



**Showcasing research from Professor Abbaspourrad's laboratory, College of Agriculture and Life Sciences, Cornell University, New York, United States.**

Faster sperm selected by rheotaxis leads to superior early embryonic development *in vitro*

We created conditions similar to the female reproductive tract by designing small parallel triangular prisms on a microfluidic platform for sperm selection as sperm swim against fluid flow. The tapered space between the prisms creates the conditions for the accumulation and selection of sperm. Bovine spermatozoa of higher speed are more capable of swimming against the flow as the flow rate increases and the DNA fragmentation index is lowered by increasing the flow rate. The samples collected at the highest flow rate resulted in the formation of 23% more blastocysts.

**As featured in:**



See Alireza Abbaspourrad *et al.*,  
*Lab Chip*, 2024, **24**, 210.