



September 13–16, 2013

# 106th Annual Meeting of the German Zoological Society

Ludwig-Maximilians-Universität München

Geschwister-Scholl-Platz 1, 80539 Munich, Germany

## Program



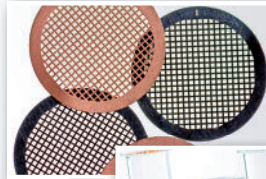
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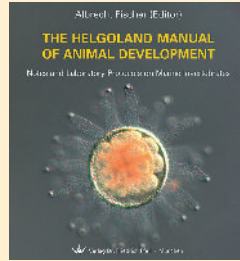
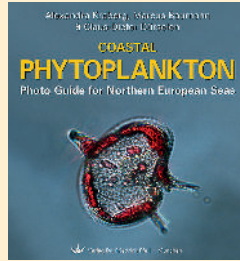
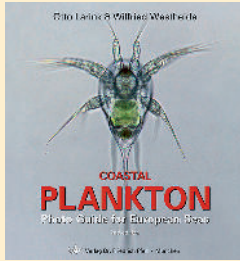
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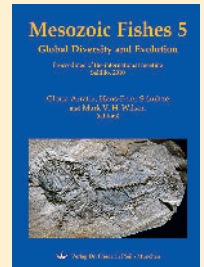
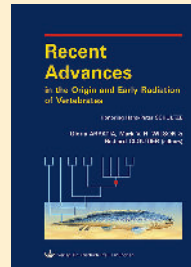
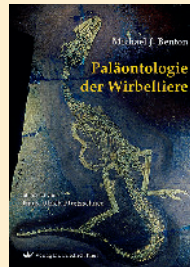
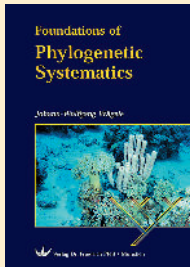
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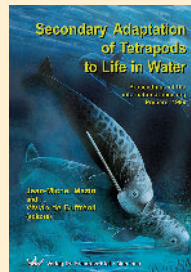
# Books and journals from Verlag Dr. Friedrich Pfeil



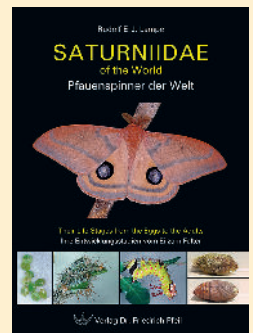
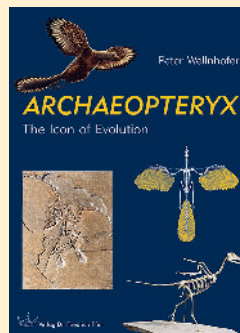
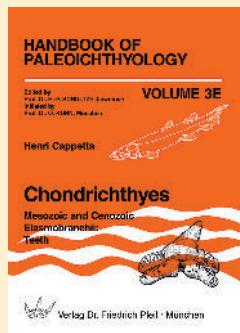
*... colorful and diverse as nature,*



*... indispensable despite the Internet,*



*... of highest quality, with and without the impact factor,*



*... independent and open for your ideas.*



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## Welcome address of the local organizers

From September 13-16, 2013 the Ludwig-Maximilians-Universität München (LMU) will host the largest zoological conference in Germany. Highly distinguished national and international researchers will contribute to the 106th Annual Meeting of the German Zoological Society (DZG) and showcase the rapid progress in zoological sciences ranging from developmental biology to zoological systematics.

About 500 participants will have access to close to 400 posters and oral presentations that will demonstrate a variety of state-of-the-art scientific approaches from molecular to behavioral levels, including three satellite symposia on neuroethology, physiology, and electron-microscopy. In particular, the Annual Meeting will provide a platform for young researchers to present their work to a large and influential audience in their respective fields.

Over the years, the Munich area has acquired a reputation as a research hot spot in zoology. Munich researchers have massively contributed to long-standing scientific paradigms and have been rewarded with the highest honors, including the Nobel Prize. Highly influential and very well-known figures like Konrad Lorenz and Hansjochem Autrum, including former presidents of the DZG like Karl von Frisch, Franz Huber and Gerhard Neuweiler, were conducting significant parts of their studies in the Munich region and have laid the foundations of a strong tradition in neuroethology, to name just one area.

The local coordination team of the Annual Meeting 2013 would like to warmly welcome all participants to Munich! Nearby mountains, lakes, parks and beer gardens invite you to informally explore avenues of research in a leisure environment. We do hope you will also enjoy the cultural opportunities offered by downtown Munich surrounding the conference venue.

On behalf of the 2013 organization team

A handwritten signature in black ink, appearing to read 'B. Grothe'.

Benedikt Grothe

A handwritten signature in black ink, appearing to read 'O. Behrend'.

Oliver Behrend

# Friday, 13 September 2013

14:00 – 16:00

DZG Board Meeting

16:00 – 18:00

DZG Advisory Council Meeting

18:30 – 19:00

**Welcome address:** Prof. Dr. Constance Scharff, Prof. Dr. Barbara Conradt, Prof. Dr. Benedikt Grothe

19:00 – 19:30

**Introductory Lecture:** Benedikt Grothe

Historie der Zoologie in München

19:30 – 20:30

**Public Key Note:** Th. C. G. Bosch

Das Prinzip Metaorganismus: Mikroben als Partner der Evolution der Tiere

20:30 – 21:30

Welcome Reception

13:00 – 15:00

Tour

Zoologische Staatssammlung  
(Org.: R. Melzer, K. Schönitzer)

Program  
Overview

General  
Information

Program DZG 2013

Satellite Symposia

Behavioral  
Biology

Developmental  
Biology

Ecology

Evolutionary  
Biology

Morphology

Neurobiology

Physiology

Zoological  
Systematics

# Saturday, 14 September 2013

08:30 – 09:30

**Key Note:** David Attwell

Brain Power: brain energy use as a constraint on CNS design and its relation to information processing.

09:30 – 10:30

**Key Note:** Susanne Foltzik

Colony personality and the importance of behavioral variance for insect societies

10:30 – 11:00

☕ COFFEE BREAK

11:00 – 11:30

**Evolutionary Biology I:** Alexander Kupfer

Reproductive biology and life history evolution of caecilian amphibians

11:30 – 12:00

**Evolutionary Biology II:** Arne Nolte

Hybridization as an evolutionary motor in fishes

12:00 – 12:30

**Neurobiology I:** Wolf Hanke

Mechanoreception in aquatic vertebrates – catching fish using hydrodynamic trails

12:30 – 14:30

🍽️ LUNCH BREAK

13:00 – 14:30

Poster Session I (even numbers)

12:30 – 13:30

Internal Section Meeting Evolutionary Biology

13:30 – 14:30

Internal Section Meeting Morphology

14:30 – 16:00 à 15min. Short Presentations

**Evolutionary Biology I**

**Developmental Biology I**

**Neurobiology I**

**Morphology I**

16:00 – 16:30

☕ COFFEE BREAK

16:30 – 18:00 à 15min. Short Presentations

**Evolutionary Biology II**

**Behavioral Biology I**

**Neurobiology II**

**Morphology II**

18:00 – 19:00

**Special Lecture:** Hans Fricke

Hallo Korallenriff – Diaspora eines gefährdeten Ökosystems

14:00 – 16:00

Meeting of Speakers of Study Groups

11:00 – 11:30

**Developmental Biology I:** Tomislav Domazet-Lošo

Macroevolutionary history of the sensory and central nervous system in vertebrates

11:30 – 12:00

**Developmental Biology II:** Nicole Rebscher

Establishing quiescence in primordial germ cells of the polychaete *Platynereis dumerilii*

12:00 – 12:30

**Morphology I:** Frank Friedrich

Insect morphology in the phylogenomic age - its impact on reconstruction of phylogeny and evolution

12:30 – 13:30

Internal Section Meeting Developmental Biology

# Sunday, 15 September 2013

08:30 – 09:30

**Key Note:** Diethard Tautz

Adaptation Genetics

09:30 – 10:30

**Key Note:** Daniela Nicastro

Modern electron microscopy provides a new window into cellular morphology

10:30 – 11:00

☕ COFFEE BREAK

● Scientific Program

● Side Program

● Social Program

● Breaks

● Internal Section Meetings

● Location

11:00 – 11:30	11:00 – 11:30
<b>Neurobiology II:</b> Dominik Heyers Neuroanatomy of Avian Magnetoreception	<b>Systematics I:</b> Tanja Schwander Mechanisms underlying transitions from sexual reproduction to parthenogenesis in insects
11:30 – 12:00	11:30 – 12:00
<b>Ecology I:</b> Thomas Eitz Perfume making and signal evolution in orchid bees	<b>Physiology I:</b> Annika Herwig The regulation of seasonal adaptations. A central role for thyroid hormones?
12:00 – 14:00	12:30 – 14:00
<b>LUNCH BREAK</b>	<b>Poster Session II</b> (odd numbers)
12:00 – 14:00	
Internal Section Meeting   Physiology	
13:00 – 14:00	13:00 – 14:00
Internal Section Meeting   Ecology	Internal Section Meeting   Neurobiology
14:00 – 15:30 à 15min. Short Presentations	
<b>Ecology I</b>	<b>Systematics I</b>
	<b>Evolutionary Biology III</b>
	<b>Physiology I</b>
15:30 – 16:30	
<b>DFG Talk:</b>	
Starting your research career – DFG funding programmes and application procedures	
16:30 – 17:00	
<b>COFFEE BREAK</b>	
17:00 – 19:00	
<b>DZG Member Meeting &amp; Awards</b>	
19:30 – 23:00	
<b>Social Evening – Dinner</b>	

## Monday, 16 September 2013

08:30 – 09:30	
<b>Key Note:</b> Michael N. Dawson Natural Experiments	
09:30 – 10:30	
<b>Key Note:</b> Jennifer Clack New insights into locomotion and vertebral construction in the earliest tetrapods	
10:30 – 11:00	
<b>COFFEE BREAK</b>	
11:00 – 11:30	11:00 – 11:30
<b>Ecology II:</b> Michael Heethoff The influence of chemical defence on soil predator-prey-dynamics	<b>Physiologie II:</b> Bettina Zeis Coping with variable oxygen and temperature conditions: differential protein expression in <i>Daphnia</i> and consequences for the animals' physiology
11:30 – 12:00	11:30 – 12:00
<b>Behavioral Biology I:</b> Silke Kipper Multiple traits, multiple messages, multiple receivers? The information encoded in nightingale song.	<b>Systematik I:</b> Dirk Erpenbeck The slow and the furious - sponge evolution revisited
12:00 – 12:30	12:00 – 12:30
<b>Behavioral Biology II:</b> Simone Kurt A new promising behavioral paradigm for auditory learning and perception in mice	<b>Morphologie II:</b> Thomas Kleinteich Sticky stuff: adhesion in fishes and amphibians
12:30 – 14:00	12:30 – 13:30
<b>LUNCH BREAK</b>	Internal Section Meeting Behavioral Biology
12:30 – 13:00	12:30 – 14:00
<b>Sponsored Lecture: JEOL Products for Life Science</b>	<b>DFG Speed-Dating</b> Meet the experts to discuss perspectives for your research career
14:00 – 15:30 à 15min. Short Presentations	
<b>Evolutionary Biology IV</b>	<b>Ecology II</b>
	<b>Behavioral Biology II</b>
	<b>Systematics II</b>
	<b>Physiology II</b>
15:30 – 16:00	
<b>COFFEE BREAK</b>	
16:00 – 17:30 à 15min. Short Presentations	
<b>Neurobiology III</b>	<b>Behavioral Biology III</b>
	<b>Morphology III</b>
	<b>Evolutionary Biology V</b>
17:30 – 18:00	
<b>SHORT BREAK</b>	
18:00 – 19:00	
<b>Public Evening Lecture:</b> Michael Brecht Soziale Repräsentationen in der Hirnrinde der Ratte including Poster Prize	



# Program Overview Satellite Symposia

## Thursday, 12 September 2013

Program Overview

General Information

Program DZG 2013

Satellite Symposia

Behavioral Biology

Developmental Biology

Ecology

Evolutionary Biology

Morphology

Neurobiology

Physiology

Zoological Systematics

A 119 | 1. Floor

09:00 – 17:00

Satellite Symposium II „Perspectives in Animal Physiology“

Coffee 10:45 – 11:15

Lunch 12:35 – 14:00

Coffee 15:30 – 16:00

Thomas Mann Halle | 1. Floor

17:00 – 20:00

Postersession | Poster, Beer, Leberkäs

A 125 | 1. Floor

13:00 – 18:15

Satellite Symposium I „Neuroethology“

Coffee 14:45 – 15:15

Coffee 16:45 – 17:15

Thomas Mann Halle | 1. Floor

18:15 – 21:00

Postersession

## Friday, 13 September 2013

A 125 | 1. Floor

9:00 – 14:00

Continuation Satellite Symposium I „Neuroethology“

Coffee 10:30 – 11:00

Break 12:30 – 12:45

A 119 | 1. Floor

9:00 – 12:30

Continuation Satellite Symposium II „Perspectives in Animal Physiology“

Coffee 10:45 – 11:15

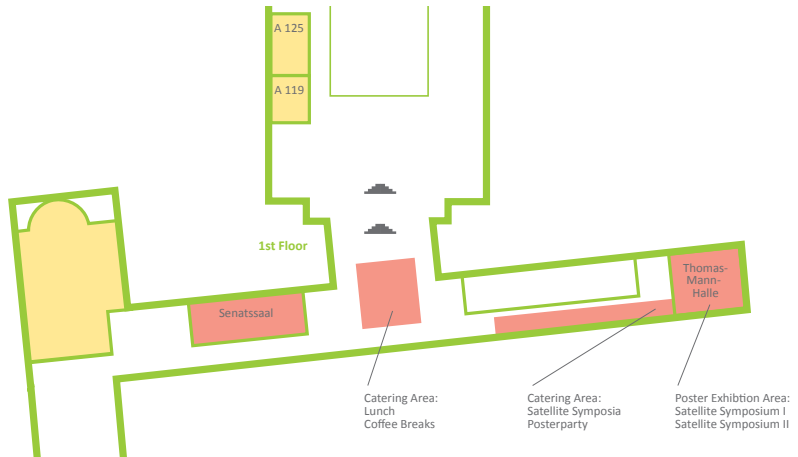
A 021 | G. Floor

9:00 – 13:00

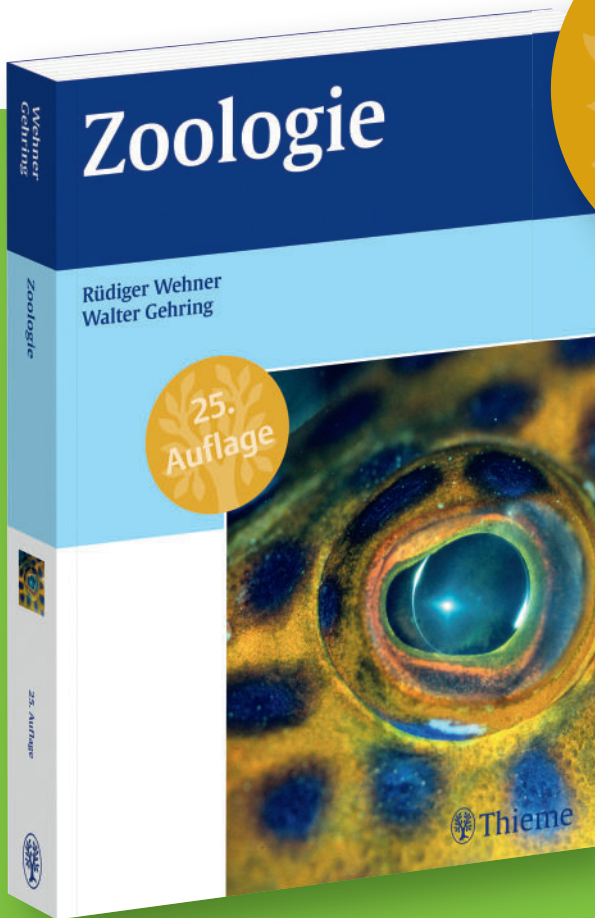
Satellite Symposium III – 3DEM

Coffee 11:05 – 11:30

## Poster Plan



# Die Jubiläumsausgabe der Zoologie



25.  
Auflage

25.  
Auflage

Treffen Sie die Autoren persönlich am  
14. September um 12:30 Uhr am Thieme Stand  
und sichern Sie sich Ihre signierte Jubiläumsauflage.

