

Special Issue: Reproductive Proteomics

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On the Cover: "Tales of Four Conceptions," an oil painting by artist Julie Newdoll, as commissioned by MCP. Pictured is a metaphorical depiction of the different mechanisms of fertilization in four different groups of organisms. At the *top* are insects, represented by Eros and Psyche. In Greek myth, Eros keeps Psyche in his home in a big mountain. He comes to her in the night through the mountain. Insect eggs have a pore through which only one sperm can fit. The sperm is so large, it physically keeps competitors from entering. In the *right quadrant*, mammals are represented by Penelope and Odysseus, with the many suitors that she keeps at bay until her husband's return locked outside the doors. In mammals, only one sperm gets into the egg, after which the outside of the egg will no longer permit any more sperm to enter, thus "shutting the door" on any competitors. In the *lower quadrant*, avians are represented by Eos, the rosy-fingered goddess of the dawn who rises into the sky from the river Okeanos at the start of each day. She has an unquenchable desire for handsome young men. The avian egg allows many sperm to enter, but only one does the actual fertilizing. At some point, the egg surface changes, and no more sperm are allowed to enter. The river, thick with reeds, represents a barrier to the sperm that have not arrived in time, symbolized by the men on the other side of the river, who were not able to make it across before the chamber of Eos is full. On the *left*, echinoderms are represented by Danae, who has been locked below ground by her father, King Acrisius, to keep her from getting pregnant with a child that has been prophesied to kill him. Zeus manages to impregnate her by turning into a golden shower and penetrating the fortress. Echinoderms release many sperm into the water, but only one finds its way into an egg. Julie Newdoll's fine art, journal covers, music and chemistry games can be found on www.brushwithscience.com.

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