

June 13, 2016
Magdeburg, Germany

20th International Conference for Renewable Resources
and Plant Biotechnology

NAROSSA[®] 2016

Program



PPM

Pilot
Pflanzenöltechnologie
Magdeburg e.V.

Sponsored by

ÖHMI

Sunday, June 12 – Get-together

- 16:00 Registration
16:30 Welcome drink in the restaurant „Chaplin“ (Roncalli-Haus) and historical city tour

Monday, June 13 – Conference

- 08:00 Welcome coffee / Registration
08:30 Opening and Greetings
08:45 Plenary lectures
09:45 Lectures – Medicinal plants
10:45 Poster presentations & Poster session / Coffee break
11:45 Lectures – Remediation of degraded land
12:30 Lunch
13:30 Lectures – Bioeconomy
14:15 Lectures – Biomaterials
15:00 Poster presentations & Poster session / Coffee break
16:00 Lectures – Renewable resources of energy
16:45 Lectures – Microalgae
17:30 „VDI Best Young Scientist’s Presentation Award“ Ceremony
17:45 End of the conference

Conference agenda

- 08:00 Welcome coffee / Registration

08:30 **OPENING AND GREETINGS**

08:45 **PLENARY LECTURES**

Algal biotechnology in Australia

Kirsten Heimann

College of Marine and Environmental Sciences James Cook University, Townsville, Australia

Resources for biopolymers in XXI century

Ryszard Kozłowski, Maria Mackiewicz-Talarczyk

Institute of Natural Fibres & Medicinal Plants, Poznań, Poland

09:45 **LECTURES – Medicinal Plants**

Chair: Prof. Dr. hab. Waldemar Buchwald

Pharmacotherapy of Alzheimer’s disease - medicinal plants and expression of selected genes

Przemysław Mikołajczak^{1,2}, Marcin Ozarowski^{1,2}, Radosław Kujawski¹,

Joanna Bartkowiak-Wieczorek², Anna Bogacz^{1,2}, Michał Szulc²,

Ewa Kaminska², Małgorzata Kujawska², Agnieszka Seremak-Mrozikiewicz^{1,2}

¹ *Institute of Natural Fibres & Medicinal Plants, Poznań, Poland*

² *University of Medical Sciences, Poznań, Poland*

Identification and quantification of substances in *Rheum-root* extracts with LC-MS

Silvia Ballert, Kathrin Kabrodt, Ingo Schellenberg

Anhalt University of Applied Sciences, Institute of Bioanalytical Sciences (IBAS), Bernburg, Germany

Antifungal potential of *Rheum-root* extracts in different model systems

Marit Gillmeister, Helmut Baltruschat, Ingo Schellenberg

Anhalt University of Applied Sciences, Institute of Bioanalytical Sciences (IBAS), Bernburg, Germany

Research of *Rhodiola rosea* L. carried out in the Institute of Natural Fibres & Medicinal Plants

Waldemar Buchwald, Artur Adamczak, Elżbieta Bilińska, Anna Forycka

Institute of Natural Fibres & Medicinal Plants, Poznań, Poland

- 10:45 Poster presentations & Poster session / Coffee break

11:45 **LECTURES – Remediation of degraded land**

Chair: Prof. Dr. hab. Jerzy Mańkowski

The use of potato pulp for 2,4-dichlorophenol removal – a possible remediation method

Katarzyna Kurnik, Jarosław Tyburski

Nicolaus Copernicus University, Toruń, Poland

Story of transgenic flax usable for bioremediation in the Czech Republic

Miroslava Vrbová, Miroslav Griga

Agritec, Ltd., Šumperk, Czech Republic

Remediation of lignite post-mining areas by cultivation of industrial hemp and alfalfa - project continuation

Jerzy Mańkowski¹, Jacek Kołodziej¹, Przemysław Baraniecki¹,

Andrzej Kubacki¹, Irena Pniewska¹, Krzysztof Pudełko²

¹ *Institute of Natural Fibres & Medicinal Plants, Poznań, Poland*

² *University of Life Sciences, Poznań, Poland*

- 12:30 Lunch

13:30 **LECTURES – Bioeconomy**

Chair: Andreas Krombholz

Conditioning and drying of a biological product in inductively heated fluidized beds

Vesselin Idakiev, Andreas Bück, Evangelos Tsotsas, Lothar Mörl

NaWiTec/ Thermal Process Engineering, Otto-von-Guericke-Universität Magdeburg, Germany

Investigations on the use of *Lallemantia* seed as a new raw material for oil extraction and processing in the paint industry

Ulla Eggers¹, Ulrich KluB¹, Ronald Jansen², Gunther Fleck³

¹ Reincke Naturfarben GmbH, Buxtehude, Germany

² Weseroil GmbH, Brake (Unterweser), Germany

³ Pilot Pflanzenöltechnologie Magdeburg e.V., Magdeburg, Germany

Modified polyurea and polyurethane coatings for electrochemical antifouling

Christian Morig, Nong Zheng, Pascal Fuchs, Monique Martin, Uwe Spohn

Fraunhofer-Institut für Mikrostruktur von Werkstoffen und Systemen, Halle, Germany

