

**Joint Meeting of the German and Israeli Societies  
of Developmental Biology  
Vienna, February 17-20, 2019**

<https://gfe2019.univie.ac.at/home/>

**Organizers**

Ulrich Technau, Eli Arama

**Co-Organizers**

Michael Brand, Fred Berger, Elly Tanaka, David Sprinzak, Peleg Hasson

GfE <https://www.vbio.de/gfe-entwicklungsbiologie>

IsSDB <http://issdb.org>

Gesellschaft für Entwicklungsbiologie e.V.

Geschäftsstelle: Dr. Thomas Thumberger

Centre for Organismal Studies

Universität Heidelberg

Im Neuenheimer Feld 230

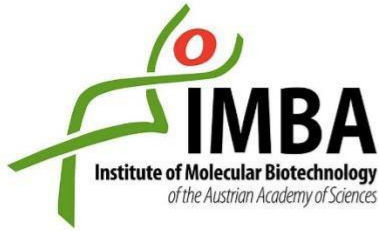
69120 Heidelberg

E-mail: [thomas.thumberger@cos.uni-heidelberg.de](mailto:thomas.thumberger@cos.uni-heidelberg.de)

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## Sponsors



# General information

## Venue

Campus of the University of Vienna

Spitalgasse 2, 1090 Vienna

Enter GPS coordinates 48.217146, 16.353164 with a navigation app like Google Maps or similar or scan the QR code on the map below with your phone and follow the link.

## Getting there

The venue is located in the “Old general hospital” or “Altes AKH” in the 9<sup>th</sup> district of Vienna. It is accessible by trams 5 and 33 from the “green” U4 subway line (station Friedensbrücke) and by trams 43 and 44 from the “brown” U6 subway line (station Alser Straße) or the “purple” U2 subway line (station Schottentor/Universität).



**From the airport**, you can take an ÖBB local train line S7 in the direction of Floridsdorf (travels at 18 and 48 minutes past every hour, the journey takes approximately 25 minutes, single ticket €4.20 including further transportation in Vienna) or CAT (travels at 09 and 39 minutes past every hour, journey time approximately 15 minutes, single ticket €12, return €21, additional ticket is required for the public transportation in Vienna) to Wien-Mitte. At Wien-Mitte, change to the “green” subway line U4 in the direction of Heiligenstadt. Exit at the Friedensbrücke station, change to tram 5 in the direction of Westbahnhof or tram 33 in the direction of Josefstädter Straße. Exit at Lazarettgasse or Lange Gasse and walk to the venue. The whole journey will take about an hour.

**If you come by long distance train**, it is advisable to get off at the station Wien-Meidling. Most trains stop at this much smaller station before continuing to Wien Hauptbahnhof. Change to the “brown” subway line U6 in the direction of Floridsdorf. Exit at Alser Straße and change to the tram 43 (more frequent) or 44 in the direction of Schottentor. Exit at Lange Gasse and walk to the venue. Journey time 25-30 minutes.

If you exit your train at Wien Hauptbahnhof, take tram line D in the direction of Nußdorf. Exit at Schottentor and either change to tram 43 or 44 and exit at Lange Gasse or just walk directly from Schottentor (approximately 900 m). Journey time will also be around 30 minutes.

**Taxi:** It is advisable to pre-order a taxi (e.g. <http://www.flextaxi-flughafentaxi.at/> or call +436603620746) for travel to or from the airport. It costs 25-30 EUR. A taxi taken directly in front of the airport will cost around 60 EUR. Travel time Airport – City center is between 30-45 min, depending on traffic.

**If you come by car**, and unless your hotel provides private parking, you are well-advised to leave it either in one of the Park and Ride lots such as the one near U4 Hütteldorf or to park in the 19<sup>th</sup> district, where it is free. In central districts, such as 9<sup>th</sup>, parking on the street will not be possible for you for longer than 2 hours from 07:00 till 22:00 and will require purchasing parking tickets at gas stations or at tobacconists.

**Transportation in town.** You can purchase your tickets in machines located at every railway or subway station. You will be able to choose English on the first screen. The options include single journey tickets (bus/tram/subway/S-Bahn changes are allowed; all Vienna is a single tarif zone) as well as 24, 48 and 72 hour tickets and week tickets (always start from Monday). Single journey tickets can also be bought at a slightly higher price in ticket machines on the trams. No tickets can be purchased in city buses.

### **Useful links for planning your journey**

Austrian railway network planner: <http://fahrplan.oebb.at/bin/query.exe/en> or scan the QR below and follow the link.



Wiener Linien planner for transportation in town: <https://www.wienerlinien.at/eporta13/> or scan the QR below and follow the link.



### **Registration**

Registration will open at 14:00 on Sunday, February 17<sup>th</sup> in the lobby of the venue.

### **Cloak room**

The venue has a cloak room available for you.

### **Information for speakers**

The venue has a PC, which can be used for the presentations. In this case, please upload your talks in **.ppt**, **.pptx** or **.pdf** format latest in the break before the session. For morning talks, presentations have to be uploaded in the evening.

If you wish to bring your own laptop, please make sure that it has a VGA or HDMI port or bring a suitable adapter with you. This is especially relevant for Mac users.

**In order to avoid delays by switching between computers, please remember that speakers using their own laptops must check that their computer recognizes the projector and that the projected picture is alright latest in the break before the session! There will be always someone to assist you with checking this.**

Please have a backup copy of your presentation on a USB device with you in case something goes wrong.

### **Poster sessions**

Poster sessions will be taking place in the hallway to the left and to the right of the main lecture hall and in the adjoining room behind it. Please observe the markings and consult the floor plan below. All posters can be put up at the beginning of the meeting according to the number of the poster in the abstract book. Please do not forget to put them down afterwards.

### **Internet access**

The venue offers wireless internet access via eduroam.

### **Coffee breaks and welcome reception**

Coffee breaks and welcome reception will take place in the lower floor of the venue. This meeting has been certified as an "Eco-Event", a label from the City of Vienna. Accordingly, we make an effort to have this meeting as sustainable as possible. We therefore avoid any plastic and hence use only real plates and glasses. Please help us by keeping track of your glasses and cups and re-use them for refills.

 **okoEvent**  
In Wien ist die Umwelt VIP



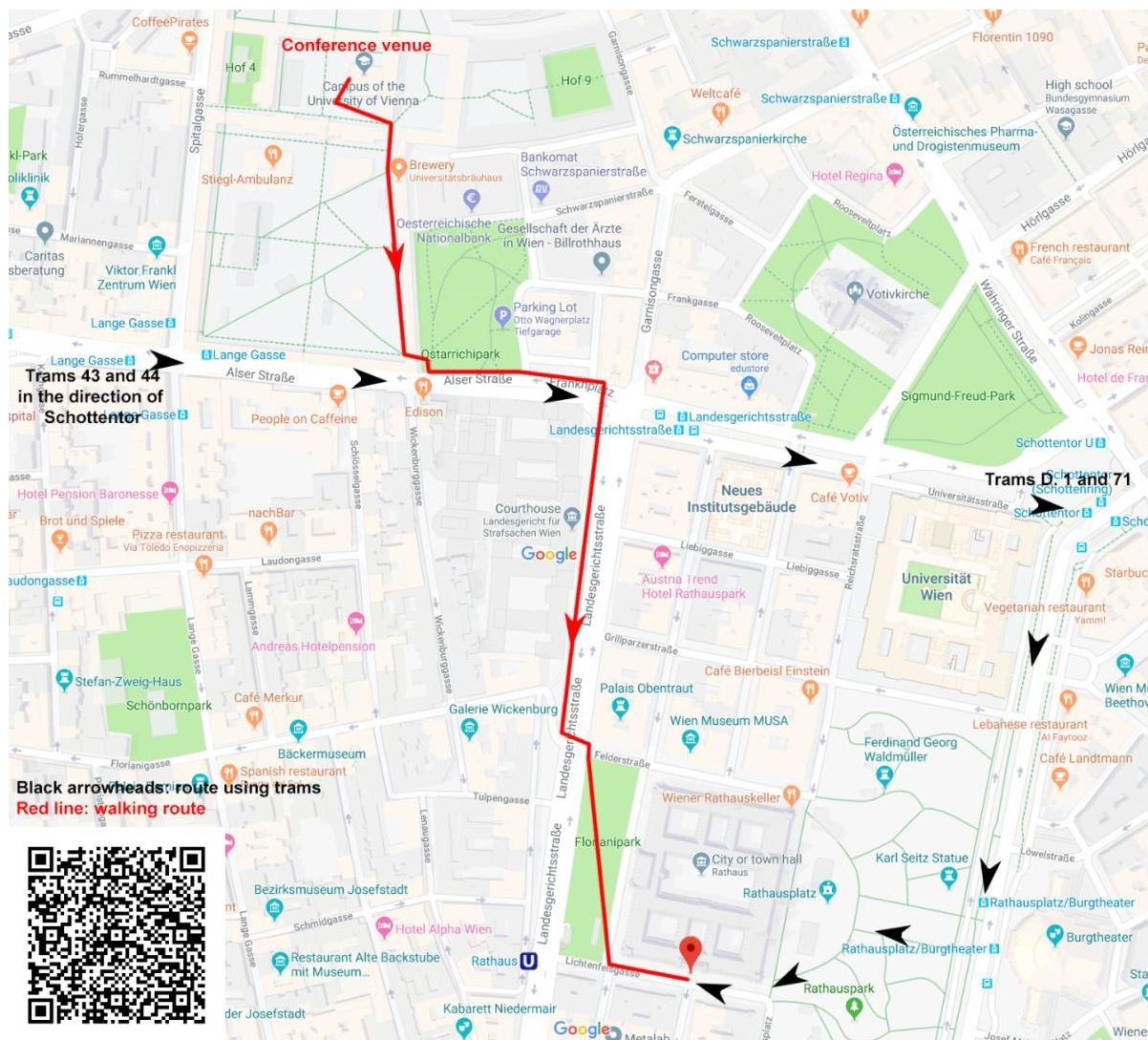
## Lunch breaks

Those of you who included lunch in the conference fee will receive lunch vouchers at the registration desk. The vouchers will be valid in the restaurant Gangl in the first courtyard (Hof 1) of the Altes AKH campus. For those of you who did not pay for lunch vouchers, there is a convenient BILLA supermarket in the same courtyard (closed on Sunday) as well as several restaurants. Both, Gangl and BILLA are marked in red on the [map](#) in the “Getting there section”.

