

**PGDIS 2012, Festspeilhaus, Bregenz, Austria**  
**From polar body to blastocyst – the evolving genome**  
**Where to next for preimplantation genetic diagnosis?**  
**May 16<sup>th</sup>-19<sup>th</sup>, 2012**

<b>Wednesday May 16<sup>th</sup> Hotel Mercure</b>	
8.00-10.00	<b>Registration for Pre-congress Workshops and Meetings</b>
17.00-19.00	<b>Registration for PGDIS 2012</b>
<b>Pre-congress Workshops and Meetings</b> Coffee and lunch provided	
8.30-12.00	<p><b>1. Array CGH</b> (organised by Tony Gordon, BlueGnome Ltd)</p> <ul style="list-style-type: none"> <li>• Setting up a laboratory for PGS – equipment and logistic requirements</li> <li>• Which sample to biopsy and practical considerations for running PGS</li> <li>• aCGH software analysis</li> <li>• Reciprocal translocations/ Robertsonian translocations/Inversions – what imbalances can aCGH be used to detect in PGS?</li> <li>• An introduction to karyomapping</li> </ul> <p><b>2. Gamete and embryo vitrification</b> (organised by <a href="#">Pierre Vanderzwalmen, Bregenz</a>)</p> <ul style="list-style-type: none"> <li>• Basic aspects of cryobiology (Vanderzwalmen Pierre, IVF Centers Prof. Zech)</li> <li>• Vitrification: Answers to FAQ (Vanderzwalmen Pierre, IVF Centers Prof. Zech)</li> <li>• Immediate and longer term effects of vitrification on blastomere viability, cell division and embryo development (Chatzimeletiou Katarina, Papageorgiou General Hospital, Thessaloniki, Greece)</li> <li>• Clinical application of oocyte and embryo vitrification in the closed system (Wirleitner Barbara, IVF Centers Prof. Zech)</li> <li>• Vitrification of trophectoderm-biopsied blastocysts (Stecher Astrid, IVF Centers Prof. Zech)</li> <li>• Hands-on workshop on aseptic Vitrisafe vitrification</li> <li>• Closing remarks</li> </ul>
12.00-14.00	<b>Lunch</b>
14.00-18.00	<p><b>3. Time-Lapse and Blastocyst Culture for Embryo Selection</b> (organised by <a href="#">Astrid Stecher, Bregenz</a>)</p> <p>Theoretical Session</p> <ul style="list-style-type: none"> <li>• Time-Lapse analysis: What is known from the literature?</li> </ul>

**PGDIS 2012, Festspeilhaus, Bregenz, Austria**  
**From polar body to blastocyst – the evolving genome**  
**Where to next for preimplantation genetic diagnosis?**  
**May 16<sup>th</sup>-19<sup>th</sup>, 2012**

	<p>Maximilian Schuff, IVF Centers Prof. Zech (Bregenz, Austria)</p> <ul style="list-style-type: none"> <li>• Influence of culture conditions on embryo development up to the blastocyst stages. Astrid Stecher, IVF Centers Prof. Zech (Bregenz, Austria)</li> <li>• Contribution of the paternal factors on embryo development. Pierre Vanderzwalmen, IVF Centers Prof. Zech (Bregenz, Austria)</li> <li>• The role of lifestyle factors. Astrid Stecher &amp; Johannes Wogatzky, IVF Centers Prof. Zech (Bregenz, Austria)</li> <li>• Questionable events in embryo development. Petra Baborova, IVF Centers Prof. Zech (Pilsen, Czech Republic)</li> <li>• Established criteria in embryo scoring vs. Time-Lapse analysis to the blastocyst stage. Let's ask the experts. Nicolas Zech, IVF Centers Prof. Zech (Bregenz, Austria)</li> </ul> <hr/> <p><b>4. Free RBM Online-Writing Workshop</b></p> <ul style="list-style-type: none"> <li>• Intro</li> <li>• Common reasons for rejection</li> <li>• Focussed topic (plagiarism or topic most relevant to the host affiliated society)</li> <li>• Responding to referees comments</li> </ul> <hr/> <p><b>5. 24Sure User Group Meeting</b> (organised by Tony Gordon, BlueGnome Ltd)</p> <ul style="list-style-type: none"> <li>• 24sure V3 protocol and BlueFuse Multi V3.0 software updates</li> <li>• Karyomapping update</li> <li>• User presentations</li> </ul>
18.00-20.00	<b>PGDIS Board Meeting</b>

