



## Division of Evolutionary Developmental Biology

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### DEDB Officers & Representatives

Cassandra Extavour  
*Chair 2016-2018*

Sally Leys  
*Past-Chair 2016-2018*

Gregory Davis  
*Secretary 2015-2017*

Julia Bowsher  
*Secretary-Elect 2016-2017*

Yuichiro Suzuki  
*Program Officer 2016-2019*

Amanda Kahn  
*Student/Postdoctoral Representative  
2014-2017*

### Message from the Chair

Cassandra Extavour, [Chair.DEDB@sicb.org](mailto:Chair.DEDB@sicb.org)

Dear DEDB members,

Happy spring everyone! I hope, if you're in a northern climate, that spring is coming soon to your area, and if you're in a southern climate, that you appreciate how good you have it not having to shovel snow!

Before going further, I'd like to thank [Sally Leys](#), our former chair, for all of the hard work she did advocating for Evo-Devo at SICB over the past two years, and for passing on to me all of her hard-won knowledge on how best to do this job going forward. When next you see Sally at SICB, please thank her, and notice how much more relaxed she will likely be, since she no longer has to go to all of the executive committee meetings!

This newsletter is the place where we update you, our members, on things that happened at, and have happened since, the SICB meeting in Portland in January of this year. We'll also share with you evo-devo relevant news that we've heard of from other societies, initiatives, and colleagues around the world.

### 1) Highlights of the Portland Meeting

Although there was only one symposium with an explicit evo-devo theme ("A Bigger Picture: Organismal Function at the Nexus of Development, Ecology, and Evolution"), DEDB co-sponsored two symposia (described by our Program Officer, Yui Suzuki, below), and there were several sessions with an emphasis on topics traditionally addressed by our field. The latter included "Evolution Viewed Through a Developmental Lens," "Major Body Plan Transitions," and "Larvae, Metamorphosis, and Life Cycles," all of which were well attended by DEDB members.

We also had an outstanding "Best Student Oral Presentation" competition, where several talented graduate students told us about their fascinating work on topics ranging from size variation in beetle horns to loss of lungs in salamanders. Thanks to all of our volunteer judges from the DEDB community who helped us with this competition, and with the "Best Student Poster Presentation" competition.

Our judges had a wealth of very good presentations to choose from, but they reached an agreement that the best oral presentation was given by [Daniel Urban](#). Daniel is pursuing his PhD in the laboratory of [Karen Sears](#) at the University of Illinois Urbana-Champaign, and he gave an exciting talk entitled "An Earful of Jaw, Then and Now: Insights from Evolutionary Developmental Biology." Daniel explained how combining paleontology with developmental biology of relevant extant organisms can shed new light



on some of the major morphological transitions that occurred in the evolution of the mammalian jaw. The winner of the best student poster presentation was [Frank Stabile](#), from the lab of [Gunter Wagner](#) at Yale University. Frank's poster, entitled "Identification of four genes involved in the development of feathers but not scales in birds," described his progress on identifying genes that can differentiate between two structures currently hypothesized to be homologous, namely scales and feathers in amniotes.

As we did last year, this year we must again thank [Amanda Kahn](#), our student/postdoc representative, who coordinated the very popular faculty/student dinners. If you did not take advantage of this program at the Portland meeting, please consider participating at the [2017 meeting in New Orleans](#). Students, this is a chance to spend some quality time with faculty members, and learn about their work and from their experience. Faculty, this is a fantastic opportunity to learn about the ongoing work and concerns of the next generation of scientists, and potentially even to recruit great students and postdocs to your own lab! Watch out for the emails that will circulate to engage you in this program, in the months preceding the New Orleans meeting.

## 2) Symposia

Particularly because there were so few symposia with an explicitly Evo-Devo focus at the Portland meeting, it is important that we (this means you!) have a strong DEDB presence at San Francisco in 2018. The deadline to submit proposals will be August 25, 2016, and the online application is available [here](#).