## Conference dinner

If you registered for the conference dinner (Tuesday, February 19<sup>th</sup>), please be advised that it will take place in the City Hall (Rathaus), which is in the walking distance from the venue (approximately 1.3 km, see map below). Members of the organizing Department will assist you as guides for the walk. If you prefer to use public transportation, take tram 43 or 44 from Lange Gasse in the direction of Schottentor to the last stop (Schottentor) and change to trams D, 1 or 71 for one additional stop. Exit at Rathausplatz/Burgtheater and start walking around the neo-gothic City Hall building on its left side (when looking from the tram stop on the Universitätsring). The entrance will be through an archway approximately in the middle of the building.

Enter GPS coordinates 48.210149, 16.357097 with a navigation app like Google Maps or similar or scan the QR code on the map below with your phone and follow the link.



## Invited Speakers Dinner

On Monday, February 18, invited speakers and board members of the GfE and IsSDB are invited for a dinner at the restaurant “Ellas”, Judenplatz 9, 1010 Vienna. The restaurant is located in the 1<sup>st</sup> district and can be either reached by foot (15-20 min walk) or by taxi.

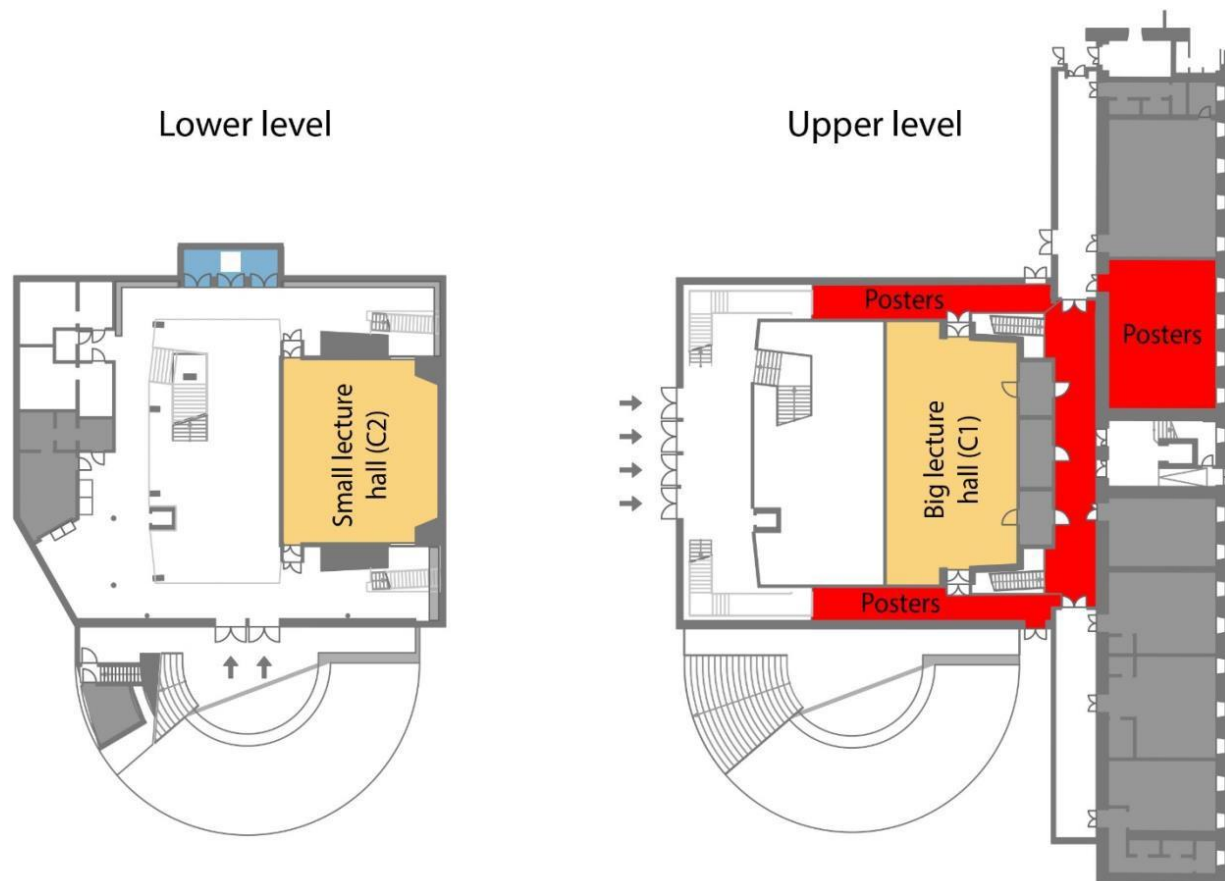
## Awards

During the meeting, four prizes will be awarded: the IsSDB prize to Howard Cedar (Monday, February 18, at 18:30), the GfE Klaus Sander Prize to Herbert Jäckle (Tuesday, February 19, at 18:30), the GfE PhD Prize (Tuesday, February 19, at 14:15), and the Poster Prize (Wednesday, February 20, at 12:30).

## GfE members meeting / IsSDB members meeting

GfE members meeting will take place on Tuesday at 13:30 in the big lecture hall. IsSDB members are welcome to use the small lecture hall for their members meeting if required at the same time.

## Floor plan of the venue





# Overview of the sessions

Sunday		Monday		Tuesday		Wednesday		
starts	Big hall (C1)	starts	Big hall (C1)	Small hall (C2)	starts	Big hall (C1)	Small hall (C2)	
		09:00	Keynote		09:00	Genomic approaches to development		
		09:35	Neural development				09:35	Organogenesis
		10:40	Coffee		10:45	Coffee	10:40	Coffee
		11:10	Neural development		11:15	Regeneration	11:10	EvoDevo and emerging models
		11:50	Stem cells, organoids and disease		12:35	Lunch	12:30	Poster Prize / End
		12:55	Lunch					
					13:30	Society meeting GfE		
14:00	Registration				14:15	GfE PhD Prize award		
		14:30	Single cell approaches	Biophysics of development	14:30	Polarity and axis formation	Germline / early cleavages	
16:00	Welcome	15:50	Coffee		16:00	Coffee		
16:10	Developmental Cell Biology	16:20	Poster session I	New techniques	16:30	Poster session II		
17:30		Coffee						
18:00	Developmental Cell Biology	18:30	IsSDB prize talk		18:30	Klaus Sander Prize talk		
18:55	Keynote	19:15	Invited speakers dinner		19:15	Conference dinner		
19:45		Reception						

## Scientific program

Sunday, February 17<sup>th</sup>

<b>Big lecture hall (C1)</b>	
<b>14:00</b>	<b>Registration opens</b>
<b>16:00</b>	<b>Opening remarks by Uli Technau</b>
<b>16:10 – 17:30</b>	<b>Developmental Cell Biology (chair: Peleg Hasson)</b>
16:10	<i>Benjamin Podbilewicz</i> Evolution of developmental cell fusion
16:35	<i>Jiri Friml</i> Evolution of efficient root gravitropism during conquest of land by plants
17:00	<i>Felix Gunawan</i> Uncovering the development and maturation of vertebrate heart valves at single cell resolution
17:15	<i>Tom Schultheiss</i> A novel hedgehog-regulated molecular module that shapes epithelial cell and tissue morphogenesis to position the ventral embryonic midline
<b>17:30</b>	<b>Coffee break</b>
<b>18:00 – 18:55</b>	<b>Developmental Cell Biology (chair: Estee Kurant)</b>
18:00	<i>Frank Schnorrer</i> Measuring molecular tension at developing muscle attachment sites
18:25	<i>Dorothee Bornhorst</i> Intra-organ communication within the developing zebrafish heart involves mechanical coupling of myocardium and endocardium
18:40	<i>Alina Kolpakova</i> The two mitofusin genes are functionally interchangeable, but both are required for the full fusion of the <i>Drosophila</i> spermatid mitochondria
<b>18:55</b>	<b>Keynote: <i>Benny Shilo</i> (chair David Sprinzak)</b> Dynamics of morphogen shuttling in the <i>Drosophila</i> embryo
<b>19:45</b>	<b>Welcome reception</b>

## Monday, February 18<sup>th</sup> (morning session)

<b>Big lecture hall (C1)</b>	
<b>09:00 – 11:50</b>	<b>Neural development (chair: Thomas Hummel)</b>
<b>09:00</b>	<b>Keynote: <i>Andrea Brand</i></b> <b>Time to get up: awakening stem cells in the brain</b>
09:35	<i>Christian Klämbt</i> Development of the <i>Drosophila</i> blood-brain barrier
10:00	<i>Anna Kicheva</i> Coordination of progenitor specification and growth in the developing spinal cord
10:25	<i>Wolfgang Driever</i> Dynamic control of stemness and neurogenesis in neural proliferation zones of the larval zebrafish brain
<b>10:40</b>	<b>Coffee break</b>
11:10	<i>Dalit Sela-Donenfeld</i> Hindbrain boundaries - new sites of neural stem/progenitor cells during embryonic development
11:25	<i>Chaya Kalcheim</i> The dynamics of dorsal neural tube development: from Neural Crest to definitive Roof Plate
<b>11:50 – 12:55</b>	<b>Stem cells, organoids and disease (chair: Lazaro Centanin)</b>
11:50	<i>Jürgen Knoblich</i> Cerebral organoids: modelling human brain development and tumorigenesis in stem cell derived 3D culture
12:15	<i>Prisca Liberali</i> Self-organization and symmetry breaking in intestinal organoid development
12:40	<i>Erika Tsingos</i> Taking turns: Quiescent and active stem cells coexist in homeostatic growth of the retinal pigment epithelium of medaka
<b>12:55</b>	<b>Lunch</b>

