



Images From Diana Bratu's Lab Featured In Cell's Journal Picture Show

Images taken in [Diana Bratu's lab](#) by Dr. [Irina Catrina](#) are featured in Cell's Journal Picture Show that was recently released, called Reproduction. The image titled "The Short End of a Long Stick" shows sperm cells from *Drosophila*.

Flies in the *Drosophila* genus produce the longest sperm cells on Earth. One species, *Drosophila bifurca*, has sperm that is 58 mm (2.3 inches) long. Our good friend *D. melanogaster* generates sperm that are merely ~2 mm long but still ~300 times the length of human sperm. Moreover, their sperm seem to navigate a female's reproductive tract by swimming backward, or tail first.

Drosophila sperm are delivered to the females in tangled coils, with ~4000 transferred in one encounter. Several species of *Drosophila* mate by traumatic insemination—the male pierces the female's abdomen and injects sperm into abdominal cavity.

Image: A whole testis was isolated from *D. melanogaster*, fixed, and then imaged by spinning

disc confocal microscope, 20X objective. Actin cones are stained green with phalloidin-FITC; drongo mRNA is detected by RNA FISH using a molecular beacon fluorescent probe (AF647); and, DAPI stain nuclei blue.

(Inset) A snapshot of the sperm individualization process achieved by a cystic bulge that moves along the spermatid bundle. One cystic bulge contains 64 actin cones for the 64 syncytial spermatids present in a bundle. During this process most of the cytoplasm is discarded into a waste bag.