Happy 2018 to all! This promises to be another exciting year and the one in which the APS-hosted International Congress of Plant Pathology (ICPP2018) takes place. In addition to hosting ICPP2018, APS will focus on several key priorities in the coming year.

Who is this “APS” that will “host,” “focus,” and so on? APS is YOU. Each of you. APS is successful because its members volunteer and participate. Now the question is, where would YOU like to get involved? Here are some highlights (and ideas for you) for the coming year.

Hosting ICPP2018

This will be a truly international meeting, bringing together scientists and other plant health professionals from around the world to share the latest information on advances related to the theme “Plant Health in a Global Economy.” You will be impressed by the more than 55 plenary, keynote, and submitted concurrent sessions that are being organized, and more than 1,750 abstracts for short-talk and poster presentations are currently under review by our scientific program-planning teams. You will also have a selection of six field trips and 15 workshops in the days before ICPP2018 that you can opt to participate in. In addition to attending the scientific sessions, those of you at the meeting will be able to find solutions to existing problems, discover innovative ideas, and share information about specific topics at the many Idea Cafés, where you can meet great minds in plant pathology in an informal setting. To top it all off, Boston will be a wonderful venue, and tours, activities, and great networking events have been planned throughout the congress.

To those who contributed to the ICPP2018 bursary fund, many thanks! Awards from the $150,000 bursary fund were offered to nearly 145 applicants to support attendance by students and early career professionals from developing countries. As a reminder, APS student members can apply for APS Foundation Student Travel Awards to help support their travel to ICPP2018; watch for more details in February.

We are thrilled to be hosting this incredible congress from July 29 through August 3, 2018, and look forward to record-setting participation by you, the members of APS. Be sure to make your plans and register before April 11 for the best rates available!

Focusing Forward

APS leadership initiating a focus on phytobiomes began as a new concept for addressing global food security during an APS “thought leaders” meeting in 2013. This year, leadership established the Plant Pathology Advisory Team (PPAT), a periodic gathering of thought leaders, to ensure continued investment in looking forward for the best opportunities to advance plant pathology. The PPAT is a diverse and evolving group of APS members who will meet biannually to identify scientific and social priorities for the organization. At the annual meeting in San Antonio, the PPAT identified emerging and re-emerging diseases as the highest-priority focus for APS. A framework document is being developed and will outline mechanisms that APS can use to address this top-priority issue. Many of you will likely be asked to provide input; if you are interested in being involved in this effort, please let me know.

Offering Value

As always, APS is focused on providing a wealth of high-value member services. Coming this year, you will see the results of our investment in a website redesign for www.apsnet.org to provide better access to information, useful collaboration tools for committees, and an updated Education site. Beginning in January 2018, Phytopathology News is being provided to members only in electronic format. Even though some of us (!) may still print out the online version, eliminating the print format is a big step toward streamlining our delivery of

Palm, continued on page 17

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PROCESS OPENS IN FEBRUARY

Start Preparing Your Student Travel Award Application

The APS Foundation invites APS student members to apply for Student Travel Awards, an excellent opportunity to gain recognition and support. The application process opens in February, so start preparing your materials, including your ICPP2018 abstract, a proposal for a future “Hot Topic” session, and a letter of recommendation from your advisor. Applications are due Tuesday, March 20 at 4:00 p.m. Central Standard Time. Direct questions to APS Graduate Student Committee Chair, Lourena Arone.
PLANT PATHOLOGY’S PERPLEXING PAST—
THE REST OF THE STORY

How an Unrelated Invention Helped Develop Plant Pathology

Robert M. Harveson, University of Nebraska, rharveson2@unl.edu

Many of you are likely familiar with Johannes Gutenberg, the German blacksmith who invented the printing press and introduced movable-type printing to Europe in the 1440s. His brilliant invention played a key role in the development of the scientific revolution by making the production of printed books economical and thus more affordable to the masses. It also affected plant pathology hundreds of years later. That’s the rest of the story.

In the book How We Got to Now, author Steven Johnson (2014) contends that Gutenberg’s invention of the printing press not only increased literacy and improved education, but it also exposed a flaw common to much of the population: farsightedness. This revelation created a new market for the production of spectacles, or eyeglasses. Within 100 years of Gutenberg’s invention, business was booming for spectacle makers in Europe, as more people were reading books and needing assistance with seeing small print.

The Jansens and the Microscope

Sometime after the year 100, the Romans invented and began experimenting with glass. They found that viewing objects through shapes of glass that were thick in the middle and thin on the edges caused the objects to appear larger. These shapes were called lenses. The word lens is derived from the Latin lens, which means “lentil bean”; lenses and lentil beans are similarly shaped. It was also discovered that a fire could be started by focusing the rays of the sun under a lens. As a result, early lenses were also called “burning glasses.”

Because these simple glass lenses were capable only of powers ranging from approximately 6x to 10x, they were more like magnifying glasses than present-day microscopes. Around 1590, a father–son team of spectacle makers from the Netherlands, Hans and Zacharias Jansen, found that when they placed several lenses in a tube and looked into it, objects at the end of the tube appeared greatly enlarged. With this device, one could magnify objects to a much larger scale than with a simple burning glass. The Jansens’ important discovery became the concept behind the compound microscope.

Anton van Leeuwenhoek

Anton van Leeuwenhoek, another Dutchman, developed new methods for grinding and polishing his own lenses. He was a draper (a retailer of cloth used for clothing) and used the lenses to count threads in woven cloth. In 1671, he constructed his first simple microscope, which was capable of increasing the resolution of an object up to 270x. This allowed van Leeuwenhoek to view things that were not visible with the naked eye, such as bacteria, protozoa, and other microorganisms, as well as yeast and blood cells. He is often referred to as the “Father of Microscopy” because of his lens improvements and descriptions and illustrations of the microorganisms and cells he observed.

