

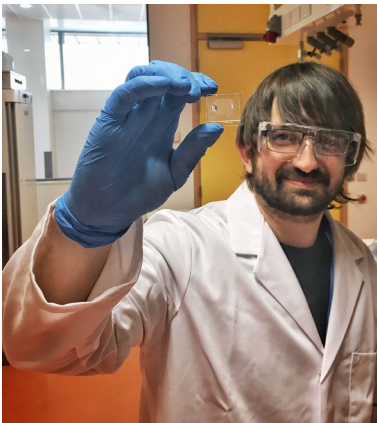
Cytoswim – sperm selection for reproductive success

CytoSwim, a spinout from the University of Warwick, is developing innovative single-use chips for sperm conditioning and separation. Sperm conditioning is an integral part of IVF procedures used in both animal breeding and human assisted reproduction treatments. The CytoSwim device addresses a global and rapidly growing market opportunity which currently has low success rates, and few alternative technologies.



Technology overview

Current sperm conditioning is achieved primarily through density gradient centrifugation which relies on both expensive separation reagents and an expensive and maintenance-intensive centrifuge. Alongside this there is growing evidence that this technique can damage the sample, reducing the likelihood of pregnancy compared to gentler separation. CytoSwim's single-use device relies on a proprietary microstructure to separate out the healthier and faster cells from a sample. It uses no power and is compatible with existing lab processes and reagents, and improves the selection of the viable sperm by 2x compared to current methods.



The Company

CytoSwim Ltd was founded in 2018 as a spinout from University of Warwick's Department of Physics and is based at the University of Warwick Science Park, enabling close ongoing collaboration with the University. The founder, Dr Max Meissner, also took part in Innovate UK's ICURe¹ programme, which supports university researchers to validate their ideas in the marketplace. Through this programme meetings were held with over 100 experts and potential end users and it was established that as well as the market for human fertility treatments, there is a large 'gateway' market in breeding research mice and livestock worth around £6m per year. As clinical approval for medical device products takes around two years, the company will first validate its products in the high value livestock breeding sector.

Next Steps

In 2019 Cytoswim was awarded a grant of £300k from Innovate UK and raised just over £100k in seed investment funding from Oxford Technology Management. This funding will be used to scale manufacturing and validate the devices with commercial mouse breeders and clinical embryologists. The company also won a £25k Incubator Award from the MICRA Innovation Accelerator programme. CytoSwim will be seeking to raise a Series A round of £1m in 2020 to underpin the development and market launch of their first clinical product for use in human reproductive treatments.

2018 – ICURe funding – £35k
2019 – Oxford Technology Management investment – £100k
Innovate UK grant – £300k
MICRA Incubator Award - £25k

Patents: A GB patent application was filed in 2019 to protect the novel sperm separation technology.

*CytoSwim Ltd. Is currently seeking further partners and investors
For further information please visit: www.cytoswim.com
Contact email: info@cytoswim.com*

¹ ICURe - Innovation-to-Commercialisation of University Research