



# American Society of Plant Biologists

## 2020 Election

### This Brochure Includes:

#### Biographies of candidates for

- President-elect
- Secretary-elect
- Corresponding Member

- **Election Procedures:** On the electronic ballot card, mark your choice of candidates for elected office.

## President-elect

(to serve as president 2021–2022)



### Katayoon (Katie) Dehesh

From its inception in 1924, ASPB has met daunting challenges but has never ceased to serve the global scientific community, aiding our common scientific quest to explore uncharted waters and providing a vehicle for our shared bond that transcends national, ethnic, gender, and social divides. In the current era of increasingly unexpected political and economic uncertainties, ASPB once again will rise to the

occasion in dealing with the unprecedented hurdles that have emerged. These hurdles are likely to disproportionately impact our early career and underrepresented groups. As president, I would like to increase the career-focused opportunities for our students, postdoctoral fellows, and early career colleagues by amplifying the voice of ASPB in various public and private sectors and by enhancing our engagement in society at large. Toward this goal, I would initially form an advisory council representing educators, governmental granting agencies, politicians, businessmen, and farmers to formulate approaches to implementing this endeavor.

I am currently the director of the Institute of Integrative Genome Biology at the University of California, Riverside (UCR), and a distinguished professor in molecular biochemistry. My research focus is on the evolutionarily conserved stress signaling and transduction pathways shared between plants and other organisms, such as eubacteria and Apicomplexa, as a means to providing an integrated view of the origins and patterns of divergence in adaptive networks. Previously, while at UC Davis, I served as chair of the Plant Biology Graduate Program and chair of the Emphasis in Biotechnology Program, where we expanded our educational program to include industrial experience by actively involving various industrial partners in agricultural and medical fields. Prior to joining the academic ranks, I worked for 10 years in the plant biotechnology sector, generating 11 patents.

I obtained my BSc from Pahlavi University in Shiraz, Iran, where I was introduced to salt-loving plants (halophytes) that grow on unimaginably high salt-containing ground. This initiated an interest that led me to continue my higher education at Sussex University, UK, an institute well known for its work in this area. Upon receiving my PhD, I traveled back to Iran for a visit with the intention of continuing my postdoctoral training in the USA. Upon arrival, however, I applied for and was offered an assistant professorship at the National University, Tehran. I accepted, planning on only a short stay. But soon after that, I was notified that I was banned from travel because of the compulsory military service for all MD or PhD women. In consequence, I remained in Iran, performing my service duties at the military barracks in the mornings and teaching classes at the National University in the evenings. Shortly thereafter, in 1979, I heard the bells of revolution, but did not anticipate the outcome. In 1980, because of my personal beliefs and convictions, I left Iran and went to Germany, where I eventually obtained a Habilitation (German equivalent of tenure track) position at the University of Keil, working on chlorophyll biosynthesis enzymes. Being the only foreigner and only woman Habilitant in the institute, although intimidating, offered me a unique opportunity to positively impact and empower the female graduate students in the institute. Later, I was granted a sabbatical leave to go to the University of Madison-Wisconsin to learn much-needed molecular techniques. After a year there, I resigned from my position in Germany and continued as a postdoctoral fellow in Madison, and later at the Plant Gene Expression center in Berkeley/Albany, working on the transcriptional regulation of phytochrome. Upon gaining experience in both molecular and biochemical techniques, I joined Calgene, a small but powerful biotech company in Davis, where I began working in the area of lipid biochemistry with the aim of identifying novel enzymes for production of medicinal oils in plants. In 1999, Calgene was acquired by Monsanto, and I continued my research as the lead lipid scientist for three more years before resigning to join UC Davis as a full professor. There, I initiated de novo several funded research programs based on plant general stress responses. In 2016, I moved to UCR as the director of the Institute of Integrative Genome Biology, where I have initiated and established new core facilities focused on metabolomic analyses. It is my intention to expand the core activities to the training of

*continued on page 2*

**VOTE! Help select the leaders of ASPB!**  
**Deadline for voting is July 10, 2020.**



# 2020 Election

## American Society of Plant Biologists

### President-elect

*continued from page 1*

undergraduate students in analytical techniques as a way to educate and provide a path to employment.