Microscope Allows Pathogens to be Seen

Most plant disease epidemics are caused by members of the four major pathogen groups: nematodes, fungi, bacteria, and viruses. In general, the pathogens that belong to these groups were first recognized and studied in order of their decreasing size. For instance, the human parasites known as “Guinea worms” were the first nematodes to be recognized, because they were large enough to be seen by the naked eye. However, it was not until after the microscope was developed that smaller plant-parasitic nematodes began to be observed and studied extensively.

Like the study of nematodes, the systematic study of fungi apart from mushrooms did not formally begin until further advancements had been made in microscopy, such as those of van Leeuwenhoek in the seventeenth century. The microscope was influential in the discovery and characterization of bacteria, as it was in the study of fungal and nematode pathogens in plants. Because viruses are so small, they were not observed until after introduction of the electron microscope in the 1930s.

Harveson, continued on page 17
Conclusions

Plant diseases have been known and observed by humans for millennia. The rusts, mildews, and blights that we observe today were familiar to the Greeks, Romans, Hebrews, Chinese, and Indians. However, they did not understand the true nature of the diseases and instead ascribed blame to supernatural forces, largely because they could not see the pathogens causing disease.

Johnson’s (2014) hypothesis that invention of the printing press spurred the need to produce magnifying glasses for legions of new readers was the impetus for this article. I have taken his concept a bit further and speculated that this invention catalyzed a trickle-down response, from enhanced lenses to the creation of microscopes—eventually leading to the development of plant pathology by allowing pathogens to be recognized and observed. Thus, it can be argued that the printing press was indirectly responsible for the birth of our discipline. Now, you know the rest of the story!

REFERENCES


Palm, continued from page 15

information to members. A more mobile-friendly platform is in development and will launch with the website redesign.

I hope that you have benefitted from the new APS webinar series, which started in the second half of 2017 and will continue consistently into 2018. The webinars are free to APS members and cover important topics identified by the membership. Upcoming webinars will help you learn about the manuscript review process, provide tips on how to successfully discuss controversial issues, and more. Offering webinars is a great way to provide valuable insights year-round; if you have webinar ideas, please let us know.

APS continues to foster innovative approaches to learning at our annual meetings, and the 2019 meeting will be no exception. Mark your calendars to attend the meeting on August 4–7, 2019, in Cleveland, Ohio. One-to-One Conversations with an Expert will continue, as will the popular Idea Cafés, Phytopathologists of Distinction (POD) talks, and other interactive and thought-provoking sessions. Family-friendly activities at the annual meeting will continue to grow, as well; for more details, check out the family-friendly update in this issue (see page 23).

Thanking YOU

In closing, thank you for the opportunity to serve as president of APS. It is truly an honor and a privilege—one I could not have imagined back in 1976 when I joined APS. The job of president would be impossible without a dedicated council, extraordinary headquarters staff, and—most importantly—all of YOU. Your work reviewing, governing, developing meeting content, conducting outreach, chairing committees, and so on is what keeps APS alive and well. I thank you for your efforts and challenge you to see yourself when someone says, “APS will…”

My best wishes for 2018,

Mary ■
The Financial Advisory Committee (FAC) and APS headquarters staff meet periodically to review financial matters related to the operation of the society and to refine the APS strategic financial plan. The FAC, headquarters staff, and leaders of APS business centers update and revise the strategic financial plan annually to ensure that funds are available to support all activities of the society. An overall society programmatic strategic plan is in place to put forth a strategy to meet the mission and vision for the future. Council and the officers regularly analyze the external environment and make progress toward assigning responsibility for developing and executing strategies to attain the goals of the society’s strategic plan. Having a strategic financial plan helps us, as a society, to provide a focus for our resources, and the plan is used as a guide for the various committees and staff to do their jobs. Identifying strategic targets informs everyone as to what is expected from their programs several years in advance so they can build and execute strategies over several budget years. The role of the FAC in this process is not to get involved in program-specific strategy building but rather to develop financial goals, build business plans to meet those goals, and monitor progress toward each goal. The FAC continually asks the difficult questions, such as which programs should break even and which are expected to generate surplus to invest in the programs and services that best benefit our members. This plan continues to work for the society, allowing us to invest in our future.

The fiscal year 2017 (FY17) profit from operations (excluding investments) was concluded with a surplus of $426,788. This net income from operations was before adjustment for the funded status of the APS pension plan of $511,428. This adjustment increased income and is based on an actuarial analysis with several variables, and as such, the amount can fluctuate significantly from year to year.

The FY17 income and expense categories for the society are detailed in Table 1. Total income ($5,285,975) was derived from nine sources, as indicated in Figure 1, and total operating expenses ($4,859,187) incurred during FY17 were partitioned as indicated in Figure 2. APS income and expenses for the most recent 11 fiscal years are presented in Table 2. The total assets of the society as of June 30, 2017 (including restricted funds) were $10.1 million, and liabilities totaled $5.2 million. This resulted in total net assets of $4.9 million.

