pregnancy rates in endometriosis



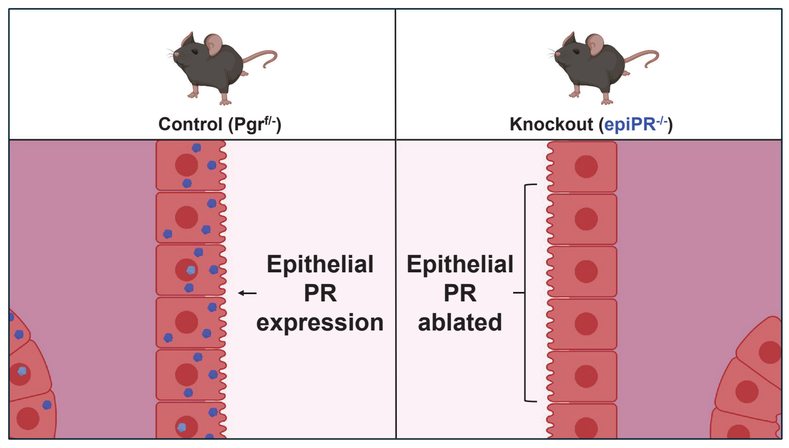

**Fluid accumulation ↑, pregnancy rates ↓**

Chien et al. Hum Reprod 2002

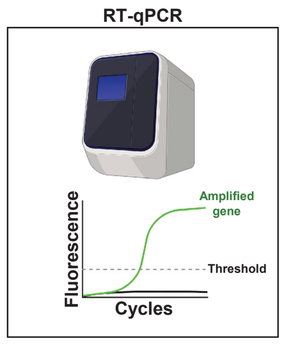
## Estrogen and progesterone control uterine fluid movement



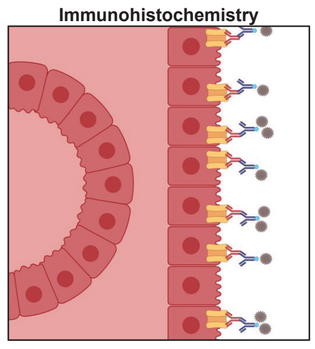

## Modelling progesterone signaling




## Examining changes at the gene and protein level

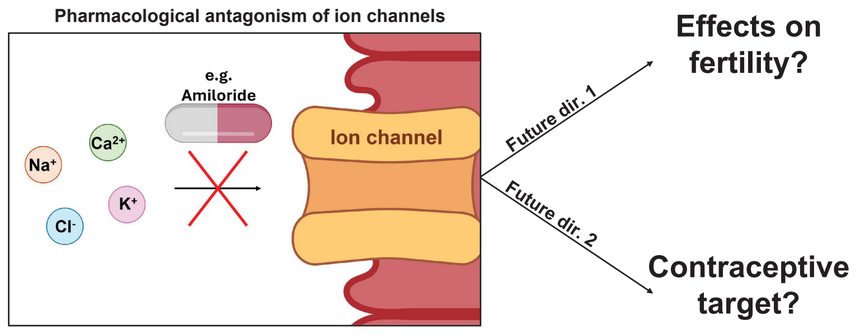



**Gene expression**




**Protein expression**

## Targeting the mechanisms of uterine fluid movement

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