As everyone probably knows, in early January I “returned” from a six month sabbatical from the Presidency. This was a chance to reconnect with my lab and the scientific community and to work closely with Bridget Rigas as she has developed BTI’s communications and fundraising strategy. Upon my return the leadership team was both old and new: Joan Curtiss and Karen Kindle had departed, and Eric Richards returned as Vice President for Research. The tenth anniversary of my Presidency (August 1st, 2014) also occurred during this period.

For the remainder of 2015, our main focus will be on bringing in the next generation of faculty-level scientists, and ensuring their success. This will require appropriate infrastructure, direct support for research and importantly, increased opportunities for success in raising external funds. How can and should BTI lay the groundwork for renewing the staff that directs the most important thing we do – make discoveries in plant biology? The answer to this question lies in both internal and external activities.

Recently, BTI faculty spent considerable time framing and discussing future hiring. Our intention is to coordinate hiring with the School of Integrative Plant Sciences, while enriching BTI science through the hiring of junior-level researchers with exciting ideas. Some areas of particular interest are the microbiome/phytobiome, and also small molecule chemicals and their biological roles. Either of these areas, and indeed a number of others, would strongly link to BTI’s existing strengths in mechanisms of signal transduction, genomics and bioinformatics. You will hear more about our next faculty search by early summer.

Providing resources for both our existing and anticipated new staff is of highest priority. We were very excited to learn, for example, that the Triad Foundation increased our research funding by 40% for our next four-year period. Fundraising from non-traditional (i.e. non-Federal) sources requires different strategies, and engagement of Bridget’s team and a range of BTI scientists with the Triad Foundation, to educate them about our good work, resulted in increased commitment. In a similar vein, I and two other BTI faculty members, Zhangjun Fei and Lukas Mueller, met with Bill Gates during his visit to Cornell last fall. His desire to impact food security in developing countries has led to substantial investments on this campus; some $6.62M will be expended at BTI to help meet this worthy goal. Among the various projects is an ongoing creation of a bioinformatics workspace on the second floor. I also recently returned from Washington, DC, where I met with both legislative offices and officials from NSF, ARPA-E and NIFA. While it was gratifying to hear strong support for plant research on both sides of the aisle, it will be the responsibility of the research community to keep the pressure on so that our competitive resources do not fall victim to partisan brinksmanship.

BTI’s commitment to faculty renewal and resource development are two pillars of our strategic plan, which was renewed in 2014. For more details on this plan, I encourage you to see a more detailed description on page 4 of this issue.

Sincerely,

David
Grants and Awards

**Gary Blissard**, co-PIs Zhangjun Fei (BTI) and Ping Wang (Cornell)  
USDA/NIFA  
Modifying Insect Midgut Responses to Pathogen Attack  
04/01/2015 - 03/31/2018  
$455,000

**Lukas Muller**  
Gates/FAU  
Metabolic engineering of carbon pathways to enhance yield of root and tuber crops  
2015-2020  
$640,957

**Frank Schroeder**, co-PI Nancy Keller (UWI)  
NIH/UWI  
Comprehensive analysis of NRPS-derived metabolomes of three *Aspergillus* species  
12/5/14-11/30/18  
$469,202

**Lukas Muller**. Co-PI Susan McCouch (Cornell)  
Gates/Cornell  
6/18/14 3/10/15  
Delivering a high-density genomics breeder’s toolkit  
12/01/14 - 11/30/19  
$1,802,506

Conference Room Updates

The 4th floor conference room (room 415) is in the process of being updated: carpeting, furniture, paint. Once complete, it will be a much nicer video conferencing area for BTI use.

The 3rd and 1st floor conference rooms (room 313 / 119) are on the schedule for updates as well. Watch for more information soon.