If you plan to propose a symposium, consider going about your approach with plenty of advance notice, by following these recommendations:

1. Decide on your theme for the Symposium. Remember that a broader theme that will attract not only DEDB members, but also members of other SICB divisions, will be more likely to garner the interest of a greater proportion of the program committee members, since the program committee includes representatives from all divisions.

2. Invite a slate of speakers. Try to get their commitment to participate in the Symposium if it is selected for the program.
  - a. Remember that Symposium speakers must agree to commit not only to speak in the Symposium, but also to write a paper on the topic of their presentation for the Society's journal Integrative and Comparative Biology within a month of the meeting (by January 31st).
  - b. Make sure your speaker list is as diverse as possible with respect to career stage, gender, ethnic background, and anything else that will give your Symposium a wide range of perspectives and outlooks.
3. Develop a plan for how you will fund your Symposium. Remember that even if your Symposium is selected, you may not be able to get enough funding from the Division to cover all speaker costs.
  - a. Make sure that your invited speakers are aware of the fact that you may not be able to cover all of their costs. It is entirely up to you how you distribute whatever funding you obtain, for their travel arrangements, registration fees and other costs.
  - b. Remember that each Division Program Officer has only two thousand dollars to help support symposia.
4. If you have any questions about proposing a Symposium, or would like to see examples of previous successful Symposium proposals, email Yui Suzuki, our new program officer, at [DPO.DEDB@sicb.org](mailto:DPO.DEDB@sicb.org).
5. Go to <http://www.sicb.org/meetings/2018/call-symp.php> to complete the online application form, and submit your application before August 25, 2016!

## 3) Funding for Evo-Devo

Although it has been nearly a decade since the economic crisis of 2008, for most scientists it does not feel as if it is getting any easier to obtain funding support for our work! Luckily for DEDB members, Evo-Devo work is a priority for several program officers at the National Science Foundation (NSF) in the US. Although the NSF has a limited budget and cannot work miracles, several evo-devo-sympathetic program officers have been trying to find ways in



which the NSF can continue to support our work. NSF Program Officer Anthea Letsou attended the Portland meeting, and gave DEDB members the following important recommendations for seeking funding support for our work from the NSF:

1. Consider applying to the new funding track called EDGE: Enabling Discovery Through Genomic Tools. The goal of this program is to promote the development and dissemination of genomic tools for functional genetic analysis in non-traditional model organisms. If you wish to apply, you must submit a letter of intent by April 29, 2016. See <http://www.nsf.gov/pubs/2016/nsf16505/nsf16505.htm> for details.
2. For mid-career investigators, consider applying for an NSF mid-career award. This is a regular project proposal, but one where the PI proposes to perform at least some work in which they do not currently have expertise; part of the funding and time dedicated to carrying out the project must therefore include time for the PI to acquire this expertise, for example, by visiting a host lab. Think of it as a sort of large-scale DDIG (Doctoral Dissertation Improvement) Grant proposal for PIs: such an award can enable you to learn the tools needed to carry out work that currently falls outside of your area of expertise. For example, scientists trained as developmental biologists, paleontologists or functional morphologists, might like to become familiar with programming, bioinformatics, or computational modeling, to broaden the scope of their approaches to their evo-devo questions of interest. To apply to this program, submit a pre-proposal at whatever time of year is indicated by the NSF division most appropriate to you, and simply indicate that this proposal should be considered in the mid-career award category. See <http://www.nsf.gov/pubs/2016/nsf16505/nsf16505.htm> for details.

#### 4) Evo-Devo News from Outside DEDB

Just four months before SICB 2016, the new Pan American Society for Evolutionary Developmental Biology (PANAM SEDB, <http://www.evodevopanam.org/>) held their inaugural meeting in Berkeley, CA, in August 2015. Several DEDB members attended, and overall, as judged from the meeting proceedings and from the feedback survey that followed the meeting, it succeeded in its goal of providing another confer-

ence setting for members of our community to communicate and discuss their work. Just as they are always at SICB, NSF Program Officers were in attendance at the PANAM SEDB meeting. The next PANAM SEDB meeting will be in Calgary, Alberta, Canada, August 19-23, 2017.