In the course of my career I have been honored with various awards, including Monsanto Fellow, several teaching awards at UC Davis, and election to the German National Academy of Sciences (Leopoldina) in 2017.

I first joined ASPB in 1998, and I am currently serving on the Hoagland Award Committee. I previously (2013-2019) served on the ASPB Publications Committee, which administers the ASPB/AAAS Mass Media Science & Engineering Fellowship.

My mantra is POWER, as my dream is to empower the young and strengthen their belief in the power of determination and positive thinking. And yes we can!



### Georg Jander

Adaptability in a changing environment is essential for the long-term relevance and success of a member-focused society like ASPB. As we approach our 100-year anniversary, ASPB faces renewed challenges but also opportunities for broadening the impact of the Society and, more generally, plant research. As president of ASPB, I would work to increase and diversify Society membership while

also ensuring that we remain relevant as a home for both basic and applied plant scientists. With ongoing ecological changes and demands for increased agricultural productivity, communicating the essential nature of plant research, related infrastructure, and human capital to our funding agencies, in Congress, to potential donors, and elsewhere is a central function of ASPB and, in particular, its leadership. In the face of ever-increasing competition among publishing options for plant scientists, we must focus on maintaining the leading position of ASPB journals and their function as a source of income for the society. Finally, I would see my role as ASPB president as being that of a cheerleader promoting the possibilities and excitement of plant science, not only to current and future Society members, but also to the general public.

Although I have been an avid gardener for 50 years and have had individual potted plants in my home and office for more than 40 years, I am a bit of a late bloomer with my vocational interest in plants. After completing an undergraduate degree in computer science at Washington University, I studied *E. coli* disulfide bond formation as a PhD student at Harvard Medical School. Finally, as an NIH postdoctoral fellow at Massachusetts General Hospital, I initiated my research on the chemical ecology of plant-insect interactions, using Arabidopsis as a model system. Subsequently, I spent

four years studying plant amino acid metabolism at the Monsanto Company (now Bayer Crop Science). In 2002, I became a faculty member at the Boyce Thompson Institute in Ithaca, New York, with an adjunct appointment in the School of Integrative Plant Sciences at Cornell University. With the exception of sabbatical visits at the Max Planck Institute for Chemical Ecology in Germany and the Weizmann Institute in Israel, I have been in the same position ever since. In recent years, my lab group has consisted of 10 to 12 postdocs, graduate students, and undergraduates. With funding from NSF, USDA, DARPA, BARD, and the Triad Foundation, I have generated more than 100 publications describing basic and applied aspects of plant metabolism and plant-insect interactions. Current research in my lab involves maize, *Setaria viridis*, and *Erysimum cheiranthoides* (wormseed wallflower).

I have been an ASPB member for almost my entire career as a plant scientist, and the Society has been my main point of contact with the wider plant research community. Among the many membership benefits, I particularly enjoy the ASPB annual meeting, with its opportunities for interactions with other scientists and the wide range of plant research topics that are covered. My past service to ASPB has included contributions as a monitoring editor for *Plant Physiology*, as well as a co-editor for a plant-herbivore interactions focus issue of the journal. Additionally, I have served three-year terms on the Publications Committee and the Program Committee for the annual meeting. Thus, as a potential ASPB president, I am familiar with the organization of the Society and the needs and interests of its membership.

Promoting plant research at an early stage in student careers, and thereby increasing the size and diversity of our potential membership pool, is key to the long-term success of ASPB. In addition to mentoring 62 undergraduates and 27 high school students since starting my own lab at the Boyce Thompson Institute, I have been the lead investigator for five consecutive NSF Research Experiences for Undergraduates (REU) site grants. Among 213 summer interns in the past 16 years of our program, 44% were underrepresented minority students, 55% were from small colleges without extensive plant research opportunities, and 36% were first-generation college students. In addition to these NSF-funded interns, a similar number of high school and college students with funding from other sources have participated in our summer program, including several with ASPB SURF awards. When I meet former interns in their new roles as graduate students or postdocs presenting research at the ASPB annual meeting, they frequently tell me how their interest in plant science was either initiated or solidified by participation in our REU program. Several of these former REU students are now faculty members, mentoring the next generation of undergraduate plant scientists at the University of Washington, Cornell University, and other institutions. Continued interactions between ASPB and our REU site, as well as similar plant-focused internship programs at places like Michigan State University, UC Riverside, and the Danforth Center, will help to promote the membership, diversity, and continued success of ASPB as it enters its second century.