# Venue Map

Program Overview

General Information

Program DZG 2013

Satellite Symposia

Behavioral Biology

Developmental Biology

Ecology

Evolutionary Biology

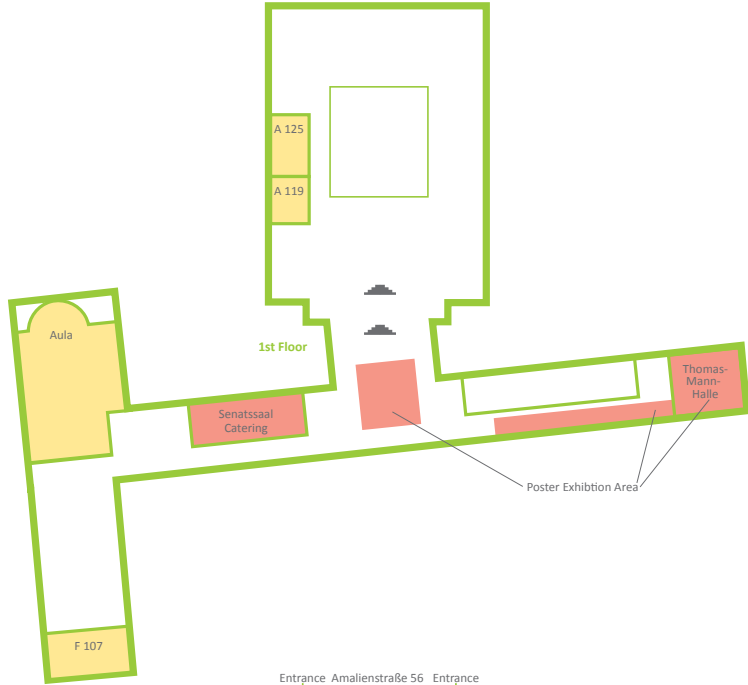
Morphology

Neurobiology

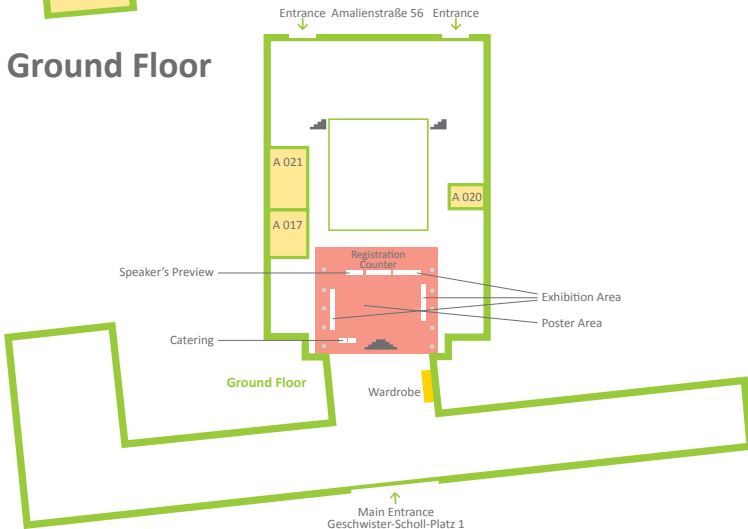
Physiology

Zoological Systematics

## 1st Floor

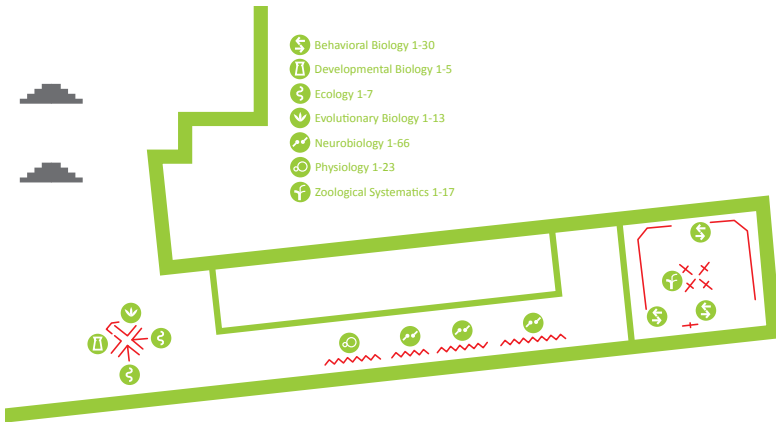


## Ground Floor

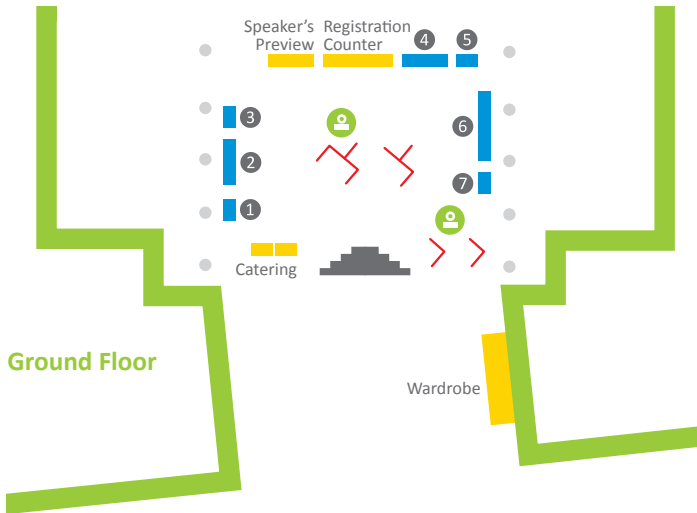


# Poster | Exhibition Plan

## Poster Map 1st Floor



## Poster/Exhibition Map Ground Floor



Morphology 1-24

1 Springer Spektrum

2 Marcus Sommer SOMSO Modelle GmbH

3 JEOL (Germany) GmbH

4 Georg Thieme Verlag KG

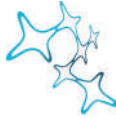
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**ZoS 1013/2**

Erdkröte (*Bufo bufo*) Paar im Amplexus.

Nach Studiendirektor Christian Groß.



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## General Meeting Information

### Munich

The city of Munich is the capital of the county Bavaria. It is situated in the midst of a beautiful pre-alpine countryside and offers a spectacular variety of culinary, artistic and cultural highlights. Munich combines the splendour of an old royal seat with the vitality of a modern high-tech location. The city owes its generous architecture to the reign of Ludwig I. The townscape is marked by broad avenues and the contrast between Classicist restraint and Baroque profusion. Daring creativity and innovation have placed new architectural accents all over the city. The downtown area presents a clear, delightful and charming image marked by the distinctive feature of Frauenkirche church whose two towers rise above the roofs of the city.

### Congress Venue

Address:

Ludwig-Maximilians-Universität München

Geschwister-Scholl-Platz 1

80539 München

Access to the Congress Venue:

- Underground (U-Bahn): line U3 or U6 to „Universität“
- Bus: Line 154, Bus Stop „Universität“

Due to restricted parking in the area of the University we recommend to travel by public transport.

Program  
Overview

General  
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Program DZG 2013

Satellite Symposia

### Local Organizers:

Prof. Dr. Benedikt Grothe, LMU Munich

Prof. Dr. Oliver Behrend, MCN-LMU Munich

### Conference Office

event lab. GmbH

Dufourstraße 15

D-04107 Leipzig

Germany

[www.eventlab.org](http://www.eventlab.org)

### Registration Desk:

The Registration Counter will be open at the following times:

Thursday, September 12, 2013      08.00 – 18.30

Friday, September 13, 2013      08.00 – 20.30

Saturday, September 14, 2013      08.00 – 19.00

Sunday, September 15, 2013      08.00 – 19.00

Monday, September 16, 2013      08.00 – 18.00

The counter will be situated in the inner courtyard (Lichthof) on the ground floor of the main building of the LMU.

### Badges:

The personal badge is the entrance ticket to the Congress Venue and all scientific sessions. Due to security regulations, badges must be worn at all times throughout the congress and to social events.

In case of loss or damage of your badge, the cost of 15,00 € for printing a new badge will be charged.

### Oral Presentations (Short Presentations)

Your ppt-files need to be on USB-sticks and handed in at the speaker's preview, if possible the day before your talk (latest during lunch breaks or coffee breaks before your session). You have 10 min for your talk and 5 min for discussion, session assistants and chairmen are advised to strictly adhere to the presentation time.



Behavioral  
Biology



Developmental  
Biology



Ecology



Evolutionary  
Biology



Morphology



Neurobiology



Physiology



Zoological  
Systematics

### Speaker's Preview

The speaker's preview to hand in and pre-view or change your presentation is situated in the inner courtyard (Lichthof) on the ground floor.

**All talks must be handed in at the speaker's preview!** Please hand in your talk the day before your talk, latest during lunch breaks or coffee breaks before your session.

All presentations shall be based on Power Point versions and compatible with Windows systems. Other computers or converters are not available. All presenters must therefore bring their presentation in the adequate version on flash drive (USB drive).

### Poster Sessions

Saturday, September 14, 2013, 13.00 – 14.30 (presenting even numbers)

Sunday, September 15, 2013, 12.30 – 14.00 (presenting odd numbers)

### Poster Presentation Guidelines

Posters will be displayed during all the congress.

Posters should be prepared in advance and brought in person by the authors.

Dimensions of posters should have DIN A0 format, but not more than 90 cm wide by 2.30 cm high. Material to attach your poster is provided on site.

Posters can be fixed on the poster boards on Friday, September 13, from 18.00.

Posters need to be removed on Monday September 16, from 14.00 and before 16.00.

The organizer will be not be responsible for any loss or damage occurred to the posters left on the boards beyond Monday, September 16, 18.00.

The code of the poster presentation in the program is identical of the poster board number.

### Wi-Fi

Name: "con"

A password is not required.

### Exhibition

The industrial exhibition is located in the inner courtyard (Lichthof) of the main building of the LMU – conference halls.



Program  
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Program DZG 2013

Satellite Symposia

### Exhibition opening hours are as follows:

Friday, September 13, 2013 17.00 – 21.30

Saturday, September 14, 2013 08.30 – 16.30

Sunday, September 15, 2013 08.00 – 17.00

Monday, September 16, 2013 08.00 – 16.00

The exhibition will be situated in the inner courtyard (Lichthof) on the ground floor of the main building of the LMU.

### Coffee Breaks & Lunches

Coffee breaks & lunches will be served in the inner courtyard and Senatssaal and are included in the registration fee. Lunch breaks include cold drinks and a small snack on Saturday, September 14 and Sunday, September 15, 2013. There will be no lunch provided on Monday, September 16, 2013. An extra booth to purchase food and drinks will also be available during all lunch times in the catering area.

### Congress Language

The official language of the Congress will be English.

### Insurance

The Congress accepts no liability for any personal injury, loss or damage of property belonging to or additional expenses incurred by congress participants either during the congress or as result of delays, strikes or any other circumstances.

Participants are advised to make their own arrangements with respect to health and travel insurance.

### Useful links

Munich Tourist Office: [www.muenchen.de](http://www.muenchen.de)

Munich Airport: [www.munich-airport.de](http://www.munich-airport.de)

Munich Public Transport MVV: [www.mvv-muenchen.de](http://www.mvv-muenchen.de)

University of Munich Ludwig-Maximilians-Universität: [www.en.uni-muenchen.de](http://www.en.uni-muenchen.de)



Behavioral  
Biology



Developmental  
Biology



Ecology



Evolutionary  
Biology



Morphology



Neurobiology



Physiology



Zoological  
Systematics

# Social Evening Sunday, September 15, 2013 | 19:30



## Augustiner-Keller

We are delighted to invite you to a social dinner on Sunday, September 15, 2013 in the Lagerkeller of the Augustiner-Keller Munich.

The famous Augustiner-Keller, which is situated in the heart of beautiful Munich, stands for the Bavarian enjoyment of life and its long tradition. The first time the restaurant appeared in the city's map was around 1812 and is since then known as an important part of reflecting the Bavarian culture.

Enjoy the unique atmosphere and spend an evening with your colleagues and friends.

Begin: 19:30

Tickets: 50,00 € | 35,00 € (students)

*incl. 19% German VAT*

## Directions

The Augustiner-Keller is centrally located and can be reached easily by subway, local train or tram:

Subway: U1, U2, U4 and U5 | Stop: Hauptbahnhof

Local Train: S1 – S8 | Stop: Hauptbahnhof or Hackerbrücke

Tram: 16 and 17 | Stop: Hopfenstraße

Some parking spaces are available for individual arrival by car.

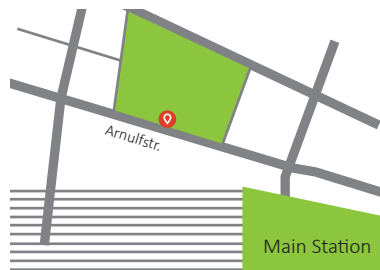
## Address

Augustiner Keller München

Arnulfstr. 52

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## KEY NOTES & SPECIAL LECTURES

Friday, September 13th, 2013 |  Aula


### Opening Ceremony :

**Welcome Address** |  18.30 – 19.00

Prof. Dr. Constance Scharff | President of the German Zoological Society

Prof. Dr. Barbara Conradt | Designated Vice-President for Research & Diversity, LMU

Prof. Dr. Benedikt Grothe | Scientific Coordination of the 106th Annual Meeting

 Music: Lukas Lukas-Fabian Moser (Violoncello) | Haike Dietrich (Piano)

**Introductory Lecture** |  19.00 – 19.30

*B. Grothe (Munich)*

Historie der Zoologie in München


**Public Key Note** |  19.30 – 20.30

*T.C.G. Bosch (Kiel)*

Das Prinzip Metaorganismus: Mikroben als Partner der Evolution der Tiere

*Chair: B. Grothe, LMU*

 Music: Piece for Violoncello & Piano

Saturday, September 14th, 2013 |  Aula

**Key Note** |  08.30 – 09.30

*D. Attwell (London)*

Brain power: Energy use as a constraint on CNS design and information processing

*Chair: B. Grothe, LMU*

**Key Note** |  09.30 – 10.30

*S. Foitzik (Mainz)*

Colony personality and the importance of behavioral variance for insect societies


*Chair: G. Haszpunar, ZSM-LMU*

**Special Lecture** |  18.00 – 19.00

*H. Fricke (Tutzing)*

Hallo Korallenriff – Diaspora eines gefährdeten Ökosystems

*Chair: O. Behrend, MCN-LMU*

Sunday, September 15th, 2013 |  Aula

**Key Note** |  08.30 – 09.30

*D. Tautz (Ploen)*

Adaptation Genetics

*Chair: H. Luksch, TUM*

**Key Note** |  09.30 – 10.30

*D. Nicastro (Waltham, MA)*

Modern electron microscopy provides a new window into cellular morphology

*Chair: R. Melzer, ZSM-LMU*

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**Awards** | ⌚ 17:00 – 18:00

**Werner-Rathmayer-Preis** A. Trede (Kühen)

Das kleinste Tagebuch der Welt – Untersuchungen an Heringslarven

*Laudator: Prof. Carsten Duch, Universität Mainz*

**Horst-Wiehe-Preis** J. Clemens (Princeton)

The computational principles underlying perceptual decision making during song recognition in insects

*Laudator: Prof. Bernhard Ronacher, Humboldt Universität, Berlin*

**Walther-Arndt-Preis** S. Cremer (Klosterneuburg)

Collective disease defence in ant societies

*Laudator: Prof. Joachim Kurtz, Universität Münster*

Monday, September 16th, 2013 | 📍 Aula

**Key Note** | ⌚ 08.30 – 09.30

*M. Dawson (Merced)*

**Natural Experiments**

*Chair: W. Enard, LMU*

**Key Note** | ⌚ 09.30 – 10.30

*J.A. Clack (Cambridge)*

New insights into locomotion and vertebral construction in the earliest tetrapods

*Chair: M. Myoga, LMU*

**Public Evening Lecture:** incl. Poster Prize | ⌚ 18.00 – 19.00

*M. Brecht (Berlin)*

Soziale Repräsentationen in der Hirnrinde der Ratte

*Chair: A. Herz, LMU*

## MEETINGS DZG

Friday, September 13th, 2013

**DZG Board Meeting** | ⌚ 14.00 – 16.00 | 📍 A 020

**DZG Advisory Council Meeting** | ⌚ 16.00 – 18.00 | 📍 A 021

Sunday, September 15th, 2013

**DZG Member Meeting & Awards** | ⌚ 17.00 – 19.00 | 📍 Aula

Friday, September 13th, 2013

Meeting of Speakers of Study Groups | ⌚ 14.00 – 16.00 | 📍 A 017

Saturday, September 14th, 2013

Internal Section Meeting- Developmental Biology | ⌚ 12.30 – 13.30 | 📍 A 119

## INTERNAL SECTION MEETINGS

Internal Section Meeting- Evolutionary Biology | 🕒 12.30 – 13.30 | 📍 A125

Internal Section Meeting- Morphology | 🕒 13.30 – 14.30 | 📍 A 017

Sunday, September 15th, 2013

Internal Section Meeting- Physiology | 🕒 12.00 – 14.00 | 📍 A 017

Internal Section Meeting- Ecology | 🕒 13.00 – 14.00 | 📍 A 125

Internal Section Meeting- Neurobiology | 🕒 13.00 – 14.00 | 📍 A 119

Monday, September 16th, 2013

Internal Section Meeting- Behavioral Biology | 🕒 12.30 – 13.30 | 📍 A 119

## SIDE PROGRAM

Friday, September 13th, 2013

Tour „Zoologische Staatssammlung München“ | 🕒 13.00 – 15.00 | Zoologische Staatssammlung

Meeting point directly at the Zoologischen Staatssammlung.

