Boreal Orchards®

Challenging frontiers

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Transgenic Res (2008) 17:965–975
DOI 10.1007/s11248-007-9159-y

ORIGINAL PAPER

A high-throughput *Agrobacterium*-mediated transformation system for the grass model species *Brachypodium distachyon* L.

Daniel Ioan Păcurar · Hans Thordal-Christensen · Klaus Kristian Nielsen · Ingo Lenk

Physiological and Molecular Plant Pathology 76 (2011) 76–81

Contents lists available at ScienceDirect

Physiological and Molecular Plant Pathology

journal homepage: www.elsevier.com/locate/pmpp

Mini Review

Agrobacterium tumefaciens: From crown gall tumors to genetic transformation

Daniel I. Păcurar [a,c,*], Hans Thordal-Christensen [d], Monica L. Păcurar [b,c], Doru Pamfil [c], Constantin Botez [c], Catherine Bellini [a,e]

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DLF SEEDS & SCIENCE
Marie Curie 5th Framework Program

The Plant Cell, Vol. 21: 3119–3132, October 2009, www.plantcell.org © 2009 American Society of Plant Biologists

Phenotypic Plasticity of Adventitious Rooting in *Arabidopsis* Is Controlled by Complex Regulation of AUXIN RESPONSE FACTOR Transcripts and MicroRNA Abundance

Laurent Gutierrez,[a,b] John D. Bussell,[a,c] Daniel I. Păcurar,[a,d] Josèli Schwambach,[a,1] Monica Păcurar,[a,d] and Catherine Bellini[a,e,2,3]

www.nature.com/scientificreports

SCIENTIFIC REPORTS

OPEN

The Arabidopsis Cop9 signalosome subunit 4 (CNS4) is involved in adventitious root formation

Received: 5 April 2016
Accepted: 14 March 2017

Daniel Ioan Pacurar[1,4], Monica Lacramioara Pacurar[1,2,4], Abdellah Lakehal[1], Andrea Mariana Pacurar[2], Alok Ranjan[1] & Catherine Bellini[1,3]

Journal of Experimental Botany, Vol. 63, No. 7, pp. 2491–2501, 2012
doi:10.1093/jxb/err422 Advance Access publication 25 January, 2012
This paper is available online free of all access charges (see http://jxb.oxfordjournals.org/open_access.html for further details)

Journal of Experimental Botany
www.jxb.oxfordjournals.org

RESEARCH PAPER

A collection of INDEL markers for map-based cloning in seven *Arabidopsis* accessions

Daniel Ioan Păcurar[1,2,*,†], Monica Lăcrămioara Păcurar[1,2], Nathaniel Street[†], John Desmond Bussell[1,4], Tiberia Ioana Pop[†], Laurent Gutierrez[1,‡] and Catherine Bellini[1,3,†]

Journal of Experimental Botany, Vol. 65, No. 6, pp. 1605–1618, 2014
doi:10.1093/jxb/eru026 Advance Access publication 4 March, 2014
This paper is available online free of all access charges (see http://jxb.oxfordjournals.org/open_access.html for further details)

Journal of Experimental Botany
www.jxb.oxfordjournals.org

RESEARCH PAPER

Identification of new adventitious rooting mutants amongst suppressors of the *Arabidopsis thaliana superroot2* mutation

Daniel Ioan Pacurar[1,2,*,†], Monica Lacramioara Pacurar[1,2,3,*,‡], John Desmond Bussell[3,4], Joseli Schwambach[3,5,§], Tiberia Ioana Pop[1,2], Mariusz Kowalczyk[3], Laurent Gutierrez[3,6], Emilie Cavel[1], Salma Chaabouni[1], Karin Ljung[3], Arthur Germano Fett-Neto[5], Doru Pamfil[2] and Catherine Bellini[1,7,†]

Physiologia Plantarum
An International Journa

Physiologia Plantarum 2014

MINIREVIEW

Auxin is a central player in the hormone cross-talks that control adventitious rooting

Daniel Ioan Pacurar[a,†], Irene Perrone[a,b,†,*] and Catherine Bellini[a,c]

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The Plant Cell, Vol. 24: 2515–2527, June 2012, www.plantcell.org © 2012 American Society of Plant Biologists. All rights reserved.