### Table 1. Audited Summary of Income and Expenses—6/30/17 (Twelve Months)

<table>
<thead>
<tr>
<th>Category</th>
<th>Income</th>
<th>Expenses</th>
<th>Net Before Overhead</th>
<th>Net After Overhead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member Services</td>
<td>335,258</td>
<td>678,954</td>
<td>14%</td>
<td>-343,696</td>
</tr>
<tr>
<td>Phytopathology</td>
<td>918,827</td>
<td>399,919</td>
<td>8%</td>
<td>518,908</td>
</tr>
<tr>
<td>Plant Disease</td>
<td>1,067,988</td>
<td>569,264</td>
<td>12%</td>
<td>498,724</td>
</tr>
<tr>
<td>Phyto News</td>
<td>3,586</td>
<td>29,192</td>
<td>1%</td>
<td>-25,606</td>
</tr>
<tr>
<td>MPMI</td>
<td>708,853</td>
<td>319,575</td>
<td>7%</td>
<td>389,278</td>
</tr>
<tr>
<td>Plant Mgmt Network</td>
<td>320,907</td>
<td>191,808</td>
<td>4%</td>
<td>129,099</td>
</tr>
<tr>
<td>APS Press</td>
<td>880,046</td>
<td>715,164</td>
<td>15%</td>
<td>164,882</td>
</tr>
<tr>
<td>Annual Meeting</td>
<td>815,595</td>
<td>587,450</td>
<td>12%</td>
<td>228,145</td>
</tr>
<tr>
<td>Auxiliary Meetings</td>
<td>90,750</td>
<td>80,799</td>
<td>2%</td>
<td>9,951</td>
</tr>
<tr>
<td>Innovation</td>
<td>3,980</td>
<td>68,512</td>
<td>1%</td>
<td>-64,532</td>
</tr>
<tr>
<td>G &amp; A</td>
<td>140,185</td>
<td>1,218,550</td>
<td>25%</td>
<td>-1,078,365</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>5,285,975</td>
<td>4,859,187</td>
<td>426,788</td>
<td>426,788</td>
</tr>
</tbody>
</table>

Surplus (Loss) 426,788

### Table 2. Comparison of APS FYs 2007–2017 Before Reserve Allocation

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Income</th>
<th>Expenses</th>
<th>Surplus (Deficit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY17</td>
<td>$5,285,975</td>
<td>$4,859,187</td>
<td>$426,788</td>
</tr>
<tr>
<td>FY16</td>
<td>$5,835,371</td>
<td>$5,277,956</td>
<td>$557,415</td>
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<td>FY15</td>
<td>$5,218,553</td>
<td>$5,164,054</td>
<td>$54,499</td>
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<tr>
<td>FY14</td>
<td>$4,931,056</td>
<td>$4,525,740</td>
<td>$405,316</td>
</tr>
<tr>
<td>FY13</td>
<td>$4,888,696</td>
<td>$4,849,155</td>
<td>$39,541</td>
</tr>
<tr>
<td>FY12</td>
<td>$5,223,752</td>
<td>$4,766,446</td>
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<tr>
<td>FY11</td>
<td>$5,218,553</td>
<td>$5,164,054</td>
<td>$54,499</td>
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<td>FY10</td>
<td>$5,116,883</td>
<td>$4,572,696</td>
<td>$544,187</td>
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<td>FY09</td>
<td>$4,935,612</td>
<td>$4,508,102</td>
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<tr>
<td>FY08</td>
<td>$4,734,346</td>
<td>$4,712,582</td>
<td>$21,764</td>
</tr>
<tr>
<td>FY07</td>
<td>$4,538,077</td>
<td>$4,327,412</td>
<td>$210,665</td>
</tr>
</tbody>
</table>
Phytopathology Transitions to New Editor-in-Chief

Phytopathology is in great shape as Krishna V. Subbarao hands over the reins to Harald Scherm.

Subbarao served as editor-in-chief (EIC) for Phytopathology, APS’s premier plant pathology journal, from 2015 through 2017. During his tenure as EIC, he pioneered new approaches that will leave a strong legacy on the society’s flagship journal. Subbarao appointed a senior editor for reviews, and the journal published 28 Review articles and three Focus Issues, which increased its impact during his term. In all, Phytopathology received 1,199 original manuscripts and published 501 articles with an editorial board of 19 senior editors and 34 associate editors. The number of submissions increased 15%, and the time from submission to decision—a key metric in author satisfaction—decreased by 6 days during Subbarao’s tenure.

Incoming Phytopathology EIC Harald Scherm, University of Georgia, and his editorial board began work in January 2018.

APS OFFICE OF EDUCATION

Opening Available for Graduate Students Interested in Education Initiatives

The APS Office of Education (OE) is currently seeking a graduate student member to serve on its board for a 3-year term starting in August 2018. The mission of the OE is to promote plant pathology curricula and support the educational development of plant pathologists and those interested in plant pathology through a variety of APS initiatives. The OE’s mission is broadly defined to include all aspects of the current and future education needs of APS.

The student will gain valuable experience as a full voting and participating member of the OE. It is important for him or her to attend the OE midyear meeting, which is typically held for 2 days in December at APS headquarters in St. Paul, Minnesota. (All travel expenses for the midyear meeting are paid for by the OE.)

To be considered for the position, the student must meet these qualifications:
1. Be a student member of APS, and be more than 1 year into an MS or PhD program.
2. Submit a one-page letter stating the following:
   • Reason for wanting to join the OE board
   • Interest in educational programs for APS members and ideas for activities that APS should consider as part of its educational offerings
   • Confirmation of ability to attend the OE midyear meeting
3. Submit a letter of support from the applicant’s major professor or research director.

