

## Program EU-PEARLS 2010 Meeting, October 14-15, 2010

### Thursday October 14, 2010:

- 08.00-09.00 Registration Coralys/CIRAD, Amphitheater Agropolis International  
09.00-09.15 Opening, welcome address, *B. Hubert*, Chairman of Agropolis International  
09.15-09.30 Welcome address from Languedoc-Roussillon Region, *Y. Pietrasenta*, vice-president  
09.30-09.45 EU-based Production and Exploitation of Alternative Rubber and Latex (EU-PEARLS), *H. Mooibroek*, project coordinator.

### Natural rubber

- 09.50-10.15 **Keynote speaker M. R. Finlay** (*Armstrong Atlantic State University, Savannah, USA*):  
The many futures of alternative rubber plants  
10.15- 10.35 *Taraxacum kok-saghyz* as a sustainable source of natural rubber and inulin:  
development of biological feedstocks and root processing and rubber quality validation,  
*Matt Kleinhenz* (Ohio State Univ. Wooster, USA)  
10.35-11.00 Coffee break, Poster session  
11.00-11.20 Natural rubber in tyres: present status and future trends, *N. Gevers* (Apollo  
Vredestein, Enschede, The Netherlands)  
11.20-11.40 Is the production of natural rubber from rubber tree really threatened? *F. Rivano*  
(CIRAD, Montpellier, France)  
11.40-12.00 Natural rubber and latex allergies, *K. Cornish* (Ohio State University, Wooster, USA)  
12.00-12.30 General discussion session natural rubber  
12.30-14.00 Lunch, poster Session

### Isoprenoid biosynthesis

- 14.00-14.30 **Keynote speaker T. Bach** (*Université de Strasbourg, France*): The biotechnology of  
isoprenoids - all things considered? Tobacco BY-2 cells as a model system.  
14.30-14.50 Summary of U.S. Efforts to Identify Rubber Biosynthetic Genes, *D. Shintani* (University  
of Nevada, Reno, USA)  
14.50-15.10 Dissection and molecular characterisation of the rubber synthetic pathway and latex  
rheology in *T. kok-saghyz*, *C. Schulze Gronover* (Fraunhofer Institut, Aachen,  
Germany)  
15.10-15.40 Coffee break, Poster session  
15.40-16.00 Genetic and genomic analyses of SALB resistance in rubber tree (*Hevea* spp.), *M.*  
*Seguin* (CIRAD, Montpellier, France)  
16.00-16.20 Quantitative proteomics and flow cytometric analysis of *Taraxacum koksaghyz*  
accessions, *I. van der Meer* (Plant Research International, Wageningen, The  
Netherlands)  
16.20-16.40 General discussion session isoprenoid biosynthesis  
16.40 Poster session, return to hotel  
18.00 Bus departure from Heliotel (Montferrier)  
18.30 Bus departure for Ibis Mercure down town  
19.00-22.00 Wine tasting, Gala Dinner at Mas du Ministre

## Friday October 15, 2010:

### Agronomy and genetics

- 09.00-09.30 **Keynote speaker D. T. RAY** (Univ. of Arizona, Tucson, USA) Evaluating and improving guayule germplasm.
- 09.30-09.50 Guayule USDA-ARS Agronomic and Breeding research –An update, *T. Coffelt* (USDA-ARS-USALARC, Maricopa, USA)
- 09.50-10.10 Mexico: The largest genetic reservoir of guayule, *D. Jasso de Rodríguez* (Universidad Autonoma Agraria "Antonio Narro", Buenavista, Mexico)
- 10.10-10.40 Coffee break, poster session
- 10.40-11.00 Genetic diversity and variation in rubber traits in natural populations of the Russian dandelion in Kazakhstan, *P. van Dijk* (KeyGene, Wageningen, The Netherlands)
- 11.00-11.20 Agronomic Performance and Latex characteristics of *Taraxacum* accessions, *E. Ritter*, (NEIKER Institute, Vitoria, Spain)
- 11.20-11.40 Progress of guayule agronomic trials in Europe: early evaluation, EU-PEARLS project: *D. Snoeck* (Cirad, U. Wageningen/MonptSupAgro)
- 11.40-12.00 General discussion session agronomy and genetics
- 12.00-13.20 Lunch, poster Session
- 13.20-14.20 Possibility to visit guayule field visit, Montpellier SupAgro/Cirad, Lavalette center, or to visit CIRAD/BIOS laboratory (please sign up at registration desk)