**Monday, February 18<sup>th</sup>, (afternoon session)**

<b>Big lecture hall (C1)</b>		<b>Small lecture hall (C2)</b>	
<b>14:30 – 15:50</b>	<b>Single cell approaches (chair: Elly Tanaka)</b>	<b>14:30 – 15:50</b>	<b>Biophysics of development (chair: Patrick Müller)</b>
14:30	<i>Barbara Treutlein</i> Dissecting human and chimpanzee cerebral organoids using single-cell transcriptomics	14:30	<i>Naama Barkai</i> Designing a robust biological timer
14:55	<i>Naomi Habib</i> From single cells to landscapes of brain regeneration and degeneration	14:55	<i>Stephan Grill</i> Integrin-mediated attachment of the blastoderm to the vitelline envelope impacts gastrulation in <i>Tribolium castaneum</i>
15:20	<i>Omri Wurtzel</i> A foxF regulatory program specifies planarian muscle formation revealed by single cell analysis	15:20	<i>Albert Thommen</i> Physiological basis of metabolic rate scaling in planarian flatworms
15:35	<i>Alison Cole</i> Development and Homeostasis in a sea anemone: a multi-faceted approach to characterize Cnidarian stem cells	15:35	<i>Adi Salzberg</i> Alteration in ECM composition affects sensory organ mechanics and function
<b>15:50</b>	<b>Coffee break</b>		
<b>16:20 – 18:30</b>	<b>Poster session I (even numbers) area around the big lecture hall</b>	<b>16:20 – 16:50</b>	<b>New techniques (chair: Alexander Klimovich)</b>
		16:20	<i>Florian Raible</i> A combined, versatile depigmentation and clearing method (DEEP-C) for studying animal nervous systems across scales
		16:30	<i>Wouter Masselink</i> Broad applicability of a streamlined Ethyl Cinnamate-based clearing procedure
		16:40	<i>Tinatini Tavhelidse</i> Efficient single-copy HDR by 5' modified long dsDNA donors

<b>Big lecture hall (C1)</b>	
<b>18:30</b>	<b>IsSDB prize talk <i>Howard Cedar</i> (chair: Chaya Kalcheim) DNA methylation and the unending process of development</b>
<b>19:15</b>	<b>Dinner on your own / invited speakers dinner</b>

## Tuesday, February 19<sup>th</sup> (morning session)

<b>Big lecture hall (C1)</b>	
<b>09:00 – 10:45</b>	<b>Genomic approaches to development (chair: Oleg Simakov)</b>
09:00	<i>Kikue Tachibana-Konwalski</i> New insights into the causes of egg aneuploidy at advanced maternal age
09:25	<i>Enrico Coen</i> Resolving Conflicts: The Genetic Control of Plant Morphogenesis
09:50	<i>Stephan Mundlos</i> 3D chromatin conformation of Pitx1 locus defines forelimb vs hind limb identity
10:15	<i>Anna Kögler</i> Light-controlled perturbation of transcription factor function during embryogenesis
10:30	<i>Michael Borg</i> Paternal resetting of H3K27me3-silenced states primes early plant development
<b>10:45</b>	<b>Coffee break</b>
<b>11:15 – 12:35</b>	<b>Regeneration (chair: Monika Hassel)</b>
11:15	<i>Kerstin Bartscherer</i> Regeneration initiation – from planarians to African spiny mice
11:40	<i>Eldad Tzahor</i> Signaling Mechanisms in Heart Regeneration
12:05	<i>Christian Lange</i> Thyroid hormone signaling controls adult brain regeneration in zebrafish
12:20	<i>Prayag Murawala</i> Single-cell analysis uncovers convergence of cell identities during axolotl limb regeneration
<b>12:35</b>	<b>Lunch</b>



**Tuesday, February 19<sup>th</sup>, (afternoon session)**

<b>Big lecture hall (C1)</b>	
<b>13:30</b>	<b>Society meeting GfE</b>
<b>14:15</b>	<b>GfE PhD Prize award</b>

<b>Big lecture hall (C1)</b>		<b>Small lecture hall (C2)</b>	
<b>14:30 – 16:00</b>	<b>Polarity and axis formation (chair: Urs Schmidt-Ott)</b>	<b>14:30 – 16:00</b>	<b>Germline / early cleavages (chair Tamar Lotan)</b>
14:30	<i>Elisabeth Knust</i> Crosstalk between the Drosophila Crumbs polarity complex and the apical cytocortex orchestrates epithelial polarity	14:30	<i>Hila Toledano</i> Draper isoforms in cyst cells regulate phagocytosis and aging of germ cell debris
14:55	<i>Marja Timmermans</i> Pattern formation by mobile morphogen-like small RNA signals	14:55	<i>Maria Torres Padilla</i> Epigenetic mechanisms in early mammalian development: impact of heterochromatin dynamics
15:20	<i>Gregor Bucher</i> Double abdomen in a short germ insect: Zygotic control of axis formation revealed in the beetle <i>Tribolium castaneum</i>	15:20	<i>Roland Dosch</i> Functional equivalence of the zebrafish germ plasm organizer Bucky ball with the unrelated Drosophila Oskar
15:45	<i>Jörg Grosshans</i> The emergence of the subapical domain depends on polarization of cortical actin	15:45	<i>Andrea Pauli</i> Bouncer and SPACA4 - small proteins with big roles
<b>16:00</b>	<b>Coffee break</b>		
<b>16:30 – 18:30</b>	<b>Poster session II (odd numbers) area around the big lecture hall</b>		

<b>Big lecture hall (C1)</b>	
<b>18:30</b>	<b>GfE Klaus Sander Prize talk <i>Herbert Jäckle</i> (chair: Uli Technau) From Gradients to Disease, from Fly to Man</b>
<b>19:15</b>	<b>Conference dinner at the City Hall</b>

## Wednesday, February 20<sup>th</sup>

<b>Big lecture hall (C1)</b>	
<b>09:00 – 10:40</b>	<b>Organogenesis (chair: Andrea Vortkamp)</b>
<b>09:00</b>	<b>Keynote: <i>Olivier Pourquié</i> Deconstructing the human segmentation clock <i>in vitro</i></b>
09:35	<i>Ruth Ashery-Padan</i> Investigating the transitions from multipotent precursors to stably differentiated cell types of the eye
10:00	<i>Miltos Tsiantis</i> The genetic basis for diversification of leaf form: from understanding to reconstructing
10:25	<i>Wiebke Herzog</i> Wnt7-catenin signaling regulates VE-cadherin-mediated anastomosis of brain capillaries by counteracting S1pr1 signaling
<b>10:40</b>	<b>Coffee break</b>
<b>11:10 – 12:30</b>	<b>EvoDevo and emerging models (chair: Smadar Ben-Tabou de-Leon)</b>
11:10	<i>Kai Rathje</i> Bacteria interactions cause tumorigenesis in Hydra
11:25	<i>Stefan Schulte-Merker</i> Different ways to make a spine - notochord sheath cells, but not the sclerotome, drive axial spine metamerisation in zebrafish
11:40	<i>Matt Gibson</i> Functional interrogation of an axial Hox code in the sea anemone, <i>Nematostella vectensis</i>
12:05	<i>Sabine Zachgo</i> <i>Marchantia polymorpha</i> : Insight into land plant evolution from a liverwort perspective
<b>12:30</b>	<b>Poster Prize and concluding remarks</b>
<b>13:00</b>	<b>End of the meeting. Do not forget your posters!</b>

## Poster titles

### A | Developmental cell biology

- A01 | RETINOIC ACID SIGNALING REDUCTION RECAPITULATES THE EFFECTS OF ALCOHOL ON EMBRYO SIZE  
*Pillemer, Graciela (Hebrew University of Jerusalem, Jerusalem, ISR)*
- A02 | FIBROBLAST FUSION AT THE MUSCLE FIBERS TERMINI FACILITATES MUSCLE-TENDON JUNCTION DEVELOPMENT.  
*Yaseen-Badarne, Wesal; Kraft-Sheleg, Ortal; Zaffryar-Eilot, Shelly; Hasson, Peleg (Technion, Sakhnin, ISR; Technion, Haifa, ISR)*
- A03 | CADHERIN SWITCH MARKS GERM LAYER FORMATION IN THE DIPLOBLASTIC SEA ANEMONE NEMATOSTELLA VECTENSIS.  
*Pukhlyakova, Ekaterina; Kirillova, Anastasia; Kraus, Yulia; Technau, Ulrich (University of Vienna, Vienna, AUT; Lomonosov Moscow State University, Moscow, RUS)*
- A04 | REVEALING THE MECHANISM THAT OPTIMIZED THE RATE OF BODY AXIS ELONGATION IN FLIES.  
*Urbansky, Silvia (Centre for Organismal Studies, University of Heidelberg, Heidelberg, GER)*
- A05 | FROM EXTENSION TO INFOLDING: UNCOVERING THE ROLE OF MYOII IN THE ORIGIN OF NOVEL TISSUE BEHAVIOUR.  
*Ruhland, Naima (Centre for Organismal Studies, University of Heidelberg, Heidelberg, GER)*
- A06 | CHARACTERIZATION OF DROSOPHILA NIDOGEN/ENTACTIN REVEALS ROLES IN BASEMENT MEMBRANE STABILITY, BARRIER FUNCTION AND NERVOUS SYSTEM PATTERNING  
*Wolfstetter, Georg; Dahlitz, Ina; Pfeifer, Kathrin; Töpfer, Uwe; Alt, Joscha Arne; Pfeifer, Daniel Christoph; Lakes-Harlan, Reinhard; Baumgartner, Stefan; Palmer, Ruth H.; Holz, Anne (The Sahlgrenska Academy at the University of Gothenburg, Gothenburg, SWE; Justus-Liebig-Universität Giessen, Giessen, GER; Lund University, Lund, SWE)*
- A07 | NEUROEPITHELIAL FLOW DURING OPTIC CUP FORMATION IN MEDAKA AND MOLECULES INFLUENCING IT.  
*Sokolova, Natalia; Tavhelidse, Tinatini; Thumberger, Thomas; Wittbrodt, Joachim (Centre for Organismal Studies, University of Heidelberg, Heidelberg, GER)*
- A08 | THE ROLE OF FAT4-DCHS1 INTERACTIONS IN REGULATING DOWNSTREAM HIPPO SIGNALING  
*Easa, Yathreb (Tel Aviv university, israel, ISR)*
- A09 | ELUCIDATING THE ROLE OF ENDOTHELIAL CADHERINS ON NOTCH SIGNALING DURING ANGIOGENESIS.  
*Mamistvalov, Rose (Tel Aviv University, Lod, ISR)*
- A10 | TOWARDS QUANTITATIVE ANALYSIS OF THE NOTCH TRANSCRIPTIONAL RESPONSE.  
*Eafergan, Natanel (Tel Aviv University, Tel Aviv, ISR)*
- A11 | THE ROLE OF CK2 ON THE ACTIVITY OF THE WAVE REGULATORY COMPLEX CONTROLLING CELL SHAPE AND CELL MIGRATION OF DROSOPHILA MACROPHAGES.  
*Hirschhäuser, Alexander; Bogdan, Sven (Philipps-Universität Marburg, Marburg, GER)*

