



International Society for Neuroethology

Newsletter/April 2020

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THIS ISSUE FEATURES

President's Column by *Eric Warrant*
COVID-19 Update by *Eric Warrant*
Outreach Highlights by *Miriam Henze* and *Sara Wasserman*
MBL Meeting on the Vertebrate Viral Toolbox



The Prez Says

Eric Warrant
President of the ISN



Hello everyone!

I guess you, like me, are trying to work out what is happening in the world with the rapid spread of the COVID-19 virus. The pandemic is no doubt affecting all of us in various ways, especially because different countries are taking different strategies to deal with it. As most of you now know, our upcoming congress in Lisbon has now been postponed until 2022 and the Berlin congress until 2024. This was a joint decision taken with the rest of the Executive Committee, as well as with the chairs of the ICN Local Organising Committee (**Rui Oliveira**) and the ICN Program

Committee (**Cynthia Moss** and **Uwe Homberg**). Of course, many of you – me included – have already registered. Rest assured, your registration fees will be returned! We are just working out the logistical details of how this will happen at the moment.

We have not taken these measures lightly. The Local Organising Committee and the Program Committee have made a truly massive effort to secure facilities, speakers and significant funding for the congress and everything has so far gone incredibly smoothly. The congress was gearing up to be as brilliant as ever, but it is good to know that all the hard work was not in vain! The program, the venues and the funding will remain intact until 2022. And this isn't the only thing that will remain intact. We will still accept applications for five of this year's awards – Young Investigator, Capranica, Konishi, Fellows of the ISN and Heiligenberg – but not the sixth (Developing Neuroethology, which is exclusively reserved for travel to the ICN in the year of application). As previously notified, the closing dates for these five awards are May 1st 2020 (see the ISN web site for details).

For me personally, this disturbing COVID-19 pandemic comes on top of the most terrifying Australian summer in living memory. My joy of seeing millions of our wonderful Bogong moths enter the Australian Alps last October, despite years of terrible drought and two summers with literally no moths at all in the mountains (which I shared in my last Prez Sez column in November), was soon reduced to terror and tears as massive fires ravaged vast areas of pristine alpine wilderness around our field station (as well as vast areas in other parts of Australia). And when I say "field station", this is actually my family home in Australia, where much love and energy has been invested – we built our special ferromagnetic-free lab there only a couple of years ago, to study the sensory basis of long-distance navigation in the Bogong moth. My wife Sara, and our two boys and I were there over Christmas, but we were forced to evacuate on New Year's Eve, a harrowing and uncertain drive to safety through a smoke and flame choked landscape to Canberra, almost 200 km away. It was around 5 pm when we left – normally it would have been brilliantly sunny, but the dense smoke made it look more like midnight. Apart from our own gear, we had the car loaded with the smallest and most expensive pieces of equipment we could salvage from the lab. Just in case. We watched on from afar as the fires nearly demolished our house and lab on three separate occasions during January – only last-minute changes in the weather and the wind direction saved us each time. I would never wish this experience on anyone. On a brighter note however, the flames didn't reach the high mountain caves where hundreds of millions of Bogong moths were aestivating, and despite being

somewhat depleted due to smoke poisoning, it seems that the bulk of them survived!

So for me it has been a rather shaky start to the year. And with our uncertain immediate future with COVID-19, I suspect that things have become a bit shaky for all of you as well. At least we have some certainty about the future of our congress!

In these uncertain times, I must confess I gain a great deal of comfort from thinking about the wonders of the creatures that we study. And I am sure I am not alone. Cambridge zoologist Hugh Cott, the author of the classic 1940 book *Adaptive Colouration in Animals*, couldn't have put it better: "Fortunate are those who have learned to see, in the wild things of Nature, something to be loved, something to be wondered at, something to be revered, for they will have found the key to a never-failing source of recreation and refreshment".