To be considered for the OE board position, the student should submit his or her statement of interest and faculty support letter to OE Director Tom Mitchell (mitchell.815@osu.edu) by February 26, 2018. Questions should also be directed to Mitchell via e-mail or phone (+1.614.292.1728). The OE will review submitted materials and decide on the appointment by the end of March.

Applications for Storkan-Hanes-McCaslin Foundation Awards Due May 1

The deadline is approaching for graduate students to submit applications for the Storkan-Hanes-McCaslin Foundation Awards, named in honor of Richard C. Storkan, Gerald L. Hanes, and Robert L. McCaslin. To date, more than $513,000 has been awarded to 80 promising scientists.

In addition to an unrestricted cash award ($5,000–$10,000), which can be used for any purpose that will benefit the education of the student (including personal expenses), each new awardee will receive round-trip fare to the ICPP2018 meeting, “Plant Health in a Global Economy” (hosted by APS). All awardees will be presented their awards at a luncheon attended by their research advisors, previous awardees, and members of the APS Foundation Committee. A major aim of the foundation is to encourage research by offering financial assistance to graduate students working on soilborne diseases of plants.

To be considered for funding, the applicant’s proposal should be carefully prepared in accordance with the instructions published in the December 2017 issue of Phytopathology News and submitted electronically no later than May 1, 2018, to Michael Stanghellini (chair of the Selection Committee). The applicant should submit a single file that contains the following:
1. A two- or three-page research proposal, including a concise statement of the objectives, methods, and materials and the projected impact of the proposed research (a budget is not required);
2. A one-page resume (including a brief education and research background, plus a telephone number and e-mail address); and
3. A letter of recommendation from the applicant’s major professor or research director.
The 2017 Year in Review

APS worked to grow within and beyond the society in 2017

Pierce A. Paul, APS Internal Communications Officer, paul.661@osu.edu

Greetings! As Internal Communications Officer (ICO), one of my primary responsibilities is to communicate the plans and activities of APS Council to members. Council meets at multiple times during the year to plan, develop, and discuss policies and action items to address issues, opportunities, and developments in plant pathology and related fields. In this report, I highlight a few key activities from 2017, pulling information from annual reports prepared by boards, offices, forums, and committees.

A Family Friendly APS Meeting

The 2016 Professional Development Forum (PDF), which became an official APS forum in 2016, initiated several activities geared toward advancing the professional development of students and early- to mid-career APS members. One such activity, developed in response to a challenge from former APS President Sally Miller, was the successful organization of a family friendly program of activities at the 2017 APS Annual Meeting in San Antonio, Texas. A subcommittee composed of the PDF and general APS members researched, coordinated, and delivered an excellent program for the children of meeting attendees. The Graduate Student committee also contributed to this effort by assisting with the development of the Sprouts Kid’s Club, which provided activities and resources for families attending the meeting. This initiative was very well received by those who participated, and the PDF eagerly looks forward to developing and expanding family friendly activities at future APS meetings, building on the lessons learned in 2017.

Interactions with the Private Sector

APS continues to explore strategies for strengthening interactions and relationships with the private sector. In 2017, the Office of Private Sector Relations (OPSR) contributed to this effort with a graduate student-organized special session at the annual meeting entitled “Preparing for Careers in Industry” and held its second biennial private sector and government institution tour in California. The latter gave students and postdoctoral researchers exposure to agribusiness organizations (Bayer CropScience, Dow AgroSciences, Dupont-Pioneer, Monsanto, and Syngenta), the California Department of Food and Agriculture, and the Citrus Research Board, through which students and researchers learned, among other things, about possible private-sector career opportunities for plant pathologists and plant health professionals in general. The OPSR also granted an Individual Experiential Award to a postdoc at the USDA–ARS in Charleston and a Departmental Experiential Award to the University of Georgia.

APS Publications Doing Well

In 2016–2017, income from APS journals and APS PRESS publications comprised 77% of the society's income. All the journals did well. Plant Disease, Phytopathology, and Molecular Plant-Microbe Interactions (MPMI) all had impact factors greater than 2.9. Averaged across these journals, the time from submission to a decision was reduced to less than 35 days. The number of submissions handled by the editorial boards remained fairly stable for some journals but increased considerably for others. For instance, the Plant Disease board handled a record number of manuscripts in 2016. Plant Management Network (PMN), Plant Health Progress (PHP), APS PRESS, Plant Health Instructor, and Phytopathology News are also doing well. The Phytobiomes journal was successfully launched in 2016 as APS’s first fully open-access journal and is growing. The first article was published in early 2017, and the first full issue of the journal was published in May 2017.

The APS Publications Board continues to rethink journal publication strategies and is implementing new technologies and improvements in delivery, handling, and formatting to meet members’ needs. For instance, the lateral transfer of manuscripts among journals within Manuscript Central was successfully implemented and is expected to greatly facilitate the process of redirecting (instead of completely resubmitting) manuscripts to an APS journal deemed more appropriate for the content being published.

Maintaining High Standards and a Safe and Respectful Society for All

As a professional organization committed to maintaining very high standards and a fair, safe, and respectful society, APS has a Code of Professional Conduct that “encompasses the values important to the profession and expresses the profession’s responsibilities to the public, clients, and colleagues” and a Sexual Harassment Policy that is a part of the society’s constitution. “United States Federal, and most State, laws strictly prohibit sexual harassment.” At the December meeting, APS Council decided that links (see below) to both documents, which are available on the APS website, should be highlighted in this report in Phytopathology News and will be referenced in the annual meeting program book in the future, following in the footsteps of some sister societies:

- APS Code of Professional Conduct
- APS Sexual Harassment Policy

The most up-to-date listing of APS leadership—including council, boards, offices, and committee listing is currently available. A detailed version of the 109th Annual Report will be available soon.