**PGDIS 2012, Festspeilhaus, Bregenz, Austria**  
**From polar body to blastocyst – the evolving genome**  
**Where to next for preimplantation genetic diagnosis?**  
**May 16<sup>th</sup>-19<sup>th</sup>, 2012**

<b>Thursday May 17<sup>th</sup></b>	
8.15	<b>Introduction and welcome</b> Renee Martin (Calgary, Canada) President, PGDIS Nicolas Zech (Bregenz, Austria) Congress President Alan Handyside (London, UK) Chairman, Scientific Committee
<b>Plenary session (1)</b> <b>New developments in preconception testing and prenatal diagnosis</b> Chaired by Joe Leigh Simpson (Miami, USA) & Anver Kuliev (Chicago, USA)	
8.30	<b>P1 Preconception testing by next generation sequencing</b> Stephen Kingsmore (Kansas City, USA)
9.15	<b>P2 Prenatal diagnosis in the era of the personal genome</b> Joris Vermeesch (Leuven, Belgium)
10.00-10.30	Coffee
<b>Session (1)</b> <b>The polar bodies of the oocyte: insights into meiosis and maternal genetic defects</b> Chaired by Svetlana Rechitsky (Chicago, USA) & Renee Martin (Calgary, Canada)	
10.30	<b>S1 Polar body based PGD for genetic and chromosomal disorders</b> Anver Kuliev (Chicago, USA)
11.00	<b>S2 Why are human eggs so often aneuploid? A novel hypothesis from chromosome cohesion.</b> Nobuaki Kudo (London, UK)
11.30	<b>S3 Polar body biopsy and array CGH for aneuploidy in advanced maternal age</b> Markus Montag (Heidelberg, Germany)
12.00	<b>S4 The use of polar bodies and cumulus cells to assess oocytes and select embryos</b> Elpida Fragouli (Oxford, UK)
12.30-14.00	Lunch
<b>Invited oral communications (1)</b> Chaired by Darren Griffin (Canterbury, UK) & Alan Thornhill (London, UK)	
14.00	<b>O1 Polar body 1, polar body 2 and blastomere analysis in PGS treatment</b> <sup>1</sup> Fishel, S., <sup>1</sup> Cater, E., <sup>1</sup> Lynch, C., <sup>1</sup> Jenner, L., <sup>2</sup> Campbell, A. <sup>1</sup> CARE Fertility, Nottingham, <sup>2</sup> CARE Fertility, Manchester, UK
14.20	<b>O2 Altered morphokinetic parameters of embryos identified as aneuploid by single cell array CGH analysis at the 8-cell stage</b> <sup>1*</sup> Davies, S, <sup>1</sup> Christopikou, D, <sup>1</sup> Tsorva, E, <sup>1</sup> Karagianni, T, <sup>1</sup> Mastrominas, M and <sup>1,2</sup> Handyside, AH <sup>1</sup> Embryogenesis, Assisted Reproduction Unit, Athens, Greece and <sup>2</sup> Institute of Integrative and Comparative Biology, Faculty of Biological Sciences, University of Leeds, Leeds, UK
14.40	<b>O3 Aneuploidy screening reveals high incidence of abnormalities of chromosomes which are not involved in the rearrangements</b> Beyazyurek C <sup>1</sup> ., Cinar Yapan C <sup>1</sup> ., Ekmekci G.C <sup>1</sup> ., Yesil M. <sup>1</sup> , Altin G. <sup>2</sup> , Yelke H.K. <sup>2</sup> ,