With these encouraging words, I wish all of you the very best in the coming weeks and months. Stay well, look after yourselves and each other, and most important of all – keep washing those hands! ☐

My warmest regards,

Eric Warrant
President, ISN



ICN COVID-19 VIRUS UPDATE

As we all know, the COVID-19 outbreak has caused major distress and disruption throughout the world and is likely to continue to do so for some time. This has led to major events being cancelled or postponed worldwide, and as I promised some weeks ago, I am now informing you of our decision regarding the future of our congress in Lisbon, planned for this coming July. After much deliberation and conversation, the following actions have been decided by the members of the Executive Committee and Council, together with the Chairs of the Program Committee and Local Organising Committee:

1. Due to the currently uncertain lifetime of the current COVID-19 crisis, **the Lisbon ICN will be postponed for 2 years**, and is rescheduled for July 24-29, 2022 - again in Lisbon, and in the same venues (and with the same Program Committee and Local Organising Committee). The Congress program, which had already been finalised, will remain the same for 2022 (assuming the willingness of currently enlisted speakers to participate). The congress web site

(www.neuroethology2020.com) will remain live until the 2022 congress and updated accordingly.

2. **The Berlin ICN, previously scheduled for 2022, will be postponed until 2024**, and is rescheduled for July 28 - August 3, 2024 (in Berlin).
3. **Registration fees of those who have already registered for the congress will be reimbursed.** Details of how this reimbursement will be made will come shortly.
4. **Deadlines for ISN awards are still May 1st.** We will still accept and judge applications for five of our awards this year (Young Investigator, Capranica, Konishi, Fellows of the ISN and Heiligenberg), but not the sixth (Developing Neuroethology - which is exclusively reserved for travel to the ICN in the year of application). The successful Young Investigators will be invited to make video recordings of their lectures to post on the ISN website. The 2020 award winners will join the 2022 award winners on stage at the 2022 congress to receive the congratulations of the society. Please find application details on the society's web site: www.neuroethology.org/awards
5. **The current ISN officers will remain in their positions until the 2022 congress** to maintain leadership stability and continuity during these uncertain times. This includes the members of the Executive Committee and the Council.

I sincerely hope that you and your families are all well and safe in this incredibly difficult situation – and remain that way.

My very warmest regards,

Eric Warrant,

President of the International Society of Neuroethology
On behalf of the ISN Executive Committee and the ICN 2020 Organising and Program



INTERNATIONAL CONGRESS
NEUROETHOLOGY | 2022

24-29 JULY | LISBON | PORTUGAL



EARLY CAREER PERSPECTIVE: OUTREACH

Many of our ISN members are supporting incredible outreach projects and developing innovative teaching methods to integrate research experiences into their teaching curriculum. Below, we share interviews with three individuals that are engaging with their local communities and students in different and inspiring ways. We know many of you are also doing fantastic outreach and creative activities in the classroom. If you would like to be featured in an upcoming newsletter about your project, don't hesitate to reach out to either of us at swasserm@wellesley.edu (**Sara Wasserman**) or miri@mhenze.net (**Miriam Henze**).

Jessica Fox

Associate Professor

Case Western Reserve University

United States

Website: <http://tinyurl.com/FoxLabCWRU>



Alex Trebek interviewing Jessica about insect brains on Jeopardy

What is your current outreach project?

My current outreach project focuses on helping high school girls develop quantitative skills in the context of life sciences research. Though women represent over 50% of biology majors, they are still underrepresented in the more quantitative subfields of biology. My outreach aims to teach quantitative techniques and coding skills to high school girls in two ways. First, I run short workshops for girls to try their hand at writing code for microcontrollers. Second, I mentor high school girls in my lab for long-term research projects.

How did you go about establishing this project?

I began mentoring students after I connected with the coordinator of the science program at the private, all-girls Hathaway Brown school. This program provides a significant amount of support for girls doing research in local labs (here at Case Western Reserve University, but also at the Cleveland Clinic, University Hospitals, and NASA Glenn Research Center). Students in the program are mentored by the program coordinator before they begin lab research: they learn things like how scientific publishing works and how to keep a lab notebook, and they are fully trained for lab safety before they even meet their lab mentor. The program also provides transportation to the lab after school. Once they start their projects, the program coordinator helps them develop it into a yearly poster presentation and a final paper that is submitted to a national science competition (e.g. the Regeneron Science Talent Search, in which my most recent student was a finalist). This support from the school makes it very easy to mentor these students. They arrive prepared and they are able to meet the high expectations placed for them.