14:15 **LECTURES – Biomaterials**

Chair: V-Prof. Dr.-Ing. Andrea Siebert-Raths

Enzymatic treatment of natural fibres for improvement of smell behavior of composites

Peter Gerth, Anja Müller

Magdeburg-Stendal University of Applied Sciences, Magdeburg, Germany

Modification of mechanical and thermal properties through radiation crosslinking of injection molding grade, bio-based polylactic acid and polyamides

Jacek Lecinski, Jessica Rutz, Hans-Josef Endres

University of Applied Sciences and Arts, IfBB – Institute for Bioplastics and Biocomposites, Hannover, Germany

Mechanical recycling of Polylactide from industrial waste

Denisa Bellušová, Saskia Mauer, Andrea Siebert-Raths

Hannover University of Applied Sciences and Arts, IfBB – Institute for Bioplastics and Biocomposites, Hannover, Germany

15:00 Poster presentations & Poster session / Coffee break

16:00 **LECTURES – Renewable resources of energy**

Chair: Thorsten Breitschuh

State and potential of anaerobic bio-waste treatment in Germany

Jürgen Wiese, Carsten Cuhls, Ingolf Seick

Magdeburg-Stendal University of Applied Sciences, Magdeburg, Germany

Energy supply from agricultural waste by means of fluidized bed combustion and gasification

Betty Appelt, Carsten Keichel

Fraunhofer Institute for Factory Operation and Automation IFF, Magdeburg, Germany

Ensilage of biogenic residues

Andrea Pfeiffer, Klaus Fricke, Konstantin Dittrich

Technische Universität Braunschweig, Germany

16:45 **LECTURES – Microalgae**

Chair: Prof. Dr. Carola Griehl

Separation of microalgae from suspensions by using biogas substrate bio-filters

Christian Kleinert¹, Martin Ecke¹, Carola Griehl¹, Fritz Cotta²

¹ Anhalt University of Applied Sciences, Köthen, Germany

² GICON GmbH, Wolfen, Germany

Scale-up of a production process for starch-rich algal biomass

Claudia Holdmann^{1,2}, Ulrike Schmid-Staiger¹, Gordon Brinitzer³,

Konstantin Frick¹, Christopher Hering¹, Thomas Hirth⁴

¹ Fraunhofer IGB, Stuttgart, Germany

² University of Stuttgart, Germany

³ Fraunhofer CBP, Leuna, Germany

⁴ Karlsruhe Institute of Technology, Germany

Biohydrogen production by sensitive green algae immobilized in novel silicagels

Sarah Vanessa Homburg¹, Olaf Kruse², Anant Patel¹

¹ Bielefeld University of Applied Sciences, Germany

² Bielefeld University, Germany

17:30 „VDI Best Young Scientist’s Presentation Award“ Ceremony



Magdeburger Bezirksverein
AK Nachhaltige Rohstoffe und Ressourcen

17:45 End of the conference

Posters

P 1.1 Effects of soil additives and straw application in sweet basil (*Ocimum basilicum* L.) cultivation, depending on the type of soil
Karolina Ratajczak, Hanna Sulewska, Grażyna Szymańska, Katarzyna Panasiewicz, Agnieszka Faligowska
Poznań, Poland

P 1.2 Synthesis of phytoalexins and hydrogen peroxide in bulbs *Hippeastrum Hybridum* micropropagated *in vitro*
Monika Kamińska, Alina Trejgell, Adriana Szmidi-Jaworska
Toruń, Poland

P 1.3 Evaluation of basil genotypes using physiological and agronomic characteristics
Irakleia Karagiannioy, Christos Dordas
Thessaloniki, Greece

P 1.4 Comparison of active compounds in different extracts obtained from *in vitro* cultivated sage
Milena Szalata, Patrycja Marcinak, Aleksandra Luwanska, Karolina Wielgus
Poznań, Poland

P 1.5 The preliminary study of different carbon sources influence on *in vitro* growth of hemp
Tomasz Wróbel, Mariola Dreger, Karolina Wielgus
Poznań, Poland

P 1.6 Evaluation of cannabidiol (CBD) content in fiber type *Cannabis sativa* L.
Grażyna Mańkowska, Grzegorz Oleszak, Aleksandra Luwanska, Joanna Makowiecka, Karolina Wielgus
Poznań, Poland

P 1.7 The possibilities of using essential oils with a focus on hemp oil, as active substances and preservatives
Ryszard Kaniewski, Bogdan Kędzia, Irena Pniewska, Maciej Świejkowski
Poznań, Poland