**PGDIS 2012, Festspeilhaus, Bregenz, Austria**  
**From polar body to blastocyst – the evolving genome**  
**Where to next for preimplantation genetic diagnosis?**  
**May 16<sup>th</sup>-19<sup>th</sup>, 2012**

	Kahraman S <sup>3</sup> . <sup>1</sup> Istanbul Memorial Hospital Reproductive Genetics Center, <sup>2</sup> Istanbul Memorial Hospital IVF Unit, <sup>3</sup> Istanbul Memorial Hospital Endocrinology, IVF and Reproductive Genetics Center, Istanbul, Turkey
15.00	<b>O4 Preimplantation Genetic Diagnosis (PGD) for chromosomal rearrangements (CR) using arrays of comparative genome hybridization (aCGH). Risk assessment depending on the type of CR, the maternal age and the sex of the carrier.</b> Jiménez-Macedo A <sup>a</sup> , Garcia-Guixé E <sup>a</sup> , EscuderoT <sup>b</sup> , Colls P <sup>b</sup> , Munné S <sup>b</sup> , Giménez C <sup>a</sup> , Sandalinas M <sup>a</sup> <sup>a</sup> Reprogenetics Spain SA., Barcelona, Spain, <sup>b</sup> Reprogenetics, Livingston, New Jersey, USA
15.20	<b>O5 Determination of mutation loads in preimplantation embryos to assess the effectiveness of preimplantation genetic diagnosis (PGD) for mitochondrial DNA (mtDNA) inherited disorders</b> Laura Irving <sup>1,2</sup> , L. Craven <sup>1,2</sup> , C. Alston <sup>1,2</sup> , S. Byerley <sup>3</sup> , R.W. Taylor <sup>1,2</sup> , M. Herbert <sup>2,3</sup> & D.M. Turnbull <sup>1,2</sup> <sup>1</sup> Mitochondrial Research Group, Institute for Ageing and Health, <sup>2</sup> Institute of Ageing and Health, Newcastle University, <sup>3</sup> Newcastle Fertility Centre, International Centre for Life, Newcastle upon Tyne, UK
15.40	<b>O6 Homozygous mutations and haplotype backgrounds; implications for PGD</b> Dr Pamela Renwick <sup>1</sup> , Dr Heema Patel <sup>1</sup> , Dr Yakoub Khalaf <sup>1</sup> , Dr Reem Al-Dabbous <sup>2</sup> , Dr Caroline Ogilvie <sup>1</sup> . <sup>1</sup> Centre for Preimplantation Genetic Diagnosis, Guy's and St Thomas' NHS Foundation Trust, London, UK, <sup>2</sup> Al Soor Clinic & Genetics Laboratory, Kuwait City, Kuwait
16.00-16.30	Tea
<b>Advanced topics in clinical PGD (1)</b> Chaired by Semra Kahraman (Istanbul, Turkey) & Samir Hamamah (Montpellier, France)	
16.30	<b>S5 What about mitochondrial biopsy?</b> Luca Gianaroli (Bologna, Italy)
16.55	<b>S6 Polar body analysis by array CGH and follow up at cleavage stages</b> Dimitra Christopikou (Athens, Greece)
17.20	<b>S7 TBC</b> Santiago Munne (Livingstone, NJ, USA)
17.45	<b>S8 PGD for de novo mutations</b> Svetlana Rechitsky (Chicago, USA)
18.10	<b>S9 PGD and HLA matching: a clinical update</b> Semra Kahraman (Istanbul, Turkey)
18.30-19.30	<b>Poster session</b>
20.30	<b>Invited Speakers Dinner</b>

**PGDIS 2012, Festspeilhaus, Bregenz, Austria**  
**From polar body to blastocyst – the evolving genome**  
**Where to next for preimplantation genetic diagnosis?**  
**May 16<sup>th</sup>-19<sup>th</sup>, 2012**

