INSECTA 2017
September 07/08
Berlin
CONFERENCE PROGRAM
Jointly organised by
Acknowledgements

We would like to thank the following persons for their support, creating INSECTA 2017 as a successful event:

Organising Committee: Dr. Janina Bolling, Dr.-Ing. Julia Durek, Helene Foltan, Dr.-Ing. Antje Fröhling, Andrea Gabbert, Dr.-Ing. Thomas Piofczyk, Dr.-Ing. Frank Pudel, Dr.-Ing. Birgit Rumpold, Susen Rumposch, Dr.-Ing. Oliver Schlüter, Franziska Ulrich

Scientific Committee: Prof. Dr. Lilia Maria Ahrné, Dr. Elaine Fitches, Univ. Prof. Dr.-Ing. Henry Jäger, Prof. Dr.-Ing. Alexander Mathys, Prof. Dr. Michael Ngadi, Prof. Dr. Umezuruike Linus Opara, Dr.-Ing. Frank Pudel, Prof. Dr. Marco Dalla Rosa, Dr. Amauri Rosenthal, Dr.-Ing. Birgit Rumpold, Dr.-Ing. Oliver Schlüter, Prof. Dr. Ir. Arnold van Huis

Special thanks to Technische Universität Berlin and Museum für Naturkunde - Leibniz Institute for Evolution and Biodiversity Science

SPONSORS & PARTNERS

GOLD Sponsors

Supporting Partner

Journal Partner

AWARD Sponsor
## PROGRAM - September 07, 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 a.m.</td>
<td>Registration</td>
<td>Foyer</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td>Welcome - Opening remarks</td>
<td>H 1028</td>
</tr>
<tr>
<td></td>
<td>Dr.-Ing. Oliver Schlüter &amp; Dr.-Ing. Birgit Rumpold, Conveners</td>
<td>H 1028</td>
</tr>
<tr>
<td></td>
<td>Prof. Dr. Christian Thomsen, President of the Technische Universität Berlin</td>
<td>H 1028</td>
</tr>
<tr>
<td>10:00 a.m.</td>
<td>KEYNOTE: Prof. Dr. Harry Aiking, The Netherlands</td>
<td>H 1028</td>
</tr>
<tr>
<td></td>
<td>Food sustainability and the protein puzzle: Different resources and disciplines</td>
<td>H 1028</td>
</tr>
<tr>
<td>10:40 a.m.</td>
<td>KEYNOTE: Prof. Dr. Thomas Potthast, Germany</td>
<td>H 1028</td>
</tr>
<tr>
<td></td>
<td>Ethical perspectives on using insects for industrial food and non-food applications</td>
<td>H 1028</td>
</tr>
<tr>
<td>11:20 a.m.</td>
<td>Coffee break and poster session</td>
<td>H 1028</td>
</tr>
</tbody>
</table>

Parallel sessions in room H 1028 and H 1012 from 11:40 - 18:20

### Session 1  Evaluation of the use of insects  H 1028

- **Chairs:** Henry Jäger, Austria & Nanna Roos, Denmark

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:40 a.m.</td>
<td>Implementation of circular economy through a holistic application of black soldier flies in waste management</td>
<td>H 1028</td>
</tr>
<tr>
<td></td>
<td>Christian Holst Fischer, Denmark</td>
<td>H 1028</td>
</tr>
<tr>
<td>12:00 a.m.</td>
<td>Direct and indirect biorefinery technologies for conversion of organic side-streams into multiple marketable products – BBI-InDIRECT project</td>
<td>H 1028</td>
</tr>
<tr>
<td></td>
<td>Leen Bastiaens, Belgium</td>
<td>H 1028</td>
</tr>
<tr>
<td>12:20 a.m.</td>
<td>Authorising edible insects under the new Novel Food Regulation: Problematic aspects concerning the dossier submission</td>
<td>H 1028</td>
</tr>
<tr>
<td></td>
<td>Nicolas Carbonnelle, Belgium</td>
<td>H 1028</td>
</tr>
<tr>
<td>12:40 a.m.</td>
<td>Healthy snacks: An in-depth analysis of the dietary and therapeutic benefits of Mopane worms (Lepidoptera: Saturniidae)</td>
<td>H 1028</td>
</tr>
<tr>
<td></td>
<td>Chrysantus Tanga, Kenya</td>
<td>H 1028</td>
</tr>
<tr>
<td>1:00 p.m.</td>
<td>Adoption of insects as a source for food and feed production: determinants of acceptance between urban consumers from Maputo/Mozambique</td>
<td>H 1028</td>
</tr>
<tr>
<td></td>
<td>Luís Miguel Cunha, Portugal</td>
<td>H 1028</td>
</tr>
</tbody>
</table>