What do you enjoy most about your outreach project?

This outreach project has been exciting because the high school students I work with are performing at a very high level. My students have presented their work at the Society for Integrative Biology and at the Society for Neuroscience, and it has been fun to introduce them to the broader scientific community. I'm proud of these smart, creative, hard-working girls and of the work they have done.

What are you looking forward to doing in the future?

In the future, I'm hoping to expand my program to include more students from public schools. The resources and structure provided by the science program at Hathaway Brown have made it possible for me to mentor these students with a minimum of friction, but I would like to include students whose schools don't offer such a program. Bringing in more students and elevating their high school experience to include lab research would be positive for everyone.

Simon Sponberg

Assistant Professor

Georgia Institute of Technology

United States

Website: <https://sponberg.gatech.edu/>

What is your current outreach project?

We are creating a vertically integrated project (VIP) team based around the study of living dynamical systems. The VIP team structure is one that is well established in engineering and involves integrating undergraduate research



experiences into the core curriculum by making team based projects the students participate in for multiple semesters. The key goal of the program is to broaden participation in research by reducing the economic and time barriers to participation in “real” research experiences by integrating them as a part of the curriculum that actually meets major requirements and hence does not require students to do extra to get involved. For students that have jobs or other commitments on top of their studies, the extra time expectation needed to get involved in research can be challenging. The key features of the VIP program are that the course credit meets major requirements rather than requiring free electives, the program is ongoing so that returning students can train new students and hence reduce the mentorship load on the PI and grad students allowing the program to scale to larger numbers of students, and the goal of the team is to produce real output (in the traditional engineering VIP teams these might be products or patents, in our science driven VIP teams it is papers and conference proceedings that include a “VIP team” author). In the first 7 semesters we have had ~75 undergraduates from >10 majors participate in the program.

How did you go about establishing this project?

We tapped into the infrastructure for VIP teams that exists in several engineering departments across the country and then adapted it to a science framework. The most difficult part is to get undergraduates out of the class mindset and into the research mindset where they take ownership for their work. They expect course work to have set expectations in terms of what they do. There are guidelines about how to do well in a VIP setting (show initiative, peer evals, etc), but the specific progress they make on their projects is research as so it has inherent uncertainty.

What has been the most exciting part of your project?

See the first VIP initiated project make it all the way to a national meeting.



Simon has also done outreach teaching neuroscience to Tibetan monks

What are you looking forward to doing in the future?

We now have a few publications with the first combined results of several semesters of VIP team effort. I am excited to see these projects through to completion.

Anna Stöckl

Research Fellow
Würzburg University
Germany

Website: <https://www.annastoeckl.com/>

What outreach are you currently doing?

For a number of years now I have been taking part in a variety of science slam formats in different European countries, where one explains their research in a short and entertaining presentation. This has also led to the production of two short educational videos in collaboration with TedEd. I have also begun passing on my experience in workshops for students and PhD students, to encourage the next generation of scientists to share their passion and science knowledge with the world.

A science slam is a talk where scientists present their own scientific research in a short time frame – usually between 3 and 10 minutes - in front of a non-expert audience. The focus lies on teaching science in an entertaining way. The presentation is typically judged by the audience, but there are also competitions rated by a jury.

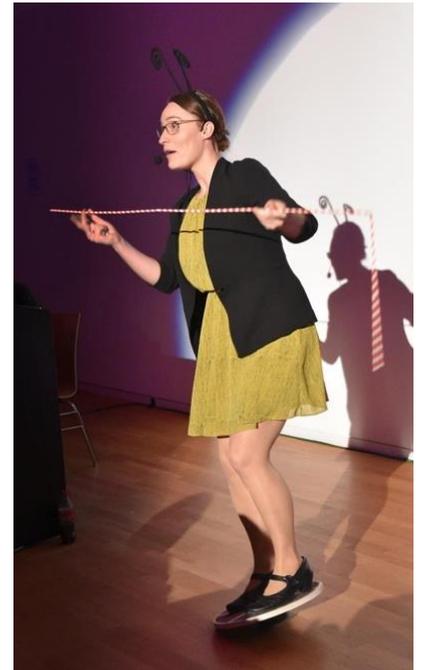
How did you get into science slamming?