- A12 | THE WAVE COMPLEX REGULATES EPIDERMAL PROLIFERATION AND MORPHOGENESIS.  
*Cohen, Yonatan; Luxenburg, Chen (Tel Aviv University, Tel Aviv, ISR)*
- A13 | EPITHELIAL-MESENCHYMAL TRANSITION OF THE EMBRYONIC EPICARDIAL CELLS IS REGULATED BY EXTRACELLULAR MATRIX PROTEIN AGRIN.  
*Sun, Xin; Bassat, Elad; Malandraki-Miller, Sophia; Zhao, Jia; Tzahor, Eldad; Riley, Paul (University of Oxford, Oxford, GBR; Weizmann Institute of Science, Rehovot, ISR)*
- A14 | RTK/MAPK/ERK- SIGNALING REGULATES THE BEHAVIOR OF THE ENDODERMAL CELLS DURING GASTRULATION IN THE SEA ANEMONE NEMATOSTELLA.  
*Bagaeva, Tatiana; Kraus, Yulia; Genikhovich, Grigory (University Of Vienna, Department of Molecular Evolution and Development, Vienna, AUT; Moscow State University, Dept. for Evolutionary Biology, Moscow, RUS)*
- A15 | IDENTIFICATION OF A NOVEL MODULATOR OF BMP SIGNALING IN A SEA ANEMONE.  
*Alexandra Schauer, Robert Zimmermann, Paul Knabl and Grigory Genikhovich (University Of Vienna, Department of Molecular Evolution and Development, Vienna, AUT)*
- A16 | REGULATION OF NOTOCHORD SIZE AND SHAPE IN MOUSE DEVELOPMENT.  
*Kishi, Kasumi; Kicheva, Anna; Hannezo, Edouard (Institute of Science and Technology (IST) Austria, Klosterneuburg, AUT)*
- A17 | CRUMBS ORGANIZES THE APICAL TRANSPORT MACHINERY BY NEGATIVELY REGULATING PTEN IN DROSOPHILA LARVAL SALIVARY GLANDS.  
*Lattner, Johanna; Leng, Weihua; Knust, Elisabeth; Brankatschk, Marko; Flores-Benitez, David (Max-Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG), Dresden, GER; The Biotechnological Center of the TU Dresden (BIOTEC), Dresden, GER).*
- A19 | DISEASE MODELING IN O.LATIPES: USING CRISPR/CAS9 TO GENERATE N-GLYCOSYLATION HYPOMORPHS.  
*Gücüm, Sevinç; Thumberger, Thomas; Wittbrodt, Joachim (Centre for Organismal Studies, Heidelberg University, Heidelberg, GER)*
- A20 | THE ENDOCYTIC PATHWAY BALANCES MEMBRANE ORGANIZATION DURING SUBCELLULAR TUBE FORMATION.  
*Rios, Daniel; Matthew, Renjith; Machado, Pedro; Schwab, Yannick; Leptin, Maria (EMBO, Heidelberg, GER; NISER, Jatni, Odisha, IND)*
- A21 | SIGNALING TRANSDUCTION DURING DROSOPHILA MYOBLAST FUSION.  
*Lübke, Stefanie; Önel, Susanne F. (Philipps-Universität Marburg, Marburg, GER)*
- A22 | DYNAMIC POOL OF CRUMBS IN THE DROSOPHILA EMBRYONIC EPIDERMIS IS REGULATED BY THE ACTOMYOSIN CORTEX AND ENDOCYTOSIS.  
*Bajur, Anna; Knust, Elisabeth (Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, GER)*

- A23 | MVBs FUNCTION TO DEGRADE SPERM MITOCHONDRIA AFTER FERTILIZATION IN DROSOPHILA.  
*Sharon Ben-Hur, Yoav Politi, Liron Gal, Ugo Mayor, Eli Arama (Weizmann Institute, Rehovot, ISR)*
- A24 | THE EXTRACELLULAR DOMAINS OF DLL1 AND DLL4 MEDIATE DIFFERENTIAL RECEPTOR SELECTIVITY IN VITRO AND DIVERGENT LIGAND FUNCTION IN VIVO.  
*Tveriakhina, Lena; Schuster-Gossler, Karin; Jarrett, Sanchez M.; Blacklow, Stephen C.; Gossler, Achim (Medizinische Hochschule Hannover, Institute for Molecular Biology OE5250, Hannover, GER; Harvard Medical School, Department of Biological Chemistry and Molecular Pharmacology, Boston, USA)*
- A25 | TISSUE INVASION OF DROSOPHILA EMBRYONIC MACROPHAGES - BMP-ACTIVATION LEADS THE WAY.  
*Wachner, Stephanie; Belyaeva, Vera; Gyoergy, Attila; Siekhaus, Daria (IST Austria, Klosterneuburg, AUT)*
- A26 | THE ROLES OF BMP AND WNT SIGNALLING IN DORSAL NEURAL TUBE DEVELOPMENT.  
*Rus, Stefanie; Kicheva, Anna (IST Austria, Klosterneuburg, AUT)*
- A27 | SEPARATE SIGNALING PATHWAYS CONTROL CORTICAL AND BASAL ACTOMYOSIN ORGANIZATION IN EPITHELIOMUSCULAR CELLS IN HYDRA.  
*Holz, Oliver; Hassel, Monika (Philipps Universität Marburg, Marburg, GER)*
- A28 | TOOLS TO DETECT RHO ACTIVITY AND PIP- SIGNALING IN HYDRA.  
*Hassel, Monika; Apel, David; Holz, Oliver; Grosse, Robert; Oliver, Dominik; Klimovich, Alexander (Philipps Universität, Marburg, GER; Universität Kiel, Kiel, GER)*
- A29 | IRRADIATION-INDUCED CELL MIGRATION (ICM) INVOLVES EMT AND CELL MIGRATION, THE LATTER OF WHICH IS REGULATED BY CASPASES.  
*Sapozhnikov, Lena; Yacobi-Sharon, Keren; Gorelick Ashkenazi, Anna; Arama, Eli (Weizmann Institute of Science, Rehovot, ISR)*
- A30 | ROLE OF CASPASES DURING SPERMATID TERMINAL DIFFERENTIATION IN DROSOPHILA.  
*Braun, Tslil; Arama, Eli (Weizmann Institute of Science, Rehovot, ISR)*
- A31 | THE TIP60 CHROMATIN REMODELING COMPLEX IS INVOLVED IN THE MAINTENANCE OF ADULT MIDGUT PRECURSOR CELLS IN THE DROSOPHILA MIDGUT.  
*Nguyen, Hong Nhung; Rust, Katja; Wodarz, Andreas (Molecular Cell Biology, Institute I for Anatomy, University of Cologne, Cologne, GER; Department of Anatomy and OB-GYN/RS, University of California, San Francisco, San Francisco, CA, USA)*
- A32 | THE ROLE OF RETINOIC ACID IN THE DEVELOPMENT OF ZEBRAFISH PELVIC FINS.  
*Draut, Heidrun; Breu, Mike; Begemann, Gerrit (Universität Bayreuth, Bayreuth, GER)*
- A33 | CELL COMPETITION AND INNATE IMMUNITY SIGNALING IN THE DROSOPHILA TESTIS NICHE.  
*Hof, Silvana; Bökel, Christian (Philipps Universität Marburg, Fb17, Marburg, GER)*