The upcoming meeting of the professional society of our European colleagues in Evo-Devo, the European Society for Evolutionary Developmental Biology (EED, <http://2016uppsala.evodevo.eu>), will take place in Uppsala, Sweden, 26-29 July 2016.

Finally, the NSF-supported Evo-Devo-Eco Research Coordination network (EDEN RCN, [www.edenrcn.com](http://www.edenrcn.com)) is in its final year, and no more funding competitions will be held. However, watch this space for a potential extension of an EDEN-like program and, if you are interested in helping to find ways to continue supporting the evo-devo-eco-community through small travel grants that encourage collaboration between labs, please contact me, Cassandra Extavour, at [Chair.DEDB@sicb.org](mailto:Chair.DEDB@sicb.org).

#### Message from the Program Officer

Yui Suzuki, [DPO.DEDB@sicb.org](mailto:DPO.DEDB@sicb.org)

As the incoming program officer for DEDB, I would first like to thank Louise Page for all her hard work and the wonderful job she did as DEDB Program Officer the last three years. I have some big shoes to fill! Louise has kindly helped acquaint me with my new role as Program Officer, so hopefully the transition will be seamless.

The 2016 SICB meeting was a great success. Some highlights from the meeting included the inaugural special session for the DEDB Best Student Presentation competition and two DEDB co-sponsored symposia: "Evolutionary Endocrinology: Hormones as Mediators of Evolutionary Phenomena" (organized by Robert Cox, Joel McGlothlin and Frances Bonier) and "Tapping the Power of Crustacean Transcriptomes to Address Grand Challenges in Comparative Biology" (organized by Donald Mykles, Karen Burnett, David Durica and Jonathon Stillman). From the talks given during the Best Student Paper session, it is clear that SICB continues to attract students engaged in high quality evo-devo research. The evolutionary endocrinology symposium highlighted interesting and exciting ideas that integrate endocrinology into evolutionary, ecological and developmental biology. The



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rise of crustaceans as useful and excellent evo-devo models was highlighted in the crustacean transcriptome symposium. The meeting also included several interesting posters relevant to DEDB.

Looking forward, there will be two DEDB symposia at the 2017 SICB meeting in New Orleans, LA. The first will be "The Evolution of Arthropod Body Plans – Integrating Phylogeny, Fossils and Development" chaired by Ariel Chipman and Doug Erwin. The second will be "Physical and Genetic Mechanisms for Evolutionary Novelty" chaired by Thomas Stewart, Stuart Newman and Günther Wagner. These will be vibrant and intellectually stimulating symposia, and I am already looking forward to the meeting. For a list of all symposia scheduled for the New Orleans meeting, see <http://www.sicb.org/meetings/2017/symposia/index.php>

Lastly, I would like to call your attention to the 2018 SICB meeting, which will be held in San Francisco. Planning for the 2018 symposia is already underway, and the deadline for submission of symposia proposals is 25 August 2016. See (<http://www.sicb.org/meetings/2018/callsymp.php> for the call for symposium proposals for 2018. A guide to preparing a symposium proposal is available on the SICB Resources page ([http://www.sicb.org/resources/SICB\\_Symposium\\_Policies\\_and\\_Guidelines\\_Final.pdf](http://www.sicb.org/resources/SICB_Symposium_Policies_and_Guidelines_Final.pdf)). Decisions will be made at the Program Committee planning meeting at the end of September, so you still have plenty of time to apply for funding to support your proposal. It would be wonderful to have a strong evo-devo presence in San Francisco, especially since the meeting is likely to draw a large crowd due to its attractive location. If you have any ideas for a symposium, I would be happy to provide tips and/or a sample proposal. Likewise, if you have any questions, don't hesitate to get in touch with me ([DPO.DEDB@sicb.org](mailto:DPO.DEDB@sicb.org)). I wish you all a successful year!

