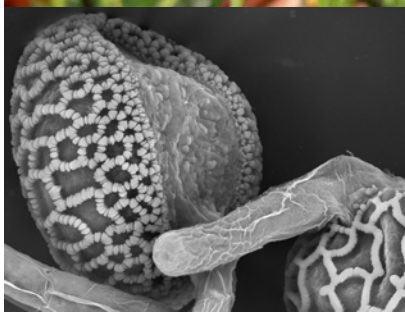
Institut de recherche en biologie végétale IRBV
JARDIN BOTANIQUE DE MONTRÉAL
Université de Montréal

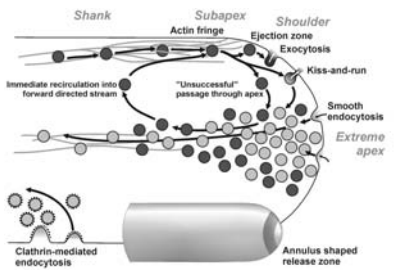
Postdoctoral Position



Dynamics and spatial organization of vesicle trafficking and secretion in plant cell morphogenesis

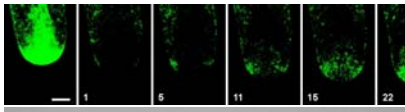
The University of Montreal is among the top 100 universities worldwide. A section of the Department of biological sciences is located in the Montreal Botanical Garden at the Plant Biology Research Institute (*Institut de recherche en biologie végétale*, IRBV). The **Laboratory of plant cell biology and cytomechanics** is interested in the architecture and mechanics of plant cell structure and the dynamics of plant cell morphogenesis. We use microscopy, micro-manipulation and mechanical modeling to understand plant cell functioning and the mechanics of cellular growth processes.

Plant cell morphogenesis requires the targeted transport of cell wall polymers and secreted proteins to precisely defined regions on the cell surface. In growing pollen tubes, this involves highly efficient vesicle trafficking to the extreme, growing end of the cell which elongates at rates of several micrometers per minute. In the present project, the subcellular localization of proteins involved in the targeting of these secretory vesicles will be studied using transformation with GFP (green fluorescent protein). This project is financed by the **Human Frontier Science Program**.



The following article reports recent data related to the present project:

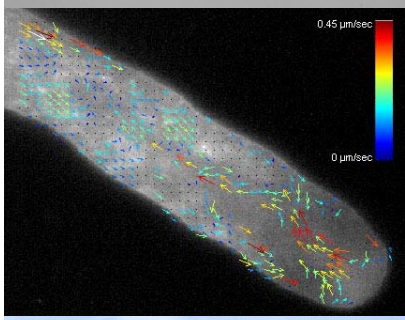
> Bove J, Vaillancourt B, Kroeger J, Hepler PK, Wiseman PW, Geitmann A **(2008)** Magnitude and direction of vesicle dynamics in growing pollen tubes using spatiotemporal image correlation spectroscopy and fluorescence recovery after photobleaching. ***Plant Physiology***, www.plantphysiol.org/cgi/doi/10.1104/pp.108.120212



Other publications from the Geitmann lab can be found at the web site indicated below.

Requirements

- PhD in plant molecular biology or related area, received within the last five years.
- Excellent academic record.
- Excellent communication skills.
- Very strong background in plant molecular biology (vector construction, *Arabidopsis* genetics and transformation): The candidate must be able to completely independently plan, organize, and carry out the molecular biology aspects of the project as well as assist graduate students with these techniques.
- Experience with fluorescent protein detection and confocal laser scanning microscopy.
- Experience in transmission electron microscopy is an asset.
- Knowledge of the French language is not mandatory but represents an asset.



Application

Please send a detailed CV containing academic transcripts, a brief outline of experience, a list of publications, and the names of three references to the e-mail address below.
The successful candidate will start in September 2008 or soon after.
The initial contract will have a duration of one year. Extension may be possible depending on the availability of research funds.

Contact

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