- A34 | CELL FOCUSING: PATTERN FORMATION BY DANCING CELLS.  
*Findeis, Daniel; Hennig, Christian; Schnabel, Ralf (Technische Universität Braunschweig, Braunschweig, GER)*
- A35 | STRESS-DEPENDENT REGULATION OF A LIQUID DROPLET COMPONENT, RBFOX1.  
*Shcherbata, Halyna (Hannover Medical School, Hannover, GER)*
- A36 | A CENTROSOME ORGANIZING CENTER COORDINATES EARLY OOGENESIS IN ZEBRAFISH.  
*Elkouby, Yaniv (The Hebrew University of Jerusalem, Jerusalem, ISR)*
- A37 | EMERGENCE OF RETINAL STEM CELLS IN FISH RETINA.  
*Zilova, Lucie; Becker, Clara; Lust, Katharina; Wittbrodt, Joachim (Centre for Organismal Studies Heidelberg, Heidelberg, GER)*
- A38 | REGULATION OF THE MAST KINASE DROP OUT IN D. MELANOGASTER.  
*D'Angelo, Valentina; Sonnenberg, Hannah; Müller, Arno (Institut für Biologie, FG Entwicklungsgenetik, Universität Kassel, Kassel, GER; School of Life Sciences, Division of Cell and Developmental Biology, University of Dundee, Dundee, GBR)*
- A39 | A HIGHLY CONSERVED MFS REGULATES O-GalNAc GLYCOSYLATION TO OPTIMIZE DROSOPHILA MACROPHAGE MIGRATION AND TISSUE INVASION.  
*Valoskova, Katarina; Biebl, Julia; Emtenani, Shamsi; Ratheesh, Aparna; Misova, Michaela; Larsen, Ida S.; Vakhrushev, Sergey Y.; Clausen, Henrik (IST Austria, Klosterneuburg, AUT; Copenhagen Center for Glycomics, University of Copenhagen, Copenhagen, DNK; University of Warwick, Coventry, GBR)*
- A40 | STUDYING A DYNAMIC CONTRACTILE ACTOMYOSIN NETWORK DURING DROSOPHILA ABDOMINAL MORPHOGENESIS.  
*Pulido Companys, Pau; Norris, Anneliese; Bischoff, Marcus (University of St Andrews, St Andrews, GBR)*
- A41 | INVESTIGATING THE FUNCTION OF A NOVEL NUCLEAR PROTEIN IN TISSUE PENETRATION OF DROSOPHILA MELANOGASTER MACROPHAGES.  
*Emtenani, Shamsi; Siekhaus, Daria; Gyoergy, Attila (Institute of Science and Technology IST Austria, Klosterneuburg, AUT)*
- A42 | DEFICIENT PROTEIN O-MANNOSYLATION AFFECTS SIGNALLING PATHWAYS IN VERTEBRATES.  
*Comean, Alex; Boeninger, Clara; Hoang, Oi Pui; Thumberger, Thomas; Wittbrodt, Joachim (Centre for Organismal Studies (COS), Heidelberg University, Heidelberg, GER)*
- A43 | PROGENITOR AMPLIFICATION IS THE RATE-LIMITING STEP IN DETERMINING RETINAL SIZE IN MEDAKA.  
*Becker, Clara; Peravali, Ravindra; Wittbrodt, Joachim (Centre for Organismal Studies, Heidelberg University, Heidelberg, GER; Institute for Toxicology and Genetics, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, GER)*

- A44 | STUDY OF HUMAN OVARIAN DEVELOPMENT & DYSGENESIS MECHANISMS IN A DROSOPHILA MODEL.  
*Gerlitz, Offer; Shore, Tikva; Levi, Tgst; Kalifa, Rachel; Weinberg-Shukron, Ariella; Rekler, Dina; Dreifuss, Amatzia; Levy-Lahad, Ephrat; Zangen, David; (The Hebrew University- Faculty of Medicine, Jerusalem, Israel)*
- A45 | EXPLORING THE FUNCTIONAL CONSERVATION OF A DEEPLY CONSERVED ANIMAL MICRORNA.  
*Gutierrez Perez, Paula (IMP, Vienna, AUT)*
- A46 | EPITHELIAL REARRANGEMENT DYNAMICS DURING MOUSE NEURAL TUBE DEVELOPMENT.  
*Bocanegra-Moreno, Laura; Zagórski, Marcin; Kicheva, Anna (Institute of Science and Technology Austria (IST Austria), Klosterneuburg, AUT; M. Smoluchowski Institute of Physics, Jagiellonian University, Kraków, POL)*
- A47 | BALANCED RHO ACTIVATION AND INHIBITION REGULATES EXOCYTOSIS BY LARGE SECRETORY VESICLES.  
*Schejter, Eyal; Massarwa, R'ada; Segal, Dagan; Shilo, Benny (Weizmann Institute of Science, Rehovot, ISR)*
- A48 | ELEVATED WNT-SIGNALING LEADS TO DIFFERENTIATION AND RESTRICTION OF POTENCY OF SINGLE STEM AND PROGENITOR CELLS IN VIVO.  
*Lischik, Colin Q.; Lempp, Eva K.; Heilig, Ann Kathrin; Inoue, Daigo (Centre for Organismal Studies, Heidelberg, GER); Wittbrodt, Joachim (Centre for Organismal Studies, Heidelberg, GER)*
- A49 | ELUCIDATING THE FUNCTIONAL ROLE OF HIF DURING BRAIN DEVELOPMENT  
*Kiefer, F., Herzog, W., Quinonez, C. (University of Muenster, Muenster, GER)*

## **B | Neural Development**

- B01 | BREAKING SYMMETRY: GLIAL SIGNALING INDUCES LATERALIZATION OF A DROSOPHILA CENTRAL BRAIN CIRCUIT.  
*Hummel, Thomas; Kaur, Rashmit; Markovitsch, Johann (Department für Neurobiologie, Wien, AUT; University Vienna, Vienna, AUT)*
- B02 | SUBFUNCTIONALIZATION OF RX GENES IN MEDAKA.  
*Tavhelidse, Tinatini; Centanin, Lázaro; Wittbrodt, Beate; Sokolova, Natalia; Mateo Cerdan, Juan-Luis; Ibberson, Dvid; Anlas, Kerim; Thomas, Isabelle; Reinhardt, Robert; Tsingos, Erika; Thumberger, Thomas; Wittbrodt, Joachim (Centre for Organismal Studies (COS) Heidelberg, University of Heidelberg, Heidelberg, GER; Universidad de Oviedo, Departamento de Informática, Oviedo, ESP; Deep Sequencing Core Facility, Cell Networks, Heidelberg University, Heidelberg, GER)*
- B03 | SPLIT-BRAIN IN A FLY: DEVELOPMENTAL MECHANISM UNDERLYING BI-LATERAL NERVOUS SYSTEM ORGANIZATION.  
*Kaur, Rashmit; Hummel, Thomas (Dept for Neurobiology, University of Vienna, Vienna, AUT)*
- B04 | GABAB SIGNALING REGULATES EARLY DEVELOPMENT AND NEUROGENESIS IN THE SEA ANEMONE NEMATOSTELLA VECTENSIS.  
*Lotan, Tamar (University of Haifa, Haifa, ISR)*

- B05 | COORDINATED CYTOSKELETON DISASSEMBLY PATHWAYS DURING DENDRITE PRUNING IN DROSOPHILA.  
*Rumpf, Sebastian; Wolterhoff, Neele (WWU Münster, Münster, GER)*
- B06 | ELUCIDATING THE MULTI-FUNCTIONALITY OF SEMAPHORIN3A/PLEXIN-A4 SIGNALING.  
*Goldner, Ron; Gokhman, Irena; Danelon, Victor; Martinez, Edward; Tran, Tracy; Yaron, Avraham (Weizmann Institute of Science, Rehovot, ISR; Rutgers University, Newark, USA)*
- B07 | ROLE OF FGF SIGNALING IN REGULATING THE STEM/DIFFERENTIATION STATE OF HINDBRAIN BOUNDARY CELLS.  
*Varshavsky, Stas; Sela-Donenfeld, Dalit (The Hebrew University of Jerusalem, Rehovot, ISR)*
- B08 | REGULATION OF NEURAL TUBE GROWTH BY THE MORPHOGENS SHH AND BMP.  
*Kuzmicz-Kowalska, Katarzyna; Kicheva, Anna (IST Austria, Klosterneuburg, AUT)*
- B09 | IMMUNOSTAINING FOR NEUROPEPTIDES IDENTIFIES THE NEURAL CIRCUITS CONTROLLING BEHAVIOR IN HYDRA DESCRIBED BY DUPRE AND YUSTE (2017).  
*David, Charles N.; Schneid, Sandra; Keramidiotou, Athina; Busse, Christina; Louwagie, Amber; Hamada, Shun; Noro, Yuki; Shimizu, Hiroshi (Dept. of Biology, University of Munich, Planegg-Martinsried, GER; Ludwig-Maximilians-University, München, GER; Fukuoka Womens's University, Fukuoka, JPN; KAUST, SAU)*
- B10 | PP2A-29B REGULATES ACTIN DISASSEMBLY DURING DENDRITE PRUNING IN DROSOPHILA  
*Wolterhoff, Neele (Institute of Neuro- and Behavioral Biology, University of Münster, Münster, GER)*
- B11 | TRIM29, A E3-LIGASE INVOLVED IN NEURAL TUBE CLOSURE AND NEURAL CREST SPECIFICATION.  
*Vess, Astrid; Ding, Jie; Neuhaus, Herbert; Hollemann, Thomas (University of Halle-Wittenberg, Halle, GER)*

## **C | Stem cells, organoids and disease**

- C01 | MECHANISM OF FLOOR PLATE INDUCTION IN THE NEUROEPITHELIAL ORGANOID.  
*Gromberg, Elena; Tanaka, Elly; Ishihara, Keisuke; Krammer, Teresa (IMP, Vienna, AUT; MPI-CBG, Dresden, GER)*
- C02 | SINGLE CELL ANALYSIS REVEALS A NOVEL MECHANISM CONTROLLING NEURAL STEM CELL PLASTICITY IN ALZHEIMER'S DISEASE MODEL OF ADULT ZEBRAFISH.  
*Kizil, Caghan; Bhattarai, Prabesh; Cosacak, Mehmet Ilyas (DZNE, Dresden, GER)*
- C03 | FAR ADVANCED NETWORK FORMATION IN RETINAL SPHEROIDS FROM CHICK EMBRYO DEPENDS ON CHOLINERGIC AND GLUTAMATERGIC DIFFERENTIATION.  
*Bachmann, Gesine; Bausch, Alex; Frohns, Florian; Thangaraj, Gopenath; Layer, Paul (Technische Universität Darmstadt, Darmstadt, GER)*

