

Course: Optics, forces & development

In vivo 3D-microscopy for the analysis of cell behaviour in developing embryos

Santiago – Chile, January 14-29th, 2013

This practical and theoretical course is aimed at graduate students from Latin America interested in the use of optics and microscopic techniques for *in vivo* 3D visualisation and analysis of cell and tissue dynamics. Limited to 12 students.

Topics:

- . Development of zebrafish and annual fish
- . Confocal and spinning microscopy
- . Light-sheet microscopy
- . Super-resolution microscopy
- . Photoactivation and laser ablation
- . In vivo electroporation
- . Force estimation in cells & tissues
- . Optical tweezers
- . Particle tracking
- . Image processing and analysis

Teachers:

- . Roberto Bernal (U. Santiago, Chi)
- . Sebastián Brauchi (U. Austral, Chi)
- . Miguel Concha (U. Chile, Chi)
- . Mauricio Cerda (U. Chile, Chi)
- . Jorg Enderlein (Univ. Gottingen, Ger)
- . Nikta Fakhri (Univ. Gottingen, Ger)
- . Steffen Härtel (U. Chile, Chi)
- . Carl-Philipp Heisenberg (IST, Austria)
- . Jorge Jara (U. Chile, Chi)
- . Ulrich Kubitscheck (Univ. Bonn, Ger)
- . Omar Ramírez (U. Chile, Chi)
- . Florian Rehfeldt (Univ. Gottingen, Ger)
- . German Reig (U. Chile, Chi)
- . Felipe Santibañez (U. Chile, Chi)
- . Christoph Schmidt (Univ. Gottingen, Ger)
- . Jan Spille (Univ. Bonn, Ger)
- . Juan Pablo Staforelli (CEFOP, Chi)

Organisers:

- . Miguel Concha (U. Chile)
- . Steffen Härtel (U. Chile)

Travel Fellowships will be available. Indicate your interest in the application.

To apply send:

- . Curriculum Vitae
- . Letter of Intention
- . Reference from supervisor/mentor

To: mconcha@med.uchile.cl

Deadline for application - December 26th 2012
Results - December 28th 2012



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