Phytopathology News

February 2018  20
2018 is already going down in history.
For the first time in over 25 years, ICPP will convene in North America!
ISPP will celebrate its 50th anniversary!
Will YOU be in attendance?

Help to make history.
Join us in Boston for ICPP2018.
View details at icpp2018.org
#ICPP2018

REGISTER EARLY AND SAVE!
Advance Registration Available Until April 12, 2018
What Should You Know about Obtaining and Using Organisms from Other Countries?

A Few Basics on the Nagoya Protocol to the Convention on Biological Diversity

by Kevin McCluskey, Public Policy Board Member, and Gwyn Beattie, Public Policy Board Chair

All types of living organisms are genetic resources, and researchers that work with genetic resources from other countries need to be aware of a formal mechanism for sharing the benefits of using these resources. The Convention on Biological Diversity (CBD) developed such a mechanism, ratified in 2014 as the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization—more commonly known as the Nagoya Protocol (or simply Nagoya). While Nagoya applies to many researchers around the globe, figuring out how it applies to your specific research can be difficult.

By way of background, Nagoya was needed to address the perception that sovereign genetic resources were being utilized without sharing the benefits, leading to exploitation. In addition, neither the 1993 Convention on Biological Diversity (CBD) nor the 2002 Bonn Guidelines included a mechanism for sharing the benefits of using genetic resources with the provider country.

Most simply, the Nagoya Protocol requires a party (normally, a country) to establish local laws that detail how others may access sovereign genetic resources and share any benefits arising from their use. Because Nagoya relies on local legislation, a patchwork of established and developing legislation currently governs how a researcher may use genetic resources from a foreign country or transport resources from one country to another. Benefit sharing under Nagoya may be monetary (for commercial utilization of a genetic resource) or nonmonetary (typically, for nonprofit research activities). Nonmonetary benefits, which include training, capacity building, and collaborative research activities, are the most common for academic research.

The United States is not a party to the CBD or to Nagoya and does not limit access to genetic resources (although local entities or owners of genetic resources may do so). Nonetheless, just as all drivers must drive on the left in the United Kingdom, researchers from the United States must follow the local laws in any country. Nagoya emphasizes that research may be prohibited if it uses genetic resources that were exported as a commodity, such as grains, fruits, vegetables, or their associated microbes.

Because Nagoya relies on local legislation, a patchwork of established and developing legislation currently governs how a researcher may use genetic resources from a foreign country or transport resources from one country to another.

Penalties for noncompliance can be applied to international researchers using the resources and to local researchers providing the resources and may include loss of access to genetic resources, revocation of research support, fines, and incarceration.

Because variations among local laws make it difficult for researchers to comply with the requirements of Nagoya, the CBD has established an Access and Benefit Sharing Clearinghouse (ABSCH), which provides information on obtaining prior informed consent on mutually agreed terms (PIC/MAT) and identify local responsible parties (National Focal Points). In addition, the Nagoya Protocol allows exemptions called specialized instruments, the most significant of which is the International Treaty on Plant Genetic Resources for Food and Agriculture. This treaty governs access to 65 major crop and forage plants and includes a multilateral benefit-sharing mechanism.

Several issues are worth mentioning. First, acquiring genetic resources for the development of diagnostic reagents falls within the jurisdiction of the requirements. However, simply detecting and identifying genetic material does not if the genetic material is not used, such as for a standard reagent. Second, the status of digital sequence information has not been addressed within the current protocol text and will be considered by an ad hoc technical expert group in February 2018; recommendations will be presented at the 14th Conference of the Parties in November 2018.

In summary, the ABSCH is a critical resource that each of us should use to ensure that our research complies with Nagoya, to protect our foreign collaborators, and to identify National Focal Points in any country in which we conduct research.
In 2017, Family Friendly APS kicked off with the Sprouts Kid’s Corner and related activities at the annual meeting in San Antonio. The launch was successful, and meeting attendees provided excellent feedback on what went well and what could be improved and on what additional offerings they would like to see in the future. In particular, many of you loved the Sprouts concept and Kid’s Corner and reported looking forward to having both continue in the future. You also suggested more engaging activities that seize this initiative as an opportunity for education, not just entertainment. The advisory group has taken this suggestion to heart and is eager to incorporate more learning initiatives into future years.

Although 2018 is not a typical annual meeting year, Family Friendly APS will be at ICPP2018 in Boston, building on last year’s successes and adding more resources and activities to improve the meeting experience for anyone attending with family members. Some of the key changes in the works for 2018 include organized offsite outings (Boston has great playgrounds, green spaces, history, and museums!), as well as scheduled, volunteer-led educational activities on site to provide more structure and better learning opportunities. Many of you volunteered to help with leading an activity or reading a story at the Sprouts Kid’s Corner through last year’s postannual meeting survey. If you were one of these individuals, there’s a good chance you will hear from us soon! If you did not volunteer through the annual meeting survey but are interested in leading a Sprouts activity, the team would love to hear from you.

Another focus of this year’s efforts will be on providing premeeting information about family friendly attractions and resources in the Boston area. This information will be made available on the ICPP2018 website and will range from nursing locations at Logan Airport to the most exciting attractions around town, and from using the subway system to drop-in childcare options near the convention center. The Family Friendly APS team will also adopt Phytopathology News (PPN) as a means of distributing new information on a monthly basis. With each PPN issue leading up to ICPP2018, we will supply a new column on how to make the most of your family’s ICPP experience. Next month, look for information on some of our favorite kid-friendly attractions near the convention center. If there’s a particular topic you would like to see covered or if you are a Boston native and would like to share your expertise, please let us know!