- C04 | GENOME SCALE MAPPING OF HISTONE H3.3 TURNOVER RATE IN MOUSE EMBRYONIC STEM CELLS AND DURING EARLY DIFFERENTIATION.  
*Schlesinger, Sharon (Hebrew University, Rehovot, ISR)*
- C05 | EPENDYMOGLIA BEHAVIOR DURING POSTEMBRYONIC GROWTH OF THE AXOLOTL TELENCEPHALON.  
*Lust, Katharina; Murawala, Prayag; Tanaka, Elly (Research Institute of Molecular Pathology, Vienna, AUT)*
- C06 | NICHE SIGNALLING IN THE DROSOPHILA TESTIS - CELL FATE CHOICE OR MICROMANAGEMENT?  
*Bökel, Christian; Hof, Silvana (Philipps-University Marburg, Marburg, GER)*
- C07 | T-CELL LINEAGE DECISION IS DETERMINED BY TEMPORAL RESIDENCY IN SPECIALIZED THYMIC MICROENVIRONMENTS.  
*Aghaallaei, Narges; Hasel, Eva; Inoue, Daigo; Dick, Advaita; Doll, Larissa; Thumberger, Thomas; Wittbrodt, Joachim; Bajoghli, Baubak (University Hospital Tübingen, Tübingen, GER; EMBL, GER; Centre for Organismal Studies, Heidelberg University, Heidelberg, GER; University Hospital Tübingen, Tübingen, GER)*
- C08 | EFFICIENCY OF IN VIVO TRANSFECTION OF PRIMORDIAL GERM CELLS IN CHICKENS AT TWO STAGES OF EMBRYONIC DEVELOPMENT.  
*Klein, Sabine; Altgilbers, Stefanie; Weigend, Steffen; Kues, Wilfried (Friedrich Loeffler Institut, Institute of Farm Animal Genetics, Neustadt, GER)*
- C09 | UNVEILING THE MOLECULAR MECHANISMS OF NEURAL CREST MIGRATION AND FORMATION OF DORSAL ROOT GANGLIA USING THREE-DIMENSIONAL NEURAL TUBE ORGANOID.  
*Krammer, Teresa; Tanaka, Elly; Gromberg, Elena (Institute of Molecular Pathology (IMP), Vienna, AUT)*
- C10 | ATOH8 A NOVEL REGULATOR OF TGF- SIGNALING.  
*Divvela, Satya Srirama Karthik; Nell, Patrick; Napirei, Markus; Zaehres, Holm; Chen, Jiayu; Gao, Shaorong; Brand-Saberi, Beate (Ruhr University Bochum, Bochum, GER; University of Vienna, AUT; Tongji University, Shanghai, CHN)*
- C11 | PREDICTION AND CONTROL OF SYMMETRY BREAKING IN EMBRYOID BODIES BY ENVIRONMENT AND SIGNAL INTEGRATION.  
*Sagy, Naor; Pour, Maayan; Slovin, Shaked; Savyon, Gaya; Allalouf, Maya; Boxman, Jonathan; Nachman, Iftach (Tel Aviv University, Tel Aviv, ISR)*
- C12 | SUBEPITHELIAL TELEOCYTES CONSTITUTE THE INTESTINAL STEM CELL NICHE  
*Shoshkes Carmel, Michal (Hebrew University Hadassah Medical School, Jerusalem, ISR)*

## **D | Single cell approaches**

- D01 | ANCIENT ANIMAL GENOME ARCHITECTURE REFLECTS CELL TYPE IDENTITIES.  
*Zimmermann, Bob; Robert, Nicolas SM; Technau, Ulrich; Simakov, Oleg (University of Vienna, Vienna, AUT; Laboratoire de Biologie du Développement, Villefranche-sur-mer, FRA)*

D02 | SINGLE-CELL TRANSCRIPTOME ANALYSIS ELUCIDATES SIMILARITIES AND DIFFERENCES BETWEEN THE POPULATION OF INTESTINAL STEM CELLS AND THEIR PROGENITORS.

*Bageritz, Josephine; Frauhammer, Felix; Wölk, Michaela; Leible, Svenja; Anders, Simon; Boutros, Michael (Deutsches Krebsforschungszentrum (DKFZ), Heidelberg, GER; Zentrum für Molekulare Biologie der Universität Heidelberg (ZMBH), Heidelberg, GER)*

D03 | GENE EXPRESSION ATLAS OF A DEVELOPING TISSUE BY SINGLE CELL EXPRESSION CORRELATION ANALYSIS.

*Bageritz, Josephine; Willnow, Philipp; Valentini, Erica; Leible, Svenja; Boutros, Michael; Teleman, Aurelio A. (DKFZ, Heidelberg, GER)*

D04 | MOLECULAR PROFILING OF CELLS IN THE SEA ANEMONE NEMATOSTELLA VECTENSIS.

*Steger, Julia; Cole, Alison G.; Technau, Ulrich (University of Vienna, AUT)*

## **E | Biophysics of Development**

E01 | INCREASE IN MECHANICAL TENSION AND E-CADHERIN MOBILITY FACILITATE CELL EXTRUSION IN DROSOPHILA EPITHELIA.

*Michel, Marcus (TU Dresden, Dresden, GER)*

E02 | SPEED REGULATION OF GENETIC CASCADES ALLOWS FOR EVOLVABILITY AND ROBUSTNESS IN THE BODY PLAN SPECIFICATION OF INSECTS.

*El-Sherif, Ezzat (Division of Developmental Biology, Erlangen, GER)*

E03 | THE ROLE OF CELLULAR REPLICATIVE LIFESPAN AND STEM CELL DYNAMICS ON CORNEAL EPITHELIUM HOMEOSTASIS AND PATTERN FORMATION.

*Savir, Yonatan (Technion, Haifa, ISR)*

E04 | MODELING THE MECHANICS OF AN EPITHELIAL SHEET DEFORMED BY A MIGRATING CELL.

*Akhmanova, Maria; Siekhaus, Daria (IST Austria, Maria Gugging, AUT)*

E05 | REGULATORS OF THE MIGRATION OF DROSOPHILA TESTIS NASCENT MYOTUBES.

*Bischoff, Maik, Renkawitz-pohl, Renate; Bogdan, Sven (Philipps Universität Marburg, Marburg, GER)*

E06 | MECHANISMS UNDERLYING THE SPATIOTEMPORAL ORGANIZATION OF BMP-DEPENDENT TARGET GENES

*Rogers, Katherine; Müller, Patrick (Friedrich Miescher Laboratory of the Max Planck Society)*

## **F | New Techniques**

F02 | A COMBINED, VERSATILE DEPIGMENTATION AND CLEARING METHOD (DEEP-C) FOR STUDYING ANIMAL NERVOUS SYSTEMS ACROSS SCALES.

*Pende, Marko; Vadiwala, Karim; Stockinger, Alexander; Revilla-i-Domingo, Roger; Schmidbaur, Hannah; Murawala, Prayag; Papadopoulos, Sofia; Becker, Klaus; Saghafi, Saiedeh; Pasierbek, Pawel; Dekens, Marcus; Simakov, Oleg; Tanaka, Elly; Dodt, Hans-Ulrich; Raible, Florian (Medical University of Vienna, Vienna, AUT; Research Institute for Molecular Pathology (IMP), Vienna, AUT; University of Vienna, Vienna, AUT)*



F04 | BROAD APPLICABILITY OF A STREAMLINED ETHYL CINNAMATE-BASED CLEARING PROCEDURE (2Eci).

*Masselink, Wouter; Reumann, Daniel; Murawala, Prayag; Pasierbek, Pawel; Taniguchi, Yuka; Knoblich, Jürgen; Tanaka, Elly (Research Institute of Molecular Pathology (IMP), Vienna, AUT; Institute of Molecular Biotechnology of the Austrian Academy of Sciences (IMBA), Vienna, AUT)*

F06 | EFFICIENT SINGLE-COPY HDR BY 5' MODIFIED LONG dsDNA DONORS.  
*Tavhelidse, Tinatinj; Gutierrez-Triana, Jose Arturo; Thumberger, Thomas; Thomas, Isabelle; Wittbrodt, Beate; Kellner, Tanja; Anlas, Kerim; Tsingos, Erika; Wittbrodt, Joachim (Centre for Organismal Studies (COS) Heidelberg, Heidelberg, GER)*

## **G | Genomic and system approaches of development**

G01 | DID GENOME RE-ORGANIZATION DRIVE THE FORMATION OF NEW REGULATORY UNITS IN CEPHALOPODS?  
*Schmidbaur, Hannah; Kawaguchi, Akane; Albertin, Caroline; Foster, Jamie; Nyholm, Spencer; Simakov, Oleg (Department für Molekulare Evolution und Entwicklung, Universität Wien, Wien, AUT; Research Institute of Molecular Pathology, Vienna, AUT; Marine Biological Laboratory ass. University of Chicago, Massachusetts, USA; University of Florida, Florida, USA; University of Connecticut, Connecticut, USA)*

G02 | RESOURCES AND SERVICES AT THE VIENNA DROSOPHILA RESOURCE CENTER (VDRC).  
*Meadows, Lisa (VDRC, Vienna BioCenter Core Facilities GmbH, Vienna, AUT)*

G03 | INVESTIGATION OF GENETIC CAUSES IN A DEVELOPMENTAL DISORDER: OCULO-AURICULO-VERTEBRAL SPECTRUM.  
*Guleray, Naz; Kosukcu, Can; Oguz, Sumeyra; Urel Demir, Gizem; Taskiran, Zihni Ekim; Simsek Kiper, Pelin Ozlem; Utine, Gulen Eda; Alanay, Yasemin; Boduroglu, Koray; Alikasifoglu, Mehmet (Department Of Medical Genetics, Hacettepe University Faculty Of Medicine, Ankara, TUR; Department Of Bioinformatics, Hacettepe University Institute Of Health Sciences, Ankara, TUR; Division Of Pediatric Genetics, Department Of Pediatrics, Hacettepe University Faculty Of Medicine, Ankara, TUR)*

G04 | EVOLUTION AND DEVELOPMENT OF AVIAN LIMBS AND DIGITS.  
*Zhou, Qi (University of Vienna, Vienna, AUT)*

G05 | A CHANGE OF HEART: MEDAKA AS A MODEL FOR HUMAN CARDIO-VASCULAR DISEASES & GWAS.  
*Hammouda, Omar; Thumberger, Thomas; Gierten, Jakob; Gehrig, Jochen; Pylatiuk, Christian; Loosli, Felix; Wittbrodt, Jochen (Centre for Organismal Studies Heidelberg (COS), Heidelberg, GER; Karlsruhe Institut für Technologie (KIT), Eggenstein-Leopoldshafen, GER; ACQUIFER, Pforzheim, GER)*