Auxin Controls *Arabidopsis* Adventitious Root Initiation by Regulating Jasmonic Acid Homeostasis

Laurent Gutierrez,[a,b,1] Gaëlle Mongelard,[b,1] Kristýna Floková,[c] Daniel I. Păcurar,[d] Ondřej Novák,[a,c] Paul Staswick,[e] Mariusz Kowalczyk,[a] Monica Păcurar,[a,f] Hervé Demailly,[b] Gaia Geiss,[a] and Catherine Bellini[d,g,2]

https://www.researchgate.net/profile/Daniel-Pacurar/research

Boreal Orchards®

Challenging frontiers

Tech-bio company

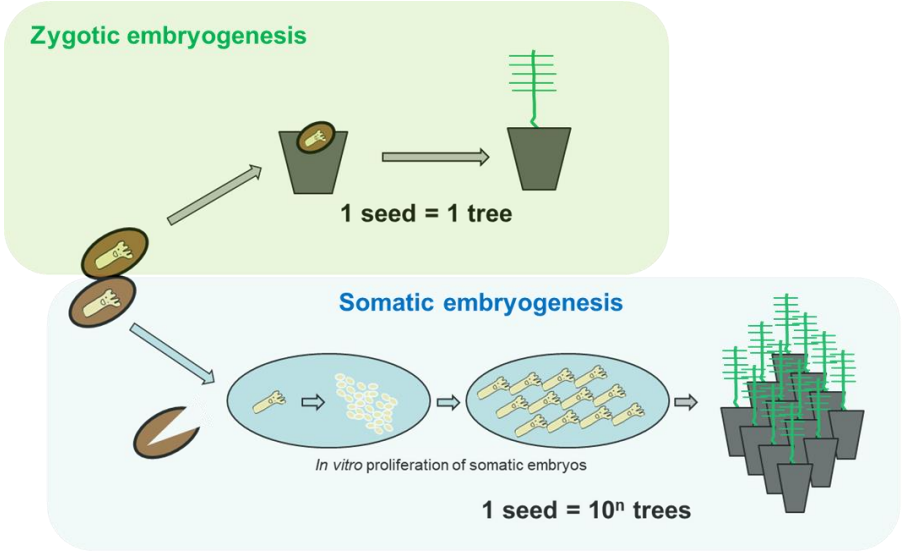
Agri/Forest/Bio-Tech/Biotecture

Mature concepts to Spin-offs

(*NeXTree AB*)

#1

An integrated automated system facility for producing (forest tree) planting material using somatic embryogenesis (SE) technology



Modified from Lelu-Walter et al., 2013

Problem: Shortage of improved seeds to meet the expected future demands for tree planting

Production of forest planting material using somatic embryogenesis

2 – 3 years

seed > cell lines, mature and germinated somatic embryos > forest planting material

vs.

Production of forest planting material using improved seeds from seed orchards

25 – 30 years !!!

seed > mature trees in seed orchards > seeds > forest planting material

We address the shortage of improved seed stocks in the forest tree nurseries

We reduce the extremely long time for improved genotypes from breeding programs to be deployed and planted in the forest, (by taking the tree out of the seed production equation)

Somatic embryogenesis literarily brings future into present!

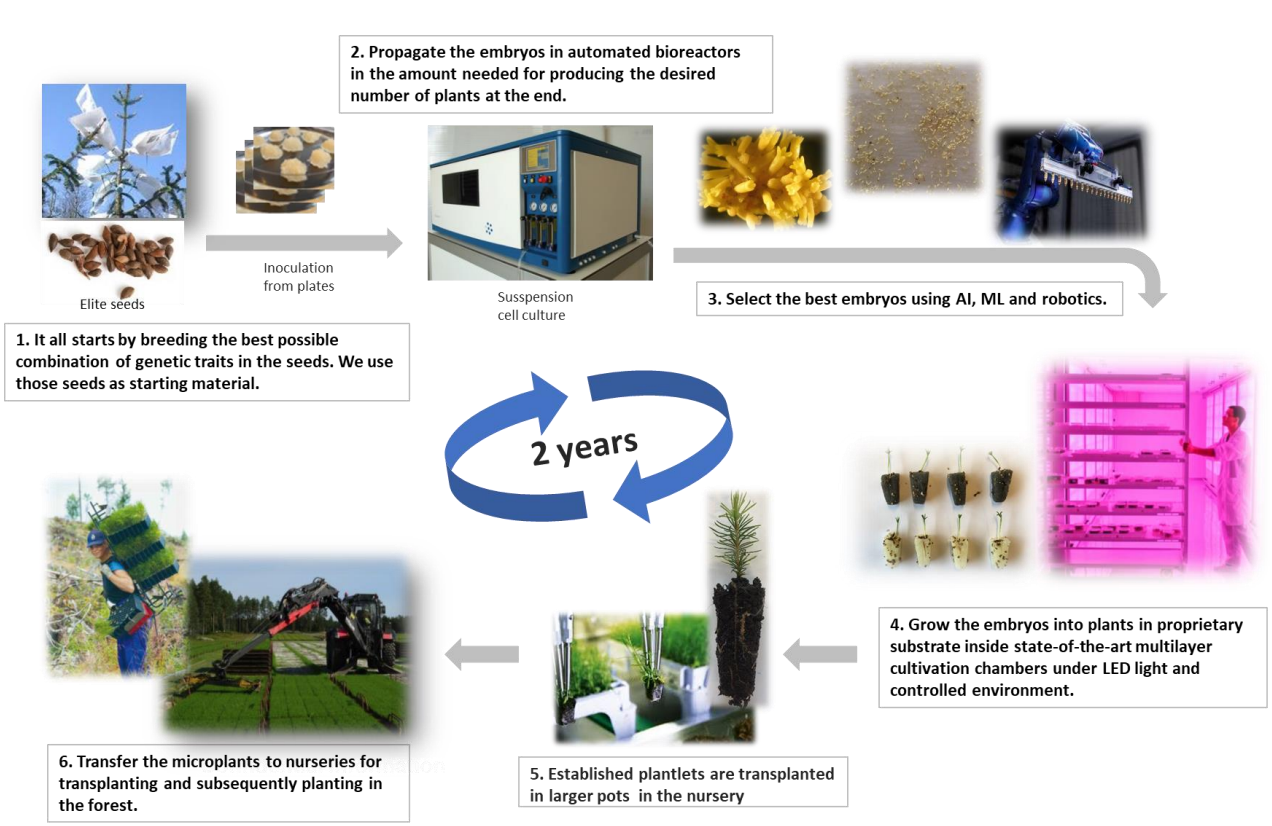
Helicopter view over the main production steps of SE plantlets