Sunday, September 15th, 2013

DFG-Talk- “Starting your research career – DFG funding programmes and application procedures” | 🕒 15.30 – 16.30 | 📍 Aula

Monday, September 16th, 2013

Sponsored Lecture: JEOL Products for Life Science | 🕒 12.30 – 13.00 | 📍 A 125

DFG Speed-Dating- Meet the experts to discuss perspectives for your research career | 🕒 12.30 – 14.00 | 📍 F 107

## SOCIAL PROGRAM

Friday, September 13th, 2013

Welcome Reception | 🕒 20.30 – 21.30 | 📍 Senatssaal

Sunday, September 15th, 2013

Social Evening – Dinner | 🕒 19.30 – 23.00 | 📍 Augustiner-Keller


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## TALKS

Saturday, September 14th, 2013

**Short Presentations: Behavioral Biology I** | 🕒 16.30 – 18.00 | 📍 A 119

Chair: Antje Engelhardt

🕒 16.30 **OP-BB-1**

Why it may be misleading to expect covariation of birds' male-to-female testosterone with sexual dimorphism, mating system, and coloniality

*W. Goymann (Seewiesen)*

🕒 16.45 **OP-BB-2**

A First Glance At Song And Dance

*R. Ullrich (Berlin), C. Scharff (Berlin)*

🕒 17.00 **OP-BB-3**

Adaptive mating behaviour depending on social environment in a bushcricket (Orthoptera: Tettigoniidae)

*G.U.C. Lehmann (Berlin)*

🕒 17.15 **OP-BB-4**

Not around the children, honey: male burying beetles adjust mating rate according to the promise of success

*K. Engel (Ulm), C. von Hoermann, A.-K. Eggert, J. Müller, S. Steiger*

🕒 17.30 **OP-BB-5**

Reproductive Costs and Homosexual Behavior in Male Arthropods

*I. Scharf (Tel Aviv), O. Martin (Zurich)*

🕒 17.45 **OP-BB-6**

Electro-communication and social behaviour in groups of different sizes in two species of pulse-type weakly electric fish (Mormyridae, Teleostei)

*G. Neusel (Bonn), M. Smeets (Bonn), G. von der Emde (Bonn)*

Monday, September 16th, 2013

**Invited Talk – Silke Kipper** | 🕒 11.30 – 12.00 | 📍 A 119

Chair: Antje Engelhardt

Multiple traits, multiple messages, multiple receivers? The information encoded in nightingale song.

*Silke Kipper (Berlin)*



## Invited Talk – Simone Kurt | 12.00 – 12.30 | A 119

Chair: Lars Lewejohann

A new promising behavioral paradigm for auditory learning and perception in mice

[S. Kurt \(Hanover\)](#)

## Internal Section Meeting – Behavioral Biology | 12.30 – 13.30 | A 119

### Short Presentations: Behavioral Biology II | 14.00 – 15.30 | A 119

Chair: Lars Lewejohann

#### 14.00 OP-BB-7

Multisensory object discrimination in the weakly electric fish *Gnathonemus petersii*

[S. Schumacher \(Bonn\)](#), [G. von der Emde](#)

#### 14.15 OP-BB-8

Motor pathways synergistically control body posture in flying *Drosophila*

[R. Berthé \(Rostock\)](#), [F.-O. Lehmann](#)

#### 14.30 OP-BB-9

Visual discrimination abilities of 2D geometrical symbols and the perception of illusionary contours in grey bamboo sharks (*Chiloscyllium griseum*).

[T. Fuss \(Bonn\)](#), [H. Bleckmann](#), [V. Schluessel](#)

#### 14.45 OP-BB-10

Acoustic mirrors as sensory traps for bats?

[S. Greif \(Seewiesen\)](#), [S. Zsebok](#), [D. Schmieder](#), [B. Siemers](#)

#### 15.00 OP-BB-11

Iridescence can function as a warning signal: experimental evidence from *Oreina* beetles

[S. Waldron \(Hamburg\)](#), [A. Honma \(Jyväskylä\)](#), [S. Dobler](#), [J. Mappes](#)

#### 15.15 OP-BB-12

The impact of coloration on the predation risk of subadult Fire salamanders (*Salamandra salamandra*)

[I.J. Hermanski \(Bielefeld\)](#), [C. Wiesbrock](#), [E.T. Krause](#), [S. Steinartz](#), [B.A. Caspers](#)

### Short Presentations: Behavioral Biology III | 16.00 – 17.30 | A 119

Chair: Wolfgang Goyman

#### 16.00 OP-BB-13

Male tolerance and male-male bonds in a multi-level primate society

[J. Fischer \(Göttingen\)](#)

🕒 16.15 **OP-BB-14**

Culturally transmitted dialects in a polygynous bat

*M. Knörnschild (Ulm), M. Nagy, M. Metz, M. Eckenweber, S. Klopsch, F. Mayer*

🕒 16.30 **OP-BB-15**

Social learning in the mouse-eared bats, *Myotis myotis* and *Myotis oxygnathus*

*T. Clarin (Seewiesen), I. Borissov, R. Page, J. Ratcliffe, B. Siemers*

🕒 16.45 **OP-BB-16**

Giant otters (*Pteronura brasiliensis*) discriminate conspecifics based on individual cohesion calls

*C.A.S. Mumm (Ulm), M.C. Urrutia, M. Knörnschild*

🕒 17.00 **OP-BB-17**

Horseshoe Bats Can Use Information in Echoes of Conspecific Calls for Spatial Orientation

*K. Koselj (Seewiesen), B. Siemers*

🕒 17.15 **OP-BB-18**

Impact of urbanization on wildlife: causes and consequences of song plasticity in city birds

*H. Brumm (Seewiesen)*

## POSTERS

📄 **PP-BB-1**

Do organisms exploit food antioxidant properties to improve oxidative balance during thermal challenges?

*M. Beaulieu (Freiburg), A. Haas (Freiburg), H. M. Schaefer (Freiburg)*

📄 **PP-BB-2**

Hey Mom, what's for Dinner? Post-weaning Maternal Food Provisioning in a Bat with a Complex Hunting Strategy

*I. Geipel (Ulm), E. Kalko (Ulm, Panama), K. Wallmeyer (Tuebingen), M. Knörnschild (Ulm)*

📄 **PP-BB-3**

How to pass the gap- Functional morphology and biomechanics of spider bridging threads.

*J. Wolff (Kiel), J. Schneider (Hamburg), S. Gorb (Kiel)*

📄 **PP-BB-4**

Lesser Mouse Eared Bats Perform Better in Obstacle Course than Greater Mouse Eared Bats

*D. Schmieder (Seewiesen, Konstanz), S. Zsebök (Seewiesen, Budapest), B. Siemers (Seewiesen), K. Safi (Konstanz, Radolfzell)*

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**PP-BB-5**

Animal Personality and Cognitive Abilities of Eurasian Harvest Mice (*Micromys minutus*)

*A. da Luz Correia (Tübingen), A. Schuster (Tübingen), K. Foerster (Tübingen)*

**PP-BB-6**

Juvenile hormone influences on aggressive behavior in male crickets

*A. Wirmmer (Ulm), C. Ott (Ulm)*

**PP-BB-7**

Influence of male age on the attractiveness of calling songs in a synchronizing bushcricket

*M. Hartbauer (Graz), H. Römer (Graz), M. Siegert (Graz)*

**PP-BB-8**

Long-term alarm cue exposition increases juvenile shoaling in a cichlid fish

*D. Meuthen (Bonn), S. Baldauf (Bonn), T. C. M. Bakker (Bonn), T. Thünken (Bonn)*

**PP-BB-9**

Archerfish adjust their fast-start decisions to systematic later changes in prey trajectory

*S. Müller (Bayreuth), S. Schuster (Bayreuth)*

**PP-BB-10**

Exploration behaviour of European Bison after reintroduction into the wild.

*P. Schmitz (Siegen), K. Witte (Siegen)*

**PP-BB-11**

Effects of alarm pheromones on escape behaviour in larval zebrafish (*Danio rerio*)

*M. Zapka (Bayreuth), A. Ramsperger (Bayreuth), S. Schuster (Bayreuth)*

**PP-BB-12**

Surface wave sensitivity of Crocodylians

*N. Grap (Bonn), H. Bleckmann (Bonn)*

**PP-BB-13**

Juvenile performance in a cichlid fish is affected by social environment and kinship

*T. Thünken (Bonn), S. Hesse (Bonn)*

**PP-BB-14**

Per conditioning of visual stimuli in workers and drones of the bumblebee *Bombus terrestris*

*L. Lichtenstein (Würzburg), F. Sommerlandt (Würzburg), J. Spaethe (Würzburg)*

**PP-BB-15**

Influence of mobile fish avatars on decision making in groups of weakly electric fish

*M. Worm (Bonn), G. von der Emde (Bonn)*

**PP-BB-16**

Localization of artificial flatfish breathing currents by harbor seals (*Phoca vitulina*)

*B. Niesterok (Rostock), Y. Krüger (Rostock), G. Dehnhardt (Rostock), W. Hanke (Rostock)*

**PP-BB-17**

The evolution of brood care behaviour in dictyopteran insects and its fossil record

*M. K. Hörnig (Greifswald), A. Sombke (Greifswald), C. Haug (Greifswald), J. T. Haug (Greifswald)*

**PP-BB-18**

Behaviour of extinct organisms: synchronised moulting in half a billion years old arthropods

*C. Haug (Greifswald), J.- B. Caron (Toronto), J. T. Haug (Greifswald)*

**PP-BB-19**

Echolocation call-mediated heterospecific recognition in a wild *Myotis* bat species

*T. Hügél (Seewiesen, Würzburg), B.- M. Schuller (Seewiesen), V. van Meir (Seewiesen), B. Siemers (Seewiesen), H. R. Goerlitz (Seewiesen)*

**PP-BB-20**

„Personality“ in laboratory mice: a way of understanding standardization-resistant variability?

*L. Lewejohann (Osnabrueck, Muenster), B. Zipser (Muenster), N. Sachser (Muenster)*

**PP-BB-21**

Acoustic defence in the tettigoniid *Poecilimon ornatus*: evidence for sex-specific differences

*K. N. Kowalski (Gießen), G. U. C. Lehmann (Berlin), R. Lakes-Harlan (Gießen), J. Strauß (Gießen)*

**PP-BB-22**

Hydrodynamic cues from the escape response of fish

*J. Knobloch (Rostock), B. Niesterok (Rostock), W. Hanke (Rostock)*

**PP-BB-23**

Flight path analysis by means of phylogenetic methods- evaluation of flight performance of Daubenton's bat

*S. Zsebök (Budapest), L. Wiegrebe (Planegg-Martinsried)*

**PP-BB-24**

Male mate choice in two orb weaving spiders (*Argiope*) from Costa Rica

*A.- S. Ganske (Greifswald), J. A. Maeder (Greifswald), S. Stefan (Braunschweig), G. Uhl (Greifswald)*

**PP-BB-25**

External female genital mutilation in an orb-weaving spider

*J. Prügél (Greifswald), U. Thom (Greifswald), G. Uhl (Greifswald), J. Kupryjanowicz (Bialystok)*

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**PP-BB-26**

Vocalisation interactions at different stages of the breeding cycle in small groups of captive zebra finches (*Taeniopygia guttata*)

*L. Gill (Seewiesen), A. Ter Maat (Seewiesen), W. Goymann (Seewiesen), M. Gahr (Seewiesen)*

**PP-BB-27**

Testing olfactory behavior of *Tribolium castaneum* during the postmetamorphic period in a two-choice olfactometer

*C. Wendlandt (35032 Marburg), M. Kollmann (35032 Marburg), S. Dippel (Göttingen), J. Schachtner (35032 Marburg)*

**PP-BB-28**

Reproductive division of labor in a clonal ant, *Platythyrea punctata*

*A. Bernadou (Regensburg), G. Alciatore (Regensburg), D. Cardoso (Regensburg), M. Cristiano (Regensburg), J. Heinze (Regensburg)*

**PP-BB-29**

Impact of light and noise pollution on the singing behaviour of rufous collared sparrows

*A. Dorado-Correa (Seewiesen, Bogota), M. Rodríguez-Rocha (Bogota), H. Brumm (Seewiesen)*

**PP-BB-30**

The galloping dung beetle: a new gait in insects

*J. Smolka (Lund), M. J. Byrne (Johannisburg), C. H. Scholtz (Pretoria), M. Dacke (Johannisburg, Lund)*



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## TALKS

Saturday, September 14th, 2013

**Invited Talk - Tomislav Domazet-Lošo** | ⌚ 11.00 – 11.30 | 📍 A 021

*Chair: Nikola-Michael Prpic-Schäper*

Macroevolutionary history of the sensory and central nervous system in vertebrates

*T. Domazet-Lošo (Zagreb), M.S. Šestak (Zagreb)*

**Invited Talk – Nicole Rebscher** | ⌚ 11.30 – 12.00 | 📍 A 021

*Chair: Nikola-Michael Prpic-Schäper*

Establishing Quiescence in Primordial Germ Cells of the Polychaete *Platynereis dumerilii*

*A.K. Lidke (Marburg), A. Grund, A. Löwer, N. Rebscher (Marburg)*

**Internal Section Meeting- Developmental Biology** | ⌚ 12.30 – 13.30 | 📍 A 119

**Short Presentations: Developmental Biology I** | ⌚ 14.30 – 16.00 | 📍 A 119

*Chair: Georg Mayer*

⌚ 14.30 **OP-DB-1**

Expression of the decapentaplegic ortholog in embryos of the Onychophoran *Euperipatoides rowelli*

*S. Treffkorn (Leipzig), G. Mayer (Leipzig)*

⌚ 14.45 **OP-DB-2**

FGF signalling controls anterior extraembryonic and embryonic fate in the beetle *Tribolium*

*R. Sharma, A. Beermann, R. Schröder (Rostock)*

⌚ 15.00 **OP-DB-3**

The evolution of metamorphosis: an example from achelate lobsters

*J.T. Haug (Greifswald), C. Haug (Greifswald)*

⌚ 15.15 **OP-DB-4**

*Tribolium* germ cell less: mirror-image abdomina in a short germ beetle differ from bicaudal phenotypes in *Drosophila*

*N. Troelenberg (Erlangen), V.A. Dao, T. Richter, G. Bucher, M. Klingler*

⌚ 15.30 **OP-DB-5**

Rnai-seq reveals target genes of WNT and HH pathways during *Tribolium* embryogenesis

*G. Bucher (Göttingen), G. Oberhofer*

🕒 15.45 **OP-DB-6**

Changes in anterior head patterning underlie the evolution of long germ embryogenesis

G. Bucher (Göttingen), S. Kittelmann (Göttingen)

## POSTERS

📄 **PP-DB-1**

Expression patterns of *pax3/7* genes in embryos of the onychophoran *Euperipatoides rowelli*

F. A. Franke (Leipzig), I. Schumann (Leipzig), G. Mayer (Leipzig)

📄 **PP-DB-2**

Developmental studies on the cucullaris muscle in the Mexican Axolotl (*Ambystoma mexicanum*)

B. Naumann (Jena), L. Olsson (Jena)

📄 **PP-DB-3**

Nosing around: a histological analysis of the developing olfactory organs of *Xenopus borealis*

J. Middel (Kassel), C. Nowack (Kassel)

📄 **PP-DB-4**

V-ATPases and Na/H-exchangers are involved in regulating the intracellular pH of migrating follicle cells during *Drosophila oogenesis*

I. Weiß (Aachen), J. Krüger (Aachen), J. Bohrmann (Aachen)

📄 **PP-DB-5**

Distal-less is required for cymbium size during spider pedipalp metamorphosis

N.-M. Prpic-Schäper (Göttingen), M. Pechmann (Göttingen)





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## TALKS

Sunday, September 15th, 2013

**Invited Talk - Thomas Eltz** | 🕒 11.30 – 12.00 | 📍 A 125

*Chair: Axel Hochkirch*

Perfume making and signal evolution in orchid bees

*T. Eltz (Bochum)*

**Internal Section Meeting** – Ecology | 🕒 13.00 – 14.00 | 📍 A 125

**Short Presentations: Ecology I** | 🕒 14.00 – 15.30 | 📍 A 125

*Chair: Ingo Hahn*

🕒 14.00 **OP-E-1**

Threatened endemic birds and island environment: case study on structural change, habitat use, and population dynamics

