

**From the President:** It is an honor to serve as our 2018 PBT Section president. The section has made significant progress in recent years in encouraging programming and establishing initiatives that meet the professional needs of Section members. I am grateful for the guidance of our Past President, Peter Jensen and look forward to next year under the leadership of Dave O’Brochta. During 2015, a process of developing Section Impacts for all ESA sections was initiated and facilitated by ESA Headquarters in promoting and implementing key capabilities for their membership. After multiple sessions and discussion, we have settled on two “wildly important goals” or WIG’s for the PBT membership.

The first involves improving PBT section continuity and communication. Our efforts in this area involve a more focused effort to involve the Governing Council in section decisions through monthly teleconference meetings and to inform the membership through quarterly newsletters, surveys of section members on important decisions, and hosting business meetings where matters of substance are discussed that will attract member attendance. This year we will attempt to facilitate interaction of Early Career professionals with more senior members through a networking session (See below). In general, our section is encouraging the involvement of ECP members in leadership positions and has invited our section ECP representative, Dr. Scott O’Neal, to serve on the Governing Council.

The second WIG involves education that will encourage of the adoption of new technologies. Our first effort in this regard was the CRISPR workshop that was held in Denver in 2017. A summary of the workshop is provided in this newsletter. Continuing along this line will be the Member symposium to be held in Vancouver in 2018 entitled “Gene Drive in the 21<sup>st</sup> Century: Genetic Control of Agricultural and Public Health Pests.” We believe these events provide PBT members as well as other section members with the opportunity to see how developing technologies are shaping our discipline.

While we have made good progress on some, we still have a ways to go on others but believe that our efforts have put the section on the right track for the future. We continue to seek additional ways that we can serve PBT member needs beyond the annual meeting and welcome your feedback. [Please email me your comments](#). We have a very involved and active Governing Council and look forward to seeing everyone in Vancouver.

**PBT Officer Nominations:** The PBT Governing Council is soliciting candidates for PBT Section Vice President-Elect (2021 PBT Section President). Anyone interested in serving in this role should contact [Blair Siegfried](#). Candidates will need to submit a bio (maximum of 250 words) and a photo **no later than May 31, 2018**.

**Gene Editing Workshop:** At the 2017 Annual Meeting in Denver, the PBT Section offered a workshop entitled *Insect Genome Editing: Why and How* as part of the

Section's commitment to offer members opportunities to grow professionally. The workshop was co-sponsored by the NSF-supported *Insect Genetic Technologies Research Coordination Network* ([igtrcn.org](http://igtrcn.org)). This very well attended workshop was designed to emphasize the technical aspects of conducting gene-editing experiments in insects with the intention of providing attendees examples from a range of non-model insect systems. Presentations described gene-editing projects involving pea aphids, whiteflies, butterflies, beetles and ants. Each of these insect systems presented researchers with unique technical challenges and illustrated that while the CRISPR-Cas9 system may be efficient from a biochemical perspective, implementing gene-editing experiments involves significant technical challenges related to the biology of the target species. Those in attendance came away with a realistic impression of what it might take to use gene editing in their insect systems of interest. Following the technical presentations, a 'hands-on' tutorial was conducted on the practicalities of designing guide RNAs to maximize the likelihood of on-target gene-editing and minimizing off-target effects. This included an introduction to a two online guide RNA design and analysis tools. PBT hopes to offer its members similarly useful workshops at future meetings.

**PBT-ECP Networking:** One of the topics of importance to PBT members that was identified and discussed during our annual business meeting in Denver last year was the idea of fostering greater enthusiasm in and facilitating increased interactions between PBT members. As a result of this discussion, the PBT Governing Council is pleased to announce that PBT members can look forward to a special networking event that we will be hosting in conjunction with our annual business meeting in Vancouver this year. The goal of this event is to bring together PBT early career professionals and late stage doctoral candidates with mid- and late-career members from across academia, government, and industry. Members will have the chance to sit down together and exchange brief introductions in the spirit of the popular "lightning bug talks". This will be a limited registration for this event, so if you are interested, watch for more details in our next newsletter!

**PBT Awards:** PBT will again offer two awards for outstanding members of our section. The first is the PBT Recognition Award in Insect Physiology, Biochemistry and Toxicology. Previously this award was offered as the ESA Recognition Award in Insect Physiology, Biochemistry and Toxicology. Starting in 2018 it is the PBT Recognition Award in Insect Physiology, Biochemistry and Toxicology and it is required that you are a PBT Section Member to apply for the award. Eligibility and nomination requirements can be found at: <https://www.entsoc.org/pbt/recognition-pbt-award>. **Nominations are due by June 1<sup>st</sup>.**

The second award is Lillian and Alex Feir Graduate Student Travel Award in Insect Physiology, Biochemistry, or Molecular Biology. The purpose of this ESA award is to encourage graduate students working with insects or other arthropods in the broad areas of physiology, biochemistry, and molecular biology to affiliate with ESA's PBT Section and to attend the ESA Annual Meeting. Information about this award

can be found at : <https://www.entsoc.org/awards/student/feir>. **Nominations are due by June 1<sup>st</sup>.**

We hope to continue the tradition of having these awardees present their work at the PBT Business meeting at the National Meeting.

**ESA-based awards:** Along with the PBT-based awards, there are many other ESA-based awards that are regularly awarded to PBT members such as the Early Career Innovation Award, ECP Research Award, Entomological Foundation Medal of Honor, and Fellows of the Entomological Society of America. Information on these awards can be found at: <https://www.entsoc.org/about/awards-honors>.

**Social Media:** PBT now has a larger presence on social media. Follow us on twitter via [@EsaPbt](https://twitter.com/EsaPbt)! If you would like for us to promote your research, teaching or outreach activities please email us at [pbtsectionesa@gmail.com](mailto:pbtsectionesa@gmail.com), or send us a direct message on twitter. We like to learn about, and promote, the hard work of our members.

We are also looking for volunteers to help us run the social media account(s). Contact [Marianne Alleyne](#) if you are interested. We really could use your expertise and time.

**PBT Section Symposia at Entomology 2018:** The PBT Section Governing Council is pleased to announce that the following have been accepted as Section Symposia for the 2018 ESA Annual Meeting.

**Gene Drive: 21st Century Genetic Control of Agricultural and Public Health Pests**

Organizers: David O'Brochta and Blair Siegfried

**Juvenile Hormone: from Discovery to Applications**

Organizers: Alexander Raikhel and Subba Reddy Palli

**RNAi: Mechanism of Action and Resistance to dsRNA**

Organizers: Elane Fishilevich, Ana Vélez, Bill Moar, and Subba Reddy Palli

**RNAi: New Traits, Field Performance and Safety**

Organizers: William Moar, Ana Vélez, and Elane Fishilevich

**Social Insect Nutritional Ecology in a Changing World**

Organizers: Spence Behmer, Juliana Rangel, Pierre Lau, and Pierre Lesne

**Teaching Insect Physiology in a Changing World: Crossing Borders Between Traditional and Integrative Pedagogy**

Organizers: Dan Hahn and Mark Brown