P 1.8 *In vitro* propagation of willow herb for the purpose of obtaining raw material for the treatment of urogenital disorders
Mariola Dreger¹, Joanna Makowiecka¹, Tomasz Michalik², Jolanta Wegenke², Karolina Wielgus¹
¹ Poznań, Poland,
² Dobrcz, Poland

P 2.1 Effect of nitrogen on accumulation of selected macro and microelements by linseed
Marie Bjelkova, Martina Větrovcova
Šumperk, Czech Republic

P 3.1 Lignin modified polyurethanes for electrically conductive coatings
Pascal Fuchs, Monique Martin, Christian Morig, Jiale Han, Nong Zheng, Uwe Spohn
Halle, Germany

P 3.2 Utilization of *Nicotiana glauca* as new feedstock for biorefining
Thomas Piofczyk
Magdeburg, Germany

P 3.3 Development of a new method for processing rice bran to a high-quality oil with a high content of γ -Oryzanol
Katharina Kupey¹, Gunther Fleck¹, Michael Moll², Niklas Stadermann²
¹ Magdeburg, Germany,
² Neuss, Germany

P 3.4 Adaptation of cereal combine harvesters for mowing fibrous flax which is further processed into homomorphic fiber
Ryszard Kozłowski, Jerzy Mańkowski, Jacek Kołodziej, Ryszard Kaniewski, Andrzej Kubacki
Poznań, Poland

P 4.1 Suppression of non-enzymatic browning during composite manufacturing
Peter Gerth, Anja Müller, Juliane Schulz
Magdeburg, Germany

P 5.1 Grass as biomass in comparison of current and possible methods
Michelle Busch, Martin Keitz, Carsten Cuhls
Magdeburg, Germany

P 5.2 Culture of immature embryos for genetic modification of *Sorghum* for bioethanol production
Aleksandra Luwanska, Mariola Dreger, Grażyna Mankowska, Joanna Makowiecka, Karolina Wielgus, Ryszard Slomski
Poznań, Poland

P 6.1 Production of EPA-rich *Phaeodactylum tricornutum* biomass in a pilot plant with flat panel airlift reactors
Gordon Brinitzer¹, Philipp Brosig¹, Felix Derwenskus², Alexander Laug², Ulrike Schmid-Staiger²
¹ Leuna, Germany,
² Stuttgart, Germany

P 6.2 Algae as a source of active pharmaceutical ingredient – New Glutaminy cyclase (QC) inhibitors from microalgae
Stephanie Hielscher-Michael, Carola Griehl
Köthen, Germany

P 6.3 Stable all-season outdoor cultivation of microalgae in Germany using the Christmas Tree photobioreactor
Stefan Matthes¹, Martin Ecke¹, Carola Griehl¹, Fritz Cotta², Jochen Großmann³
¹ Köthen, Germany,
² Wolfen, Germany,
³ Dresden, Germany

P 6.4 Sulfolipids in microalgae
Christian Taeger¹, Carola Griehl¹, Christian Wilhelm²
¹ Köthen, Germany,
² Leipzig, Germany

Organizers

PPM Pilot Pflanzenöltechnologie Magdeburg e.V.
Berliner Chaussee 66, 39114 Magdeburg, Germany

Institute of Natural Fibres and Medicinal Plants
ul. Wojska polskiego 71 b, 60-630 Poznań, Poland

Official Language

English

Conference Venue

Roncalli-Haus: Max-Josef-Metzger-Str. 12/13, 39104 Magdeburg, Germany
www.roncalli-haus.de

Registration

Please register online at the conference website:
www.ppm-magdeburg.de/narossa

Registration Fees

Full registration fee	200 EUR
Students	50 EUR

The conference fee includes:

Participation in the Get-together (welcome drink and historical city tour), attending the sessions, coffee breaks, lunch, conference beverages and conference proceedings

The conference fee has to be paid within 2 weeks after receiving the invoice to the following bank account (cash is not possible):

Stadtsparkasse Magdeburg
IBAN: DE18 8105 3272 0039 2530 84
BIC/SWIFT: NOLADE21MDG

Reason for transfer: last name, first name, invoice number and „NAROSSA 2016“.

The invoice is your binding confirmation.

Cancellations are only accepted in written form. For cancellations till 29th of May 2016 a processing fee of 30 EUR will be charged, after that date the full participation fee is due. In case of cancellation, please state your name, address and the invoice number.

The organizer reserves the right for program changes due to recent events.

Accommodation recommendation

Maritim-Hotel Magdeburg, Otto-von-Guericke-Straße 87, 39104 Magdeburg, Germany
e-mail: info.mag@maritim.de, www.maritim.com

Hotel Motel One, Domplatz 5, 39104 Magdeburg, Germany
e-mail: magdeburg@motel-one.com, www.motel-one.com

InterCityHotel Magdeburg, Bahnhofstraße 69, 39104 Magdeburg, Germany
e-mail: reservations@magdeburg.intercityhotel.de, www.magdeburg.intercityhotel.de