*I. Hahn (Münster), P.M. Vergara (Santiago de Chile), J. Baumeister, G. Soto*

🕒 14.15 **OP-E-2**

Testing major invasion hypotheses with the hierarchy-of-hypotheses approach

*J. Jeschke (Freising), T. Heger*

🕒 14.30 **OP-E-3**

The invasive ladybird *Harmonia axyridis* carries bioweapons against native competitors

*A. Vilcinskas (Giessen), H. Schmidtberg (Giessen), H. Vogel (Jena)*

🕒 14.45 **OP-E-4**

The impact of domestic honeybees and land use on a native pollinator genus (*Bombus*)

*W. Kämpfer (Bochum), N. Blüthgen, T. Eltz*

🕒 15.00 **OP-E-5**

Climate change impacts on fresh-water lakes: Increased CO<sup>2</sup> disables inducible defences in *Daphnia pulex*

*L. Weiss (Bochum), A. Steiger, L. Pötter, R. Tollrian*

🕒 15.15 **OP-E-6**

Detecting community-wide patterns of competitive and other interactions: a case study using tropical ant communities

*F. Ellwood (Bristol), N. Blüthgen (Darmstadt), F. Menzel (Mainz)*

Monday, September 16th, 2013

**Invited Talk - Michael Heathoff** | 🕒 11.00 – 11.30 | 📍 A 125

Chair: Gerlind U.C. Lehmann

The influence of chemical defense on soil predator-prey-dynamics

[M. Heathoff \(Tübingen\)](#)

**Short Presentations: Ecology II** | 🕒 14.00 – 15.30 | 📍 A 125

Chair: Michael Heathoff

🕒 14.00 **OP-E-7**

Interaction of social and ecological parameters on offspring survival in a wild primate

[A. Engelhardt \(Göttingen\)](#), [D. Kerhoas \(Göttingen\)](#), [D. Perwitasari-Farajallah](#), [M. Agil](#), [A. Widdig](#)

🕒 14.15 **OP-E-8**

Food hygiene and nest sanitation in the emerald cockroach wasp *Ampulex compressa* (Hymenoptera: Ampulicidae)

[G. Herzner \(Regensburg\)](#)

🕒 14.30 **OP-E-9**

Transgenerational immune priming effects in *Manduca sexta* are dependent on the offspring developmental stage

[U. Trauer-Kizilelma \(Berlin\)](#), [M. Hilker \(Berlin\)](#)

🕒 14.45 **OP-E-10**

What makes a forager leave a resource patch? Confronting models with reality

[T. Hoffmeister \(Bremen\)](#), [E. Wajnberg](#), [P. Coquillard](#), [A. Thiel](#), [J. Uhlig](#)

🕒 15.00 **OP-E-11**

Detection of the travel direction of single vortex rings by a stationary harbour seal (*Phoca vitulina*)

[Y. Krüger \(Rostock\)](#), [S. Wieskotten](#), [L. Miersch](#), [G. Dehnhardt](#), [W. Hanke](#)

🕒 15.15 **OP-E-12**

Munnopsidae (Crustacea, Isopoda, Asellota) in Icelandic waters

[S. Schnurr \(Hamburg\)](#), [A. Brandt](#), [S. Brix](#), [P. Martinez Arbizu](#)

## POSTERS

### PP-E-1

The Role of Eco-Evolutionary Experience in Invasion Success

*W.-C. Saul (Freising), J. M. Jeschke (Freising), T. Heger (Freising)*

### PP-E-2

Plead against vandalism

*B.-M. Schuller (Seewiesen), E. Bitzilekis (Munich), B. Siemers (Seewiesen), H. R. Goerlitz (Seewiesen)*

### PP-E-3

The influence of ambient UV light on sperm quality and sexual ornamentation in a fish

*I. Rick (Bonn), M. Mehlis (Bonn), E. Eßer (Bonn), T. Bakker (Bonn)*

### PP-E-4

Do enhanced levels of ambient uvb-radiation affect the immune capacity of three-spined sticklebacks (*Gasterosteus aculeatus*)?

*S. Vitt (Bonn), L. Drolshagen (Bonn), A. K. Rahn (Bonn), I. P. Rick (Bonn), T. C. M. Bakker (Bonn)*

### PP-E-5

Circumventing the constraints of suction feeding: nectar water evaporation by long-tongued orchid bees

*T. Pokorny (Bochum, Düsseldorf), K. Lunau (Düsseldorf), T. Eltz (Bochum)*

### PP-E-6

Dispersal behavior in the wasp spider *Argiope bruennichi* (Araneae)

*J. Krüger (Greifswald), H. Krehenwinkel (Plön), D. Bonte (Gent), G. Uhl (Greifswald)*

### PP-E-7

Population genetics of bat-associated bed bugs *Cimex lectularius*

*B. Sánchez Navarro (Tubingen), K. Reinhardt (Tubingen)*


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## TALKS

Saturday, September 14th, 2013

**Invited Talk - Alexander Kupfer** | 🕒 11.00 – 11.30 | 📍 A125

*Chair: Gregor Kölsch*

Reproductive biology and life history evolution of caecilian amphibians

[\*A. Kupfer \(Potsdam\)\*](#)

**Invited Talk - Arne Nolte** | 🕒 11.30 – 12.00 | 📍 A125

*Chair: Alexander Kupfer*

Hybridization as an evolutionary motor in fishes

[\*A.W. Nolte \(Plön\)\*](#)

**Internal Section Meeting** – Evolutionary Biology | 🕒 12.30 – 13.30 | 📍 A125

**Short Presentations: Evolutionary Biology I** | 🕒 14.30 – 16.00 | 📍 A125

*Chair: Thomas Schmitt*

🕒 14.30 **OP-EB-1**

Audience effect in zebra finches (*Taeniopygia guttata castanotis*) during mate choice for novel phenotypes: sexes differ

[\*N. Kniel \(Siegen\), S. Bender, K. Witte\*](#)

🕒 14.45 **OP-EB-2**

Impacts of sexual and natural selection on male-female co-evolution.

[\*O. Martin \(Zurich\)\*](#)

🕒 15.00 **OP-EB-3**

That's one small step for an individual, one giant leap for populations – disentangling the cues for mate recognition in the early phase of population differentiation

[\*M. Linnenbrink \(Ploen\), S. von Merten, D. Tautz\*](#)

🕒 15.15 **OP-EB-4**

No wings, no weapons, no female choice- sexual selection in wingless ant males

[\*I. Kureck \(Siegen\), S. Foitzik\*](#)

🕒 15.30 **OP-EB-5**

Pathogen adaptation to individual versus social immune defences of ants

[\*M. Stock \(Klosterneuburg\), A.V. Grasse, S. Cremer\*](#)

🕒 15.45 **OP-EB-6**

Individual and colony-level effects of social immunisation in ants

[\*M. Konrad \(Klosterneuburg\), K. Seif, S. Cremer\*](#)

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## Short Presentations: Evolutionary Biology II | 16.30 – 18.00 | A125

Chair: Arne Nolte

### 16.30 OP-EB-7

New insights into the evolutionary history and the present distribution of the common Southern Ocean pycnogonid *Colossendeis megalonyx*

*L. Dietz (Bochum), C. Held, C. Mayer (Bonn), F. Leese (Bremerhaven)*

### 16.45 OP-EB-8

Unlocking the genetic archives: development of markers for use on highly degraded samples

*P. Turko (Dübbendorf), J. Rusek, C. Tellenbach, J. Wolinska, P. Spaak*

### 17.00 OP-EB-9

Strongly male-biased effective population in a polyandrous wader

*C. Küpper (Sheffield), J. DaCosta (Boston), M. Sorenson, T. Székely, S. Edwards*

### 17.15 OP-EB-10

Genotypic diversity in a clonally reproducing fish, *Poecilia formosa*

*K. Lampert (Bochum)*

### 17.30 OP-EB-11

A genomic and ecological dissection of the recent range expansion of the European wasp spider *Argiope bruennichi* - Consequence of climate change?

*H. Krehenwinkel (Ploen), M. Graze, G. Uhl (Greifswald), D. Tautz*

### 17.45 OP-EB-12

Testing phylogeographic scenarios with mitochondrial genes and genome-wide RAD markers in a montane caddisfly (*Thremma gallicum*)

*F. Leese (Bochum), J.-N. Macher (Bochum), A. Rozenberg (Bochum)*

Sunday, September 15th, 2013

## Short Presentations: Evolutionary Biology III | 14.00 – 15.30 | A 021

Chair: Sylvia Cremer

### 14.00 OP-EB-13

Reproduction, lifespan and aging in ant males

*S. Metzler (Regensburg), J. Heinze, A. Schrempf*

### 14.15 OP-EB-14

Inbreeding depression in an insect with maternal care: influences of family interactions, life-stage and offspring sex.

*J. Meunier (Mainz), M. Kölliker (Basel)*

### 14.30 OP-EB-15

Bigger mothers are better mothers: disentangling size-related pre- and postnatal maternal effects

*S. Steiger (Ulm)*

🕒 14.45 **OP-EB-16**

Why sex pheromones diversify. Lessons from *Nasonia*

*I. Putz, D. Pothmann, J. Ruther (Regensburg)*

🕒 15.00 **OP-EB-17**

Pheromone evolution in insects: diversification of chemical messengers evolves a defensive compound into a cue and signal

*J. Stökl (Regensburg), I. Weiss, T. Rössler, J. Hofferberth, M. Brummer, J. Ruther*

🕒 15.15 **OP-EB-18**

Multiple adaptations of specialized Lygaeinae (Heteroptera, Lygaeidae): strategies to cope with host plant cardenolides

*C. Bramer (Hamburg), G. Petschenka, F. Friedrich, S. Dobler*

Monday, September 16th, 2013

**Short Presentations: Evolutionary Biology IV** | 🕒 14.00 – 15.30 | 📍 Aula

Chair: Johannes Stökl

🕒 14.00 **OP-EB-19**

Identification of genes involved in spicule formation of calcareous sponges (Porifera, Class Calcarea)

*O. Voigt (Munich), K. Sluzek, M. Adamski, G. Wörheide, M. Adamska*

🕒 14.15 **OP-EB-20**

Sperm protein evolution in primates: acceleration by post-mating sexual selection and conservation by protein interactions

*J. Schumacher (Mainz), D. Rosenkranz, H. Herlyn (Mainz)*

🕒 14.30 **OP-EB-21**

The dispersal of yeast by insect vectors

*C.U. Baden (Plön), D. Greig (Plön)*

🕒 14.45 **OP-EB-22**

The evolution of directional hearing in crickets

*A.K. Schmidt (Graz), H. Römer*

🕒 15.00 **OP-EB-23**

The evolutionary dynamics of competitiveness

*S. Baldauf (Bonn), L. Engqvist (Bielefeld), F.J. Weissing*

🕒 15.15 **OP-EB-24**

Stay cool during bad weather – Heterothermy in the Common Swift *Apus apus*

*A. Wellbrock (Siegen), C. Bauch, K. Witte, J. Rozman*



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## Short Presentations: Evolutionary Biology V | 16.00 – 17.30 | A 017

Chair: Sandra Steiger

### 16.00 OP-EB-25

First evidence of cryptic species diversity and significant population structure in a widespread freshwater nematode morphospecies (*Tobrilus gracilis*)

*K. Ristau (Bielefeld), S. Steinfartz, W. Traunspurger*

### 16.15 OP-EB-26

Can a hybrid outcompete its parental species? - a story about a “super clone” (*Daphnia galeata* × *Longispina* hybrid)

*J. Griebel (Planegg-Martinsried), M. Poxleitner, A. Navas Faria, S. Giessler, J. Wolinska*

### 16.30 OP-EB-27

A transcriptome derived female-specific marker in the invasive Western mosquitofish *Gambusia affinis*

*D. Lamatsch (Mondsee)*

### 16.45 OP-EB-28

Population structure of microparasites infecting *Daphnia*: spatio-temporal dynamics

*J. Wolinska (Planegg-Martinsried), A. Petrusek, J. Rusek, E. Gonzalez Tortuero, S. Giessler*

### 17.00 OP-EB-29

Deciphering the glacial history of the Western Antarctic Ice sheet using the genome of a brooding marine isopod

*S. Agrawal (Bremerhaven), F. Leese, C. Schubart, C. Mayer, C. Held (Bremerhaven)*

### 17.15 OP-EB-30

Testing the timeframe of the most recent Panama Isthmus closure from a marine point-of-view

*N. Thiercelin (Regensburg), C.D. Schubart (Regensburg)*

## POSTERS

### PP-EB-1

Tit for tat- Genome analysis of the bacterial endosymbionts of reed beetles (*Donaciinae*)

*G. Kölsch (Hamburg)*

### PP-EB-2

Diversity of bacterial endosymbionts within bees (*Anthophila*)

*M. Gerth (Leipzig), C. Bleidorn (Leipzig)*

### PP-EB-3

Influence of different stressors on reproduction and longevity of ant queens

*J. Giehr (Regensburg), S. Cremer (Klosterneuburg), J. Heinze (Regensburg), A. Schrepf (Regensburg)*

**PP-EB-4**

Sperm competition in three-spined sticklebacks (*Gasterosteus aculeatus*)- in vitro veritas

*M. Mehliš (Bonn), M. K. Licht (Bonn), T. C. M. Bakker (Bonn)*

**PP-EB-5**

“Together we can make it” - Social buffering in parasitized ant colonies

*S. Beros (Mainz), I. Scharf (Tel Aviv), A. Modlmeier (Pittsburgh), S. Foitzik (Mainz)*

**PP-EB-6**

Deciphering the sex determination mechanism in the bumblebee *Bombus terrestris*

*M. Biewer (Köln), S. Lechner (Tübingen), M. Hasselmann (Köln)*

**PP-EB-7**

Phenotypic expression of olfactory related genes in sexuals and workers of the leaf-cutting ant *A. vollenweideri*

*S. Koch (Konstanz, Jena), C. J. Kleineidam (Konstanz), B. S. Hansson (Jena), E. Große-Wilde (Jena)*

**PP-EB-8**

Perfume evolution and diversification in orchid bees

*L. Mitko (Bochum), S. R. Ramirez (Davis), T. Eltz (Bochum)*

**PP-EB-9**

What May Have Driven the Evolution of Cercal Lengths in Crickets (Ensifera: *Grylloidea*)?

*M. Gebhardt (Freising), S. Haidinger (Freising), F. Walz (Freising)*

**PP-EB-10**

Intracolony genetic variability in the massive coral *Porites australiensis*

*M. Schweinsberg (Bochum), T. Gröning (Bochum), R. Tollrian (Bochum), K. P. Lampert (Bochum)*

**PP-EB-11**

Unlocking poor quality *Daphnia* samples by SNP genotyping

*J. Rusek (Planegg-Martinsried), G. Ayan (Planegg-Martinsried), P. Turko (Dübendorf), S. Giessler (Planegg-Martinsried), C. Tellenbach (Dübendorf), L. Theodosiou (Planegg-Martinsried), P. Spaak (Dübendorf), J. Wolinska (Planegg-Martinsried)*

**PP-EB-12**

Bioinformatic analysis of amplicon sequencing data to study spatial and temporal variation in a *Daphnia* microparasite

*E. Gonzalez-Tortuero (Planegg-Martinsried), J. Rusek (Planegg-Martinsried), S. Giessler (Planegg-Martinsried), A. Petrusek (Prague), J. Wolinska (Planegg-Martinsried)*

**PP-EB-13**

Extended mitogenomic taxon sampling in the phylum Mollusca


*I. Stöger (Munich), A.J. Poustka, N. Wilson, M. Schrödl*


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## TALKS

Saturday, September 14th, 2013

**Invited Talk – Frank Friedrich** | 🕒 12.00 – 12.30 | 📍 A 017

*Chair: Peter Michalik*

Insect morphology in the phylogenomic age- its impact on the reconstruction of phylogeny and evolution

*Frank Friedrich (Hamburg)*

**Internal Section Meeting – Morphology** | 🕒 13.30 – 14.30 | 📍 A 017

**Short Presentations: Morphology I** | 🕒 14.30 – 16.00 | 📍 A 017

*Chair: Christian Wirkner*

🕒 14.30 **OP-M-1**

New insights into the Xiphosuran circulatory system

*T. Göpel (Rostock), C.S. Wirkner*

🕒 14.45 **OP-M-2**

Evolutionary morphology of the vascular and respiratory systems in harvestmen.

*B.-J. Klußmann-Fricke (Rostock), C.S. Wirkner*

🕒 15.00 **OP-M-3**

The great silk alternative: Multiple co-evolution of web loss and sticky hairs in spiders.