### Session 2 Insect production systems  H 1012

- **Chairs:** Leen Van Campenhout, Belgium & Thomas Piofczyk, Germany

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:40 a.m.</td>
<td>Industrialization of insect farming: New challenges to prevent pathogenic hazards</td>
<td>H 1012</td>
</tr>
<tr>
<td></td>
<td>Thomas Lefebvre, France</td>
<td>H 1012</td>
</tr>
<tr>
<td>12:00 a.m.</td>
<td>Exploiting seaweed as feed for insects - identifying the risks of pathogen transfer within the production chain</td>
<td>H 1012</td>
</tr>
<tr>
<td></td>
<td>Isobel Swinscoe, Scotland</td>
<td>H 1012</td>
</tr>
<tr>
<td>12:20 a.m.</td>
<td>More sustainable food design with insects, agri-food waste streams and high-moisture extrusion</td>
<td>H 1012</td>
</tr>
<tr>
<td></td>
<td>Sergiy Smetana, Germany</td>
<td>H 1012</td>
</tr>
<tr>
<td>12:40 a.m.</td>
<td>Developing a breeding method for the nutritionally important edible shea caterpillar</td>
<td>H 1012</td>
</tr>
<tr>
<td></td>
<td>Darja Dobermann, UK</td>
<td>H 1012</td>
</tr>
<tr>
<td>1:00 p.m.</td>
<td>The trigger BSF eggs hatching and how to employ it in an large scale facility</td>
<td>H 1012</td>
</tr>
<tr>
<td></td>
<td>Nouchka De Craene, Belgium</td>
<td>H 1012</td>
</tr>
<tr>
<td>1:20 p.m.</td>
<td>Lunch break and poster session</td>
<td>H 1012</td>
</tr>
</tbody>
</table>
Session 3  Utilisation of insects as food  
Chairs: Harry Aiking, The Netherlands & Dolores Rodrigo, Spain

2:20 p.m. Insects for food: protein fractionation  
Catriona Lakemond, The Netherlands

2:40 p.m. Insect protein as a food additive  
Joanne Gould, UK

3:00 p.m. High moisture extrusion of two types of insect protein (T. molitor and A. diaperinus) with soy protein concentrate: influence of insect content and barrel temperature  
Sergiy Smetana, Germany

3:20 p.m. Insects as ingredients for bakery goods. A comparison study of H. illucens, A. domestica and T. molitor flours  
Cristina M. Gonzalez, Spain

3:40 p.m. Evaluation of the chemical safety of edible insects and insect-based food intended for human consumption. A Belgian pilot study  
Giulia Poma, Belgium

4:00 p.m. The dynamics of inheritable cultural gastronomy in relation to commercial food product-positioning within Europe  
Evelien Donkers, France

Session 4  Insect production systems  
Chairs: Elaine Fitches, UK & Andreas Vilcinskas, Germany

2:20 p.m. Effects of gender and rearing substrate on protein profile of silkworm (B. mori) pupae  
Francesco Gai, Italy

2:40 p.m. Industrial rearing optimization of T. molitor larvae (Coleoptera, Tenebrionidae) with respect to high rearing densities, yeast as food additive and alternative possibilities of non-invasive monitoring systems  
Jan Woyzichowski, Germany

