

SLTB Newsletter



Hello SLTB members,

this newsletter will present you a summary of the Biobanking Course held in the University of Luxemburg, the final COST 871 meeting held in Angers and this year's Cryobiology meeting.

Hope you are all well and I am looking forward to the next Annual SLTB meeting in London,

Anja Kaczmarczyk,
Committee Member SLTB

Principles of Biobanking for Clinical, Biological & Environmental Biospecimens & Bioresources

text and photos by Erica Benson

Two SLTB members, Dr Erica Benson and Dr Keith Harding have helped to develop and recently lectured on a new continuing professional development course administered and awarded by the University of Luxemburg entitled "*Certificate in the Principles of Biobanking for Clinical, Biological and Environmental Biospecimens and Bioresources*". The transdisciplinary course, which is endorsed by the

International Society for Biological and Environmental Repositories (ISBER) took place for the first in time June 2011. It was organized in collaboration with course leader, Dr Fay Betsou of the Integrated Biobank of Luxemburg (IBBL) and other specialist lecturers from IBBL, the Gabriel Lippmann Institute and the University of Créteil. The course brought together 13 students from Europe and North Africa (Belgium, Germany, Sweden, Switzerland, Italy, Iceland, Malta and Egypt). The curriculum took the students on a 3-week journey, through the biospecimen's life cycle from the natural (human or non-human) environment to the scientist's bench and included lectures and practical classes on the application of low and ultra-low (cryogenic) temperature storage. Throughout the course, students learnt about the technical, scientific, economic and legal aspects of biobanks and discovered the interdisciplinarity of biobanking. They have all successfully passed the examination and are the first cohort to hold a certificate on transdisciplinary biobanking awarded by the University of Luxemburg. It is expected that the course will be run every two years in Luxemburg. Part of the course curriculum included a promotional presentation about the SLTB delivered by Keith Harding; Erica Benson presented information about CryoLetters and the

Society for Cryobiology. They were delighted to deliver the cryobiological part of their training in cooperation with Dr Olga Kofanova, who is a former member of The Institute for Problems of Cryobiology & Cryomedicine of the National Academy of Sciences of the Ukraine and is now a medical cryobanking specialist based at the IBBL.



The class of 2011



The Integrated Biobank of Luxembourg where some practical training took place.

Cryopreservation Symposium ‘COST Action 871 Cryopreservation of crop species in Europe – Final meeting’ held in Angers 8th to 11th of February 2011

text and photos by Martin Schumacher

From the 8th until the 11th of February 2011 the final meeting of COST Action 871 “Cryopreservation of Crop Species in Europe” (Cryoplanet) was held in Angers. This COST Action brought together a network of European researchers from 21 EU countries working on cryopreservation of plants, plant cells and tissues.

Associated members came from the 3 none-EU countries: New Zealand, Russia and Tunisia. The nucleus of this COST Action was the former EU funded research project CRYMCEPT coordinated by Rony Swennen and Bart Panis from the university of Leuven (<http://www.biw.kuleuven.be/dtp/tro/crymcept/CRYMCEPT.htm>). Chair of the COST action was again Bart Panis from Leuven University who organized and submitted the COST proposal. The COST Action started in 2006 and ended officially in November 2010. During this period 8 scientific meetings, several workshops and training schools and a lot of short term scientific missions have been organized. Background information of the work done in the action is presented on a website hosted by the University of Leuven (<http://www.biw.kuleuven.be/dtp/tro/cost871/home.htm>).

The final meeting was organized by Agnes Grapin from the “Institute supérieure des sciences agronomiques agroalimentaires, horticoles et du paysage (INHP)” and Florent Engelmann from the “Institute de recherche pour le developement” (IRD) in Montpellier. It took place in a region well known for plant research on the Agrocampus Quest of INHP in Angers. Angers also hosts Vegepolys, a “Pôle de compétitivité” (French competitive cluster). This is “in a given area, an association of companies, research centres and training organisations committed to a partnership approach aimed at creating synergies within jointly-run innovative projects”. Representatives of both institutions gave a welcome address to the participants at the beginning of the meeting. Another address of welcome was given by Didier Coulomb, the Director of the International Institute of Refrigeration. All representatives gave also a summary of the activities of their specific institutions. The scientific meeting summarized 4 years of work on plant cryopreservation within the COST Action network. Two days of

the meeting were dedicated to the scientific focal points of the COST Action, represented by its two work packages.

On the first day results of work package 1 titled “Fundamental aspects of cryopreservation / Cryoprotection and genetic stability” were presented. As keynote speaker Oliver Leprince talked about “LEA proteins and seed conservation in the dry state”. After this introduction into basic aspects of drought tolerance, seven lectures reported basic and applied research on osmotic and oxidative stress, basic applications of DSC for cryopreservation research, basic problems during the cryopreservation of large collections of apple and cacao and the application of RAPD techniques for the proof of genetic stability during cryopreservation of *Mentha x piperita* accessions by different methods. Several posters completed this topic.

The second day was dedicated to work package 2 “Technology, Application and Validation of Plant Cryopreservation” and turned to more practical aspects. Keynote speaker for this session was H.H. Kim from RDA Korea. He presented an interesting talk on “Development of droplet vitrification protocols and their implementation”. Then 11 lectures presented practical applications of cryopreservation ranging from freezing of bilberry seeds to banana conservation. Several lectures were dealing with cryopreservation of tree genetic resources either by dormant bud preservation or vitrification. The work was done with fruit trees like apple and pear or trees of the genus *Populus* and *Abies*. In addition 21 posters were presented in this section.