### Message from the Student/Postdoctoral Affairs Committee Representative

Amanda Kahn, [kahn@ualberta.ca](mailto:kahn@ualberta.ca)

Greetings DEDB students and postdocs!

Great job to those who presented posters and talks in Portland! This was the first year that DEDB held a special session for the Best Student Talk award, so please send us your thoughts about the new format. The Evo-Devo Dinner Dates were also a big success. The program has grown every year since its incep-

tion; this year 18 faculty hosted 30 students to a lunch or dinner. Thank you to all who participated, and I hope more of you can join in next year!

The DEDB business meeting, despite its exclusive-sounding name, is actually for everyone in the division. It is the only time that DEDB members can get together and talk about the interests of the division and thoughts on its future, which means that all voices should be heard (including yours). For those who were not able to attend the business meeting, check out the [meeting minutes](#) posted to the website and email me or the other officers to weigh in on the topics covered.

We typically think about scientific societies only as we approach conference time, but you can benefit from SICB and DEDB in many other ways during the rest of the year, before ramping up for next year's conference in New Orleans. Check out the Student and Postdoctoral Affairs Committee's recently updated list of external grants and scholarships ([click here](#); your member number is needed for access), get involved in organizing a proposal for a symposium for the 2018 San Francisco meeting, and interact with other SICB and DEDB members through social media. Also, the New Orleans conference will be my last as the DEDB Student/Postdoctoral Affairs Committee representative, so email me in the next few months if you are interested in taking up the three-year position.

Have a great, productive summer collecting more data that you can present at SICB! And, as always, email me if you have any questions or want to get more involved in our (your) division.

### Message from the Secretary

Greg Davis, [Secretary.DEDB@sicb.org](mailto:Secretary.DEDB@sicb.org)

Another fantastic meeting for our division this year! Thanks to Louise Page, our outgoing Program Officer, for all the hard work, our affiliated symposium organizers, and Amada Kahn, our Student/Postdoctoral Affairs Committee Representative, for continuing to liaison between students, postdocs and faculty and for keeping the Evo-Devo Dinner Dates alive and well. As mentioned by the other three officers above, this was the first year we had a special session for the Best Student Oral Presentation. Please let any of us know how you felt about that session, especially if you have suggestions. At the business meeting in Portland there was some discussion about how we



might improve the process, including submission of abstracts, selection of abstracts, and judging. Check out the [minutes of the meeting](#) for more details, and please let me know if you have an opinion or suggestions.

With our move to a special session for the Best Student Oral Presentation, it has come to my attention that we need to vote to modify the Division By-Laws. The proposed changes are shown below; an ambiguity is removed about whether a student is allowed to win either the poster and oral competition just once or if she/he can win each just once, and the process for selecting judges for both the Best Student Oral and Poster Presentations is clarified. For several years now we have not been following the protocol in the By-Laws, which states that the Chair shall appoint three full members to act as judges each year. Instead we've been soliciting volunteers to act as judges from our membership and letting our volunteers select talks or posters to judge. We intend to continue this process with the slight modification that volunteers to judge the talks will be asked to attend the entire special session. Note, however, that the suggested changes mostly make the By-Laws more general; this has been recommended in order to give us flexibility as we refine our process, particularly with regard to identifying judges. Below is the current language of the affected section of the DEDB Division Bylaws. Old language is indicated by strike-through; the proposed new language is indicated in bold underlined text.

