

Frontiers in Reproduction (FIR):

Molecular & Cellular Concepts

April 29 - June 11, 2017

ADMISSIONS DEADLINE:
January 11, 2017

Substantial scholarship support is available to U.S. and foreign citizens, and may cover the majority of course fees and travel expenses.

Financial aid decisions are made on the basis of need and are not a factor in admissions decisions.



Frontiers in Reproduction (FIR) is a 6-week-long laboratory and lecture course designed for scientists-in-training (graduate students, postdoctoral fellows, as well as clinical fellows) who are interested in improving basic conceptual knowledge and methodological skills to pursue a research career in the reproductive sciences. Entering our twentieth year, we have 348 alumni worldwide.

FIR is limited to 20 participants per year and is held at the Marine Biological Laboratory (MBL) in Woods Hole, Massachusetts, a site rich in the tradition of biological inquiry. The course is organized into three sections consisting of lectures from resident faculty and invited speakers, discussions, and informal seminars, as well as hands-on laboratory exercises. Dr. Mario Ascoli (University of Iowa), is FIR's lead course director. The first section is directed by Dr. Dan Bernard (McGill University), and covers signal transduction and gene regulation in the hypothalamic-pituitary-gonadal axis. Section 2, directed by Dr. Carmen Williams (National Institute of Environmental Health Sciences) focuses on stem cells, gametogenesis, fertilization, and preimplantation embryo development. Section 3 is directed Dr. Barry Hinton (University of Virginia), and addresses the development and functions of the male and female reproductive tracts under normal and pathological conditions.

Why you should attend:

FIR IS NOT YOUR REGULAR UNIVERSITY COURSE! Lectures and laboratories are taught by 30-40 leading investigators from 20-30 different institutions representing all areas of reproductive biology.

IT WOULD BE IMPOSSIBLE TO LEARN ALL OF THE TECHNIQUES AND APPROACHES covered at FIR in any university course. Techniques covered at FIR include transfections of mammalian cells, characterization of signal transduction pathways, transcriptional regulation techniques such as real-time PCR and chromatin immunoprecipitation, oocyte maturation, confocal imaging, meiosis, germ cell transplantation, microarrays, bioinformatics, IVF, ICSI, FISH, nuclear transfer, embryo manipulations, one cell embryo and ES cell microinjection, tissue recombination, implantation, analysis of mutant mice, and genotyping.

AS A FIR TRAINEE YOU WILL BECOME A MEMBER OF AN ENTHUSIASTIC GROUP OF SCIENTISTS who share common research interests and have an innate curiosity about reproductive biology. These interactions provide invaluable career networking opportunities.

FIR FACULTY AND TRAINEES ARE FREE FROM OTHER RESPONSIBILITIES found at home institutions, enabling full immersion in the FIR experience. Participants' only responsibilities are to teach and learn. These characteristics of FIR, coupled with the rich scientific atmosphere of the MBL, provide a unique, informal and relaxed setting to complement an intense lecture and laboratory program.

Faculty & Lecturers Participating in FIR 2016:

Kjresti Aagard, Mario Ascoli, Richard Auchus, Ravi Balasubramanian, Marisa Bartolomei, Francoise Baylis, Dan Bernard, Gustavo Blanco, Pawel Borowicz, Sylvie Breton, David Carroll, Jose Cibelli, Lane Christenson, Paula Cohen, Alan Conley, Franco DeMayo, Ina Dobrinski, Francesca Duncan, Dieter Egli, Buffy Ellsworth, Asgi Fazleabas, Rafael Fissore, Harvey Florman, Chris Geyer, Gideon Gil, Antonio Giraldez, Stephen Hammes, Barry Hinton, Laurinda Jaffe, Greg Johnson, Joan Jorgensen, Kenneth Korach, Dolores Lamb, Jon Levine, Polina Lishko, Alejandro Lomniczi, Jesse Mager, Kelly Mayo, Jim McIlvaine, Lisa Mehlmann, Sue Moenter, Louis Muglia, Errol Norwitz, Kyle Orwig, Mana Parast, Peggy Petroff, Gail Prins, Robert Rebar, Lawrence Reynolds, Joanne Richards, Paolo Rinaudo, Emilie Rissman, Mark Roberson, Karen Schindler, Richard Schultz, Tom Spencer, Paula Stein, Jacques Tremblay, Will Walker, David Wildt, Carmen Williams.

For more information about FIR, admissions, and financial aid assistance, visit

fir.mbl.edu

or contact the course coordinator:
fircourse@mbledu

FIR is supported by major grants from the NICHD and the Burroughs Wellcome Fund.

The MBL is an Affirmative Action/Equal Opportunity/Disabled/Veterans Employer.

