

Deciphering molecular mechanisms of fertilization in seed plants

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The founding of the journal *Sexual Plant Reproduction* in 1987 was largely due to the efforts of our Founding Editor, Professor Hans Ferdinand Linskens, who marshaled the scientific talent to launch this journal. With this issue, **we celebrate his life and the beginning of the twentieth year of the journal** with a special issue that he would undoubtedly find to be a topic of personal scientific fascination, as his work helped to place us on the path toward our current understanding of fertilization in seed plants.

Since its first description over a century ago, no other process has been of greater interest in reproductive plant biology than understanding the controlling events underlying fertilization, and particularly the process of double fertilization in flowering plants that makes our current food productivity possible and governs our health and productivity.

But fertilization is hardly unique to angiosperm or seed plant biology. In this special issue we chose to explore the **general themes and molecular mechanisms that govern both plant and animal gametic interactions** and have asked some scientific leaders in this field to participate. We

have covered topics of universal interest including gamete attraction from both a male and female perspective, fertilization-related molecules for adhesion, binding and fusion, prevention of polyspermy, activation of development and regulation of the molecular repertoire.

At no time have we had a greater pace of progress toward molecular understanding of a broad range of themes in sexual plant reproduction. As tools of exploration continue to develop, this pace continues to accelerate and we anticipate that in the very near future we will have a molecular knowledge of these topics that will usher in a phase of this work that may allow **unparalleled manipulation of crops and plants to meet current and future agriculture and health challenges**.

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