#### Article XIV. Best Student Presentation Awards

Annual awards shall be made for the best presentations by students at the annual meeting, one for the best ~~contributed paper~~ **oral presentation** and one for the best poster **presentation**. Students who have not yet been awarded the Ph.D. are eligible for the prize, as are new Ph.D.s who have received the degree no more than 12 months prior to the meeting and are presenting a paper on their graduate research. The work must be original and must have been carried out principally by the student presenting the paper **work**. ~~The prize can be awarded only once to any student.~~ **A student who wins best oral presentation may not compete in the best oral presentation competition in this division in the future. A student who wins best poster presentation may not compete in the best poster presentation competition in this division in the future.** Prior to the Annual

Meeting, students who have submitted abstracts will be given the option of competing or not competing for the prize. However, if, in the opinion of the judges, none of the papers presented at a given meeting are deserving of a prize, the prize may be omitted for that year. In the case of a tie, duplicate prizes may be awarded. ~~The Chair of the Division shall appoint annually 3 full members~~ **Judges will be solicited from the membership** of the Division to act as judges. ~~All papers identified as~~ **and all presentations** competing for the ~~a~~ prize must be attended by at least one judge, and preferably by **at least** three. No member who has a student competing for a prize shall be eligible to serve as ~~a~~ judge.

We will be voting on these changes in May at the same time we have our elections, and indeed, even though Cassandra has just taken the helm, we need to have an election this spring for the next Chair-Elect, who will serve one year as Chair-Elect and then take over as Chair in 2018. We are fortunate to have three excellent candidates for the office. Please make sure to read their statements below and cast your vote during the election in May.

**Minutes of the DEDB Business Meeting in Portland, OR, click [here](#)**

#### Candidates for Chair-Elect

##### **Kim Hoke**



**Current Position:** Associate Professor, Department of Biology, Colorado State University.

**Education:** B.S. Stanford University (1994); Ph.D. Stanford University (2002).

**Professional Experience:** Associate Professor (2015-present) and Assistant Professor (2009-2015), Department of Biology, Colorado State University; Postdoctoral Fellow, Section of Integrative Biology, University of Texas at Austin, laboratories of Michael Ryan and Walter Wilczynski (2003-2009); Postdoctoral Fellow, Smithsonian Tropical Research Institute, laboratory of Stanley Rand



and Michael Ryan (2002-2003); graduate student, Stanford University, laboratory of Russell Fernald (1994-2002).

**SICB Activities:** Invited Speaker, Neuroecology Symposium, 2016 SICB Meeting.

**Other Memberships:** Pan-American Society for Evolutionary Developmental Biology; International Society for Neuroethology.

**Research Interests:** My lab focuses on the processes that shape evolutionary trajectories underlying convergent evolution of behavioral and morphological traits. We link molecular, neural, and developmental mechanisms to their consequences for organismal phenotypes, and we investigate the neural and hormonal mechanisms of context- or experience-dependent changes in behavior. One project examines the interplay between developmental processes and population divergence in diversity in brain and behavior in guppies. A second project investigates the developmental causes and functional consequences of the repeated loss and regain of outer and middle ear structures in toads.

**Goals Statement:** Portland 2016 was my first SICB conference, largely because I've typically conducted my fieldwork on toads in South America during December and January. The meeting was full of diverse and fascinating talks, but as a newbie I was struck by the confusing nature of the many SICB subgroups. My objectives as chair of DEDB would be to help new members navigate SICB opportunities, and also to highlight DEDB's contributions to both macroevolutionary patterns and population-level processes.

### David Lambert



**Current Position:** Associate Professor of Biology, University of Rochester.

**Education:** B.S. Yale University (1995); Ph.D. University of Arizona (2002).

**Professional Experience:** Associate Professor (2011-present) and Assistant Professor (2004-2011), Department of Biology, University of Rochester; Helen Hay Whitney Foundation Postdoctoral Fellow, laboratory of Kevin White, Yale University (2002-2004); graduate work in the laboratory of Lisa Nagy, University of Washington; undergraduate research in the laboratory of Leo Buss, Yale University.

**SICB Activities:** Co-Organizer, Symposium on Spiralian Development, 2010 SICB meeting.

**Other Memberships:** Society for Developmental Biology.

**Research Interests:** I have broad interests in evolution and development. Work in my lab focuses on the mechanisms of spiralian development using the mollusk *Ilyanassa* as a model. Recently, we have worked on the roles of asymmetric RNA segregation in patterning the blastula and signaling that patterns the dorsal-ventral axis. Current projects include mechanisms of shell development, endomesodermal stem cell development, and the role of lineage-specific genes in ciliary band development.