G06 | PHYLOGENETIC RELATIONSHIPS AND SEX CHROMOSOME EVOLUTION IN PRIMITIVE BIRDS.  
*Wang, Zongji; Zhang, Jilin; Zhang, Guojie; Zhou, Qi (University of Vienna, Vienna, AUT; Zhejiang University, Hangzhou, CHN; BGI-Shenzhen, Shenzhen, CHN; Karolinska Institutet, Solna, SWE; Kunming Institute of Zoology, Chinese Academy of Sciences, Kunming, CHN; University of Copenhagen, Copenhagen, DNK)*

## **H | Regeneration**

H01 | NEUROGENESIS IN THE ZEBRAFISH INNER EAR: A NEUROD/NESTIN-POSITIVE PROGENITOR POOL AS A SOURCE OF NEW NEURONS DURING GROWTH, HOMEOSTASIS AND REGENERATION.  
*Schwarzer, Simone; Rekhade, Devavrat Ravindra; Brand, Michael; Hans, Stefan (Technische Universität Dresden, Center for Molecular and Cellular Bioengineering (CMCB) DFG-Center for Regenerative Therapies Dresden, Dresden, GER)*

- H02 | NO HEAD REGENERATION HERE: REGENERATION CAPACITY AND STEM-CELL DYNAMICS OF THEAMA MEDITERRANEA (POLYCLADIDA, PLATYHELMINTHES).  
*Bertemes, Philip; Grosbusch, Alexandra; Egger, Bernhard (Universität Innsbruck, Innsbruck, AUT)*
- H03 | A DYNAMIC PATTERN OF AUXIN SOURCES ORCHESTRATES ROOT REGENERATION.  
*Matosevich-Lepar, Rotem; Cohen, Itay; De-Martino, Michela; Scarpella, Enrico; Efroni, Idan (The Hebrew University of Jerusalem, Rehovot, ISR; University of Alberta, Edmonton, CAN)*
- H04 | THE DYNAMICS OF NEURAL STEM CELLS AND NEURONS IN AXOLOTL SPINAL CORD REGENERATION.  
*Lou, Wilson Pak-Kin; Fei, Jifeng; Tanaka, Elly (IMP, Vienna, AUT; South China Normal University, Guangzhou, CHN)*
- H05 | DEVELOPMENT OF A HIGH-CONTENT IN VIVO SCREENING PLATFORM USING AUTOMATED LASER-ASSISTED PHOTOABLATION IN AN ACUTE KIDNEY INJURY MODEL IN ZEBRAFISH.  
*Heigwer, Jana; Gunkel, Manuel; Joggerst-Thomalla, Brigitte; von der Heide, Marko; Küpper, Kevin; Erfle, Holger; Gehrig, Jochen; Westhoff, Jens H (University Hospital Heidelberg, Heidelberg, GER; Heidelberg University, Heidelberg, GER; Acquifer, Heidelberg, GER; Rapp OptoElectronic GmbH, Wedel, GER; Rapp OptoElectronics GmbH, Wedel, GER)*
- H06 | TESTING REGENERATION POTENTIAL OF MOUSE SKIN FIBROBLASTS.  
*Grosser, Lidia (IMP-Research Institute of Molecular Pathology, Vienna, AUT)*
- H07 | TESTING THE REGENERATIVE POTENTIAL OF LIMB BLASTEMA CELLS IN POST-METAMORPHIC XENOPUS LAEVIS.  
*Lin, Tzi-Yang (Research institue of molecular pathology, Vienna, AUT)*
- H08 | SKIN AND MUSCLE CONNECTIVE TISSUE CELLS IN BONE FRACTURE HEALING IN AXOLOTL.  
*Polikarpova, Anastasia; Schmidt-Bleek, Katharina; Ellinghaus, Agnes; Tanaka, Elly M. (Research Institute of Molecular Pathology, Vienna, AUT; Julius Wolff Institute, Charité – Universitätsmedizin, Berlin, GER)*
- H09 | A CELLULAR PROFILING APPROACH TO DISSECT THE REGULATION OF REGENERATION IN A MARINE ANNELID.  
*Stockinger, Alexander; Revilla-i-Domingo, Roger; Raible, Florian (University of Vienna, Vienna, AUT)*
- H10 | SINGLE CELL SEQUENCING REVEALS DIVERSITY OF NEWBORN NEURONS IN THE ADULT ZEBRAFISH BRAIN.  
*Lange, Christian; Rost, Fabian; Machate, Anja; Reinhardt, Susanne; Kuscha, Veronika; Rulands, Steffen; Brand, Michael (CRTD, TU Dresden, Dresden, GER; MPI for Physics of Complex Systems, Dresden, GER)*

## **I | Polarity and axis formation**

- I01 | THE SECRETED TYROSINE KINASE PKDCC AND THE WNT PATHWAY DURING GASTRULATION IN THE RABBIT EMBRYO.  
*Plöger, Ruben; Viebahn, Christoph (Institute of embryology and anatomy, University hospital Göttingen, Göttingen, GER)*

- I02 | AN EARLY CHICK EMBRYO CULTURE DEVICE FOR STUDYING MOLECULAR AND MORPHOLOGICAL LEFT-RIGHT PATTERNING.  
*Pieper, Tobias Karl; Sydow, Hans-Georg; Viebahn, Christoph; Tsikolia, Nikoloz (Universitätsmedizin Göttingen, Göttingen, GER)*
- I03 | THREE PATHWAYS REGULATE SPINDLE DIRECTIONS IN THREE DIMENSIONS: A NEW FUNCTION FOR FGF IN THE C. ELEGANS EMBRYO.  
*Sastradihardja, Tania; Hennig, Christian; Eggert, Frank; Schnabel, Ralf (Technische Universität Braunschweig, Institute of Genetics, Braunschweig, GER; Technische Universität Braunschweig, Psychological Methodology and Biopsychology, Braunschweig, GER)*
- I04 | TODDLER SIGNALING IS ESSENTIAL FOR CELL POLARIZATION DURING GASTRULATION.  
*Stock, Jessica; Kazmar, Tomas; Pauli, Andrea (Research Institute of Molecular Pathology, Vienna, AUT)*

## **J | Germline and early cleavages**

- J01 | THE MAST KINASE DROP OUT CONTROLS DYNEIN-MEDIATED TRANSPORT AND POLARISED MEMBRANE GROWTH IN DROSOPHILA CELLULARISATION.  
*Sonnenberg, Hannah; Langlands, Alistair; Pautz, Sabine; D'Angelo, Valentina; Herberg, Friedrich; Müller, Arno (University of Dundee, Dundee, GBR; Universität Kassel, Kassel, GER)*
- J02 | THE TRIM32-RELATED UBIQUITIN LIGASE, GRIF-1, REPROGRAMS PRIMORDIAL GERM CELLS TO ENSURE GERM CELL IMMORTALITY.  
*Oyewale, Tosin; Eckmann, Christian (MLU Halle-Wittenberg, Halle (Saale), GER)*

## **K | Organogenesis**

- K01 | FGF8 MRNA AND PROTEIN RELAY FOR A LONG-RANGE FGF8 CONCENTRATION GRADIENT  
*Pu, Qin (University of Bonn, Bonn, GER)*
- K02 | THE TRANSCRIPTION FACTOR OSR1 MARKS EMBRYONIC PROGENITORS OF BROWN ADIPOSE TISSUE (BAT) AND ADULT ADIPOSE STEM/PRECURSOR CELLS (ASPCs), AND IS ESSENTIAL FOR BAT FORMATION.  
*Vom Hofe-Schneider, Sophie; Schulz, Tim; Stricker, Sigmar (Freie Universität Berlin, Berlin, GER; Deutsches Institut für Ernährungsforschung, Nuthetal, GER)*
- K03 | EPIGENETIC REGULATION OF CHONDROCYTE DIFFERENTIATION.  
*Wuelling, Manuela; Neu, Christoph; Kitanowski, Simo; Cao, Yingying; Thiesen, Andrea; Lange, Anja; Hoffmann, Daniel; Vortkamp, Andrea (University Duisburg-Essen, Essen, GER)*
- K04 | CAVEOLIN 1a IS REQUIRED FOR MUSCULAR AND NEURONAL INTEGRITY IN XENOPUS LAEVIS.  
*Breuer, Marlen; Berger, Hanna; Borchers, Annette (Philipps Universität Marburg, Marburg, AUT)*
- K05 | OUTGROWTH OF ZEBRAFISH GILL FILAMENTS IS REGULATED BY AN INTERPLAY BETWEEN THE RA- AND BMP-SIGNALING PATHWAYS.  
*Liebenstein, Thomas; Stenglein, Laura; Grysczyk, Lara; Nardini, Niels; Begemann, Gerrit (University of Bayreuth, Bayreuth, GER)*

