



Laboratory of Molecular Cytogenetic and Cytometry  
Institute of Experimental Botany AS CR  
Sokolovská 6, CA-772 00 Olomouc, Czech Republic

## Molecular Aspects of Grass Genome Evolution

### Internship Opportunity in Plant Molecular Cytogenetics

#### Goal

Facilitate acquisition of research-relevant experience and skills.

#### Objectives

Interns will obtain hands-on experience with cutting-edge techniques and analyses critical for modern plant genome research:

- ◇ Flow cytometric sorting of chromosomes
- ◇ In situ hybridization of markers
- ◇ Development of sub-genomic BAC libraries
- ◇ Analysis of genome structure and evolution
- ◇ Physical mapping

#### Sponsor

Support for the internship is part of the education and outreach objective of the National Science Foundation Plant Genome Research Program project:

“Physical Mapping of the Wheat D Genome”

(NSF IOS-0701916) <http://wheat.ucdavis.edu/wheatD/>

#### Participant target

Postdoctoral scholars or advanced graduate students, who are citizens or permanent residents of the USA.

#### Support available

The D-Genome Physical Mapping Project is able to support an intern for a period of two months in Olomouc with \$1,500 available for round-trip travel from the USA to the Czech Republic and \$3,000 as a stipend intended to cover living expenses while in Olomouc. Funding is currently available for up to three internships. Two more will be

available in 2011. Selection of interns will be on the basis of fit of the applicant's own research interests and the opportunities offered at the Institute. Special consideration will be given to qualified applicants from backgrounds underrepresented in science.

#### Application process

Applications should consist of:

- ◇ A biosketch documenting applicant's education and work experience and including a list of publications (no more than two pages).
- ◇ A statement of applicant's research interests, summary of dissertation work, and the relevance of the opportunities of the internship to applicant's career goals (no more than one page).
- ◇ Applicant's current contact information and affiliation, and name and contact information for current research advisor(s).

Applicants must be prepared to provide documentation of citizenship or permanent residency status.

#### Host institution

The Laboratory of Molecular Cytogenetics and Cytometry (<http://olomouc.ueb.cas.cz/>), led by Dr. Jaroslav Dolezel at the Institute of Experimental Botany, Olomouc, Czech Republic, will host the interns. Dr. Dolezel is a collaborator with the sponsoring NSF-PGRP-funded D-Genome Physical Mapping Project, responsible for generating single chromosome and chromosome arm BAC libraries from hexaploid wheat. He is a pioneer in the dissection of genomes by isolating chromosome and chromosome-fragment libraries, especially in wheat and related species. His work has been indispensable in facilitating the progress of large genome physical mapping and sequencing projects. The Laboratory is an ideal location for gaining experience in all the tools of modern plant molecular cytogenetics.



#### Timeline

Applications are due by **May 14, 2010**.

Notices of awards will be made by May 20.

Target period for 2010 internships is the months of July and August.

Submit application by email to:

Patrick McGuire <[pemcguire@ucdavis.edu](mailto:pemcguire@ucdavis.edu)>

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