**Goals Statement:** I am honored by the nomination to run for Chair of DEDB. Since I was a graduate student, the SICB meetings have been a key part of my professional interactions, and I welcome the chance to help contribute to the quality of these meetings. If elected, I would work to increase participation at meetings. I would especially try to facilitate graduate student and post-doc attendance, since the opportunities for these members to present and interact with others at meetings is one of the particular strengths of SICB. I would also work to recruit and support groundbreaking symposia that will move the field in new and interesting directions, and stimulate interactions among members, while attracting those who have not attended before.



**David Weisblat**



**Current Position:** Professor, Cell & Developmental Biology, Dept. of Molecular & Cell Biology, University of California, Berkeley.

**Education:** A.B. Harvard College (1971); Ph.D. Caltech (1976); postdoctoral research, University of California, Berkeley 1976-1983.

**Professional Experience:** Instructor, MBL Leech Course, Woods

Hole, MA (1984-2000); Director MBL Leech Course, Woods Hole, MA (1991, 1993); PI & Director, UCB NSF REU Site in Cell, Developmental & Evolutionary Biology (2006-2013); Co-PI, UCB NSF REU Site in Integrative Biology at UC Berkeley, from Molecules to Ecosystems (2014-present); Equity Advisor, UCB Dept. of Molecular & Cell Biology (2007-present); Faculty Sponsor, UCB SACNAS Chapter (2007-present); Instructor, MBL Neural Systems & Behavior Course, Woods Hole, MA (2015-present); Instructor, International Course on Cellular Neurobiology, UNAM, Mexico (1994); Instructor, IBRO Theoretical & Practical Course in Neuroscience, Queretaro, Mexico (2001, 2003); Instructor, IBRO School in Brazil, Ribeirao Preto, Brazil (2002, 2004); Chief Instructor, Mahableshwar Workshop "Evolution of Developmental Mechanisms," Mahableshwar, India (2005); IBRO, Visiting Lecture Team, Tallinn, Estonia, and Bangalore, India (2005); IBRO, Visiting Lecture Team, Lagos, Nigeria (2007); IBRO, Visiting Lecture Team, Nagpur, India (2008); IBRO, Visiting Lecture Team, Younde, Cameroon (2010); NSF Panel (1999-2003, 2010, 2014, 2016); NIH, Diversity Fellowship Panel member (2008-2010); NIH, DEV1, ad hoc member (2009); NIH, DEV2, ad hoc member (2010); Journal of Neurobiology (1986-1995); International Journal of Developmental Biology (1989-1996); Development (1988-1998); Roux's Archives of Developmental Biology (1989-1996); Zoological Science (2003-2004); Associate Editor, Development, Genes/Evolution (1996-2015).

**Other Memberships:** American Association for the Advancement of Science; American Chemical Society; American Society for Cell Biology; Society for Developmental Biology; Pan-American Society for Evolutionary Developmental Biology.

**Research Interests:** Biology of leeches. Primarily interested in embryonic development of the glossiphoniid leech *Helobdella austinenis*, with excursions into speciation and life history comparisons in the genus *Helobdella*, behavior and development of the leech nervous system, and the comparison of clitellate annelid embryos that exemplify determinate and indeterminate growth (the leech *Helobdella* and the oligochaete *Tubifex*, respectively).

**Goals Statement:** The intrinsically comparative nature of the field of evolutionary developmental biology requires that its practitioners typically spend much of their time and energy in intellectual isolation, focused on the details of development in species that few other scientists are studying. But it is also essential that we come together with others to make the essential comparisons across taxa, exchange information on technical advances, provide encouragement and exposure for younger scientists, etc. SICB meetings and other activities provide an excellent forum for these interactions, and I would be to help continue the valuable contributions of our division to these ends.