On Thursday country representatives reported on the activities concerning plant cryopreservation in the different countries during the period of the COST Action. Almost all countries could report an improvement of cryopreservation activities.

The organizers improved the meeting by informative and pleasant events. On the first day the participants had the chance to enjoy beautiful tapestry during a welcome cocktail in the old Town Council of Angers. On the second day participants paid a visit to the INRA collection of apple and pear and finally the congress trip started with a visit of the firm Ernest Turc and continued with a trip to the Loire valley with a visit of Brissac palace. A nice wine tasting gave COST Action 871 a pleasant ending.

All members agreed that the COST Action 871 can be considered a great success for cryopreservation in Europe. It succeeded in bringing almost all plant cryopreservation scientists in Europe in contact. Many of them organized cooperations and made even friends in the fruitful, cooperative and also pleasant atmosphere during the meetings. Many young scientists had the chance to learn important techniques during the short term scientific missions in specialized laboratories. Several laboratories could set up cryopreservation sharing experience with laboratories having a longer tradition in plant cryopreservation. At the meeting it was decided that the outcome of the COST Action should be published in book format probably at the end of 2011.

Unfortunately the chance to get more financial support from EC bodies for plant cryopreservation projects in the future is low and participants discussed ways and possibilities to keep the network that developed during this COST Action intact and co-operations going on. Already in the past some of the COST Action meetings had been organized in cooperation with SLTB and participants agreed that SLTB meetings will be an opportunity for organizing contacts and cooperation in the future. The recently announced meeting on tree cryopreservation is a first trying.



Attendees of the final COST Action 871 Meeting in Angers, France

New Member

Please welcome our new SLTB member
Feda Aljaser (feda.aljaser@gmail.com)



I am a PhD student at the Division of Human Development, School of Medical Sciences, University of Nottingham, UK. I obtained my BSc degree in Clinical Laboratory Sciences. My Masters in Medical Sciences was on assisted Reproductive Technology. My PhD research is on ovarian tissue long-term cryopreservation investigating the physical and chemical changes due to low temperature that limit the success of this procedure. I am using the sheep model, as it is similar to humans. In addition, research for developing sperm freezing protocols that provide robust post thaw survival is carried on in parallel at the Andrology department, Queens Medical Centre, Nottingham, UK.

Cryobiology Meeting 2011, Corvallis, Oregon, USA

text and photos by Barbara Reed

The Society for Cryobiology convened in Corvallis, Oregon, USA July 22-27, 2011 with over 150 attendees. The meeting began with a social evening at 'The Vue' in downtown Corvallis, with music, food, wine and conversation.

Sessions started on Sunday morning with a keynote session on 'Freeze drying and anhydrobiosis' convened by John Crowe followed by 'Cryobiology in assisted reproductive technology' with Mary Zelinski, Convener. An evening barbecue sponsored by the ICYR was held at a local park. Monday's sessions focused on 'Cryopreservation in agriculture' convened by Barbara Reed, Crystal Award presentations and an evening poster session. Tuesday's sessions included 'Current trends in biobanking', Allison Hubel, Convener and 'Blood cell cryopreservation', Jason Acker, convener, with tours of the National Clonal Germplasm Repository and an afternoon trip to the Oregon Coast and Aquarium. Wednesday completed the sessions with 'Mathematical modeling of ice formation', Jens Karlsson, Convener, and Plant Biobanking and Biophysics.

The annual business meeting was held with lively discussions and announcement of the 2011 class of Fellow Awards to John Crowe and Barbara Reed. The Fellow Awards session included talks by the 2010 Fellows (Michael Taylor, Sajio Sumida) and a talk on the work of deceased Fellow Valentin Grischenko. The meeting concluded with a dinner at Tyee Winery.



Dr. Thomas Lumpkin, Director General of CIMMYT speaks on World Food Security



Student travel award winners



Peter Mazur, John McGrath and Sajio Sumida enjoy the reception



Participants of the Oregon coast tour

PRESERVATION OF FOREST SPECIES

SLTB Autumn Symposium 2011

Thursday 6th October 2011, 10 am – 5 pm
& Friday 7th October 2011, 10 am – 12.30 pm

Location: Linnean Society, London

The global initiative by the Convention on Biological Diversity (CBD) to achieve a significant reduction in the rate of biodiversity loss by 2010 was not achieved. Of primary concern is the continuing loss of forests and associated species. New targets for 2020, approved at the Conference of the Parties in Nagoya in 2010, includes the need to 'prevent the extinction of known threatened species and improve and sustain their conservation status.' The contribution that cryopreservation can make to the conservation of forest species will be the focus of this symposium.

Organised by: Prof Hugh W. Pritchard (Kew, UK), Prof. Florent Engelmann (IRD, France), Dr Maurizio Lambardi (Univ. Florence, Italy), Dr Jon Green (UEL, UK)

The Linnean Society of London, Burlington House, Piccadilly, London W1J 0BF
Directions: <http://www.linnean.org/index.php?id=215>

For more information please have a look at:

<http://www.sltb.info/PDF/SLTB2011Autumn.pdf>

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