*J. Wolff (Kiel), W. Nentwig, S. Gorb*

🕒 15.15 **OP-M-4**

The head of the mandibulate ancestor: new evidence from a centipede

*A. Sombke (Greifswald), J.T. Haug (Greifswald), C. Haug (Greifswald)*

🕒 15.30 **OP-M-5**

Architecture of the serotonin transmitter system in the ventral nerve cord of Tetraconata – Support for a sister group relationship of Remipedia and Hexapoda?

*T. Stemme (Hanover), M. Stern, G. Bicker*

🕒 15.45 **OP-M-6**

Developmental strategies in *Cyclestheria*, sistergroup to water fleas (Cladocera, Crustacea) – direct or pseudo-direct development?

*S. Richter (Rostock), M. Fritsch*

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## Short Presentations: Morphology II | ⌚ 16.30 – 18.00 | 📍 A 017

Chair: Michael Heethoff

### ⌚ 16.30 OP-M-7

Putative role of ventral and pre-ventral organs as attachment sites for segmental limb muscles in adult velvet worms (Onychophora)

*I. de Sena Oliveira (Leipzig), G. Mayer (Leipzig)*

### ⌚ 16.45 OP-M-8

Structure and anterior regeneration of musculature and nervous system in *Cirratulus sp.* (Cirratulidae, Annelida)

*M. Weidhase (Leipzig), C. Bleidorn, C. Helm*

### ⌚ 17.00 OP-M-9

Modality matters: The predator-specific inducible defenses of *Daphnia barbata*

*Q. Herzog (Martinsried-Planegg), C. Laforsch*

### ⌚ 17.15 OP-M-10

Ultrastructural analysis of male secretion release in the dwarf spider *Oedothorax retusus* (Linyphiidae: Erigoninae)

*K. Kunz (Greifswald), P. Michalik, G. Uhl*

### ⌚ 17.30 OP-M-11

Neurogenesis in the indirect-developing enteropneust *Balanoglossus misakiensis* (Deuterostomia; Hemichordata): no signs of a ubiquitous epidermal nerve-net

*S. Kaul-Strehlow (Vienna), A. Wanninger*

### ⌚ 17.45 OP-M-12

Ontogeny of photoreception in brachiopod larvae revealed by immunocytochemical data

*N. Furchheim (Berlin), E.M. Ullrich-Lüter, M.I. Arnone, C. Lüter*

Monday, September 16th, 2013

## Invited Talk – Thomas Kleinteich | ⌚ 12.00 – 12.30 | 📍 A 021

Chair: Manuela Schmidt

Sticky stuff: adhesion in fishes and amphibians

*T. Kleinteich (Kiel), D.K. Wainwright, A. Kleinteich, A.P. Summers, S.N. Gorb*

## Short Presentations: Morphology III | ⌚ 16.00 – 17.30 | 📍 A 021

Chair: Sabrina Kaul-Strehlow

### ⌚ 16.00 OP-M-13

Same same but different: Ptychoidy in Enarthronota (Acari, Oribatida)

*S. Schmelzle (Tübingen), R.A. Norton, M. Heethoff (Tübingen)*

🕒 16.15 **OP-M-14**

Ultrastructure of cuticular vesicles in Anthelidae (Insecta, Lepidoptera)

*P. Bergmann (Stuttgart), A. Zwick (Stuttgart)*

🕒 16.30 **OP-M-15**

Biomineralization and material characterization in invertebrates

*M.-L. Lemloh (Saarbruecken), F. Brümmer, J. Bill, F. Marin, I.M. Weiss*

🕒 16.45 **OP-M-16**

Modeling of blood volume shifts during pulmonary bypass in crocodiles

*R. Campen (Planegg-Martinsried), M. Wittmann, P.L. Rautenberg, D. Metzler, M. Starck*

🕒 17.00 **OP-M-17**

The impact of preen oil and artificially induced ageing on water repellency of barn owl (*T. furcata pratinctola*) and pigeon (*Columba livia domestica*) feather vanes

*B. Ott (Aachen), S. Blazek (Aachen), C. Effertz (Aachen), H. Wagner*

🕒 17.15 **OP-M-18**

Family Ties or You Are What You Eat – Analyzing the effects of diet, size, and taxonomy on the shape of the rodent mandible

*A.C. Schunke (Plön), D. Tautz (Plön)*

## POSTERS

📄 **PP-M-1**

Extremely long mouthparts in flower-visiting insects: form, function and evolution

*H. W. Krenn (Vienna), J. Bauder (Vienna), F. Karolyi (Vienna)*

📄 **PP-M-2**

Diversity of mitochondrial structures

*K. Jakob (Planegg-Martinsried), P. Brzęk (Białystok), J. M. Starck (Planegg-Martinsried)*

📄 **PP-M-3**

Hydrodynamic perception in seals

*L. Miersch (Rostock), S. Wieskotten (Rostock), Y. Krüger (Rostock), W. Hanke (Rostock), M. Witte (Rostock), M. Brede (Rostock), A. Leder (Rostock), G. Dehnhardt (Rostock)*

📄 **PP-M-4**

Mobility versus movement: the range of long axis rotation in the hip joint of Iguana

*P. Arnold (Jena), M. S. Fischer (Jena), J. A. Nyakatura (Jena)*

📄 **PP-M-5**

Comparative Study of the Skeletal and Muscular System of the Thorax in Representatives of the Ensifera (Insecta, Orthoptera)


*F. Leubner (Göttingen), S. Bradler (Göttingen)*

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 **PP-M-6**

Comparison of the musculature in the probosces in Naididae and Propappidae (Oligochaeta)

*K. Peth (Hamburg), A. Schmidt-Rhaesa (Hamburg)*

 **PP-M-7**

Tagmatisation in mantis shrimps (Stomatopoda, Malacostraca, Crustacea s. l.)

*V. Kutschera (Ulm), J. T. Haug (Greifswald), W. S. Sallam (Ismailia), A. Maas (Ulm), D. Waloszek (Ulm), C. Haug (Greifswald)*

 **PP-M-8**

The role of bypass elements in leucon-type canal systems: A fluid dynamic study using particle tracking velocimetry in *Tethya wilhelma*

*H. Jahn (Jena), J. Herzen (Geesthacht), F. Beckmann (Geesthacht), M. Nickel (Jena), J. Hammel (Jena)*

 **PP-M-9**

New inside to the evolution of eye ontogenesis of *Panorpa vulgaris imhoff* and labram, 1836

*B. D. Saltin (Rottenburg, D-72076 Tübingen)*

 **PP-M-10**

Pseudo-4D reconstruction of the head region of *Engraulis encrasicolus* (Engraulidae, Teleostei)

*A. de Motte (Planegg - Martinsried), M. Heß (Planegg - Martinsried)*

 **PP-M-11**

Flow parameters of a leucon-type canal system in vivo: a case study in the freshwater sponge *Spongilla lacustris*

*S. Zade (Jena), M. Nickel (Jena), J. Hammel (Jena)*

 **PP-M-12**

Camera recordings of a previously undescribed high-speed jump in the genus *Tanycypris* (Cypridoidea, Ostracoda)

*C. Nagler (Freising), R. Matzke-Karasz (Germany), S. Hofmann (Regensburg)*

 **PP-M-13**

Neuroarchitecture of the optic lobes and the brain of the water flea *Daphnia magna*

*T. Kress (Stockholm), H. Dirksen (Stockholm), S. Harzsch (Greifswald)*

 **PP-M-14**

Do ootheca structures reflect phylogenetic relationships in praying mantises (Insecta, Mantodea)?

*U. Eulitz (Dresden)*

 **PP-M-15**

„Finding Nemo is just easy. But what about sea anemones?“

*T. Bartnik (Hamburg), S. Holst (Hamburg), A. Schmidt-Rhaesa (Hamburg)*

**PP-M-16**

Hold on to your kleptocnides! 3D-microanatomy of meiofaunal Pseudovermis (Nudibranchia, Gastropoda, Mollusca)

*T. Stoschek (Munich), A. Rabe (Munich), A. Migotto (São Sebastião), G. Haszprunar (Munich), T. Neusser (Munich), K. Jörger (Munich)*

**PP-M-17**

Fluid-Structure-Interaction: How cellular structures affect local flow in sponge canal systems.

*J. Hammel (Jena)*

**PP-M-18**

Comparative sacoglossan microanatomy

*P. Köhner (Munich), B. Brenzinger (Munich), K. Jensen (Copenhagen), V. Padula (Munich), M. Schrödl (Munich)*

**PP-M-19**

Numb genitalia?- First evidence of sensory afferents in the male palpal organ of spiders (Araneae)

*E. Lipke (Greifswald), P. Michalik (Greifswald)*

**PP-M-20**

Fine structure of epidermal organs in *Phascolion caupo* (Sipuncula): Do gland characters support an ingroup relationship of sipunculans to Polychaeta?

*C. Müller (Greifswald, Berlin), J. Hylleberg (Aarhus C), P. Michalik (Aarhus C, Greifswald)*

**PP-M-21**

The evolution of head structures in adult caddisflies (Insecta, Trichoptera)

*F. Friedrich (Hamburg), M. Kubiak (Hamburg)*

**PP-M-22**

An immunohistochemical study on the olfactory lobe of *Scutigera coleoptrata*: Insights into evolutionary trends in Mandibulata?

*J. Brennecke (Greifswald), S. Harzsch (Greifswald), A. Sombke (Greifswald)*

**PP-M-23**

Morphological and Chemical Analyses of Adhesive Tarsus Structures in *Nicrophorus nepalensis* and *Nicrophorus vespilloides* (Silphidae)

*J. Braun (Tübingen), O. Betz (Tübingen)*

**PP-M-24**

Comparison of morphological and genetic analyses reveals higher diversity in *Potamon ruttneri* and *Potamon gedrosianum* complex.

*A. Keikhosravi (Regensburg), C. D. Schubart (Regensburg)*





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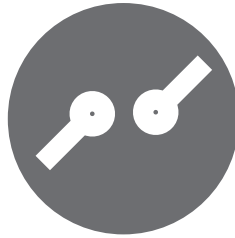
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Saturday, September 14th, 2013

**Invited Talk - Wolf Hanke** | 🕒 12.00 – 12.30 | 📍 A 021

*Chair: Boris Chagnaud*

Mechanoreception in aquatic vertebrates – catching fish using hydrodynamic trails

*W. Hanke (Rostock)*

**Short Presentations: Neurobiology I** | 🕒 14.30 – 16.00 | 📍 A 021

*Chair: Christoph Kleineidam*

🕒 14.30 **OP-NB-1**

Elementary receptor potentials of pheromone receptor neurons in *Bombyx mori*, *Manduca sexta*, and *Macroglossum stellatarum*

*K.-E. Kaissling (Starnberg)*

🕒 14.45 **OP-NB-2**

Floral preference is reflected in the neuroanatomy of the olfactory system in mason bees (*Osmia*)

*C. Kelber (Darmstadt), T. Schmitt, W. Rössler*

🕒 15.00 **OP-NB-3**

Neuronal mechanisms of odor learning in drosophila: a thermogenetically induced memory engrain in kenyon cells drives learned behavior

*D. Vasmer (Göttingen), A. Pooryasin (Göttingen), T. Riemensperger (Göttingen), A. Fiala (Göttingen)*

🕒 15.15 **OP-NB-4**

Orcokinin as major neuropeptide components in the crayfish olfactory system

*H. Dircksen (Stockholm), T. Kress (Stockholm), C. Wegener (Würzburg), S. Harzsch (Greifswald)*

🕒 15.30 **OP-NB-5**

Glia associated with central complex lineages in the embryonic brain of the grasshopper *Schistocerca gregaria*

*Y. Liu (Planegg), G. Boyan*

🕒 15.45 **OP-NB-6**

Drosophila Voltage Gated Calcium Channels: From Function to Behavior and Speciation


*S. Ryglewski (Mainz), C. Duch (Mainz)*

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## Short Presentations: Neurobiology II | ⌚ 16.30 – 18.00 | 📍 A 021

Chair: Boris Chagnaud

### ⌚ 16.30 **OP-NB-7**

Gerbils at a cocktail party: looking at auditory processing mechanisms underlying spatial release from masking

*A. Klinge-Strahl (Oldenburg), R. Beutelmann, G. Klump*

### ⌚ 16.45 **OP-NB-8**

Precise Timing of Glycinergic Inhibition Modulates Coincidence Detection in the Auditory Brainstem

*M. Myoga (Munich), S. Lehnert, C. Leibold, F. Felmy, B. Grothe*

### ⌚ 17.00 **OP-NB-9**

Out of phase: importance of the medial septum for directional hearing in crickets

*S. Hirtenlehner (Graz), A.K. Schmidt (Graz), H. Römer (Graz)*

### ⌚ 17.15 **OP-NB-10**

Gait parameters at different walking speeds in the desert ant, *Cataglyphis fortis*

*H. Wolf (Ulm), V. Wahl, M. Wittlinger*

### ⌚ 17.30 **OP-NB-11**

Physiological Properties of the Archerfish Mauthner-Cell

*P. Machnik (Bayreuth), K. Leupolz (Bayreuth), B. Bausewein (Bayreuth), W. Schulze, S. Schuster (Bayreuth)*

### ⌚ 17.45 **OP-NB-12**

Simultaneous imaging of both mauthner-cells and c-start kinematics reveals rapid adaptation after cooling in larval zebrafish

*A. Hecker (Bayreuth), W. Schulze, S. Schuster*

Sunday, September 15th, 2013

## Invited Talk – Dominik Heyers | ⌚ 11.00 – 11.30 | 📍 A 125

Chair: Jacob Engelmann

Neurobiology of Avian Magnetoreception

*D. Heyers (Oldenburg)*

## Internal Section Meeting – Neurobiology | ⌚ 13.00 – 14.00 | 📍 A 119

Monday, September 16th, 2013

## Short Presentations: Neurobiology III | ⌚ 16.00 – 17.30 | 📍 A 125

Chair: Jacob Engelmann

### ⌚ 16.00 **OP-NB-13**

The neural basis of polarization vision in bees and locusts: similarities and differences

*K. Pfeiffer (Marburg), M. Held, B. el Jundi, U. Homberg*

🕒 16.15 **OP-NB-14**

Transgenic shh-GFP line suggests hedgehog signaling in larval zebrafish optic tectum and cerebellum

*M.F. Wullmann (Planegg), D. Biechl (Planegg)*

🕒 16.30 **OP-NB-15**

Transfer of optic flow information between the eyes and between odometers in the desert ant *Cataglyphis bicolor*

*M. Wittlinger (Ulm), K. Schwannauer, S. Pfeffer*

🕒 16.45 **OP-NB-16**

Spectral sensitivity in onychophora (velvet worms), as revealed by behavioural and electrophysiological experiments

*H. Beckmann (Leipzig), P.A. Stevenson, G. Mayer*

🕒 17.00 **OP-NB-17**

In and out of the box: How bees orient in an ambiguous environment

*N. Boeddeker (Bielefeld), W. Stürzl, S. Jetzschke, M. Mertes, L. Dittmar*

🕒 17.15 **OP-NB-18**

Axon counts in four cranial nerves of harbor seals (*Phoca vitulina*) and hooded seals (*Cystophora cristata*)

*F. Hanke (Rostock), D. Wohler (Rostock), J. Kröger, M. Witt (Rostock), A. Wree, N. Czech-Damal, L. Folkow, U. Siebert, G. Dehnhardt*

## POSTERS

📄 **PP-NB-1**

The Sensillum coelocapitulum in ants (*Camponotus rufipes*) contains warm- and cold-receptive neurons

*M. Nagel (Konstanz), C. J. Kleineidam (Konstanz)*

📄 **PP-NB-2**

Innervation pattern of the infrared sensitive pit membrane of rattlesnakes

*M. Bothe (Freising-Weihenstephan), H. Luksch (Freising-Weihenstephan), T. Kohl (Freising-Weihenstephan)*

📄 **PP-NB-3**

Electric images of resistive and capacitive objects at the head of the weakly electric fish *Gnathonemus petersii*

*M. Gottwald (Bonn), L. Hamann (Bonn), R. Bott (Bonn), S. Rau (Bonn), G. von der Emde (Bonn)*

📄 **PP-NB-4**

Miniaturization of the olfactory system in stingless bees (Meliponini)

*E. Klug (Würzburg), C. Kelber (Darmstadt), W. Rössler (Würzburg), J. Spaethe (Würzburg)*

📄 **PP-NB-5**

Connectivity of the MON of the Zebrafish

*V. Kassing (Bielefeld), J. Engelmann (Bielefeld)*

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**PP-NB-6**

Immediate early gene activation in weakly electric fish (*Gnathonemus petersii*) during learning and recall of a spatial memory task

