

# Séminaire de Biologie des Plantes

Les séminaires ont lieu sur le Campus Agro-M/INRA de La Gaillarde (2, place P. Viala Montpellier)

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Jeudi 15 mai 2008

Salle A - Bâtiment Administratif à 14h00

**Alessandro Vitale**

(Istituto di Biologia e Biotecnologia Agraria, CNR, Milano, Italy, European Union)

## Protein body formation in the endoplasmic reticulum

Plant cells can use the endoplasmic reticulum (ER) to store proteins as large polymers, termed protein bodies. The most striking example is the accumulation of storage proteins in the seeds of a number of cereals, but ER protein bodies are also transiently formed by certain vacuolar proteases, and can be produced in any tissue by the expression of a number of foreign proteins, without affecting plant metabolism and development. This process has a great potential in terms of biotechnological exploitations, but the molecular basis for the stable formation of ER protein bodies are still unclear. Insolubility, hydrophobic interactions with the inner side of the ER membrane or unusually extensive interactions with ER chaperones have been hypothesized as possible major determinants, but experimental evidence in support of one or another hypothesis is emerging only now. Recent data obtained in our laboratory point to interchain disulfide bonds as a determinant and start to elucidate the mechanisms of sorting between the three alternative destinies that secretory proteins can have when they enter the ER: degradation by ER quality control, stable PB formation, and access to vesicular traffic.

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Séminaires à venir

- Vendredi 23 mai : Fernanda Carvalho-Niebel, contact Marc Lepetit

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- Jeudi 29 mai : Jörg Kudla, contact Jean-Baptiste Thibaud ([thibaud@supagro.inra.fr](mailto:thibaud@supagro.inra.fr))

- Jeudi 5 juin : J. Fabre et M. Dausat (Présentation de la plate-forme "Phenopsis" : applications expérimentales et base de donnée) contact Christine Granier

([granier@supagro.inra.fr](mailto:granier@supagro.inra.fr))

- Jeudi 12 juin : Laurent Chatre (présentation sur les mécanismes de transport entre membrane et rôle des SNAREs), contact Nadine Paris ([paris@supagro.inra.fr](mailto:paris@supagro.inra.fr))