# 2020 Election

## American Society of Plant Biologists

### Secretary-elect

(to serve as secretary 2021–2023)

#### Jose Alonso

Jose Alonso is a William Neal Reynolds Distinguished Professor of Plant Biology and Genetics in the Department of Plant and Microbial Biology at North Carolina State University. He did his undergraduate studies and obtained his PhD at the University of Valencia, Spain. In 1995, Jose joined the group of Dr. Joseph Eckler at the University of Pennsylvania and later at the Salk Institute, where he worked on the characterization of several components of the ethylene signaling pathway in *Arabidopsis* and led the generation of the Salk T-DNA mutant collection. In 2001, Jose joined the faculty at North Carolina State University, where he continued to work on the genetic and molecular characterization of hormone biosynthesis, signaling, and response. His group has made significant contributions to the elucidation of the biosynthetic pathways of the plant hormone auxin, the identification of molecular mechanisms involved in hormone crosstalk, and the discovery of translation regulation as a key mechanism in the plant response to ethylene. Jose's interest in hormone biology is complemented and synergized with his passion for developing genetic tools and technologies—from the T-DNA collection to the recombineering toolbox—that facilitate, accelerate, and democratize plant biology research.

Besides doing research, Jose teaches a graduate course in functional genomics and the modeling component of the hands-on synthetic biology course for undergraduates. He is active in community outreach and co-runs a successful bilingual (English and Spanish) online Plants4kids program that is disseminated through classroom visits and monthly hands-on public demos at the local natural science museum. In his free time, Jose enjoys spending time with his wife and two kids, gardening, biking, and working on various do-it-yourself projects, from designing and building Arduino freezer alarms to hacking commercial 3D printers to convert them into Raspberry Pi-controlled plant imaging robots.

Directly relevant to the position of ASPB secretary and chair of the Program Committee of the Society's annual conference are Jose's prior efforts as an elected member of the North American *Arabidopsis* Steering Committee, member of the *Arabidopsis* Stock Center Advisory Board, and cochair of the 2014 International Conference on *Arabidopsis* Research. If elected, Jose will build on his experience of serving the plant community and leverage his scientific interests in basic plant biology and technology development to advance ASPB's commitment to democratizing science and plant biology research.

#### Stacey Harmer

Stacey Harmer is a professor in the Department of Plant Biology at the University of California, Davis. She received a BA in biochemistry from the University of California, Berkeley, and was awarded a PhD in biochemistry at the University of California, San Francisco, where she studied B cell signal transduction. She then converted to the green side of biology, carrying out post-doctoral studies in the lab of Steve Kay at the Scripps Research Institute. There, she was introduced to circadian biology, molecular genetics, and the then-nascent field of genomics. She joined the faculty at UC Davis in 2002, where she has remained since. Her lab studies plant adaptations to the abiotic environment as seen through the lens of circadian biology. Specifically, her lab studies both the molecular nature of the oscillator that generates daily rhythms and multiple aspects of plant physiology affected by the circadian system. She is particularly interested in exploring relationships between clock, light, and growth signaling pathways in the control of vegetative and reproductive development in *Arabidopsis thaliana* and the Asteraceae crop sunflower.

Stacey's services to the greater scientific community have been varied. Contributions to postgraduate education include serving as lead instructor for the Cold Spring Harbor Laboratory's Plant Course for three years and as guest instructor for many other courses on plant and circadian biology. She is currently treasurer for the Society for Research on Biological Rhythms and an editor for the *Journal of Biological Rhythms* and for *Plant Physiology*. She has been a member of ASPB since 2003 and is currently serving on the ASPB Program Committee. Other experiences in meeting planning have included serving on the scientific advisory board for the International Conference on *Arabidopsis* Research.

The main function of ASPB secretary is to oversee the Program Committee in the planning for the annual meeting. With so many specialty meetings now available, Stacey sees a key role for the ASPB annual meeting in bringing together plant biologists at diverse career stages and with different expertise to learn from each other and create a greater sense of community. While excellent and groundbreaking science is now and should remain a cornerstone of the meeting, Stacey would like to continue to promote the professional development and career enrichment activities that set this meeting apart from other, more narrowly focused, conferences.