*S. Kuenzel (Bielefeld), U. Mayer (Rovereto (TN)), J. Engelmann (Bielefeld)*

**PP-NB-7**

Sensorimotor patterns during electrolocation behavior of mormyrid fish

*V. Hofmann (Bielefeld), J. I. Sanguinetti-Scheck (Montevideo), B. Geurten (Göttingen), L. Gómez-Sena (Montevideo), J. Engelmann (Bielefeld)*

**PP-NB-8**

Object detection and distance discrimination by mormyrid ell neurons

*V. Hofmann (Bielefeld), S. Künzel (Bielefeld), J. I. Sanguinetti-Scheck (Montevideo), J. Engelmann (Bielefeld)*

**PP-NB-9**

The avian head creates acoustic cues of elevation

*H. Schnyder (Freising), D. Vanderelst (Bristol, UK), S. Bartenstein (Freising), U. Firzloff (Freising), H. Luksch (Freising)*

**PP-NB-10**

Tuning of myelinated axon properties to preserve temporal information in a mammalian sound localization circuit

*M. Ford (Planegg-Martinsried, Munich), O. Alexandrova (Planegg-Martinsried), L. Cossell (London), D. Attwell (London), B. Grothe (Planegg-Martinsried)*

**PP-NB-11**

Perception of spatial sound statistics by gerbils

*A. Lingner (Munich, Munich, Munich), D. Neusius (Munich), B. Grothe (Munich, Munich), M. Pecka (Munich), L. Wiegrebe (Munich, Munich)*

**PP-NB-12**

Activity-dependent inhibition gates information in an echo suppression circuit

*J. Ammer (Planegg-Martinsried), F. Felmy (Planegg-Martinsried)*

**PP-NB-13**

GABA<sub>B</sub> receptor-mediated adaptation in medial superior olive neurons

*A. Stange (Planegg-Martinsried), M. H. Myoga (Planegg-Martinsried), A. Lingner (Planegg-Martinsried), M. C. Ford (Planegg-Martinsried), O. Alexandrova (Planegg-Martinsried), F. Felmy (Planegg-Martinsried), M. Pecka (Planegg-Martinsried), I. Siveke (Planegg-Martinsried), B. Grothe (Planegg-Martinsried)*

**PP-NB-14**

Spectral and temporal integration in the auditory system of barn owls

*L. Kettler (Aachen), H. Wagner (Aachen)*

**PP-NB-15**

Vision and Audition in the Midbrain of the Mongolian Gerbil

*T. Jennings (Planegg-Martinsried), B. Grothe (Planegg-Martinsried)*

**PP-NB-16**

Temporal coding and spike time variability in across-frequency integrating neurons of the barn owl

*P. Tellers (Aachen), K. Bülles (Aachen), H. Wagner (Aachen)*

**PP-NB-17**

Sites of calcium entry of neurons in the medial superior olive

*S. Berner (Martinsried), D. Franzen (Martinsried), C. Kellner (Martinsried), F. Felmy (Martinsried)*

**PP-NB-18**

Maturation of Neurons in the Auditory Brainstem:  
Mathematical Modelling of Metabolism & Quantification of Metabolic Marker Levels

*B. Trattner (Planegg-Martinsried, Planegg-Martinsried), C. Gravot (Planegg-Martinsried, Planegg-Martinsried), B. Grothe (Planegg-Martinsried), L. Kunz (Planegg-Martinsried)*

**PP-NB-20**

A fine-tuned motor decision requires less than 30 milliseconds of sensory input.

*I. Rischawy (Bayreuth), M. Krause (Bayreuth), S. Schuster (Bayreuth)*

**PP-NB-21**

Inhibitory Mechanisms in the Mauthner Neurons of Archerfish

*B. Bausewein (Bayreuth), P. Machnik (Bayreuth), S. Schuster (Bayreuth)*

**PP-NB-22**

Development of cerebellar function in *Xenopus laevis*

*C. Gravot (Planegg-Martinsried), H. Straka (Planegg-Martinsried)*

**PP-NB-23**

Locomotion-related corollary activity in mechanoreceptor efferent neurons modulates peripheral sensory processing

*R. Banchi (Planegg), B. Chagnaud (Planegg), H. Straka (Planegg)*

**PP-NB-24**

Parallel signaling pathways as principle for vestibulo-ocular reflexes in *Xenopus laevis*

*K. Gensberger (Planegg-Martinsried), H. Dietrich (Planegg-Martinsried, Planegg-Martinsried), H. Straka (Planegg-Martinsried)*

**PP-NB-25**

Effects of neonicotinoid insecticides on motor and neuronal activity in the honeybee

*M. Triltsch (Frankfurt am Main), J. Fischer (Frankfurt am Main), K. Kabat vel Job (Frankfurt am Main), B. Grünewald (Frankfurt am Main)*

**PP-NB-26**

Short- and long-term depression in Area X of juvenile zebra finches

*S. Wohlgemuth (Berlin), C. Scharff (Berlin)*

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**PP-NB-27**

Songbird brain-derived neurotrophic factor variants

*M. Hertel (Seewiesen), F. Dittrich (Seewiesen), A. Lohrentz (Seewiesen), J. Kammerlander (Seewiesen), C. Reusch (Seewiesen), I. Ruczyńska (Seewiesen), C. Frankl-Vilches (Seewiesen), M. Gahr (Seewiesen)*

**PP-NB-28**

Spatial tuning of linear vestibulo-ocular reflexes during *Xenopus laevis* development

*F. Branoner (Planegg-Martinsried), H. Straka (Planegg-Martinsried)*

**PP-NB-29**

Synchronization of motoneurons in a vocal network is facilitated by a hyperpolarizing conductance

*B. Chagnaud (Munich), A. Bass (Ithaca, NY)*

**PP-NB-30**

A LED-based Microscope to Manipulate Neuronal Activity in Axolotl

*S. Dörenberger (Martinsried), R. Banchi (Martinsried), R. Uhl (Martinsried), F. Felmy (Martinsried), H. Straka (Martinsried), L. Kunz (Martinsried)*

**PP-NB-31**

Application of a reference gene set for quantitative gene expression studies in multiple avian species

*I. Adam (Berlin), C. Scharff (Berlin), A. Meyer (Berlin), A. D. Gruber (Berlin), P. Olias (Berlin)*

**PP-NB-32**

Microglomerular Synaptic Complexes in the polarization Vision Pathway of the Honeybee

*M. Held (Marburg), U. Homberg (Marburg), K. Pfeiffer (Marburg)*

**PP-NB-33**

Visual search in barn owls: From feature to conjunction search

*J. Orłowski (Aachen), F. Rohn (Aachen), P. Nikolay (Aachen), H. Wagner (Aachen)*

**PP-NB-34**

The pattern of triple cone pedicles in the anchovy retina

*K. Schulze (Munich), M. Heß (Munich)*

**PP-NB-35**

Combinatorial analysis of zebrafish olfactory sensory neurons and their primary projections shown with Ca-binding proteins

*D. Biechl (Planegg-Martinsried), S. Kress (Planegg-Martinsried), M. F. Wullmann (Planegg-Martinsried)*

**PP-NB-36**

c-Fos can be used to detect neuronal activity in the olfactory system of the firebellied toad *Bombina orientalis*

*K. Schröder (Kassel), C. Nowack (Kassel)*

**PP-NB-37**

How plastic is the neuropeptide repertoire in the *Tribolium* central olfactory pathway?

*M. Binzer (Marburg), S. Ries (Marburg), J. Kahnt (Marburg), J. Schachtner (Marburg)*

**PP-NB-38**

Identification of GABA/GAD and TKRP-immunoreactive neurons in the olfactory system of *Tribolium castaneum*

*S. F. Crombach (Marburg), P. Christ (Marburg), M. Kollmann (Marburg), M. Binzer (Marburg), J. Schachtner (Marburg)*

**PP-NB-39**

Function of adult-generated dopaminergic interneurons in the olfactory bulb glomerular layer

*W. Bywalez (Munich), M. Mörschel (Munich), P. Serr (Munich), J. Ninkovic (Neuherberg), M. Götz (Neuherberg), V. Egger (Munich)*

**PP-NB-40**

A novel Semi intact IN SITU nose-OLFActory Bulb-brainstem preparation (NOBBP) of rat

*F. Perez (Martinsried), D. Farmer (Melbourne), D. Stanic (Melbourne), M. Dutschmann (Melbourne), V. Egger (Martinsried, Regensburg)*

**PP-NB-41**

Neuroprotection and neuroregeneration in insects: in vivo and in vitro evidence for pre-vertebrate evolution of erythropoietin (EPO) signalling in tissue protection

*R. Heinrich (Göttingen), N. Miljus (Göttingen), H. Ehrenreich (Göttingen)*

**PP-NB-42**

A new method for operant conditioning in honey bees

*N. Kirkerud (Konstanz, Konstanz), D. Gustav (Konstanz), G. Galizia (Konstanz)*

**PP-NB-43**

Comparison of arthropod neuroendocrine systems

*A. Wirmmer (Ulm), A. Dünnebeil (Ulm), M. Seibold (Ulm)*

**PP-NB-44**

Neuroanatomy of the central complex in the brain of the honeybee

*A. Kaiser (Marburg), U. Homberg (Marburg), K. Pfeiffer (Marburg)*

**PP-NB-45**

Invertebrate FoxP: A case for deep homology?

*A. Schatton (Berlin), E. Mendoza (Berlin), G. Leboulle (Berlin), S. Sigrist (Berlin), C. Scharff (Berlin)*

**PP-NB-46**

Modulation and regulation of electrical synapses in the leech.

*G. Welzel (Bayreuth), S. Schuster (Bayreuth)*



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**PP-NB-47**

Neuronal tracing of cephalic nerves in the velvet worm *Euperipatoides rowelli*-implications for the evolution of the onychophoran mouth

*C. Martin (Leipzig), G. Mayer (Leipzig)*

**PP-NB-48**

The Perfect Wave- Communication between Neurons and Astrocytes by Calcium Waves in the Suprachiasmatic Nucleus (SCN) of Dsungarian Hamsters (*Phodopus sungorus*)

*S. Steinlechner (Hanover), E. Lipokatic-Takacs (Hanover)*

**PP-NB-49**

The endocannabinoid system and discrimination learning in the zebrafish

*N. Oellers (Bonn), G. von der Emde (Bonn), T. Ruhl (Bonn)*

**PP-NB-50**

Active avoidance learning and extinction of aversive memory in zebrafish (*Danio rerio*)

*A.-K. Weber (Bonn), G. von der Emde (Bonn), T. Ruhl (Bonn)*

**PP-NB-51**

Characterisation of a descending population of tyramin-/octopaminergic cells in the locust brain.

*H.-J. Pflüger (Berlin), S. Hartfil (Berlin)*

**PP-NB-52**

Adult neurogenesis in the adult beetle brain

*B. Trebels (Marburg), M. Kollmann (Marburg), J. Schachtner (Marburg)*

**PP-NB-53**

A *Drosophila* Model of Rett: Probing Cellular and Molecular Function of MECP2

*A. Williams (Tempe), C. Duch (Mainz)*

**PP-NB-54**

Mating-related odor orientation and its neuronal basis in honeybee drones

*A. S. Brandstätter (Gif-sur-Yvette, Munich), F. Bastin (Gif-sur-Yvette), J.-C. Sandoz (Gif-sur-Yvette)*

**PP-NB-55**

Reactive glia acquire stem cell properties in response to Sonic hedgehog in the injured brain

*S. Sirko (Munich), G. Behrendt (Munich), N. Plesnila (Munich, Munich), K. Grobe (Münster), L. Dimou (Munich), M. Götz (Munich)*

**PP-NB-56**

Proliferation of reactive astrocytes is enriched in juxtavascular positions

*J. Frik (Munich, La Plata), S. Bardehle (Munich), M. Krüger (Leipzig), I. Bechmann (Leipzig), L. Dimou (Munich), N. Plesnila (Munich), M. Götz (Munich)*

### **PP-NB-57**

Role of Polycomb Repressive Complex 1 (PRC1)- protein Ring1B in neuronal differentiation

*J. S. Murenu (Munich, Martinsried), S. Gascón (Munich), M. Götz (Munich)*

### **PP-NB-58**

In vivo, single cell analysis of progenitor cells' response to injury in the zebrafish telencephalon

*J. S. Barbosa (Munich, Coimbra, Portugal), E. Violette-Baumgart (Munich), M. Götz (Munich), J. Ninkovic (Munich)*

### **PP-NB-59**

Molecular mechanisms of astroglia-to-neuron conversion by forced expression of proneural genes

*G. Masserdotti (Munich), S. Gillotin (London), M. Irmeler (Munich), J. Becker (Munich), F. Guillemot (London), B. Berninger (Mainz), M. Götz (Munich)*

### **PP-NB-60**

A novel at-hook containing transcription factor, akna, promotes differentiation of neural stem cells

*P. A. Johansson (Planegg-Martinsried, Munich), K. Chinnappa (Munich), A. Gavranovic (Munich), G. Ortega (Munich), M. Götz (Munich)*

### **PP-NB-61**

Probing for NG2-glia function by limiting their proliferation in the adult brain

*S. Schneider (Munich), C. Simon (Munich), M. Irmeler (Munich), J. Beckers (Munich, Freising-Weiherstephan), G. Eichele (Göttingen), M. Götz (Munich), L. Dimou (Munich)*

### **PP-NB-62**

Choroid plexus secreted microRNAs maintain neural stem cells by regulating neurogenic fate determinants

*M. Lerch (Munich), J. Fischer (Munich), V. Zywitza (Munich), P. Johansson (Munich), M. Götz (Munich), J. Ninkovic (Munich)*

### **PP-NB-63**

Regional differences in differentiation properties highlight heterogeneity among adult ng2-glia

*F. Viganò (Munich, Milan), S. Schneider (Munich), W. Möbius (Göttingen), M. P. Abbraccio (Milan), M. Götz (Munich), L. Dimou (Munich)*

### **PP-NB-64**

Smad4 and Trim33 redundantly regulate neural stem cells in the developing cortex


*S. Falk (Munich, Zurich), E. Joosten (Zurich), V. Kaartinen (Ann Arbor), M. Götz (Munich), L. Sommer (Zurich)*

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 **PP-NB-65**

Choroid plexus secreted miRNAs maintain neural stem cells by regulating neurogenic fate determinants

*M. Pusch (Munich), J. Fischer (Munich), V. Zywitzka (Munich), P. Johansson (Munich), M. Götz (Munich), J. Ninkovic (Munich)*

 **PP-NB-66**

The BAF complex interacts with Pax6 in adult neural progenitors to establish a neurogenic cross-regulatory transcriptional network

*J. Ninkovic (Munich), A. Steiner-Mezzadri (Munich), M. Jawerka (Munich), U. Akinci (Rotterdam), G. Masserdotti (Munich), S. Petricca (Munich), J. Fischer (Munich), A. von Holst (Heidelberg), J. Beckers (Freising-Weihestephan), C. D. Lie (Munich), D. Petrik (Dallas), E. Miller (Stanford), J. Tang (Stanford), J. Wu (Dallas), V. Lefebvre (Cleveland), J. Demmers (Rotterdam), A. Eisch (Dallas), D. Metzger (Strasbourg), G. Crabtree (Stanford), M. Irmeler (Munich), R. Poot (Rotterdam), M. Götz (Munich)*



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## TALKS

Sunday, September 15th, 2013

**Invited Talk – Annika Herwig** | ⌚ 11.30 – 12.00 | 📍 A 017

*Chair: Walter Stöcker*

The regulation of seasonal adaptations in mammals: a central role for thyroid hormones?

[A. Herwig \(Hamburg\)](#)

**Internal Section Meeting – Physiology** | ⌚ 12.00 – 14.00 | 📍 A 017

**Short Presentation: Physiology I** | ⌚ 14.00 – 15.30 | 📍 A 017

*Chair: Ulrich Hoeger*

⌚ 14.00 **OP-P-1**

Are roosting bats in torpor immune to anthropogenic noise?