- K06 | DYNAMIC CELL MOTILITY IN PANCREATIC ISLET MORPHOGENESIS.  
*Julia Freudenblum, José A. Iglesias, Martin Hermann, Dirk Meyer, Robin A. Kimmel (Institute of Molecular Biology/CMBI, University of Innsbruck, Innsbruck, AUT; Johann Radon Institute for Computational and Applied Mathematics (RICAM), Austrian Academy of Sciences, Linz, AUT; Department of Anaesthesiology and Critical Care Medicine, Innsbruck Medical University, Innsbruck, AUT; Department of Neurosurgery, Medical University of Innsbruck, Innsbruck AUT)*
- K07 | DIVIDING THE EARLY METANEPHRIC FIELD - THE ROLE OF TBX18 IN URETER SPECIFICATION.  
*Weiss, Anna-Carina; Bettenhausen, Eva; Kleppa, Marc-Jens; Trowe, Mark-Oliver; Kispert, Andreas (Medizinische Hochschule Hannover, Hannover, GER)*
- K08 | DROSOPHILA TWIST - A MYOGENIC SWITCH?  
*Bartle, Jakob; Frasnch, Manfred (Division of Developmental Biology, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, GER)*
- K09 | SAME SAME, BUT DIFFERENT - THE ANTERIOR LATERAL LINE.  
*Groß, Karen; Seleit, Ali; Centanin, Lázaro (Centre for Organismal Studies Heidelberg, Heidelberg, GER)*
- K10 | TWIST AFFECTS LINEAGE REPROGRAMMING AND TRANSDIFFERENTIATION OF SYNCYTIAL ALARY MUSCLES DURING DROSOPHILA METAMORPHOSIS.  
*Rose, Marcel; Frasnch, Manfred; Christoph, Schaub (Division of Developmental Biology, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, GER)*
- K11 | TRACHEAL APICAL EXTRACELLULAR MATRIX MATURATION IN DROSOPHILA MELANOGASTER IS MEDIATED BY EVOLUTIONARY CONSERVED SERINE PROTEASES.  
*Drees, Leonard; Schuh, Reinhard (Max Planck Institute for Biophysical Chemistry, Göttingen, GER)*
- K12 | MATRIX METALLOPROTEASES 2 AND 9 ARE FUNDAMENTAL FOR NEURAL CREST AND SKELETAL DEVELOPMENT IN THE MOUSE EMBRYO.  
*Kalev-Altman, Rotem; Monsonego-Ornan, Efrat; Sela-Donenfeld, Dalit (Hebrew University of Jerusalem, Rehovot, ISR)*
- K13 | THE ZINC FINGER TRANSCRIPTION FACTOR DBcl11/CG9650 IS REQUIRED FOR PROPER SOMATIC AND CARDIAC MUSCLE DEVELOPMENT IN DROSOPHILA.  
*Muster, Helena; Frasnch, Manfred (Division of Developmental Biology, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, GER)*
- K14 | THE HOX TRANSCRIPTION FACTOR UBX STABILIZES LINEAGE COMMITMENT BY SUPPRESSING CELLULAR PLASTICITY.  
*Domsch, Katrin; Carnesecchi, Julie; Disela, Vanessa; Lohmann, Ingrid (Heidelberg University - COS - Developmental Biology, Heidelberg, GER)*
- K15 | ORG-1 DRIVES DIRECT MUSCLE LINEAGE REPROGRAMMING THROUGH NEGATIVE REGULATION OF HIPPO SIGNALLING.  
*Rose, Marcel; Frasnch, Manfred; Schaub, Christoph (Division of Developmental Biology, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, GER)*



## **L | EvoDevo**

### **L01 | CHARACTERIZATION OF PUTATIVE STEM CELLS IN NEMATOSTELLA VECTENSIS**

*Andreas Denner, Julia Steger, Alexander Ries, Alison G. Cole, Ulrich Technau (Dept. of Molecular Evolution and Development, University of Vienna, Vienna, AUT)*

### **L02 | THE ROLE OF BRACHYURY IN "MESODERM" DETERMINATION IN METAZOANS**

*Schwaiger, Michaela; Dnyansagar, Rohit; Zimmermann, Bob; Genikhovich, Grigory; Ferrer, Patricio; Andrikou, Carmen; Weingart, Anton; Lowe, Elijah K.; Ina Arnone, Maria; Technau, Ulrich (Dept. of Molecular Evolution and Development, University of Vienna, Vienna, AUT; Cellular and Developmental Biology, Napoli, ITA)*

### **L03 | FUNCTIONAL DIVERSIFICATION OF INTERLEUKIN-1 DURING VERTEBRATE EVOLUTION**

*Hasel, Eva; Bartok, Eva; Bajoghli, Baubak; Leptin, Maria (EMBL, Heidelberg, GER; Institut für Klinische Chemie und Klinische Pharmakologie, Universitätsklinikum Bonn, Bonn, GER; University Hospital Tübingen Division of Translational Oncology, Tübingen, GER)*

### **L04 | RELEASE FROM YOLK SAC IS REQUIRED FOR EXTRAEMBRYONIC ENVELOPE FORMATION IN THE SCUTTLE FLY MEGASELIA ABDITA**

*Caroti, Francesca; Gonzalez, Everardo; Noeske, Viola; Lemke, Steffen (COS Heidelberg, Heidelberg, GER)*

### **L05 | THE EVOLUTION OF THE MICRORNA PATHWAY AND ITS ESSENTIAL ROLE IN CNIDARIAN DEVELOPMENT**

*Fridrich, Arie; Modepalli, Vengamanaidu; Agron, Maayan; Moran, Yehu (The Hebrew University of Jerusalem, Jerusalem, ISR)*

### **L06 | SUPERNUMERARY SEGMENTS FORMING IN A SHORT GERM INSECT THROUGH REPAIR OF A DISRUPTED INITIAL PATTERN SUGGEST AUTONOMOUS PATTERNING CAPABILITIES DOWNSTREAM OF THE SEGMENTATION CLOCK**

*Distler, Jutta; Klingler, Martin (Friedrich-Alexander-Universität Erlangen, Erlangen, GER)*

### **L07 | THE EVOLUTION OF ANIMAL MUSCLE CELL TYPES: INSIGHTS FROM THE DIPLOBLAST NEMATOSTELLA VECTENSIS**

*Kaul-Strehlow, Sabrina; Jahnel, Stefan; Steger, Julia; Cole, Alison G; Zimmermann, Robert P; Hack, Lisa AK; Steinmetz, Patrick RH; Technau, Ulrich (Dept. of Molecular Evolution and Development, University of Vienna, Vienna, AUT; Sars International Centre for Marine Molecular Biology, Bergen, NOR)*

### **L08 | ANCESTRAL CHARACTER OF PRIMATE GASTRULATION.**

*Tsikolia, Nikoloz; Rulle, Alexander; Bertocchini, Federica; Viebahn, Christoph (Anatomy and Embryology University of Göttingen, Göttingen, GER; Universitätsmedizin Göttingen, Göttingen, GER; Universidad de Cantabria, Santander, ESP)*

### **L09 | EVOLUTION OF LIFE CYCLES IN POLYCLAD FLATWORMS (PLATYHELMINTHES)**

*Girstmair, Johannes; Egger, Bernhard; Gammoudi, Mehrez; Telford, Max; Tomancak, Pavel (Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, GER; University of Innsbruck, Innsbruck, AUT; Université de Tunis El-Manar, Tunisia, Tunis, TUN; University College London, London, GBR)*

- L10 | COMPARATIVE STUDIES OF EXPRESSION KINETICS REVEAL DEVELOPMENTAL CONSTRAINTS AND PLASTICITY  
*Gildor, Tsvia; Ben-Tabou de-Leon, Smadar (University of Haifa, Haifa, ISR)*
- L11 | UNCOVERING THE ROLE OF TAXON-RESTRICTED GENES IN THE NEURONS OF THE FRESHWATER POLYP HYDRA.  
*Matt, Ann-Sophie; De Anda, Jaime; Wong, Gerard; Bosch, Thomas C.G.; Klimovich, Alexander (Zoologisches Institut, Kiel, GER; Department of Bioengineering, Los Angeles, USA)*
- L12 | A NEW GENE BUDS OUT AND TAKES OVER AN ESSENTIAL ROLE IN TALL BLASTODERM FORMATION IN HIGHER FLIES.  
*Noeske, Viola (COS Uni Heidelberg, Heidelberg, GER)*
- L13 | ANCESTRAL COMPLEXITY AND FUNCTION OF THE NERVOUS SYSTEM: INSIGHTS FROM SINGLE-CELL TRANSCRIPTOMICS IN HYDRA.  
*Klimovich, Alexander; Matt, Ann-Sophie; Giez, Christoph; Giacomello, Stefania; Adameyko, Igor; Bosch, Thomas (Zoological Institute, Kiel, GER; Department of Molecular Neurosciences, Vienna, AUT; SciLifeLab Stockholm, Solna, SWE)*
- L14 | A NEW GENE FAMILY OF SHORT COLLAGENS IN THE DEVELOPMENT AND REGENERATION OF THE SEA ANEMONE NEMATOSTELLA VECTENSIS.  
*Gat, Uri (Hebrew University, Jerusalem, ISR)*
- L15 | TINKERING WITH DEVELOPMENT: THE LATERAL LINE AS A MODEL TO STUDY PATTERN FORMATION AND EVOLUTION.  
*Seleit, Ali; Centanin, Lazaro (COS Centre for Organismal Studies, Heidelberg, Heidelberg, GER)*
- L16 | EXTRINSIC AND INTRINSIC FACTORS REGULATE BODY SIZE IN HYDRA BY CONSERVED SIGNALING PATHWAYS.  
*Mortzfeld, Benedikt; Taubenheim, Jan; Klimovich, Alexander V.; Fraune, Sebastian; Rosenstiel, Philip; Bosch, Thomas C. G. (University of Massachusetts Dartmouth, Dartmouth MA, USA; Christian-Albrechts University Kiel, Kiel, GER)*
- L17 | TOWARDS UNDERSTANDING AN ULTIMATELY SIMPLE METAORGANISM: IMPACT OF SYMBIOTIC MICROBES ON DEVELOPMENTAL PROCESSES OF HYDRA.  
*Bosch, Thomas; He, Jinru (Zoological Institute, Christian-Albrechts Kiel University, Kiel, GER)*
- L18 | ECHINODERMS ADAPTED THE VEGF-DRIVEN VASCULARIZATION PROGRAM TO GENERATE CALCITE SKELETONS.  
*Ben-Tabou de-Leon, Smadar (The University of Haifa, Haifa, ISR)*
- L19 | ELUCIDATING THE EVOLUTIONARILY CHANGING FUNCTIONS OF MEIS TALE-HOMEOBOX PROTEINS DURING NERVOUS SYSTEM DEVELOPMENT IN METAZOANS.  
*Ben-Tabou de-Leon, Smadar (The University of Haifa, Haifa, ISR)*