People

Student Degree

Andrea Garfinkel recently received her PhD in plant pathology from Washington State University (WSU). Her dissertation was entitled Botrytis and Other Fungal Pathogens of Peonies. Her committee included her advisor, Gary Chastagner, as well as Tobin Peever, Dennis Johnson, and Patricia Holloway (University of Alaska, Fairbanks).

Garfinkel received her BA degree in international studies and MS degree in agronomy from the University of Wyoming. At WSU, she received several scholarships, awards, and honors, including an Achievement Rewards for College Scholars (ARCS) Fellowship; WSU Richard R. and Constance M. Albrecht Scholarship; WSU Alexander A. Smick Scholarship in Rural Community Service and Development; 2015 American Phytopathological Society Pacific Division Student Travel Award; Best Oral Presentation at the International Symposium on Flower Bulbs and Herbaceous Perennials in Kunming, China, in 2016; and First Place in the Graduate Student Oral Presentation at the American Phytopathological Society Pacific Division Meeting in Riverside, California, in 2017.

Garfinkel is exploring job opportunities in both academia and industry.

Awards

Jean Ristaino, William Neal Reynolds Distinguished Professor of Plant Pathology at North Carolina State University (NCSU) and APS Excellence in International Service awardee, has received a Fulbright Award to spend 6 months at the University of Catania in Italy. She plans to use the award to expand detection of late blight on tomato and potato in southern Europe and the Mediterranean region, including North Africa and the Middle East. A disease and surveillance mapping system in the United States and most of Europe is currently in place, but no such system exists in the areas that Ristaino hopes to target.

In addition to her main project, Ristaino plans to expand her knowledge of bioinformatics at the university’s diagnostic lab in Campania, and she hopes to broaden study-abroad opportunities for students at NCSU.
and in Italy. She also intends to spend time in the United Nations Food and Agricultural Organization (FAO) and to connect with European colleagues working on food security.

Ristaino also has personal ties to the area: Her grandparents were from Sicily, and her ancestors were Sicilian farmers only a few generations back.

Daniel Farber, postdoctoral research associate with Dennis Johnson at the Department of Plant Pathology, Washington State University (WSU), has received an award from the journal Plant Pathology. Each year, the journal hosts a competition to identify the best paper submitted by a student. Farber received the award for the article “Local dispersal of Puccinia striiformis f. sp. tritici from isolated source lesions,” by D. H. Farber, J. Medlock, and C. C. Mundt, which was published in Plant Pathology in January 2017 (66[1]:28–37). Farber’s work was part of his PhD research in the Department of Botany and Plant Pathology at Oregon State University under the direction of his advisor, Chris Mundt.

Judy O’Mara, Instructor and Director of the Kansas State University Plant Disease Diagnostic Laboratory, recently received the Outstanding Mentor Award at the K-State Research and Extension Annual Conference. One nominator wrote, “In extension, relationships are critical. Judy introduced me to colleagues on campus who also deal with plant health and identification issues. She helped me understand which conferences to attend—and who to talk to while there. She helped me get to know extension agents and understand how we work together. She enhanced my career by mentoring me though those early stages.” Another wrote, “Judy also mentors students in the Plant Diagnostic Clinic. She finds funding and special permission for them to attend conferences, trainings, and workshops. She coaches them to develop projects on their own. She sees students as future plant pathologists and wants them to have the most valuable experience possible.”

New Appointment

Kevin McCluskey, Research Professor in the Department of Plant Pathology at Kansas State University, was recently named to the Ad Hoc Technical Expert Group on Digital Sequence Information on Genetic Resources. He is one of only two U.S. participants on the 25-person panel. The group will meet at the Convention on Biological Diversity Secretariat in February 2018 in Montreal, Quebec, Canada. The group will also serve the Nagoya Protocol. McCluskey, who is curator of the Fungal Genetics Stock Center, will formally represent the World Federation for Culture Collections.

New Positions

Mengjun Hu recently accepted an assistant professor position in the Department of Plant Science and Landscape Architecture at the University of Maryland. Hu will work closely with growers, stakeholders, and other specialists in Maryland to establish research and extension programs relevant to grape and small fruits in his new role. Prior to his new appointment, Hu was a postdoctoral fellow with Guido Schnabel at Clemson University.

Hu was born and raised in southeast China. He earned his BS degree and PhD in plant pathology at China Agricultural University in Beijing (2004–2008) and Huazhong Agricultural University in Wuhan (2008–2013), respectively. His research has focused primarily on fungicide resistance and its molecular basis, with an emphasis on Botrytis spp., Colletotrichum spp., and Monilinia spp., attacking small fruits and tree fruits. He has also studied fungal population genetics and taxonomy, as well as peach skin abiotic disease issues (i.e., streaking and bronzing). To date, Hu has authored or co-authored 22 peer-reviewed research publications, three book chapters, and other technical publications and conference proceedings.

Professor Tofazal Islam, Fulbright Visiting Scholar from the Department of Biototechnology, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh, recently joined Daniel Panaccione and Mahfuzur Rahman’s lab at Davis College of Agriculture, Natural Resources, and Design at West Virginia University (WVU). At WVU, Islam will work on a project entitled “Development and validation of a sensitive molecular diagnostic tool for detection and quantification of quiescent anthracnose infection on strawberry foliage.”