### Processing

- 14.20-14.50 **Keynote speaker: M. Petit** Economic and Policy Conditions for the Development of alternative rubber plants, (Institut Agronomique Méditerranéen, Montpellier, France)
- 14.50-15.10 Guayule rubber production at Sacaton, Arizona 1987-1990 , *W. W. Schloman, Jr.* (Consulting chemist, Stow, USA)
- 15.10-15.30 *Taraxacum kok-saghyz*: Production of high quality seeds and development of extraction technologies for natural rubber, latex and inulin. *A. U. Buranov* (Kok Technologies, Surrey, Canada)
- 15.30-16.00 Coffee break,
- 16.00-16.20 Variability in the wild species of *T. koksaghyz* as measured via several analyses techniques *K. Molenveld* (Wageningen UR, Wageningen, The Netherlands)
- 16.20-16.40 Fast pyrolysis of guayule shrub and bagasse, *C. McMahan* (USDA/ARS/WRRRC, Albany, USA)
- 16.40-17.00 Energy saving tyres based on natural rubber, *S. S. Sarkawi* (Univ. of Twente, Enschede, The Netherlands)
- 17.00-17.20 Conclusion of seminar, *J. B. van Beilen, S. Palu, D. Pioch, H. Mooibroek*
- 17.20-17.30 Closing of the Montpellier EU-PEARLS workshop, Chairman of CIRAD, G.Matheron

*Nb: The duration of the presentations is 15 minutes (keynote 25 minutes), plus 5 minutes of discussion*

*Full author list and affiliations can be found in the abstract book.*

## **Poster session, list of titles and authors**

### **Pathways towards the creation of an agamospermous hybrid dandelion rich in rubber**

*Tomáš Černý, Jan Kirschner, Jan Štěpánek*

Institute of Botany of the ASCR, Pruhonice, Czech Republic

### **A yeast model for isoprenoid biosynthesis**

*Matthé Wagemaker, Jan Springer, Hans Mooibroek.*

Wageningen UR - Food & Biobased Research, Wageningen, Netherlands

### **Modulation of isoprenoid production in *Nicotiana tabacum* and *Taraxacum koksaghyz*.**

*Nicole van Deenen<sup>a</sup>, J. Post<sup>a</sup>, Christian Schulze Gronover<sup>b</sup> and Dirk Prüfer*

<sup>a</sup>Department for Plant Biochemistry and Biotechnology, Hindenburgplatz 55, Westphalian Wilhelm's University Muenster, 48143 Münster, Germany

<sup>b</sup>Fraunhofer Institute for Molecular Biology and Applied Ecology (IME), branch Münster, Hindenburgplatz 55, 48143 Münster, Germany

### **Genetic studies of natural rubber biosynthesis in *Hevea* and dandelion**

*Stephen B. Ryu and Yong Jik Lee*

Environmental Biotechnology Research Center, Korea Research Institute of Bioscience and Biotechnology (KRIBB), Deajeon 305-806, Korea

### **Biochemical and anatomical analysis of alternative rubber crops**

*Hunseung Kang<sup>1</sup>, Yong Jik Lee<sup>2</sup>, and Stephen B. Ryu<sup>2</sup>*

<sup>1</sup>Division of Applied Plant Science, Chonnam National University, Gwangju 500-757, Korea

<sup>2</sup>Environmental Biotechnology Research Center, Korea Research Institute of Bioscience and Biotechnology (KRIBB), Deajeon 305-806, Korea

### **Proteins involved in rubber biosynthesis in *Taraxacum koksaghyz***

*Andrea Hillebrand<sup>a</sup>, Thomas Schmidt<sup>a</sup>, Christian Schulze Gronover<sup>b</sup> and Dirk Prüfer<sup>a,b</sup>*

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### **Approaches to increase biomass production in *Taraxacum koksaghyz***

*Oliver Munt<sup>a</sup>, Christian Schulze Gronover<sup>b</sup> and Dirk Prüfer<sup>a,b</sup>*

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### **Valorisation of latex of the pulp of argan fruit ( *Argania spinosa* )**

*Daniel Pioch, Serge Palu (1), André Collet (2), Frederic Bonfils, Christine Char-Raluy (3)*

UMR GPEB (CIRAD/UM2/UM1) (1), ICG/UM2 (2), UMR IATE (CIRAD,UM2,INRA/SupAgro) (3)

### **Comment satisfaire la demande de caoutchouc naturel, à laquelle le latex tiré de l'hévéa ne suffit plus ? En améliorant deux plantes : le guayule et le pissenlit russe**

#### **Du caoutchouc naturel en Europe**

*Serge Palu, Daniel Pioch,*

UMR Génie des procédés Eau Bioproduits, CIRAD, Jean Jacques Perrier, revue Pour La Science

**Linkage mapping in *Taraxacum* using AFLP and COS and SSR markers**

*Enrique Ritter*<sup>1</sup>, *Maria Hernandez*<sup>1</sup>, *N. Remondegui*<sup>1</sup>, *Marina Arias*<sup>1</sup>, *Koen Huvernaars*<sup>2</sup>, *Peter J. van Dijk*<sup>2</sup>

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