As a Master student I came across an advert for a science slam competition. I had never heard about this format before, and didn't know what to expect, but I entered anyway. The experience got me hooked immediately – the atmosphere at the events, the enthusiastic audiences, and the fantastic science communication community that one gets to know.

What do you enjoy most about your outreach project?

I really enjoy having this creative outlet, where I can go a little crazy, and try things I would normally never do when giving a scientific presentation (like shooting at the audience with water pistols or making fun of butterflies' eating habits).

I also really value the feedback that comes from the audience, especially at presentation events like science slams. Since my work is very much basic research, I do have my doubts at times about what I actually contribute to society. But then, being able to share my knowledge and fascination with the general public, and to see how excited people are to learn about insects and how their brains work and how much they value our science, I really get a sense of purpose from these events.



What are you looking forward to doing in the future?

Since I moved back to Germany, I have started a project in collaboration with the didactics department at Würzburg University, to give teacher students the opportunity to prepare a school project incorporating our study animals and simple behavioural experiments for schools in Würzburg. I look forward to seeing this project move from the preparation stages to being implemented in schools.

I would also really love to combine my passion for singing with outreach and start a science choir to perform

cover versions of well-known songs with new lyrics about our science – in the style of *acapellascience* and others. But since one lady doesn't make a choir, unfortunately, I keep this in the back of my mind and scout interested people as I go along.



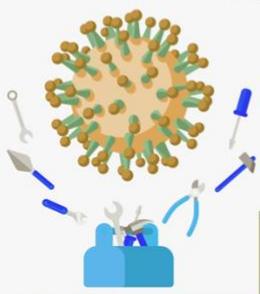
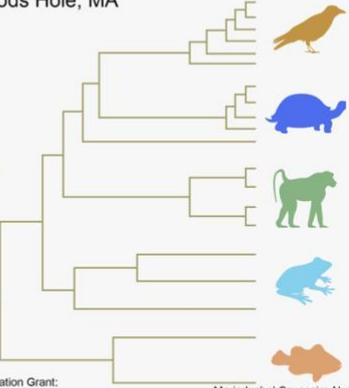
EXPANDING THE SPECIES RANGE OF THE VERTEBRATE VIRAL TOOLBOX

ISN member **Darcy Kelley**, along with an international group of researchers, is organizing a meeting on using viral vectors in vertebrate research. **This meeting is currently postponed** but will be held at the MBL in Woods Hole, MA. It should be of interest to many ISN members so please stay tuned to the MBL Conference Schedule at <https://www.mbl.edu/conferences/conference-schedule/> and be on the lookout for an announcement of the new dates!

EXPANDING THE SPECIES RANGE OF THE VERTEBRATE VIRAL TOOLBOX

Monday, April 27, 2020

Marine Biological Laboratory
Woods Hole, MA

Development and Application
of Viral Vectors for
Vertebrates

Workshop supported by the NSF Research Coordination Grant:
ENSEMBLE (Enabling Neuroscience in Species Models that Broadly Leverage Evolution).
IOS-1638400. Maria Izabel Cavassim Alves

KEYNOTE SPEAKERS

Connie Cepko Harvard	Clodagh O'Shea Salk	Jacques Robert Rochester	Jessica Whited Harvard
Esteban Engel Princeton	Clemens Riegler Harvard	Ben TenOever Mt. Sinai	Ian Wickersham MIT
Rachael Neve MIT	Kim Ritola Janelia	Sarada Viswanathan Janelia	

REGISTRATION AND INFORMATION

<https://wp.me/P4MuUH-mV>

Organized by: Hollis Cline, Scripps; Darcy Kelley, Columbia; Mark Shein-Idelson, TelAviv; Lora Sweeney, Salk; Maria Tosches, Columbia; Ayako Yamaguchi, Utah