Previously, Islam collaborated with Rahman on a project funded by the USDA–FAS entitled “Improving sustainability of strawberry production in Bangladesh through adopting low-cost pest management methods and value-added products by smallholder producers,” in which they noticed that anthracnose fruit rot (AFR) and crown rot (ACR) were becoming major threats to strawberry cultivation in Bangladesh.

Trained in Japan, Germany, and the United Kingdom, Islam’s research group in Bangladesh rapidly determined the genetic identity and origin of the first outbreak of wheat blast through field pathogenomics and open data sharing with 31 researchers from seven countries on four continents. Islam et al. published these findings in 2016 in BMC Biology (14:84).

In addition to collaborating with Panaccione and Rahman on strawberry research, Islam expects that his work as a Fulbright Visiting Scholar will allow him to extend his network with many other U.S. researchers, whom he hopes will collaborate with him to mitigate wheat blast in Bangladesh and beyond through application of cutting-edge biotechnology for development of blast-resistant wheat.

Presentation

Vishnutej Ellur, a PhD student of the Department of Plant Pathology at Washington State University, presented a poster entitled “Sequence characterization of PGIP1 of chickpea,” co-authored with Wei Wei, George Vandemark, and Weidong Chen at the North American Pulse Improvement Association (NAPIA) 2017 Biennial Conference in East Lansing, Michigan, from November 1 to 3, 2017. Ellur’s poster earned second place in the graduate student poster presentation competition at the conference. More than 80 scientists from Canada, the United States, France, and Australia attended the conference.
Classified Policy
You can process your job listing at the APS Job Center. PLEASE NOTE: Your online job listing may be edited by newsletter staff to approximately 200 words for the print listing in Phytopathology News. Fees for posting online are $25 member/$50 nonmember for graduate or postdoc positions and $200 member/$250 nonmember for all other positions. To have your job listing included in Phytopathology News, simply select the option on the online form (there is an additional $55 fee). If you have any questions, contact the APS Placement Coordinator.

Assistant/Associate Professor—
Belowground Plant Ecology/Root Microbial Interactions; Haines Family Professorship in Plant Biology
This 9-month, tenure-track position will be jointly appointed in the Departments of Plant Biology (Franklin College of Arts & Sciences) and Plant Pathology (College of Agricultural & Environmental Sciences) at the University of Georgia (UGA), starting January 2019.

The position will have available research funds from a Haines Family Professorship endowment. The incumbent will address fundamental ecological and evolutionary questions in plant ecology with an emphasis on plant roots and their interactions with the soil environment, specific soil organisms, and/or the root microbiome. Field-based research should be integrated with other approaches (e.g., modeling, computational, molecular, genomic). The successful candidate will be expected to maintain a high-impact, externally funded research program in belowground plant ecology; to mentor undergraduate students, graduate students, and/or postdoctoral scholars across relevant disciplines; and to teach undergraduate and graduate-level courses.

The candidate must have a PhD in plant biology, plant pathology, ecology, or related field. To be considered for an associate professorship, the candidate must have an established extramurally funded research program. Inquiries about the position should be directed to Dr. Jim Leebens-Mack, Chair of the Search Committee. All application materials must be submitted via the university's faculty job portal. Review of applications will begin on February 28, 2018, and continue until the position is filled. Salary is commensurate with qualifications and experience.

Graduate Assistantship
The Department of Plant Pathology at the University of Florida (UF) is currently recruiting motivated PhD students for Fall 2018. We are seeking students to study basic and applied aspects of plant-microbe interactions within the context of agricultural systems.

Starting in Fall 2018, highly competitive graduate assistantships are available in many areas of research, including disease modeling and food security; molecular and genomic aspects of plant responses to disease and drought; pathogen evolution and population structure; and comparative microbial genomics and metagenomics. Graduate student applications are due January 3, 2018, and accepted students will begin the PhD program in August 2018. Applications submitted after this deadline may be considered. Graduate student assistantships include a competitive stipend (starting at a low of $20,000 to more than $30,000) and healthcare coverage. We are seeking students with these skills and qualities: a passion for biology and a BS or MS degree in an appropriate biological science; appropriate GPA and GRE scores; strong written and spoken English language skills; field and/or laboratory experience appropriate for research in plant pathology; strong organizational skills; and the ability to complete projects.

To find out more about the Department of Plant Pathology at the University of Florida and its graduate programs, please visit us online or contact the graduate coordinator, Jessica Ulloa.

Please submit materials to Jessica Ulloa.

Senior Research Scientist Plant Pathologist
The Global Plant Health Department of Driscoll’s Inc. supports our breeders, nursery growers, and nursery staff in developing and implementing integrated disease management programs. This position will support our integrated disease management research and extension efforts across all four berry crops to address key production-limiting pathogens. The scientist will conduct and/or cooperate with others on disease management research that supports our commitment to organic production and addresses the loss of chemical tools.

Doctoral degree plus postdoctoral research experience in plant pathology or related biological sciences is required. Master's degree plus 7–10 years of relevant experience in plant pathology or closely related field will be considered. 5–7 years of experience performing similar work in a private, public, or educational setting. Strong pathology lab skills, including molecular diagnostic techniques and research tools. Strong experimental design, data collection, and analysis skills. Previous experience with berry crop pathology a plus but not required. Ability to work successfully with a diverse cross-cultural team is also necessary for this position. Management experience leading a small team, including one or two research associates.

Individual should be a self-starter and enjoy the challenge of working in a growing company. Excellent communication and presentation skills required. Bilingual English/Spanish communication skills would be a plus.

