Letter from the Vice-President of INSAR, Hilde Geurts

A letter for a newsletter, so there needs to be some news in here. For me, this year was definitely a year in which I learned a wide range of INSAR-related new things due to my board membership and being this year’s meeting chair. So, let’s highlight two of them.

First, it is widely known that the student and trainee committee (STC) is active at INSAR meetings, but it is only since the last year that I realize how incredibly active and effective they are year-round. The amount of work and planning this takes in addition to one’s regular day-to-day tasks is something people might not be aware of. I am impressed by all the work already done this year with the INSAR Annual Meeting 2018 and also the Summer Institute that are yet to come! I hope you all will attend all the great events the STC is organizing.

When my lab needs to plan the trip abroad, we are eager to know whether an abstract is accepted as only then we can book, for example, our flights to the conference (and extended stays). I am not sure whether this eagerness (or impatience) is also true for the majority of attendees, but I saw some critical comments from twitter users regarding the time between abstract submission and the final verdict. The second thing I learned is that it is impressive how sound and well-organized everything is regarding the abstract selection, (travel) grants, awards, and much more. A large group of people works hard to organize all kinds of things to make a conference a success. Already four years ahead of the actual event, people start! Again, many people are volunteering, which is incredible. One of the reasons I love the scientific community is that people are not just invested in their own research but also want to help out others to strengthen science in general and to ensure scientific knowledge will become accessible for various audiences.

I hope you all realize that, across the globe, there are many great clinical and research initiatives, and in various labs it is common practice to listen to the autistic voices. I hope people will, instead of reinventing the wheel, check out what happens in other countries. Moreover, if not common already in your lab, make sure that those on the spectrum can be actively engaged in thinking along with you to shape your research. You want to know how? Just tune in during the 2018 Summer Institute! Enjoy this year’s meeting and we will probably meet somewhere, somehow.

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**Look for us in Rotterdam!**

In conjunction with INSAR’s Board of Directors, we are hosting the following events at the INSAR 2018 Annual Meeting.

**Throughout the Conference**

**Visit us at the Student & Trainee Booth!!**

**Wednesday, 5/9**

12:00 - 3:00 pm  **Student and Trainee Workshop**

The workshop will allow students and trainees to hear about career trajectories from leaders in the field and participate in small group discussions with those experts.

**Thursday, 5/10**

12:30 - 1:45 pm  **Meet the Experts Luncheon**

This event gives students and trainees the opportunity to spend the lunch hour with leaders in the autism research community.

7:00 - 10:00 pm  **INSAR Student Member Social**

Get to know other students and trainees who are interested in autism research! Attend the free social during the INSAR annual meeting to connect with other early career researchers!

**Friday, 5/11**

7:15 – 8:45 am  **Special Interest Groups (SIG)**

Check the INSAR meeting program for a SIG that may be of interest to you. Students and trainees are welcome!

12:30 - 1:45 pm  **Meet the Experts Luncheon**

**Saturday, 5/12**

7:15 – 8:45 am  **Special Interest Groups (SIG)**

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**Summer Institute 2018**

**Stakeholder Perspectives and Participation: Building Successful Collaborations for Research**

The INSAR 2018 Summer Institute for Autism Research, Stakeholder Perspectives and Participation: Building Successful Collaborations for Research, is a 6-week webinar series focused on issues related to stakeholder participation and researcher-stakeholder collaborations. Stakeholder perspectives are increasingly incorporated into INSAR’s mission and the broader field of autism research. Also, this model of “community-engaged” research is expected to produce science that is more easily translatable and sustainable.

Each session consists of a presentation on current research, followed by a question and answer session that includes a discussion about the presenter’s career development.

**Networking at the INSAR Meeting: Tips from the Student & Trainee Committee**

- Check the program beforehand. If you are interested in meeting someone in particular, contact them before the annual meeting and suggest meeting up. Download and use the mobile app “Connect” feature.
- Building and maintaining relationships with peers can prove just as useful as senior connections. Making time to meet up for coffee and share opportunities or news about other events could lead to some help in return.
- If possible, it helps to have a mentor or someone you know make introductions.
- If you have a particularly meaningful conversation, follow up after the meeting.
- Remember that others probably feel the same way you do, so don’t be nervous and just go for it. What is the worst that could happen?

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*pre-registration required

**FOLLOW OUR TWITTER CONTEST AT #INSARSTC**

Check out the Student Booth for details!
Q: Briefly, tell us about your research.
A: The melanin-concentrating hormone (MCH) system differentiates from the embryonic neural crest along with much of the brain, endocrine system, and some parts of the immune system. MCH is mostly produced in the hypothalamus, and MCH projections from the hypothalamus extend to all relevant brain areas implicated in autism, and can be found in bone marrow, intestinal endothelial cells, and adipose tissue. MCH modulates excitation and inhibition (seizure activity and sensory gating), inflammation (cytokines and interleukins), memory formation, learning, reward, emotion, and sleep. MCH is naturally higher in women, with estrogen both increasing MCH levels and suppressing the biological influence of MCH – giving an explanation for sex-related expression of autism. An MCH driven hypothalamus–pituitary–adrenal stress axis over activation in people with autism may explain a behaviorally inhibited phenotype noted by aversion to new people and experiences. The boosted cytokine levels lead to increased cyclooxygenase-2 (COX-2) levels. COX-2 leads to increased prostaglandin E2 (PGE2) production. PGE2 increases aromatase expression with elevated aromatase causing elevation of estrogen. The excess estrogen raises MCH levels where the positive feedback loop of dysregulation continues due to compounding transcriptional and epigenetic changes at each stage.

Q: What are your future career goals/plans?
A: I would like to found a non-profit that merges several modalities of treating psychiatric illnesses based on individualized treatment planning where the connection between the mind and body informs the best possible outcomes merging changes in lifestyle, medical interventions, and counseling in order to holistically address symptoms.

Q: Can you tell us about your experiences at past INSAR Annual Meetings?
A: As a student at the University of Sheffield, I attended IMFAR in 2016. I saw so many sessions that were on an island unto themselves, offering great new perspectives yet there seemed to be no real connections being made. This was the year Thomas Insel gave a keynote address on how the lack of direction in research within the field of autism was to its detriment. This speech was incredibly influential and has driven me to make connections across disciplines so that a unified theoretical framework for understanding autism might be known.

Q: What is a challenge you’ve faced in your research, and how have you overcome that?
A: In creating this synthesis paper, it has become apparent that autism research has missed the forest for the chloroplasts. Research has become so specific and niche with nobody following in its wake to look for how these puzzle pieces fit together. I understand that funding for this type of research is almost non-existent and I am truly grateful that the opportunity to take on such a task was granted by my university. I had to teach myself genetics, neurodevelopment, endocrinology, immunology, and neuropsychology so that I could take enough steps back from the picture to look at the whole thing. The last challenge is going to be finding a journal which will publish such a long manuscript.

Tell us what you think!

The Student & Trainee Committee is dedicated to helping to provide all our students and trainees with what they need to know to be successful autism researchers. Do you have a suggestion for what you’d like to see in the next newsletter? We’d love to hear it! Send it to us at studentcommittee@autism-insar.org

Student & Trainee Research Spotlight

The Student & Trainee Committee strives to highlight the innovative and significant contributions of student and trainees involved in autism research. The selection of our Student & Trainee spotlight was determined based on blinded submissions to the INSAR website and judged by the committee on clarity, significance, and diversity. Are you conducting research right now that you would like to share with the INSAR community? Look for the submission opportunity for our next newsletter! This is your chance to let us know about the exciting work you are contributing to the autism research community.