### Enid MacRobbie Corresponding Membership Award

#### Asaph Aharoni

*Weizmann Institute of Science*

Asaph Aharoni is a Full Professor in the Department of Plant and Environmental Sciences at the Weizmann Institute of Science in Israel. Asaph has led a research group in this institution since 2005, during which time he has made substantial contributions to our understanding of how plants control the biosynthesis of secondary metabolites in time and space and how they employ and translate a vibrant chemical language to harmonize their own growth and reproduction with complex environmental parameters. Asaph has demonstrated outstanding multidisciplinary expertise that combines analytical chemistry, biochemistry, molecular genetics, computational biology and microbiology. This amalgamation of knowhow in a single laboratory represents a major driving force leading to key discoveries and technological breakthroughs in the field of metabolic biology. The more prominent scientific accomplishments of Asaph's group include: (i) identifying and characterizing the first riboswitch element in plants, (ii) deciphering the mechanisms of cuticular layer assembly and epicuticular wax formation, (iii) elucidating the biosynthetic pathways and transcriptional control of Solanum alkaloids, and (iv) resolving the entire reaction steps of the cholesterol biosynthetic pathway in plants and its evolution from the phytosterol pathway. Asaph has also made significant contribution to advancing metabolomics methodologies through increasing the resolution and comprehensiveness of metabolic analysis and the development of computational tools for identifying metabolic gene clusters in plant genomes. Asaph also performs an impressive service to the international research community, carrying out a significant amount of editorial board work and manuscript reviewing.

#### Hsou-min Li

*Academia Sinica*

Hsou-min Li holds a position as Distinguished Research Fellow at the Institute of Molecular Biology, Academia Sinica in Taipei, Taiwan. Hsou-min's research has been devoted to unraveling the molecular mechanisms of chloroplast biogenesis, with a particular interest in protein import into chloroplasts. Protein import is fundamental to the biogenesis of the organelle because thousands of nucleus-encoded proteins must be imported and properly assembled for chloroplast function. Hsou-min's group

has made many important discoveries, including the identification of several key components in the protein import pathway, and a large part of what is known about the process of protein targeting to the outer envelope membrane derives from her work. This includes determining the 3-dimensional structure of the Toc34 protein, the first component of the chloroplast protein import machinery. More recently, her work on the relationship between chloroplast and bacterial protein targeting systems has been transformational in providing molecular evidence for the evolutionary adaptation of chloroplasts from their endosymbiotic ancestors. In addition to her outstanding scientific contributions, Hsou-min has continuously served the scientific community, being on the editorial boards of ASPB journals and providing insightful review articles for the journals. She is currently serving as a supervising editor for *Plant Direct*.

#### Hitoshi Sakakibara

*Nagoya University*

Hitoshi Sakakibara is a professor at Nagoya University in Japan, where he serves as Deputy Director of the Institute for Advanced Research. Hitoshi is renowned for his work on the molecular mechanisms underlying nutrient-responsive regulation of plant growth and development, and in particular he is recognized among the world leaders in the study of cytokinins. His pioneering work started with the elucidation of the cytokinin biosynthesis pathway and the identification of its key genes and continued with deciphering how nitrogen nutrition status regulates cytokinin biosynthesis and transport. Hitoshi's work shed light for the first time on the biological meaning of the structural variation among cytokinins and how *trans*-hydroxylation of cytokinin in roots is involved in fine-tuning shoot growth and architecture. The fundamental knowledge generated by Hitoshi's group set the stage for new strategies aimed at designing low-N input/stable output agriculture. More recently, Hitoshi's work has focused on the identification of novel signaling molecules acting as plant growth and development regulators, with an emphasis on phytohormone mimics produced by phytopathogens. The outcome of this work is anticipated to lead to the identification of novel endogenous signaling molecules in plants and therefore to the development of new agrochemicals. Hitoshi has been recognized as a highly cited scientist by ISI for six consecutive years (2014-2019), and he has been acknowledged as an ASPB Top Author. He also contributes to the plant science community as editor-in-chief of *Plant and Cell Physiology* (2016 to present), a handling editor for the *Journal of Experimental Botany* (2011-2016), and a guest editor for *The Plant Cell* (2016 to present).

**Deadline for voting is July 10, 2020.**