3:00 p.m. Preliminary results of impact of pH in diets on the growth of black soldier fly (H. illucens) larvae  
Marco Meneguz, Italy

3:20 p.m. How to manipulate fatty acid contents of edible insects using artificial diets  
Vilma Lehtovaara, Finland

3:40 p.m. The residual biomass landscape for insect production  
Nathan Meijer, The Netherlands

4:00 p.m. IPIFF position paper - Implementation of EU Regulation 2015/2283 on ‘novel foods’  
Heidi de Bruin, The Netherlands

4:20 p.m. Coffee break and poster session

Session 5  Application of insects as feed  
Chairs: Heidi de Bruin, The Netherlands & Laura Gasco, Italy

4:40 p.m. Insect protein in aquafeed – potential of T. molitor meal as substitute for soy protein concentrate in compound feed for Tilapia (Oreochromis niloticus)  
Carsten Dietz, Germany

5:00 p.m. Partial or total substitution of soybean oil by T. molitor oil or H. illucens fat in rabbit diets. Preliminary results: effects on growth and slaughtering performances  
Laura Gasco, Italy
5:20 p.m. **Response of piglets due to amino acid optimization of mixed diets with 75 % replacement of soybean-meal by partly defatted insect meal (H. illucens)**  
Susanne Velten, Germany

5:40 p.m. **Insects fed with former foodstuffs for feed production: What are the risks to animal and public health?**  
Linda Kox, The Netherlands

6:00 p.m. **Legal aspects concerning the use of edible insects in animal feed: opportunities for a new business**  
Francesca Lotta, Italy

**Session 6  Insect production systems**  
Chairs: Antje Fröhling, Germany & Sergiy Smetana, Germany

4:40 p.m. **The relationship between the nutrient quality of black soldier flies and their rearing substrates**  
Marwa Shumo, Germany

5:00 p.m. **The importance of reliable input on consistent output in large scale production facilities**  
Johan Jacobs, Belgium

5:20 p.m. **Lactic acid bacteria as a measure of bacterial diseases in insects reared for feed and food**  
Luna Paola Andrade Santacoloma, Denmark

5:40 p.m. **Biorefinery of insects to high-added value products: evaluation of fractionation procedures**  
Lise Soetemans, Belgium

6:00 p.m. **inVALUABLE: Insect value chain in a circular bioeconomy**  
Lars Heckmann, Denmark

7:45 p.m. **Reception and welcome drink at Museum für Naturkunde**

8:00 p.m. **Conference Dinner**  
Welcome speeches  
Dr. Christoph Häuser, Museum für Naturkunde  
Prof. Dr.-Ing. Matthias Kleiner, Leibniz Association

**PROGRAM – September 08, 2017**

9:00 a.m. **KEYNOTE: Prof. Dr. Andreas Vilcinskas, Germany**  
Immunity of farmed insects: Basic and applied aspects

9:40 a.m. **Dr. Mafalda Quintas, Belgium**  
COST Action: A comprehensive tool for networkers

10:00 a.m. **Coffee break and poster session**

Parallel sessions from 10:20 - 12:00 in room H 1028 and H 1012

**Session 7  Non-food applications of insects**  
Chairs: Lars Heckmann, Denmark & Chrysantus Tanga, Kenya

10:20 a.m. **High-value compounds delivered from insects grown on waste**  
Natalia Jawiarczyk, UK
10:40 a.m. **The Mediterranean fruit fly, *Ceratitis capitata* – agricultural pest and mass-producible protein source**
Marc F. Schetelig, Germany

11:00 a.m. **Use of insects as an alternative source for the production of fats for cosmetics**
Geert Verheyen, Belgium

11:20 a.m. **Bioprocess engineering aspects of insect cell expression systems**
Tobias Weidner, Germany

11:40 a.m. **Valuing mulberry silkworm: an opportunity to revive French silk production**
Stéphane Person, France

**Session 8  Utilisation of insects as food**

Chairs: Luís Miguel Cunha, Portugal & Catriona Lakemond, The Netherlands

10:20 a.m. **Impact of blanching, industrial microwave drying and freeze drying on the nutritional quality, the microbial quality and the browning index of mealworm larvae (T. molitor)**
Leen Van Campenhout, Belgium

