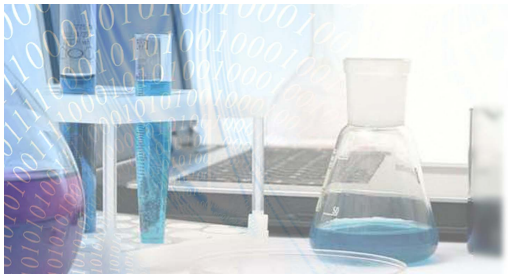


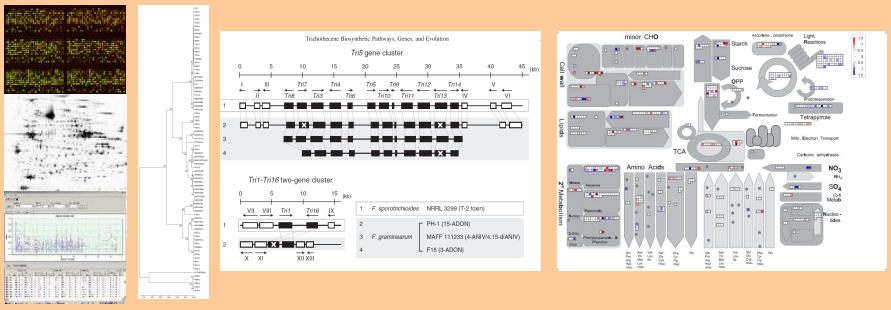
First Annual Symposium of the
Luxembourg BioInformatics Network
LuciLinX
16th October 2008 - 09.00 - 18.00
Chamber of Commerce - Conference Centre - LUXEMBOURG - KIRCHBERG

Bioinformatic activities at the Department EVA from CRP-Gabriel Lippmann

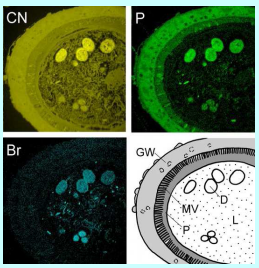
Keywords : High performance computing, genomics, phylogenomics, transcriptomics and proteomics

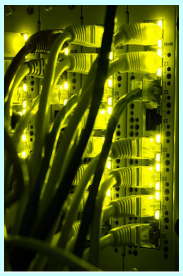
Bioinformatic activities at CRP-Gabriel Lippmann include e.g. studies of plant-stress interactions, where **systems biology** is used to unravel the very complex responses. In this context, **transcriptomics**, **proteomics** and **metabolomics** technologies are applied to identify differentially expressed genes and proteins as well as implicated metabolites, respectively. Other projects are in the domain of **phylogenomics** using full genome comparative approaches to answer questions relevant to pathogenicity and evolution of particular traits of fungi such as toxins. **Imaging tools** are used among others to visualize the distribution of toxicants at the cellular level in view of the mechanistic understanding of their activity. State-of- the art equipment in genomics, proteomics, metabolomics, microscopy (inc. SIMS), and **high-performance computing** are available to generate, manage and exploit the necessary data.

From genes, proteins, metabolites and pathway analysis…



…to massive parallel numerical modelling





High-Performance Computing System

Centre de Recherche Public
Gabriel Lippmann