[J. Luo \(Munich\)](#), [B.-M. Schuller](#), [I. Borissov](#), [B. Siemers](#)

⌚ 14.15 **OP-P-2**

More than just saving energy: Torpor patterns in dormice point to hibernation as a predator avoidance strategy

[C. Bieber \(Vienna\)](#), [T. Ruf \(Vienna\)](#)

⌚ 14.30 **OP-P-3**

Structural changes of the airways are induced upon local activation of stress signalling systems

[T. Roeder \(Kiel\)](#), [K. Uliczka \(Borstel\)](#), [K. Kallsen \(Borstel\)](#)

⌚ 14.45 **OP-P-4**

Cellular stress signaling in the nematode *Caenorhabditis elegans*

[A. Keshet \(Münster\)](#), [S.A. Winter](#), [A. Mertenskötter](#), [P. Gerke](#), [R. Paul](#)

⌚ 15.00 **OP-P-5**

Comparative transcriptomic approaches reveal a complex evolutionary history of matrix metalloproteinases in Diptera

[S. Martin \(Bonn\)](#), [K. Meusemann](#), [M. Petersen](#), [X. Zhou](#), [A. Vilcinskis](#), [B. Misof](#), [L. Podsiadlowski](#)

⌚ 15.15 **OP-P-6**

Thermoregulatory strategies in pinnipeds

[N. Erdsack \(Rostock\)](#), [G. Dehnhardt \(Rostock\)](#), [W. Hanke \(Rostock\)](#)

Monday, September 16th, 2013

**Invited Talk – Bettina Zeis** | 🕒 11.00 – 11.30 | 📍 A 021

Chair: Walter Stöcker

Coping with variable oxygen and temperature conditions: differential protein expression in *Daphnia* and consequences for the animals' physiology

B. Zeis (Münster), R. Paul

**Short Presentations: Physiology II** | 🕒 14.00 – 15.30 | 📍 A 017

Chair: Ulrich Hoeger

🕒 14.00 **OP-P-7**

Mutations in the na, k-atpase generate adaptations to cardenolides

S. Dalla (Hamburg), S. Dobler (Hamburg)

🕒 14.15 **OP-P-8**

Transporting toxic cargo: molecular adaptations to secondary host plant compounds in leaf beetles

M. Baum (Hamburg), M. Körten, S. Dobler

🕒 14.30 **OP-P-9**

Synthetic derivatives of the sponge alkaloid ageladine a as tissue and cell specific stains for live imaging of *Marcrostomum lignano*

R. Silalahi (Bremerhaven), T. Goetz (Bremerhaven), W. Loa Kum Cheung (Sydney), P. Karuso (Sydney), U. Bickmeyer (Bremerhaven)

🕒 14.45 **OP-P-10**

Chopping actin stress fibers: Remodeling of the actin cytoskeleton in human airway epithelial cells by a bacterial toxin, *S. aureus* hemolysin A

I. Hermann (Greifswald), J.-P. Hildebrandt (Greifswald), S. Ziesemer (Greifswald), H. Kische (Greifswald), S. Räh (Greifswald)

🕒 15.00 **OP-P-11**

Long telomeres better predict survival and fitness proxies than short telomeres in a long-lived seabird

C. Bauch (Wilhelmshaven), P.H. Becker, S. Verhulst (Groningen)

🕒 15.15 **OP-P-12**

Linking melanism to brain development: Expression of a melanism-related gene in barn owl feather follicles predicts sleep ontogeny

M. Scriba (Lausanne), A.-L. Ducrest, I. Henry, A.L. Vysotski, N.C. Rattenborg, A. Roulin

## POSTERS

### PP-P-1

Response of enzymatic antioxidant defense to temperature in Nile tilapia liver and white muscle

*M. Abdelmoneim Mostafa Hegazi (Tanta), Z. Ibraheim Aly Attia (Tanta)*

### PP-P-2

Development of in vitro and in vivo assays for the analysis of antibodies against the poultry red mite *Dermanyssus gallinae*

*G. R. Makert (Leipzig), S. Chabierski (Leipzig), S. Vorbrüggen (Leipzig), M. E. Krautwald-Junghanns (Leipzig), F. Mozafar (Cuxhaven), M. Voss (Cuxhaven), S. Ulbert (Leipzig)*

### PP-P-3

Globins in a shell:

The globin repertoire of the Chinese soft-shelled turtle (*Pelodiscus sinensis*)

*K. Schwarze (Hamburg), T. Burmester (Hamburg)*

### PP-P-4

Heat shock proteins 90 (HSP90s) of the microcrustacean *Daphnia pulex*

*N. Hoffschröder (Münster), E. Klumpen (Münster), E. Dohmen (Münster), A. Keshet (Münster), D. Becker (Münster), B. Zeis (Münster), R. Paul (Münster)*

### PP-P-5

Functions of HIF-1 (hypoxia-inducible factor 1) in *Daphnia pulex* and *Daphnia magna* during temperature changes or starvation

*E. Klumpen (Münster), I. Buers (Münster), M. Rüppel (Münster), B. Zeis (Münster), R. Paul (Münster)*

### PP-P-6

P38 MAPK (PMK-1) and DAF-2 signaling as well as ABC transporters provide multiple protection of *Caenorhabditis elegans* against cadmium stress

*S. A. Winter (Münster), A. Keshet (Münster), A. Mertenskötter (Münster), V. Brinkmann (Münster), R. Paul (Münster)*

### PP-P-7

How to live on Stinky Willie

*R. Romey (Hamburg), A. Donath (Bonn), S. Dobler (Hamburg)*

### PP-P-8

Daily ambient temperature cycles influence the expression of spontaneous daily torpor (sdt) in juvenile djungarian hamsters (*phodopus sungorus*)

*J. Bank (Hanover), V. Diedrich (Hanover), S. Steinlechner (Hanover)*

### PP-P-9

Deliberation process preceding a movement decision in human motor cortices revealed by high-density EEG

*D. F. Kutz (Munich), B. M. 't Hart (Munich), W. Hürster (Ulm), F. P. Kolb (Munich), J. Nida-Rümelin (Munich)*

**PP-P-10**

Insights on localized ros formation and ph in isolated bivalve gills: a live-imaging approach

*G. A. Rivera-Ingraham (Bremerhaven), I. Rocchetta (Bremerhaven, Buenos Aires), U. Bickmeyer (Bremerhaven), D. Abele (Bremerhaven)*

**PP-P-11**

Spontaneous daily torpor versus fasting-induced torpor:  
Further respirometric characterization in Dsungarian hamsters (*Phodopus sungorus*)

*V. Diedrich (Hanover), S. Steinlechner (Hanover)*

**PP-P-12**

A high-fat diet does not impair weight loss during short-day acclimation in seasonal Djungarian hamsters

*F. Scherbarth (Hanover)*

**PP-P-13**

What the expression of energy metabolism genes in the cerebral cortex of the hooded seal tells about the brain of a diving mammal

*M. L. M. Hoff (Hamburg), N. Czech-Damal (Hamburg), M. Schneuer (Hamburg), L. Folkow (Tromsø), T. Burmester (Hamburg)*

**PP-P-14**

Structure-activity relationship of akh analogues in a sphingid moth

*H. Marco (Rondebosch), G. Gäde (Rondebosch)*

**PP-P-15**

The adipokinetic peptides of the most basal insect orders, archaeognatha and zygentoma: a glimpse into the evolution of the AKH family?

*G. Gäde (Rondebosch), P. Simek (Ceske Budejovice), H. Marco (Rondebosch)*

**PP-P-16**

Intra-hypothalamic microdialysis in djungarian hamsters (*Phodopus sungorus*): a novel approach to study seasonal adaptations in mammals

*J. Bank (Hamburg), A. Herwig (Hamburg)*

**PP-P-17**

Quantitative Analysis of Gut Associated Immunity in *Manduca sexta*

*Y. Kühnel (Gießen), C.-R. von Bredow (Gießen), J. Dvořák (Prague), F. Škanta (Prague), T. E. Trenczek (Gießen)*

**PP-P-18**

Evaluation of wtCFTR-mRNA transfection efficiency in Human Airway Cells

*E. Fernandez Fernandez (Muenster), E. Casser (Muenster), K. Tomczak (Muenster), N. Bangel-Ruland (Muenster), W.-M. Weber (Muenster)*





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 **PP-P-19**

Modulation of enac expression in epithelial cells using dexamethasone

*L. Höben (Muenster), A.-K. Woiki (Muenster), N. Bangel-Ruland (Muenster), K. Tomczak (Muenster), W.-M. Weber (Muenster)*

 **PP-P-20**

Filter properties of artificial lateral line systems

*F. Kaldenbach (Bonn), A. Klein (Bonn), H. Bleckmann (Bonn)*

 **PP-P-21**

Antimicrobial peptide diversity among Hexapoda as revealed by a detailed survey of transcriptome data from more than 300 species

*P. Lesny (Bonn), M. Petersen (Bonn), K. Meusemann (Bonn), X. Zhou (Beijing), A. Vilcinskas (Giessen, Gies-sen), B. Misof (Bonn), L. Podsiadlowski (Bonn)*

 **PP-P-22**

Water Flow Alongside Realistic Fish Models

*M. Weger (Aachen), J. Hellinger (Bochum), A. Klein (Bonn), H. Bleckmann (Bonn)*

 **PP-P-23**

Tricaine (MS-222) as an effective anesthetic agent for blocking sensory-motor responses in *Xenopus laevis* tadpoles.

*C. Ramlochansingh (Planegg-Martinsried), H. Straka (Planegg-Martinsried), F. Branoner (Planegg-Mar-tinsried), B. Chagnaud (Planegg-Martinsried)*



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## TALKS

Sunday, September 15th, 2013

**Invited Talk – Tanja Schwander** | ⌚ 11.00 – 11.30 | 📍 A 119

*Chair: Sven Bradler*

Mechanisms underlying transitions from sexual reproduction to parthenogenesis in insects

*T. Schwander (Lausanne)*

**Short Presentations: Zoological Systematics I** | ⌚ 14.00 – 15.30 | 📍 A 119

*Chair: Lars Podsiadlowski (Bonn)*

14.00 **OP-ZS-1**

Lobophytum, sarcophyton: molecular identification of two widespread *Alcyoniids* genera (Octocorallia: Alcyonacea) from western australian shallow-water

*A. Polisenò (Munich), M. Bryce (Welshpool DC), S. Vargas (Munich), G. Wörheide (Munich, Munich, Munich)*

⌚ 14.15 **OP-ZS-2**

Slime protein profiling – a non-invasive tool for species identification in Onychophora

*A. Baer (Leipzig), I. de Sena Oliveira, G. Mayer*

⌚ 14.30 **OP-ZS-3**

10000 birds on one tree? Lessons from molecular phylogenetics of a well-studied taxon

*L. Podsiadlowski (Bonn)*

⌚ 14.45 **OP-ZS-4**

A species level phylogeny of flamingos (Phoenicopteriformes) supports the algae feeding specialists as a monophylum and implies two recent long-range dispersal events

*H. Giebner (Bonn), A. Manegold (Frankfurt), L. Podsiadlowski*

⌚ 15.00 **OP-ZS-5**

Phylogeography and taxonomy of *Polygordius* species and the colonization of the Mediterranean Sea

*P. Ramey-Balci (Gebze-Kocaeli), D. Fiege (Frankfurt), T. Struck (Bonn)*

⌚ 15.15 **OP-ZS-6**

Hybridization versus variability- what determines morphology in the Atlantic brachiopod genus *Terebratulina*?

*N. Ebeling (Berlin), C. Lüter (Berlin)*

Monday, September 16th, 2013

**Invited Talk – Dirk Erpenbeck** | 🕒 11.30 – 12.00 | 📍 A 021

Chair: Michael Gerth

The slow and the furious- sponge evolution revisited

*D. Erpenbeck (Munich)*

**Short Presentations: Zoological Systematics II** | 🕒 14.00 – 15.30 | 📍 A 119

Chair: Carsten Lüter

🕒 14.00 **OP-ZS-7**

Current affairs in deep non-bilaterian phylogenomics

*G. Wörheide (Munich), T. Nosenko, M. Dohrmann*

🕒 14.15 **OP-ZS-8**

New types of bacterial endosymbioses in gastropods

*G. Haszprunar (Planegg), A. Hawe, J. Judge (Berkeley)*

🕒 14.30 **OP-ZS-9**

Analyses of the glycerid venom cocktail

*S. Richter (Leipzig), F. Schwarz, L. Hering, B. von Reumont, R. Jenner, G. Schiavo, C. Bleidorn*

🕒 14.45 **OP-ZS-10**

Crypsis and lability among eastern Pacific octocorals: implications for systematics and evolutionary research

*S. Varqas (Munich), S. Ament, O. Breedy, G. Wörheide*

🕒 15.00 **OP-ZS-11**

The enigma from the deep – Integrative study of a remarkable heterobranch sea slug (Mollusca) from off Mozambique

*T. Neusser (Planegg-Martinsried), B. Brenzinger, E.E. Strong, M. Schrödl*

🕒 15.15 **OP-ZS-12**

Base by base and scale by scale: defining the biodiversity of meiofaunal solenogastres (Mollusca) via integrative taxonomy

*F. Bergmeier (Martinsried), R. Hochberg (Lowell), K.M. Kocot (Auburn), J. Norenburg (Washington, DC), C. Todt, G. Haszprunar (Munich), K.M. Jörger*

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## POSTERS

### PP-ZS-1

Towards a global inventory of animal species

*T. Kunze (Reading), Y. Roskov (Reading)*

### PP-ZS-2

The catalogue of life: plant species for zoologists

*Y. Roskov (Reading), T. Kunze (Reading)*

### PP-ZS-3

*Pallenopsis patagonica* (Hoek, 1881) (Pycnogonida)- a species complex revealed by morphology and DNA barcoding

*A. Weis (Munich), R. Meyer (Munich), L. Dietz (Bochum), J. Dömel (Bochum), F. Leese (Bochum),*

*R. Melzer (Munich)*

### PP-ZS-4

A hotspot of marine diversity at the end of the world- status and perspectives

*R. Meyer (Munich), D. Henkel (Kiel), C. Spano (Valparaiso), R. Melzer (Munich), K. M. McConnell (Puerto Montt), U. Pörschmann (Puerto Montt), D. Bellhoff (Puerto Montt), G. Försterra (Valparaiso), V. Häussermann (Valparaiso)*

### PP-ZS-5

The stick insects of Madagascar: Ancient lineages or recent adaptive radiation?

*J. Goldberg (Göttingen), K. Stey (Göttingen), S. Bradler (Göttingen)*

### PP-ZS-6

A Glimpse Into Early Evolution of Heterobranch Gastropods- Microanatomy of Rhodopomorph Seaslugs and Murchisonellid Snails

*B. Brenzinger (Munich), N. G. Wilson (Sydney), G. Haszprunar (Munich), M. Schrödl (Munich)*

### PP-ZS-7

Cleaning up the leftovers: first molecular and morphological insights into the phylogeny and biodiversity of antarctic uristidae (Crustacea, Amphipoda, Lysianassoidea)

*M. A. Seefeldt (Bochum), T. Feldkamp (Bochum), C. Held (Bremerhaven), R. Tollrian (Bochum), F. Leese (Bochum)*

### PP-ZS-8

A Multilocus Perspective of The Taxonomic Status of The Dimorphic Squat Lobster (*Munida gregaria*; Decapoda: Galatheididae)

*C. Wang (Bremerhaven), C. Held (Bremerhaven)*

### PP-ZS-9

Assessing efficiency of species identification for two mitochondrial markers in the spider genus *Oedothorax* (Erigoninae, Linyphiidae, Araneoidea)

*L. Lopardo (Greifswald), G. Uhl (Greifswald)*

### PP-ZS-10

The enemy inside your sea slug- endoparasites of the family slanchnotrophidae (Copepoda)

*M. Schrödl (Munich), R. Anton (Munich)*

### PP-ZS-11

Barcoding fauna bavarica: Gastropoda

*K. Koller (Munich), M. Schrödl (Munich)*

### PP-ZS-12

Differentiating between variability and variation in Spinicaudata (Crustacea: Branchiopoda) using the example of *Eocycticus*

*L. Tippelt (Rostock), M. Schwentner, S. Richter*

### PP-ZS-13

Transcriptome analyses in onychophora suggest two pigment dispersing factor genes in the last common ancestor of Panarthropoda

*L. Hering (Leipzig, Germany), H. Dirksen (Stockholm, Sweden), G. Mayer (Leipzig, Germany)*

### PP-ZS-14

Preliminary data on geographic structure and genetic connectivity in the endangered Brazilian freshwater crayfish *Parastacus brasiliensis* (Crustacea: Parastacidae)

*I. Miranda (Regensburg), M. P. Almerão (Porto Alegre), P. B. Araujo (Porto Alegre), C. D. Schubart (Regensburg)*

### PP-ZS-15

A New Piece in the Puzzle for the Riverine Slugs of the Acochliidiidae (Gastropoda: Panpulmonata: Acochlidia)

*B. Brenzinger (Munich), T. P. Neusser (Munich), M. Glaubrecht (Berlin), K. M. Jörger (Munich), M. Schrödl (Munich)*

### PP-ZS-16

Reconstructing the base of the annelid tree using transcriptomics

*A. Weigert (Leipzig), C. Helm (Leipzig), M. Meyer (Leipzig), B. Nickel (Leipzig), G. Purschke (Osnabrueck), K. M. Halanych (Auburn), S. Santos (Auburn), T. H. Struck (Bonn), C. Bleidorn (Leipzig)*

### PP-ZS-17

Acochlidian sea slugs (Mollusca) on shore leave- another invasion of the land

*T.P. Neusser (Planeegg-Martinsried), Y. Kano, M. Schrödl*

# SATELLITE SYMPOSIUM I – NEUROETHOLOGY

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Thursday, September 12th, 2013 | 13.00 – 20.45 | A 125

13:00 Opening Remarks

13.15 **OP-SS I-1**

Neural correlates for volitional vocal behavior in monkeys

*S. Hage (Tübingen), A. Nieder*

13.45 **OP-SS I-2**

Neural representation of echo-acoustic flow fields in bats

*U. Firzloff (Freising), S. Bartenstein*

14.15 **OP-SS I-3**

Navigation via echo-acoustic mirror images

*D. Genzel (Planeegg), A. Warmbold, S. Hoffmann, U. Firzloff, L. Wiegrebe*

15.15 **OP-SS I-4**

Nocturnal orientation in a diurnal beetle

*J. Smolka (Lund), E. Baird, M.J. Byrne, B. el Jundi, E.J. Warrant, M. Dacke*

15.45 **OP-SS I-5**

Gait parameters at different walking speeds in the desert ant, *Cataglyphis fortis*

*H. Wolf (Ulm), V. Wahl, M. Wittlinger*

16.15 **OP-SS I-6**

Transfer of optic flow information between the eyes and between odometers in the desert ant *Cataglyphis bicolor*

*M. Wittlinger (Ulm), K. Schwannauer, S. Pfeffer*

17.15 **Key Note Talk**

What do fish have to say about the evolution of vocal behaviors and neural circuits?