To find more information about the position and to apply, please click here and/or contact Ms. Cassandra Carvajal, senior recruiter.

Postdoctoral Research Associate
The Regional Pulse Crop Diagnostic Laboratory is dedicated to diagnostics of pulse crop diseases. The laboratory is affiliated with the Department of Plant Sciences and Plant Pathology at Montana State University, Bozeman. We test chickpea, lentil, and dry pea for seedborne diseases and others. The laboratory is currently accepting applications for a postdoc position. Responsibilities include identifying pathogens (bacteria, fungi, viruses, and nematodes) from different plants and soil; determining pathogenicity of identified bacteria, fungi, nematodes, oomycetes, and viruses; conducting field surveys of pulse crop diseases; development of pathogen detection methods; and publication in peer-reviewed journals.

PhD in plant pathology, plant protection, plant mycology, or related field; demonstrated experience identifying pathogens; and demonstrated molecular biology experience are required.

Apply through the Montana State University job portal. Set up an account, and search for job announcement number STAFF-VA-18143. Pay Scale is $40,000–$42,000. Open until the position has been filled.

FIND THE LATEST JOBS IN PLANT PATHOLOGY
Search online for new job opportunities in the field of plant pathology using the APS Job Center. Visit the APS Job Center.
Phytopathology
Best Practices for Population Genetic Analyses
N. J. Grünwald, S. E. Everhart, B. J. Knaus, and Z. N. Kamvar
Prospects for Biological Soilborne Disease Control: Application of Indigenous Versus Synthetic Microbiomes
M. Mazzola and S. Freilich
Tale of the Huanglongbing Disease Pyramid in the Context of the Citrus Microbiome
N. Wang, L. L. Stelinski, K. S. Pelz-Stelinski, J. H. Graham, and Y. Zhang
Epidemiology: Past, Present, and Future Impacts on Understanding Disease Dynamics and Improving Plant Disease Management—A Summary of Focus Issue Articles
P. S. Ojiambo, J. Yuen, F. van den Bosch, and L. V. Madden
Harnessing Effector-Triggered Immunity for Durable Disease Resistance
M. Zhang and G. Coaker
Peanut Smut: From an Emerging Disease to an Actual Threat to Argentine Peanut Production
Managing Grapevine Trunk Diseases with Respect to Etiology and Epidemiology: Current Strategies and Future Prospects
D. Gramaje, J. R. Urbez-Torres, and M. R. Sosnowski
Cyclophilins: Less Studied Proteins with Critical Roles in Pathogenesis
K. Singh, M. Winter, M. Zouhar, and P. Ryšánek
Prospects for Biological Soilborne Disease Control: Application of Indigenous Versus Synthetic Microbiomes
M. Mazzola and S. Freilich

Phytobiomes
The Nodule Microbiome: N2-Fixing Rhizobia Do Not Live Alone
P. Martínez-Hidalgo and A. M. Hirsch
Response of Sediment Bacterial Communities to Sudden Vegetation Dieback in a Coastal Wetland
W. H. Elmer, P. Thiel, and B. Steven
A Dimorphic and Virulence-Enhancing Endosymbiont Bacterium Discovered in Rhizoctonia solani

TOP ARTICLES 2017
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Application Deadline Extended for the Global Experience Program

The application period for the 2018 Global Experience Program has been extended to February 16. The APS Office of International Programs (OIP) makes funds available for individuals who want to help scientists and extension personnel of developing countries in training and outreach efforts. The program is open to all APS members to conduct short courses, workshops, and training programs in collaboration with a cooperating institution in a developing country. Teams consisting of a senior and a junior plant pathologist are encouraged to participate, and the development of training and extension materials will be supported. Up to $1,500 will be available for successful applicants to support travel and training material costs.

Learn more about the program and its requirements online. Please contact Ron French with any questions. Applications are due February 16, 2018.

Resolve to Enroll in Auto-Renew!

The new year is a good time to think about ways to make our lives easier and shorten our to-do lists. Enrolling in auto-renew ensures you’ll never have to remember when your membership expires or experience a lapse in your membership benefits. Enroll in auto-renew today and check it off your list for years to come.

Don’t get caught with your plants down. Renew today!

Calendar of Events

**APPLIED SPONSORED EVENTS**

**FEBRUARY 2018**
- 16-18 Southern Division Meeting. Fayetteville, AR.

**MARCH 2018**
- 21-23 Potomac Division Meeting. Ocean City, MD.

**JUNE 2018**
- 12-14 North Central Division Meeting. Fargo, ND.
- 25-27 Pacific Division Meeting. Portland, OR.

**JULY 2018**

**IMPORTANT APS DATES TO REMEMBER**

**FEBRUARY 2018**
- 16 Final reports for PDMR Volume 12 due
- 16 APS Foundation award applications due
- 21 WEBINAR: Getting Your Manuscript Accepted by APS Journals (Even If English Is Your Second Language)

**APRIL**
- 18 WEBINAR: Approachable Science on Genetically Engineered Crops (GMOs)

**MARCH 2018**
- 7–8 Southern Soybean Disease Workers Meeting. Pensacola Beach, FL.
- 7–8 European Agrochemical Adjuvants Innovation Meeting. Rotterdam, The Netherlands.

**JUNE 2018**

**SEPTEMBER 2018**
- 4–7 8th ISTA Seed Health Symposium and 6th International Seed Health Conference. Poznań, Poland.

**NOVEMBER 2018**

**JULY 2019**
- 14–18 IS-MPMI XVIII Congress. Glasgow, Scotland.