

## Course programme

Day 1: Sunday 5 <sup>th</sup> July, 2015	
14.00 onwards	Arrival at St John's College, Forecourt Porter's Lodge
16.00	Delegate Presentations , St John's College, Boys Smith Room, Fisher Building
18.15	Dinner, St John's College, The Buttery

Day 2: Monday 6 <sup>th</sup> July, 2015	
Placental Development	
08.30	Arrival at Department of Physiology, Development and Neuroscience, Physiological Laboratory
08.30-09.00	Introduction and safety briefing <b>Nuala Daw</b> Bryan Matthews Seminar Room
09.00-10.00	Human placental structure and development <b>Graham Burton</b> Bryan Matthews Seminar Room
10.00-11.00	Mouse placental structure and development <b>Erica Watson</b> Bryan Matthews Seminar Room
<b>11.00-11.30</b>	<b>Break</b> Physiology Building tea room
11.30-13.00	Mouse placenta practical <b>Erica Watson/Anne Ferguson-Smith</b> Histology Classroom
<b>13.00-14.00</b>	<b>Lunch</b> Physiology Building tea room
14.00-15.00	Epigenetic mechanisms <b>Wolf Reik</b> Bryan Matthews Seminar Room
15.00-16.00	Trophoblast stem cells <b>Myriam Hemberger</b> Bryan Matthews Seminar Room
<b>16.00-16.30</b>	<b>Break</b> Physiology Building tea room
16.30-18.00	Human placenta histology practical <b>Graham Burton/Tereza Cindrova-Davies</b> Histology Classroom
<b>18.15</b>	<b>Dinner:</b> St John's College, The Buttery
19.00 onwards	Preparation for Epigenetics Journal club (working in 3 groups, one PowerPoint presentation ON one given paper per group) St John's College, Boys Smith Room, Fisher Building (no supervision)

Day 3: Tuesday 7 <sup>th</sup> July, 2015	
Cell biology and immunology of the placenta	
08.15-10.00	Comparative placentation <b>Peter Wooding</b> Bryan Matthews Seminar Room
10.00-11.00	Placental evolution – genetic studies <b>Mick Elliot</b> Bryan Matthews Seminar Room
<b>11.00-11.30</b>	<b>Break</b> Physiology Building tea room
11.30-12.30	Placental metabolism <b>Andrew Murray</b> Bryan Matthews Seminar Room
<b>12.30-13.30</b>	<b>Lunch</b> <b>CTR's Next Generation Fellows will join course delegates for lunch</b> Physiology Building tea room
13.30-14.30	Growth restriction <b>Graham Burton</b>

		Bryan Matthews Seminar Room
14.30-15.30	Placental transport	<b>Abby Fowden</b> Bryan Matthews Seminar Room
15.30-17.00	Respirometry practical: A demonstration of techniques for measuring oxygen consumption in cells and tissue. Participants will see different experimental platforms in action and will have the opportunity to discuss the design of protocols to elucidate changes in metabolism and mitochondrial function."  <u>Or</u> Explants	<b>Andrew Murray</b>  Laboratory F7a  <b>Tereza Cindrova-Davies</b> Burton Lab, H19, Physiology Building
<b>18.00</b>	<b>Dinner: St John's College, The Buttery</b>	
19.00 onwards	Epigenetics Journal Club Presentations	<b>Anne Ferguson-Smith/Wolf Reik</b> St John's College, Boys Smith Room, Fisher Building

#### Day 4: Wednesday 8<sup>th</sup> July, 2015

Placental physiology		
09.10-10.10	Immunology of pregnancy	<b>Francesco Colucci</b> Bryan Matthews Seminar Room
10.10-11.10	Immune genes and cells in pregnancy	<b>Andrew Sharkey</b> Bryan Matthews Seminar Room
<b>11.10-11.30</b>	<b>Break</b>	Physiology Building tea room
11.30-12.30	Clinical and evolutionarily aspects of immunology of placentation	<b>Ashley Moffett</b> Bryan Matthews Seminar Room
<b>12.30-13.00</b>	<b>Lunch (early finish for those in session 1; extended lunch for those in session 2)</b>	Physiology Building tea room
13.00-15.15 15.30-17.45	Cell isolation and sorting practical: session 1 Cell isolation and sorting practical: session 2	<b>Andrew Sharkey</b> Department of Pathology
<b>18.15</b>	<b>Dinner: St John's College, The Buttery</b>	
19.30	Walking tour of Cambridge – please meet at the Porters' Lodge ( Trinity Street/St John's Street i.e. the lodge that is nearest to the street and nearest Trinity College), St John's College 19.30pm (see page 7 for map of St John's College)	

#### Day 5: Thursday 9<sup>th</sup> July, 2015

Grant-writing workshop and technology practical		
09.00-10.00	Placental endocrinology	<b>Amanda Sferruzzi-Perri</b> Bryan Matthews Seminar Room
10.00-11.00	Placental angiogenesis	<b>Steve Charnock-Jones</b> Bryan Matthews Seminar Room
<b>11.00-11.30</b>	<b>Break</b>	Physiology Building tea room
11.30-12.30	Spiral artery remodelling	<b>Steve Charnock-Jones</b> Bryan Matthews Seminar Room
<b>12.30-13.45</b>	<b>Lunch</b>	Physiology Building tea room
13.45-17.30	Genetic bioinformatics practical	<b>Steve Charnock Jones</b> Craik-Marshall Building, Bioinformatics Teaching Facility, Dept. of Genetics
<b>18.00</b>	<b>Dinner: St John's College, The Buttery</b>	
19.00	Fellowship Application Workshop	Facilitated by:  <b>Amanda Sferruzzi-Perri/ Miguel Constância:</b> St John's College, Boys Smith Room, Fisher Building

**Day 6: Friday 10<sup>th</sup> July, 2015**

		<b>Animal models and approaches</b>
08.30-09.30	Mouse genetic models of placental function	<b>Miguel Constância</b> Bryan Matthews Seminar Room
09.30-10.30	Rodent versus ovine animal models of materno-fetal interactions	<b>Dino Giussani</b> Bryan Matthews Seminar Room
<b>10.30-11.00</b>	<b>Break</b>	Physiology Building tea room
11.00-12.00	Stereology theory Supported by:  <small>TURNING IMAGES INTO KNOWLEDGE</small>	<b>Johnnie Bremholm Andersen</b> Bryan Matthews Seminar Room
<b>12.00-13.00</b>	<b>Lunch</b>	Physiology Building tea room
13.00-15.30	Stereology practical Supported by:  <small>TURNING IMAGES INTO KNOWLEDGE</small>	<b>Johnnie Bremholm Andersen</b> <b>Graham Burton</b> Histology Classroom
15.30	<b>Break</b>	Physiology Building tea room
16.00-17.00	Clinical study design	<b>Gordon Smith</b> Bryan Matthews Seminar Room
17.00	Guest lecture: Placenta in a clinical setting	<b>Christoph Lees</b> Bryan Matthews Seminar Room
<b>19.30</b>	<b>End of Course dinner</b>	<b>The St. John's Chop House</b> 21-24 Northampton Street Cambridge CB3 0AD