

**ProCoGen final open conference**  
**Promoting Conifer Genomic Resources**  
**30<sup>th</sup> November – 2<sup>nd</sup> December 2015**  
**Orléans, France**

Centre de Conférences d'Orléans, Orléans, France

## Agenda

Monday, November 30 <sup>th</sup> 2015	
<b>11:30 – 12:45</b>	<b>Registration &amp; Lunch</b>
<i>11:45 - 12:45 Lunch at Centre de Conférences</i>	
<b>13.00 – 13.50</b>	<b>Opening</b>
<ul style="list-style-type: none"> <li>• María-Teresa Cervera and Carmen Díaz-Sala, INIA-CIFOR and Universidad de Alcalá (Spain) : Welcoming words from ProCoGen coordinators [ProCoGen] (10')</li> <li>• Jean Bousquet, University of Laval (Canada) : Opening conference: current state and future prospects of the conifer genomics [Invited speaker] (40')</li> </ul>	

Monday, November 30 <sup>th</sup> 2015	
<b>13.50 – 18.50</b>	<b>Session 1. Structural genomics of conifer species</b> <b>Chairman: Pär Ingvarsson (University of Umeå), Yves Van de Peer (Flanders Institute for Biotechnology)</b>
<ul style="list-style-type: none"> <li>• Nathaniel Street, University of Umeå (Sweden) : <i>Picea abies</i> genome sequencing [Invited speaker] (30')</li> <li>• John Mackay, Oxford University (UK) : <i>Picea glauca</i> genome sequencing [Invited speaker] (30')</li> <li>• Jill Wegrzyn, University of Connecticut (USA) : Sequence assembly &amp; annotation in <i>Pinus taeda</i> [Invited speaker] (30')</li> <li>• Pär Ingvarsson, University of Umeå (Sweden) : <i>Pinus sylvestris</i> genome sequencing [ProCoGen] (30')</li> </ul>	
<i>15:50 – 16:10 Coffee break</i>	
<ul style="list-style-type: none"> <li>• Outi Savolainen and Jaakko Tyrmi, University of OULU (Finland) : SNP detection in Scots pine [ProCoGen] (30')</li> <li>• Daniel Peterson, Mississippi State University (USA) : Genome sequencing strategies [Invited</li> </ul>	

speaker] (30') <ul style="list-style-type: none"> <li>• Kostya Krutovsky, University of Göttingen (Germany) : Pinus sibirica and Larix sibirica genome sequencing [Invited speaker] (30')</li> <li>• Saneyoshi Ueno, Forestry and Forest Products Research Institute (Japan) : Sugi genome resources [Invited speaker] (30')</li> <li>• Emily Telfer, Scion (New Zealand) : Challenges assembling large conifer genomes [Selected oral presentation] (20')</li> <li>• Discussion time</li> </ul>
18:50 - 20:00      Welcome cocktail <i>at Centre de Conférences</i> & poster session

Tuesday, December 1st 2015		
8.30 – 14.50	<b>Session 2. Functional Genomics of conifer species</b> <b>Chairman: Francisco Canovas (University of Malaga), Sara von Arnold (Swedish University of Agricultural Sciences), Luc Harvengt (FCBA)</b>	
	<ul style="list-style-type: none"> <li>• Phillip Wilcox, University of Otago (New Zealand) : Genomic and genetic characteristics of the exome capture/transcriptome [Invited speaker] (30')</li> <li>• Francisco Cánovas, University of Malaga (Spain) : Pinus pinaster transcriptome dynamics [ProCoGen] (15')</li> <li>• María-Teresa Cervera, INIA-CIFOR (Spain) Physiological and molecular responses to drought in maritime pine (Pinus pinaster Ait) [ProCoGen] (15')</li> <li>• Célia Miguel, iTQB (Portugal) : Pinus pinaster miRNAs [ProCoGen] (30')</li> <li>• Carl Gunnar Fossdal, Norwegian Forest and Landscape Institute (Norway) : Functional genomics of Picea abies: development and adaptation [ProCoGen] (30')</li> </ul>	
10:30 – 10:50	<i>Coffee break</i>	
	<ul style="list-style-type: none"> <li>• Sara von Arnold, Swedish University of Agricultural Sciences (Sweden) : Transcription regulatory networks associated to development and other key processes [ProCoGen] (30')</li> <li>• Jeffrey Dean, Mississippi State University (USA) : Genetic control of adaptive traits in P. taeda [Invited speaker] (30')</li> <li>• Jose Celedon, University of British Columbia (Canada) : Functional genomics in white and Sitka spruce and on conifer defense systems [Invited speaker] (30')</li> <li>• Luc Harvengt, FCBA Institut Technologique Forêt Cellulose Bois-construction Ameublement (France) : Epigenetic dynamics associated to growth and adaptation [ProCoGen] (30')</li> </ul>	
12:50 – 14:10	<i>Lunch at Centre de Conférences</i>	
	<ul style="list-style-type: none"> <li>• Discussion time</li> </ul>	
15.00 – 19.30	<b>Session 3. Comparative Genomics of conifer species</b>	