(scenario for Norway spruce)

Solution:

Production of SE plantlets in integrated automated facilities.

A concept for a large-scale production of Norway spruce using SE technology has been developed and key parts of the process and technology evaluated and optimized in collaboration with partners and technology providers of large-scale bioreactors, culture media and substrates, vertical farming and automation solutions.



https://www.youtube.com/watch?v=KavQPHwyuoQ

"Trees are the foundation of our growing bio economy and our best allies in mitigating the effects of climate change.

Boreal Orchards´ mission is to contribute to securing future generations the chance to plant and grow trees. We are deeply honored to be recognized as one of the Nordic Top 50 Impact Companies."

Founder & Chairman Daniel Pacurar
Boreal Orchards [Sweden]

THE ONE INITIATIVE
www.oneinitiative.org

#2

Shades of Green

UMEÅ BIOTECH INCUBATOR

COMMUNITY PROCESS ACTIVITIES ABOUT US CONTACT

HOME » TWO PRE-INCUBATOR CASES BREAK NEW GROUND AT UMEÅ BIOTECH INCUBATOR

Two pre-incubator cases break new ground at Umeå Biotech Incubator

Bryotech

Interface & Architecture

Bryotecture

Bioactive Coatings and Biointerfaces

Moss could be the next wave of eco-innovation

Moss & additive manufacturing

Ecologically active soil structures, buildings/infrastructure etc.

#3

Nordic Apple *terroir*

Cele mai nordice livezi comerciale de pe planetă

PRESS RELEASES • *3 February, 2021*

COMMERCIAL PRODUCTIVE APPLE GROWING IN A NORTHERN CLIMATE - TERROIR PROJECT IN SUB ARCTIC SWEDEN WELL AHEAD OF SCHEDULE.

2020-02-18 15:29 CET

Storskalig äppelodling med 12.000 äppelträd – startskottet för en ny hållbar jordbruksgren i norra Sverige

Brännland Cider etablerar 10 hektar kommersiellt gångbara och produktiva äppelodlingari samverkan medlantbrukare, LRF, Länsstyrelsen Norrbotten, experter, nationella och internationella intressenter.


JORDBRUKSAKTUELLT
Affärsnytta för oss som jobbar med jord och skog
ja.se
68 000 ex • Nr 10 • 27 maj 2020

12 000 äppelträd ska bryta ny mark

En storskalig äppelodling ska bli startskottet för en ny hållbar jordbruksgren i norra Sverige. Brännland Cider etablerar tio hektar äppelodlingar i ett EU-finansierat projekt i samverkan med Länsstyrelsen, LRF och lantbrukare. "Ett banbrytande projekt" menar Andreas Sundgren Granitt, grundare Brännland Cider och Daniel Pacurar, projektledare från Boreal Orchards. ■6-7

Concepts & projects developed through partnership and collaboration

NORTH SWEDEN CLEANTECH

UMEÅ BIOTECH INCUBATOR

eXpression UMEÅ

Datacenter Innovation Region

DareDisrupt

eip-agri AGRICULTURE & INNOVATION

UMINOVA INNOVATION

PERIPHERAL WORKS

Boreal Orchards®

Challenging frontiers

RI. SE Research Institutes of Sweden

BRÄNNLAND CIDER

Technische Universität Berlin

Cell tainer BIOTECH BV

VINGRUPPEN Vinfinity SUSTAINABLE ACTION FUND

Nordea

Carl Wikströms Stiftelse

SLU Swedish University of Agricultural Sciences

LULEÅ TEKNISKA UNIVERSITET

Hochschule Geisenheim University

almi

tillväxt verket