*A. Bass (Cornell University)*

**Postersession** | 18.15 – 20.45 | Thomas Mann Hall, 1st Floor

## CONTINUATION SATELLITE SYMPOSIUM I – NEUROETHOLOGY

Friday, September 13th, 2013 | 🕒 09.00 – 14.00 | 📍 A 125

### 🕒 09.00 **OP-SS I-7**

FoxP1, FoxP2 and FoxP4 expression, co-localization, interaction and their importance in song-learning in the Zebra Finch (*Taeniopygia guttata*)

*E. Mendoza (Berlin), K. Tokarev, M. Weiss, D. Düring, P. Barschke, N. Arpenik, U. Kobalz, C. Scharff*

### 🕒 09.30 **OP-SS I-9**

Light-dependency of cryptochrome activation in the retina of chickens

*C. Nießner (Frankfurt), R. Wiltschko*

### 🕒 10.00 **OP-SS I-8**

Orientation experiments in view of the cryptochrome cycle

*R. Wiltschko (Frankfurt am Main), M. Ahmad (Paris), W. Wiltschko (Frankfurt am Main)*

### 🕒 11.00 **OP-SS I-10**

How is the reward magnitude in classical conditioning of the honeybee (*Apis mellifera*) translated into memory?

*D. Eisenhardt (Berlin), K. Marter*

### 🕒 11.30 **OP-SS I-11**

Sensorimotor patterns during electrolocation behavior of mormyrid fish

*V. Hofmann (Bielefeld), J.I. Sanguinetti-Scheck (Montevideo), B. Geurten (Göttingen), L. Gómez-Sena (Montevideo), J. Engelmann (Bielefeld)*

### 🕒 12.45 **Key Note Talk**

The electrosensory world of weakly electric fish: from laboratory experiments to the natural habitat.

*Rüdiger Krahe (McGill)*

*sponsored by BCCN*

### 🕒 13.45 **Closing Remarks**



## SYMPOSIUM II – PERSPECTIVES IN ANIMAL PHYSIOLOGY

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Thursday, September 12th, 2013 | 09.00 – 20.00 | A 119

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09.00 – 10.45 Bettina Zeis, Münster (Chair)

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09.00 **OP-SS II-1**

Transition of vertebrates from water to land, with particular emphasis on the evolution of respiratory proteins

*T. Burmester (Hamburg)*

09.45 **OP-SS II-2**

Dodecahedral acetylcholine-binding protein in the hemolymph of the planorbid snail *Biomphalaria glabrata*: Structure and perspectives

*J. Markl (Mainz)*

10.15 **OP-SS II-3**

A proteolytic web controls fertilization of the mammalian egg

*W. Stöcker (Mainz), K. Karmilin, A. Hildebrand, Y. Gottenbusch, H. Westphal, I. Yiallourous, E. Dietzel, J.*

*Wessling, J. Floehr, C. Schäfer, R. Weiskirchen, W. Jahnen-Dechent*

11.15 – 12.30 Annika Herwig, Hamburg (Chair)

11.15 **OP-SS II-4**

Functional Characterization of Opine Dehydrogenases of Some Invertebrate Animals

*M.K. Grieshaber (Düsseldorf), S. Smith (Düsseldorf)*

11.45 **OP-SS II-5**

The Diversity of Hirudins

*C. Müller (Greifswald), K. Mescke, S. Liebig, S. Lemke, J.-P. Hildebrandt (Greifswald)*

12.15 **OP-SS II-6**

Do salivary proteins from hematophagous leeches reach pharmacologically effective concentrations in the host?

*S. Lemke (Greifswald), C. Müller, E. Lipke, G. Uhl, J.-P. Hildebrandt*

14.00 – 17.00 Jan-Peter Hildebrandt, Greifswald (Chair)

14.00 **OP-SS II-7**

Lipid and phase specific interaction of the pore forming toxin Hla from *S.aureus* with lipid membranes

*M. Schwiering, N. Hellmann (Mainz)*

14.30 **OP-SS II-8**

The impact of aquaporines in the osmotic stress response of *C. elegans*

*A.-K. Rohlfing (Potsdam)*

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🕒 15.00 **OP-SS II-9**

Studies on the cellular stress response of the model organisms *Caenorhabditis elegans* and *Daphnia*: a short overview of the current status of research

*R. Paul (Münster), A. Keshet, B. Zeis, N. Hoffschroer, E. Klumpen, S.A. Winter*

🕒 16.00 **OP-SS II-10**

Heat shock proteins 90 (HSP90s) of the microcrustacean *Daphnia pulex*

*N. Hoffschroer (Münster), E. Klumpen, E. Dohmen, A. Keshet, D. Becker, B. Zeis, R. Paul*

🕒 16.20 **OP-SS II-11**

Functions of HIF-1 (hypoxia-inducible factor 1) in *Daphnia pulex* and *Daphnia magna* during temperature changes or starvation

*E. Klumpen (Münster), I. Buers, M. Ruppel, B. Zeis, R. Paul*

🕒 16.40 **OP-SS II-12**

P38 MAPK (PMK-1) and DAF-2 signaling as well as ABC transporters provide multiple protection of *Caenorhabditis elegans* against cadmium stress

*S.A. Winter (Münster), A. Keshet, A. Mertenskötter, V. Brinkmann, R. Paul (Münster)*

**Postersession (Poster & Beer)** 🕒 17.00 – 20.00 | 📍 Thomas Mann Hall, 1<sup>st</sup> Floor

## CONTINUATION SATELLITE SYMPOSIUM SS II – PERSPECTIVES IN ANIMAL PHYSIOLOGY

Friday, September 13th, 2013 | 🕒 09.00 – 12.30 | 📍 A 119

🕒 09.00 – 10.30 Martin Jastroch, Munich (Chair)

🕒 09.00 **OP-SS II-13**

Modelling metabolic diseases in simple organisms – does the fruit fly help us to understand obesity, diabetes or longevity?

*T. Roeder (Kiel)*

🕒 09.45 **OP-SS II-14**

Odoriferous Defensive Stink Gland Transcriptome and Systematic Reverse Genetics to Identify Novel Genes Necessary for Quinone Synthesis in the Red Flour Beetle, *Tribolium castaneum*

*E.A. Wimmer (Göttingen), J.W. Li, S. Lehmann*

🕒 10.15 **OP-SS II-15**

Molecular and pharmacological characterization of serotonin 5ht2 $\alpha$  and 5ht7 receptors in the salivary glands of the blowfly *calliphora vicina*

*W. Blenau (Oberursel), C. Röser, A. Baumann, B. Walz, O. Baumann*

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🕒 11.15 – 12.30 Thorsten Burmester, Hamburg (Chair)

🕒 11.15 **OP-SS II-16**

Tyrosinase and hemocyanin: new insights in activation and catalysis

*E. Jaenicke (Mainz), P. Fronk, H. Hartmann, H. Decker (Mainz)*

🕒 11.45 **OP-SS II-17**

Ovastacin, a cortical granule protease, is not oocyte specific

*H. Westphal (Mainz), K. Karmilin, A. Hildebrand, I. Yiallourous, W. Stöcker*

🕒 12.05 **OP-SS II-18**

Metalloprotease mediated cleavage of GARP A Receptor for latent TGF-beta

*S. Fridrich (Mainz), M. Leuck, M. Felten, W. Stöcker*



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Friday, September 13th, 2013 | 09.00 – 13.00 | A 021

🕒 09.00 **OP-SS III-1**

Reconstructing neural circuits in the fly visual system with serial-block-face-scanning-EM

*C. Kapfer (Martinsried), K. Boergens, M. Helmstaedter, A. Borst*

🕒 09.25 **OP-SS III-2**

Disentangling retinal connectomics with 3D electron microscopy

*M. Heß (Planeqq-Martinsried), P. Koch, M. Scheungrab, G. Wanner*

🕒 09.50 **OP-SS III-3**

Synchrotron tomographies of early miocene freshwater ostracods (Crustacea) with soft part preservation from the bitesantennary site; NW Queensland; Australia

*R. Matzke-Karasz (Munich), R.J. Smith (Kusatsu, Shiga), J.V. Neil, R. Symonova, L. Morkovsky, P. Cloetens, P. Tafforeau*

🕒 10.15 **OP-SS III-4**

Geometric morphometrics of waterfleas

*S. Kruppert (Bochum), M. Rabus, L. Weiss, M. Horstmann, C. Laforsch, R. Tollrian*

🕒 10.40 **OP-SS III-5**

Structural conservation versus contrast: insights into practical issues of serial-block-face-imaging and EM-reconstruction of arthropod sensilla

*C. Müller (Greifswald), T. Witschel (Greifswald), T. Hörschemeyer (Göttingen), M. Laue (Berlin), A. Sombke (Greifswald)*

🕒 11.30 **OP-SS III-6**

Serial Block-Face imaging and its potentials for reconstructing diminutive structures – a case study from arthropods

*E. Lipke (Greifswald), T. Hörschemeyer (Göttingen), A. Pakzad, C. Booth, P. Michalik*

🕒 11.55 **OP-SS III-7**

Automatic large scale volume assembly from series of ultra-thin sections

*S. Saalfeld (Dresden), R. Fetter, A. Cardona, P. Tomancak*

🕒 12.20 **OP-SS III-8**

Combining micro-CT, light microscopy and TEM in 3D

*S. Handschuh (Vienna), N. Baeumler (Munich), T. Schwaha, B. Ruthensteiner*

## Vorschau – Tagung 2014 in Göttingen

107. Jahrestagung der Deutschen Zoologischen Gesellschaft in Göttingen  
vom Mi. 10. – Sa. 13. September 2014

organisiert von Martin Göpfert, Stefan Scheu, Ernst Wimmer

Erste Informationen:

Die 107. Jahrestagung der Deutschen Zoologischen Gesellschaft (DZG), der wichtigsten Tagung für Zoologen in Deutschland, findet vom Mi. 10. – Sa. 13. September 2014 an der Georg-August-Universität Göttingen statt.

In Zusammenarbeit mit den Fachgruppen der DZG werden hochkarätige internationale Referenten gewonnen werden. Die Referenten werden aus verschiedenen Bereichen der Zoologie einen Einblick in den aktuellen Wissensstand der modernen Zoologie geben. Teilnehmerinnen und Teilnehmer können durch Poster oder Kurzvorträge ihre Forschungsprojekte vorstellen. Die DZG-Jahrestagung bietet vor allem jungen Wissenschaftlern ein hervorragendes Forum zur Präsentation Ihrer Forschungsergebnisse.

Die Georg-August-Universität Göttingen spielt eine bedeutende Rolle in der Geschichte der deutschen Zoologie. Besonders hervorzuheben sind Johann Friedrich Blumenbach (Anatom, Zoologe und Anthropologe; Begründer der Zoologie und Anthropologie: „Handbuch der vergleichenden Anatomie und Physiologie“, 1804), Ernst Ehlers (Zoologe und Präsident der DZG von 1894 bis 1895), Alfred Kühn (Zoologe, Genetiker, und Entwicklungsphysiologe; Begründer des Lehrbuchs „Grundriß der Allgemeinen Zoologie“, 1922), Peter Ax (Zoologe und wichtiger deutscher Vertreter des Phylogenetischen Systematik: „Das phylogenetische System“, 1984).

Die Deutsche Zoologische Gesellschaft und die wissenschaftliche Leitung mit Martin Göpfert (Zelluläre Neurobiologie), Stefan Scheu (Tierökologie) und Ernst Wimmer (Entwicklungsbiologie) laden Sie herzlich zur Jahrestagung 2014 ein.

Alle aktuellen Meldungen zur Tagung 2014 unter:  
[http://www.dzg-ev.de/de/jahrestagung/2014\\_goettingen\\_107/2014\\_goettingen.php](http://www.dzg-ev.de/de/jahrestagung/2014_goettingen_107/2014_goettingen.php)

Abstractbände und Bilder der letzten Tagungen finden Sie unter:  
<http://www.dzg-ev.de/de/jahrestagung/jahrestagung.php>

Zukünftige Tagung:  
108. Tagung 2015: Graz  
109. Tagung 2016: Kiel



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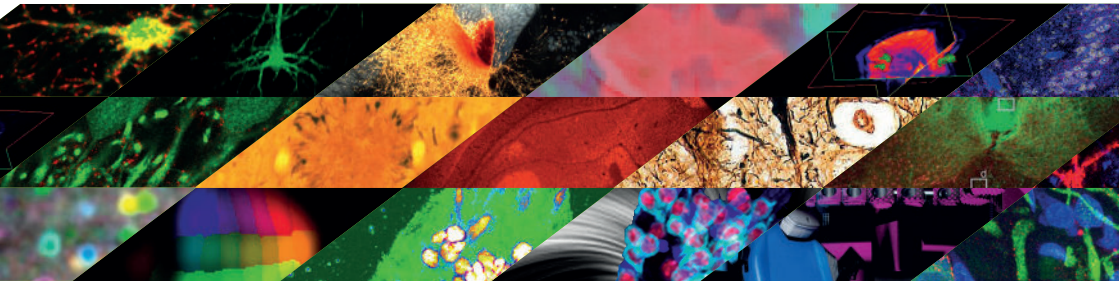
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# 106th Annual Meeting of the German Zoological Society

Ludwig-Maximilians-Universität München

Geschwister-Scholl-Platz 1, 80539 Munich, Germany

## Program







# Renes/Viscum comp. PLV bei chronischer Niereninsuffizienz

**Einfach**

Wirkstoffkombination in 1 Ampulle

**Wirksam**

in >75% der über 8.500 erfassten Fälle p.a. (Praxiserhebung 2003)

**Zugelassen**

zur Therapie der chronischen Niereninsuffizienz

Renes/Viscum comp. PLV: Flüssige Verdünnung zur Injektion für Tiere: Pferde, Hunde, Katzen. Anwendungsgebiete: Entsprechend der anthroposophischen Naturerkenntnis: Zur Anregung der Regenerations- und Gestaltungskräfte in der Niere bei akuten und chronischen Ausscheidungsstörungen, z.B. unterstützend bei Niereninsuffizienz. Zusammensetzung: 1 ml enthält: Wirkstoffe: Apis mellifica ex animale toto GI Dil. D31 (HAB, Vs. 41c) 0,1 g; Equisetum arvense ex herba ferm Dil. D14 (HAB, Vs. 35b) 0,1 g; Renes bovis GI Dil. D6 (HAB, Vs. 41a) 0,1 g; Veratrum album e radice ferm Dil. D5 (HAB, Vs. 33c) 0,1 g; Viscum album (Mali) e planta tota ferm Dil. D14 (HAB, Vs. 34i) 0,1 g; (Gemeinsam potenziert über 3 Stufen); Sonstige Bestandteile: Natriumchlorid, Natriumhydrogencarbonat, Wasser für Injektionszwecke. Dosierung und Art der Anwendung: Zur subkutanen Injektion. Tagesdosis: Pferd: 10 ml; Hund, Katze: 1 ml. Jungtiere erhalten jeweils höchstens die Hälfte der Dosis. Die Injektion der Tagesdosis erfolgt im Regelfall jeden 2. Tag bis zur Besserung. Bei perakutem bzw. akutem Krankheitsverlauf mehrmals täglich, bei chronischem Krankheitsverlauf in 2- bis 4tägigem Abstand. Wartezeit Pferd: Essbare Gewebe, Milch: 0 Tage. Apothekenpflichtig. Handelsform: 10 Ampullen mit je 1 ml; 5 Ampullen mit je 10 ml.



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