	<b>Chairman: Maria-Teresa Cervera (INIA-CIFOR), Lieven Sterck (Flanders Institute for Biotechnology)</b>
<ul style="list-style-type: none"> <li>• Matias Kirst, University of Florida (USA) : Populus [Invited speaker] (30')</li> <li>• Jérôme Salse, INRA French National Institute for Agricultural Research (France) : Karyotype and gene order evolution from reconstructed extinct ancestors highlight contrasts in genome plasticity of modern rosid crops [Invited speaker] (30')</li> <li>• Jose Antonio Cabezas, INIA-CIFOR (Spain) : ProCoGen comparative mapping based on exome capture [ProCoGen] (30')</li> </ul>	
<b>16:30 – 16:50</b>	<i>Coffee break</i>
<ul style="list-style-type: none"> <li>• Philippe Rigault, Gydlé CO (Canada) : Angiosperms analysis: Eucalyptus genome [Invited speaker]</li> <li>• Marina de Miguel, INRA French National Institute for Agricultural Research (France) : Evidence of intense chromosomal shuffling during conifer evolution [ProCoGen] (30')</li> <li>• Pär Ingvarsson on behalf of Amanda de La Torre, Swedish University of Agricultural Sciences (Sweden) : Conifer comparative genome analysis [ProCoGen] (30')</li> <li>• Lieven Sterck, Flanders Institute for Biotechnology (Belgium) : ProCoGen Genome portal: Plaza for gymnosperms [ProCoGen] (30')</li> <li>• Discussion time</li> </ul>	

<b>Wednesday, December 2<sup>nd</sup> 2015</b>	
<b>8.30 – 15.20</b>	<b>Session 4. Translational Genomics of Conifer species</b> <b>Chairman: Leopoldo Sanchez (INRA), Marco Bink (Wageningen UR)</b>
<ul style="list-style-type: none"> <li>• Stephen Cavers, NERC Centre for Ecology and Hydrology (UK) : Genomic tools and genetic conservation [Invited speaker] (30')</li> <li>• Jean-Marc Bouvet, CIRAD French agricultural research and international cooperation organization (France) : Multi-trait genomic selection for breeding Eucalyptus hybrids - importance of additive and non-additive effects [Invited speaker] (30')</li> <li>• Marco Bink / Joost van Heerwaarden, Wageningen UR Biometrics (Netherlands) : Optimal uses of genomic information in breeding programs: a simulation study [ProCoGen] (30')</li> <li>• Jérôme Bartholome, INRA French National Institute for Agricultural Research (France) : Integration of molecular tools into the maritime pine breeding program in France [ProCoGen] (30')</li> </ul>	
<b>10:30 – 10:50</b>	<i>Coffee break</i>
<ul style="list-style-type: none"> <li>• Santiago Gonzalez-Martinez, INRA French National Institute for Agricultural Research (France) : Back to nature: candidate genes, population genomics and prediction of maladaptation in natural populations [Invited speaker] (30')</li> <li>• John Hickey (JEDIN), University of Edinburgh - Roslin Institute (UK) : Some insights of future developments in GS [Invited speaker] (30')</li> <li>• Luc Harvengt, FCBA Institut Technologique Forêt Cellulose Bois-construction Ameublement</li> </ul>	

(France) : Economic evaluation of GS: Maritime pine case study [ProCoGen] (30')	
12:20 – 13:40	<i>Lunch at Centre de Conférences</i>
<ul style="list-style-type: none"> <li>• Giovanni Vendramin, CNR Italian National Research Council (Italy) : Designing core collections from natural range distributions [ProCoGen] (30')</li> <li>• John Woolliams, University of Edinburgh - Roslin Institute (UK) : RAD sequencing in Sitka Spruce for Genomic Selection [ProCoGen] (30')</li> <li>• Discussion time</li> </ul>	
<b>15.30 – 16.25</b>	<b>Session 5. Wrap-up presentation by key-note speaker on take-home messages and prospects</b>
<ul style="list-style-type: none"> <li>• Final discussion, led by María-Teresa Cervera, INIA-CIFOR (Spain)</li> </ul>	
16:25 – 16:45	<i>Coffee break &amp; poster session</i>



