

Séminaire de Biologie des Plantes

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

Contacts IBIP :

- Sabine Zimmermann (sabine.zimmermann@supagro.inra.fr)
- Marc Lepetit (marc.lepetit@supagro.inra.fr)
- Christine Granier (christine.granier@supagro.inra.fr)
- Corinne Dasen (corinne.dasen@supagro.inra.fr)
- Chantal Baracco (chantal.baracco@supagro.inra.fr)

Attention : jour inhabituel

Mardi 5 octobre 2010

Amphi 208 (Coeur d'Ecole) à 14h

Sylvain Raffaele
(Sainsbury laboratory, UK)

Adaptation to the host plant drives dual genome evolution in the Irish potato famine pathogen lineage

Plant pathogens in the lineage of the Irish potato famine organism *Phytophthora infestans* evolve by host jumps and specialization. The extent to which host jumps and specialization impact genome evolution remains largely unknown. To determine the selective forces shaping sequence variation in this lineage, we resequenced six genomes of four sister species. This work revealed uneven evolutionary rates with genes in repeat-rich regions showing higher rates of copy number variation, presence/absence polymorphisms, and $dN/dS > 1$. These loci are enriched in genes induced *in planta* implicating host adaptation in genome evolution. Genes involved in epigenetic processes are other rapidly evolving residents of the gene-sparse regions. These results demonstrate that dynamic genome compartments enriched in non-coding sequences underpin rapid gene evolution following host jumps in this pathogen lineage.

Contact :

Tou Cheu Xiong, équipe signalisation électrique et calcique
Institut de Biologie Intégrative des Plantes
Laboratoire de Biochimie et Physiologie Moléculaire des Plantes
Agro-M/INRA/CNRS/UM2
2, Place Viala, F-34 060 Montpellier Cedex 1
<http://www1.montpellier.inra.fr/ibip/bpmp/equipes/signalisation.htm>
tou-cheu.xiong@supagro.inra.fr
Phone: + 33 (0)4 99 61 27 11
Fax : + 33 (0)4 67 52 57 37

Séminaires à venir :

Jeudi 14 octobre : John Runions, (contact doan.luu@supagro.inra.fr)

Jeudi 28 octobre : Francis André Wollman (contact jean-francois.briat@supagro.inra.fr)