10:40 a.m. **Enzymatic and non-enzymatic causes of browning during grinding of insects: Tenebrio molitor, Alphitobius diaperinus and Hermetia illucens**
Renske Janssen, The Netherlands

11:00 a.m. **Safety aspects of edible insects for use in the food and feed value chain - investigation of bioaccumulation of contaminants and process-induced mitigation of allergenicity**
Benedict Purschke, Austria

11:20 a.m. **Practical & technical considerations for use of insects within food product development**
Robert Murdock, UK

11:40 a.m. **High-low quality feeding regime to improve Gryllus bimaculatus (black cricket) survival on bio-waste**
Darja Dobermann, UK

12:00 a.m. **Lunch break and poster session**

**Session 9  Evaluation of the use of insects**

Chairs: Oliver Schlüter, Germany & Andreas Vilcinskas, Germany

1:00 p.m. **GREEiNSECT: Opportunities and challenges for insect farming for ‘green economy’ in Kenya**
Nanna Roos, Denmark

1:20 a.m. **Insects & the food scenario analysis by the global council on food security and agriculture at the World Economic Forum**
Kees Aarts, The Netherlands

1:40 p.m. **Industrializing the production of black soldier fly larvae for animal feed**
Andreas Aepli, Switzerland

2:00 p.m. **Effectiveness of different information on consumers’ willingness to taste insect products**
Birgit Rumpold, Germany

2:20 p.m. **Award ceremony and closing remarks**

**VDI BEST YOUNG SCIENTIST’S PRESENTATION**

AWARD Sponsor: VDI – Magdeburger Bezirksverein
Presenter: Thomas Piofczyk, Germany
From the conference-venue to the dinner

ADDRESSES

**Conference venue**
Technische Universität (TU) Berlin, Straße des 17. Juni 135, 10623 Berlin
Main building - Rooms H 1028 / H 1029 / H 1012

**Dinner event**
Museum für Naturkunde, Invalidenstraße 43, 10115 Berlin

HOW TO GET TO THE DINNER EVENT

**By subway** U At station Ernst-Reuter-Platz“ take subway line U2 direction “S+U Pankow”, change at station “Stadtmitte” to line U6 direction “U Alt-Tegel”, get off at “Naturkundemuseum”, walk 200 m to Invalidenstraße 43.

**By S-Bahn** S Walk approx. 10 min by following „Straße des 17. Juni“ to station „S Tiergarten“, take any S-Bahn heading towards the center, get off at „Berlin Hauptbahnhof“, walk approx. 10 min following Invalidenstraße to the Museum at Invalidenstraße 43.

**Ticket fare**: 2,80 €

**Taxi call**: +49 30 26 10 26 / +49 30 20 20 20 / +49 30 21 01 01
INFORMATION

PROGRAM UPDATES

The organisers reserve the right for program changes. The poster presentation list will be available on our conference website.

ORGANISATION

Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB)
Max-Eyth-Allee 100, 14469 Potsdam, Germany
Dr.-Ing. Oliver Schlüter, Dr.-Ing Birgit Rumpold

Pilot Pflanzenöltechnologie Magdeburg e.V. (PPM)
Berliner Chaussee 66, 39114 Magdeburg, Germany
Dr.-Ing. Frank Pudel

CONTACT

info@insecta-conference.com

CONFERENCE LANGUAGE

English

PUBLIC TRANSPORT

Useful links for your mobility in Berlin
Travel service of German railways: http://bahn.hafas.de
Berlin public transport: http://www.bvg.de
Travel information: http://bit.ly/INSECTA_PUBLICTRANSPORT
Useful App for planning your trip within Berlin
App Fahrinfo Plus (available for IOS, Android and Windows)

FURTHER INFORMATION

Please visit our conference website www.insecta-conference.com

Follow us on Twitter #INSECTA2017 and Facebook INSECTA2017