<b>Friday May 18<sup>th</sup></b>	
<b>Plenary session (2)</b> <b>From zygote to blastocyst: the establishment of cell lineages</b> Chaired by Alan Handyside (London, UK)	
8.30	<b>P3 Prepatterning in the mammalian embryo</b> Magda Zernica-Goetz (Cambridge, UK)
9.15	<b>P4 The establishment of cell lineages in the human preimplantation embryo</b> Hilde Van de Velde (Brussels, Belgium)
10.00-10.30	Coffee
<b>Session (2)</b> <b>The cleavage and blastocyst stage embryo: the evolving genome</b> Chaired by Leeanda Wilton (Melbourne, Australia) & Alan Thornhill (London, UK)	
10.30	<b>S10 Cleavage stage and blastocyst biopsy</b> Alan Handyside (London, UK)
10.50	<b>S11 Chromosomal mosaicism in the cleavage stage embryo revisited</b> Leeanda Wilton (Melbourne, Australia)
11.15	<b>S12 Chromosomal instability in the human preimplantation embryo</b> Thierry Voet (Leuven, Belgium and Cambridge, UK)
11.40	<b>S13 PGD for aneuploidy and translocation chromosome imbalance by cleavage stage biopsy</b> Francesco Fiorentino (Rome, Italy)
12.05	<b>S14 Blastocyst biopsy for aneuploidy testing</b> Dagan Wells (Oxford, UK)
12.30-14.00	Lunch
<b>Invited oral communications (2)</b> Chaired by Francesco Fiorentino (Rome, Italy) & Dagan Wells (Oxford, UK)	
14.00	<b>O7 Assessment of 669 embryos and Clinical Outcome from 113 cycles using Array CGH of Blastomeres</b> Veselá, K. <sup>1,2</sup> , Horňák, M. <sup>1,2,3</sup> , Horák, J. <sup>1,3</sup> , Oráčová, E. <sup>1,2</sup> , Hromadová, L. <sup>1</sup> , Veselý, J. <sup>1,2</sup> , Trávník, P. <sup>1,2</sup> , Rubeš, J. <sup>1,2,3</sup> . <sup>1</sup> REPROMEDA Brno, <sup>2</sup> GENPROGRESS, Brno, <sup>3</sup> Veterinary research institute, Brno, Czech Republic
14.20	<b>O8 Accuracy rates in biopsies performed on day-3 and day-5 embryos using CGHarray technology for PGS</b> Mir, P <sup>1</sup> ; Rodrigo, L <sup>1</sup> ; Mateu, E <sup>1</sup> ; Mercader, A <sup>2</sup> ; Escrich, L <sup>2</sup> ; Buendía, P <sup>2</sup> ; Delgado, A <sup>2</sup> ; Poo, M.E. <sup>2</sup> ; Vera, M <sup>1</sup> ; Simón, C <sup>1,3</sup> and Rubio, C <sup>1</sup> . <sup>1</sup> PGD Unit. IVIOMICS, <sup>2</sup> IVF Lab. IVI-Valencia, <sup>3</sup> Medical Unit. IVI-Valencia, Valencia, Spain
14.40	<b>O9 Mosaicism in Blastocyst stage Embryos</b> Barahona P, Traversa M, Leigh D <sup>1</sup> and McArthur S Genea, Sydney, Australia
15.00	<b>O10 Use of next generation sequencing technology is feasible for current PGD with fresh embryo transfer</b>

**PGDIS 2012, Festspeilhaus, Bregenz, Austria**  
**From polar body to blastocyst – the evolving genome**  
**Where to next for preimplantation genetic diagnosis?**  
**May 16<sup>th</sup>-19<sup>th</sup>, 2012**

