

# Opening Gates: New Methods for Testing and Delivery of Novel Contraceptives for Male & Female Targets

## Morning Schedule

MON OOCYTES	TUE SPERM	WED FERTILIZATION	THU CONTRACEPTION	FRI CONTRACEPTION
<b>Welcome &amp; Course Introduction</b> <i>Course Directors</i> 9.00 - 9.30	<b>Spermatogenesis &amp; Sperm Structure</b> <i>Vanina Da Ros</i> 9:00 - 9.40	<b>Gamete Interaction I: Cumulus Penetration &amp; ZP Binding</b> <i>Paty Cuasnicù</i> 9.00 - 9.50	<b>Human Semen Manipulation &amp; Clinical Approach</b> <i>Clara Marin</i> 9.00 - 9.50	<b>Novel Approaches to Male Contraception (Hormonal)</b> <i>Paty Cuasnicù</i> 9.00 - 9.40
<b>Ovogenesis</b> <i>Deborah Cohen</i> 9.30 - 10.10	<b>Epididymal Maturation &amp; Sperm Transport</b> <i>Mariana Weigel</i> 9.40-10.20			
<b>Oocyte Maturation &amp; Structure</b> <i>Deborah Cohen</i> 10.10 - 10.50	<b>Historical Context: Concepts of Sperm Capacitation</b> <i>Mariano Buffone</i> 10.20 - 11.00	<b>Gamete Interaction II: ZP Penetration &amp; Gamete Fusion</b> <i>Paty Cuasnicù</i> 9.50 - 10.40	<b>Common Pitfalls in Reproductive Research: Prevention &amp; Mitigation</b> <i>TBD</i> 9.50 - 10.20	<b>Novel Approaches to Male Contraception (Non-Hormonal)</b> <i>Paty Cuasnicù</i> 9.40 - 10.20
Coffee Break 10.50 - 11.10	Coffee Break 11.00 - 11.20	Coffee Break 10.50 - 11.10	Coffee Break 10.20 - 10.40	Coffee Break 10.20 - 10.40
<b>RNAi-based methods for gene silencing in mouse oocytes</b> <i>Paula Stein</i> 11.10 - 11.50	<b>Physiological Implications of Sperm Capacitation: AR &amp; Hyperactivation</b> <i>Dario Krapf</i> 11.20- 12.00	<b>Egg Activation</b> <i>Rafael Fissore</i> 11.10 - 11.50	<b>Sperm Microscopy</b> <i>Mariano Buffone</i> 10.40 - 11.20	<b>Female Contraception</b> <i>TBD</i> 10.40 - 11.20
			<b>Sperm Cytometry</b> <i>Guillemina Luque</i> 11.20 - 12.00	
<b>Road to Intellectual Property Workshop</b> <i>TBD</i> 11.50 - 12.30	<b>Sperm Capacitation at the Molecular Level</b> <i>Dario Krapf</i> 12.00 - 12.40	<b>Early Events of Embryo Development</b> <i>Paula Stein</i> 11.50- 12.40	<b>Assisted Reproduction</b> <i>TBD</i> 12.00 - 12.40	<b>Gates Foundation Workshop</b> <i>TBD</i> 11.50 - 12.40

## Afternoon Schedule

MON OOCYTE MANIPULATION	TUE SPERM MANIPULATION	WED IVF	THU HUMAN SEMEN	FRI ADVANCED TECHNIQUES IN SEMEN ASSESSMENT
2.00 - 6.00PM	2.00 - 6.00PM	2.00 - 6.00PM	2.00 - 6.00PM	2.00 - 6.00PM
<b>Oocyte Recovery from the Oviduct</b>	<b>Sperm Collection &amp; Sperm Morphology in Different Species</b>	<b>Observation of Different Stages of Fertilization &amp; Egg Activation</b>	<b>Swim Up</b>	<b>FACSCan</b>
<b>Oocyte Preparation for Fertilization: Removal of Cumulus &amp; ZP</b>			<b>Gradient Washing</b>	
<b>Observation of Oocytes</b>	<b>Sperm Motility during Epididymal Maturation</b>	<b>Intrauterine Insemination</b>	<b>Handling</b>	<b>Microscopy</b>
<b>Cycling of Females for Insemination</b>			<b>Counting</b>	
	<b>Sperm Capacitation: Evaluation of Sperm Hyperactivation &amp; Acrosome Reaction</b>	<b>Management of Mouse Colonies</b>	<b>Motility Assessment</b>	<b>Superresolution Algorithms</b>
			<b>CatSper Functionality</b>	

Two group dinners will be held at the Institute. At one, trainees will each make an informal presentation (~10 minutes) describing their research at home institutions.