Your patience is greatly appreciated as this upgrade work continues.
Paylocity: New Online Time Submission Portal

Beginning with the pay period starting 3/28/15 all employees will need to complete time sheets online, using Paylocity. You can register in advance by following the steps below:

- [http://www.paylocity.com](http://www.paylocity.com)
- Select “Login” then “web pay”
- Select “Register User” and enter requested information
- Company ID: 11614 – complete registration process
- Answer security questions

A Self-Service Portal guide is available online at: [http://bti.cornell.edu/?p=9029](http://bti.cornell.edu/?p=9029)

Watch for more details from the HR Office or contact BTIHR@cornell.edu

**BTI Communications Team News**

**FLASH SCIENCE!** Contest of three minute science presentations in plain English. Application deadline was March 20th. Presentations will occur on Friday, April 24th, 2:30 PM, in the BTI Auditorium.

**First prize wins $500!** All participants win a Wegmans gift card. Come and listen to the talks and attend a reception hosted by PGS before announcement of the winner and runner-up.

**Contact** Bob Kohut, Annie Kruse, Daniela Floss or Barbara Hufnagle for more information.

**ART@BTI reception Thursday, April 23, 5-7 PM**, photos by Nancy Ridenour of Ithaca Garden Club. The Ithaca Garden Club has kindly underwritten scholarships for high school interns at BTI. Flowers and gardens were central to Nancy as a child growing up in Schenectady, which led to a major in biology at Cornell University. The natural science thread has been strong throughout her career as a biology teacher at Ithaca High School, in her personal life of gardening and flower arranging, and now her focus in retirement of digital artistic photography.

Are you signed up for the **BTI e-newsletter LabNOTES**? Click on the open envelope icon at the top of BTI’s web site home page if you would like to receive this monthly newsletter. BTI has a [Facebook page](https://www.facebook.com/BTIcommunications), [twitter feed](https://twitter.com/BTI_comm) and [LinkedIn](https://www.linkedin.com/company/bti) site as well, so you can stay connected to BTI and our alumni! Or just email us at [BTI.comm@cornell.edu](mailto:BTI.comm@cornell.edu).
BTI Strategic Plan for 2015—2020

Acknowledgements: In spring 2014, the Boyce Thompson Institute participated in a strategic planning process with The Hartman Group to define the Institute’s goals over the next five years.

The process included interviews with key BTI constituents: board members, senior leadership, project leaders, support staff, research associates, postdoctoral fellows and graduate students. Focused-group conversations were held to follow up on interview results, and intensive working meetings were conducted with the Senior Leadership Team. The work resulted in a renewed Strategic Plan for 2015-2020.

To all those who contributed their time, expertise and talents, the Institute’s leadership expresses its thanks.

Mission: To advance and communicate scientific knowledge in plant biology to improve agriculture, protect the environment and enhance human life.

Values: Innovation, Integrity, Mutual Respect, Excellence, and Collaboration

Objective 1.0: Science Excellence
This objective encompasses faculty renewal, facilities and training, primarily as they relate to research capacity and productivity.

1.1 Renew Faculty through hiring.
1.2 Assess and reimagine enabling facilities and technologies.
1.3 Strategically manage discretionary research funds.
1.4 Diversify training opportunities for young scientists.

Objective 2.0: Organizational Excellence
This objective encompasses optimization of scientific and management leadership roles and the Institute’s organizational model.

Optimize scientific leadership roles for President, Vice President for Research, and the Scientific Advisory Board.
Support a high performing Senior Leadership Team.
Establish a comprehensive compensation strategy for BTI researchers and staff.
Evaluate BTI organizational model to increase efficiency and productivity.
Nurture BTI culture that encompasses BTI values.

Objective 3.0: Development Excellence and Growth
This objective encompasses the need to establish a compelling mission statement for development, a robust system for garnering donations and an efficient team capable of conducting the work.

Develop provocative and compelling case for funding
Create communication and development organization to support goals
Create a strong fundraising board and National Advisory Council
Develop benchmarks for success.

Objective 4.0: Enabling Infrastructure
This objective encompasses space, facilities and information technology.

Develop a comprehensive space utilization plan (e.g. to include innovative collaboration spaces and open research environments)
Support and develop Information Technology for the future
Modify facility to enable 21st century research excellence

Objective 5.0: Ensure institutional sustainability
This objective encompasses the need to address institutional sustainability on multiple fronts, including diversification of funding, staff recruitment and retention, responsible use of resources and mitigation of risk.