## ProCoGen internal meeting

Wednesday, December 2 <sup>nd</sup> 2015	
16.45 – 18.30	<b>Only for members of ProCoGen consortium</b>
<ul style="list-style-type: none"> <li>• Pending activities &amp; future prospects, dissemination and management</li> <li>• General Assembly Meeting (management)</li> </ul>	

## Social events

Wednesday, December 2 <sup>nd</sup> 2015	
17.30 –	<b>Social program</b>
<ul style="list-style-type: none"> <li>• 17:30 - Old city guided tour (open to all attendants, but parallel to ProCoGen internal meeting), starting at the Centre de Conférences main entrance</li> <li>• 20:00 - Social dinner at the restaurant gastronomique <i>La Vieille Auberge</i>, a few meters away from the Centre de Conférences</li> </ul>	

**ProCoGen Training Workshop**  
**Practicalities of marker and genome-assisted selection**  
**3<sup>rd</sup> December 2015**  
**Orléans, France**

Thursday, December 3 <sup>rd</sup> 2015	
8.30 – 12.00	<b>Practicalities of marker and genome-assisted selection</b>
<p><b>Contributors:</b> Marco Bink and Joost van Heerwaarden (Wageningen UR Biometrics, Netherlands), Leopoldo Sanchez and collaborators (INRA, France) [ProCoGen]</p> <p>Illustration of two analytical approaches through the use of freely available tools and real data sets to be provided <i>in situ</i> and tried by attendants in their own computers</p> <ul style="list-style-type: none"> <li>• Genome-wide association studies workshop by Marco Bink and Joost van Heerwaarden</li> </ul>	
10:10 – 10:30	<i>Coffee break</i>
<ul style="list-style-type: none"> <li>• Genomic selection presented by Leopoldo Sanchez and with help during workshop by Catherine Bastien, Véronique Jorge, Facundo Muñoz and Marie Pegard</li> </ul>	
12:00 – 13:20	<i>Lunch at Centre de Conférences</i>

**ProCoGen Dissemination Workshop**  
**From our labs to your forests**  
**3<sup>rd</sup> December 2015**  
**Orléans, France**

Thursday, December 3 <sup>rd</sup> 2015	
<b>13.30 – 17.00</b>	<b>From our labs to your forests</b>
<ul style="list-style-type: none"> <li>• Outi Savolainen, University of Oulu (Finland): Using genomics tools to study local adaptation (40')</li> <li>• Concepción Avila, University of Malaga (Spain): Transcriptomic profiles to study development and adaptation in maritime pine (40')</li> <li>• Discussion (10')</li> </ul>	
<i>15:00 – 15:20</i>	<i>Coffee break</i>
<ul style="list-style-type: none"> <li>• Steve Lee, Forest Research (UK): Genomic selection is here, it's not going away, and it's good for you (40')</li> <li>• Nathalie Isabel, Canadian Forest Service (Québec, Canada) : Tree genome project unexpected outcomes: where science meets society (40')</li> <li>• Discussion (10')</li> </ul>	

**ProCoGen Dissemination Workshop**  
**Transfer of genomic tools to breeding programs**  
**4<sup>th</sup> December 2015**  
**Orléans, France**

Friday, December 4 <sup>th</sup> 2015	
<b>8.30 – 12.00</b>	<b>Transfer of genomic tools to breeding programs</b>
<ul style="list-style-type: none"> <li>• How to start from scratch a genomic characterization (genotyping/sequencing) for a species with little or no sequence resources? Patricia Faivre-Rampant and Aurélie Bérard [INRA] (40')</li> <li>• Genetic mapping and QTL meta-analysis, a review through a demo of BioMercator, Johan Joets and Yannick de Oliveira [INRA] (40')</li> <li>• How genomic information could help to sample natural variation to build core collections and enrich breeding populations? Catherine Bastien [ProCoGen] (20')</li> </ul>	
<i>10:20 – 10:50</i>	<i>Coffee break</i>
<ul style="list-style-type: none"> <li>• Can genomics simplify current breeding without the cost of a genome-wide approach? Laurent Bouffier [INRA] (40')</li> <li>• Why and how to handle genetic diversity in a genomic selection program? Leopoldo Sanchez [INRA] (30')</li> </ul>	
<i>12:00 -</i>	<i>Lunch at Centre de Conférences</i>