

**ESHRE  
PGD Consortium**

**Newsletter,  
August 2007**

Welcome to the 4th Consortium newsletter with an update of our activities. You should have received the minutes of the consortium meeting in Lyon and the business meeting of the SIG Reproductive Genetics. Both meetings were well attended with productive discussions. Here is a summary of the main points affecting consortium members.

**Laser biopsy of the human preimplantation embryo  
ESHRE workshop, July 5th 2007. Venue: Conference centre Lyon  
Course coordinators: Alan Thornhill (UK) and Stéphane Viville (FRA)**

The workshop was intended to give existing biopsy practitioners an opportunity to share experiences (good and bad) with their peers and with industry. The day was intense with 40 delegates including 6 representatives from industry representing the three most commonly used laser systems for embryo biopsy (namely Saturn, Research Instruments, UK; Octax, MTG, Germany and Zilos, Hamilton-Thorne). Each of the presentations was intended to stimulate discussion through interaction. Some highlights included Markus Montag's three golden rules of laser biopsy (1 - make only single openings to prevent problems during hatching; 2 – use multiple short pulses rather than a single large pulse; 3 – ensure that all lenses and camera attachments are tight and the embryo is resting just on the bottom of the dish before proceeding to biopsy). Anick de Vos and Andrew Glazier provided a concise and comprehensive overview of cleavage stage and blastocyst biopsy respectively. Dr Torres-Padilla provided an excellent insight into the world of mouse embryology and blastomere fate. Her conclusion that while the environment for single blastomeres is important for normal development, the specific cell biopsied should not interfere with normal future development was comforting to biopsy practitioners. The input from our partners in industry was invaluable. David Lansdowne (Research Instruments) encouraged the biopsy community to develop a standardised tool for measuring potential harm done by laser or other methods of biopsy, thereby allowing lab-specific validation, routine troubleshooting and validation of new instrumentation with regards to safety and efficacy. Diarmid Douglas-Hamilton (Hamilton-Thorne) focussed on safe and effective use of the laser to thermally ablate the zona pellucida reminding us of the positive correlation between increasing pulse time and thermal transfer with possible damage to surrounding cells and the need to

check laser alignment prior to clinical use. Klaus Rink (MTG) reviewed the encouraging data following use of the laser for polar body and cleavage stage biopsy with respect to pregnancy and live birth outcome and reminded the group to keep the embryo close to or resting on the bottom of the dish during biopsy. Cristina Magli discussed the global experience of freezing biopsied cleavage-stage embryos which was generally disappointing with several notable exceptions. The increase in blastocyst culture uptake has prompted many laboratories to freeze or vitrify blastocysts instead. During general discussion the topics of safety and efficacy of calcium/magnesium-free medium during biopsy, one versus two cell biopsy and minimum number of cells at which biopsy should be performed with a general consensus that more studies are needed. There were also questions about the relatively few laboratories performing mechanical embryo biopsy and blastocyst biopsy. A more detailed report of the discussions and presentations will be submitted for publication at a later stage and will be included in the next version of the ESHRE PGD Consortium Guidelines for Best Practice in Preimplantation Testing.

### **Genetics for ART Practitioners 2008**

The next Basic Genetics for ART Practitioners course will be in Greece on 5<sup>th</sup> April 2008. This course is being organised by the Department of Medical Genetics, Athens University (Joanne Traeger-Synodinos and Emmanuel Kanavakis).

### **Data collection**

#### **Data VII**

Finally the paper has been submitted to Human Reproduction. All centres whose data was included have been sent a copy of the paper and tables. A few numbers in the tables (especially table 1) were altered after sending to consortium members but before submission.

#### **Data VIII and beyond**

You have the new database so please can you start entering the data from 2006 and 2007 now. When all your pregnancies are completed from OR in 2006 you can submit the files but the absolute deadline is 31<sup>st</sup> Dec 2007.

### **Four Working Groups**

The PGD Consortium has now set up four working groups. It is hoped that each working group will produce at least one paper on their discussions/findings.