	KP Xu <sup>a</sup> , AR Victor <sup>a</sup> , CH Zhang <sup>a</sup> , H Jiang <sup>b</sup> , XC Li <sup>b</sup> , XQ Zhang <sup>b</sup> , HM Yang <sup>b</sup> and Z Rosenwaks <sup>a</sup> . <sup>a</sup> Center for Reproductive Medicine, Weill Cornell Medical College of Cornell University, New York, NY, USA, <sup>b</sup> BGI, Shenzhen, China
15.20	<b>O11 Blastocyst Trophoderm Cells Screening by Massively Parallel Sequencing for Aneuploidy and Imbalanced Chromosomal Arrangements Detection</b> Xuyang Yin <sup>1</sup> , Ke Tan <sup>2</sup> , Chunlei Zhang <sup>1</sup> , Shengpei Chen <sup>1</sup> , Chunsheng Zhang <sup>1</sup> , Xiaoyu Pan <sup>1</sup> , Xuchao Li <sup>1</sup> , Fang Chen <sup>1</sup> , Hui Jiang <sup>1</sup> , Ge Lin <sup>2</sup> , Guangxiu Lu <sup>2#</sup> and Xiuqing Zhang <sup>1#</sup> 1. BGI-Shenzhen, Shenzhen, Guangdong, 2. Institute of Reproductive & Stem Cell Engineering, Central South University, Reproductive & Genetic Hospital, Changsha, Hunan, China, 410078
15.40	<b>O12 Non-Invasive Prenatal Diagnosis of Congenital Adrenal Hyperplasia</b> Maria I. New, Oksana Lekarev, Tony Yuen, and Y. M. Dennis Lo
16.00-16.30	Tea
<b>Advanced topics in clinical PGD (2)</b> Chairs: Luca Gianaroli and Cristina Magli (Bologna, Italy)	
16.30	<b>S15 EQA for new diagnostic technologies</b> Alan Thornhill (London, UK)
17.00-18.00	<b>Debate</b> <b>Polar body, cleavage stage or blastocyst biopsy for aneuploidy testing?</b> Cristina Magli (Bologna, Italy), Dimitra Christopikou (Athens, Greece), Leeanda Wilton (Melbourne, Australia), Dagan Wells (Oxford, UK), Nathan Treff (Morristown, USA), Don Leigh (Sydney, Australia)
18.00-18.30	<b>PGDIS Annual General Meeting</b>
18.00-19.30	<b>Poster session (2)</b>
20.00	<b>Gala Conference Dinner</b>

**PGDIS 2012, Festspeilhaus, Bregenz, Austria**  
**From polar body to blastocyst – the evolving genome**  
**Where to next for preimplantation genetic diagnosis?**  
**May 16<sup>th</sup>-19<sup>th</sup>, 2012**

<b>Saturday May 19<sup>th</sup></b>	
<b>Plenary session (3)</b> Chaired by Nicolas Zech (Bregenz, Austria) & Joe Leigh Simpson (Miami, USA)	
8.30	<b>P5 The challenge of genome wide analysis in clinical practice?</b> Markus Hengstschläger (Vienna, Austria)
9.15	<b>P6 Non-invasive prenatal diagnosis using free fetal DNA</b> Dennis Lo (Hong Kong, China)
10.00-10.30	10.00-10.30 Coffee
<b>Session (3)</b> <b>The challenge of genomic technologies and next generation sequencing</b> Chaired by Alan Handyside (London, UK) & Joe Leigh Simpson (Miami, USA)	
10.30	<b>Karyomapping as a means of universal diagnosis and providing insight into early human development</b> Darren Griffin (Canterbury, UK)
11.00	<b>The application of bioinformatics to genetic testing for the detection of human aneuploidy and genotyping</b> Matthew Rabinowitz (Redwood City, CA, USA)
11.30	<b>Four hour 24 chromosome aneuploidy screening</b> Nathan Treff (Morristown, USA)
12.00	<b>Cost effective prevention of inherited disease by IVF and PGD</b> Ilan Tur Kasper (Chicago, USA)
12.30	Closing remarks
13.00-14.00	Lunch