

**The Hughes Science Pipeline Project  
presents**

**Distinguished Women in Science: A Lecture Series**

**How Plants Choose Their Mates: Lessons from Cell Biology**

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Most organisms have sophisticated signaling systems that allow them to identify and respond to appropriate mates. The elaborate mating behavior of animals is an excellent example of this phenomenon, but even single-celled organisms have the capacity to migrate toward potential partners. Flowering plants also choose their mates, although they do not rely on behavior or pheromones. Careful control of the timing of flowering and the interaction with species-specific pollinators provide some selectivity. Even so, because large quantities of pollen are dispersed into the environment, plants often encounter foreign pollen. To avoid fertilization between species, plants have evolved highly sophisticated recognition systems that ensure they find the correct mates, while inhibiting foreign pollen and pathogens. The work in my laboratory aims to address the following question: What are the identification tags carried by pollen that allow it to be recognized as belonging to a particular species?