#### **1. Accreditation**

This is being chaired by Karen Sermon. Accreditation is very important for diagnostic labs (and obligatory in some countries) and ideally all consortium members should be accredited. There is no doubt that this will be necessary in every country in time, but some countries do not have accreditation. The working group is going to find out what the situation is in different countries

and to see where the consortium can help. Karen has organised the first meeting for September.

## **2.PGS / Aneuploidy screening**

This is currently being chaired by Joyce Harper. After the huge amount of discussions about PGS at ESHRE, the first task of the PGS working group has been to write a position statement on PGS. As predicted this has been an almost impossible task as everyone has very differing views on this topic. A draft statement has been agreed by the majority of the steering group and it is now being considered by the ESHRE Executive Committee. Once the position statement has been submitted to Human Reproduction, Joyce will stand down as chair of this working group and it will be co-chaired by Leeanda Wilton and Sjoerd Repping. The PGS working group will look in detail at the PGS data that has been sent to the consortium since the first data collection.

## **3. Misdiagnosis**

This is being chaired by Alan Thornhill. Misdiagnosis falls into two categories; those that are detected at pregnancy or birth and those that are detected when untransferred embryos are reanalysed. The working group will be contacting consortium members to ask about both. For those centres that analyse untransferred embryos, a study will be set up.

## **4. Database**

This is being chaired by Céline Moutou. The consortium are aware that the database can still be improved. Since part of the aim of the Sanco project (see below) is to develop a database, the working group will look into this.

## **Sanco Project**

At the consortium meeting in Lyon, James Lawford-Davies presented an overview of a 2-year project funded by the European Commission (Directorate General of Health and Consumer Affairs, acronym SANCO). The funding for this project has already been awarded and ESHRE is the main partner. Other partners are James Lawford-Davies (University of Newcastle), Karen Sermon (UZ Brussel, Vrije Universiteit Brussel), Joep Geraedts (AZ Maastricht), Stéphane Viville (SIHCUS-CMCO, Strasbourg), Alison Lashwood (KCL, London) Katerina Vesela (ReproMeda, Brno, CZ), Borut Peterlin (Ljubljana, Slovenia), Tony Solomonides (University of West England, Bristol) and Julian Jenkins (Progress). The aim is to set up and use a coding system that will allow a more efficient data collection across Europe. This coding system will then be tested in collecting data related to PGD, eg on PGD cycles and babies born after PGD. A survey on the laws and ethics around PGD in Europe will close the project. The coding system is planned to be finished within the next 8 months. As there is a strong overlap between the aims of the SANCO project and what the Consortium has done for the past ten years, it is obvious that the bulk of the work will be carried out by the PGD Consortium as an ESHRE activity together with two IT partners, Tony Solomonides and James Lawford-Davies as the legal partner. This is a good opportunity for us to improve our data collection, and to pave the path to more extensive EU funding.

**Paediatric follow up**

This project is being organised by Alison Lashwood and has been launched. All centres wishing to be included should have registered with Alison.

**External Quality Assessment for preimplantation FISH testing**

This will become live very soon. Details will be sent to all consortium members.

**Steering Committee**

The members of the steering committee are:

Chair, Joyce Harper, Past Chair, Karen Sermon, Deputy Chair, Alan Thornhill. Stephane Viville (France), Christine deDie (Netherlands), Leeanda Wilton (Australia), Paul Scriven (UK), Gary Harton (USA), Celine Moutou (France), Alison Lashwood (UK), Sioban SenGupta (UK), Sjoerd Repping (Netherlands), Joanne Traeger-Synodinos (Greece), Katerina Vesela (Czech Republic), Tugce Pehlivan (Spain) and Francesco Fiorentino (Italy), Maartje Van Rij (Netherlands).

**Email list**

If there is anyone at your clinic who would like to receive this newsletter, please send their email address to [Veerle.Goossens@eshre.com](mailto:Veerle.Goossens@eshre.com) quoting your centre number

**Further information**

If you would like to make any comments, suggestions or need any further information about the consortium please email [Veerle.Goossens@eshre.com](mailto:Veerle.Goossens@eshre.com)