Continue to look for ways to diversify funding
Attract and retain the best and brightest
Minimize energy use and carbon footprint
Mitigate compliance risks (safety, HR processes, funding agencies)
BTI Welcomes:

**Patricia Waldron** joined BTI as the new **Science Writer** in January. She was born in Elmira, but has since lived in New Hampshire, Maine, Oklahoma, Antarctica, Iowa and California and is excited to be back in Upstate New York. After a decade of working in various molecular biology labs, she decided that it would be more fun to write about the discoveries of others than to do all that pipetting herself. She is a recent graduate of the University of California, Santa Cruz science communication program and her writing has appeared in *ScienceNOW*, *The Christian Science Monitor* and *Business Insider*. When she isn't hunched over her computer, she enjoys baking, exploring the local hiking trails and various handicrafts. You’ll find Patricia in the Resource Center (room 200).

**Lori Dempsey** joined BTI in January as our new **Grant Manager**. Lori bears a wealth of grants, financial, and customer service experience. Lori comes to BTI most recently from the Division of Nutritional Sciences at Cornell. Lori, her husband Jim, and teenage son Parker live in Truxton. When not on the golf course, Lori and Jim attempt to keep up with 14 year-old Parker, attending football games and wrestling matches. Lori can be found in the Business Office.

**Robin McNabb**, **Accounts Payable Coordinator**, joined BTI this month. She was previously the Office Manager at CCN International, a high end furniture company. Robin lives in Ovid with her husband and three dogs. She has a horse, Morgan, and last year they won a state championship in Western Dressage. She enjoys playing competitive volleyball and taking Martial Arts classes. Robin shares space with Kelly Smith in the Business Office.

BTI Community Silent Auctions

It’s not too late to submit your bid on various used furniture items or the BTI Truck.

**Used Furniture Items**: Bids due March 31st

**BTI Truck**: Bids due March 27th

Be sure to view pics and guidelines for bidding on these items.
Password Safety and More

by Greg Nielson

“How safe is your password?” – Gandolf

How safe is your password? [Here](#) is a site that lists the most commonly used passwords based on the 2013 Adobe security breach. There are patterns to these passwords: common phases, consecutive characters or dictionary words. If you also notice, not a single special character was used.

When you create a password remember to use: upper- and lowercase letters, numbers and special characters. Try to avoid using anything that could be obvious, like a pet’s/child’s name, birthday or address. Two quick ways of creating a password are: making up a phrase using a person, place and thing or using a phrase and then using the first letter of each word in your password.

Examples are:
- “Mickey, Minnie and Pluto drove to New York City in their new car.” |V|m&Pd2NyCI7Nc
- “Puff the Magic Dragon Lived by the sea.” P7m|Lb7c
(I was also cleaver in making letters with other characters)

When it comes to your password, is it better to have a more complex or longer password?

Longer is better. The complexity comes in to break up the dictionary passwords and deter brute-force attacks. I believe Cornell asks for at least 8 characters, my personal preference is at least 12. You can check your password security using this website (yes it is secure, otherwise I wouldn’t link you there).

How do you keep your password safe once you create it?

There are various ways to keep your passwords safe. One of the most important things you can do is to not use the same password and user name on more than one site. If you need to, add characters to the beginning or end of your password based on the website, like nf for Netflix. For places that require you to create a new password every so often, make one core password and then change the beginning or end. KeyPass, LastPass and 1Password are great password managers that keep track of your passwords for sites and programs. You could write down your password in a notepad and keep it in a bag. Try to avoid posting your passwords next to your computer or creating a file labeled passwords on your computer, see here for Sony’s story.

Remember piggyback rides?

They aren’t so fun anymore since they are now referred to as a type of social engineering attack where one person tries to gain access to a locked area by following someone who has access into that area. Here at BTI we have keycard access to the building and certain labs. While BTI is open and anyone can walk through the building during business hours, one needs card access to gain entrance to the building after hours and on weekends. All of us need to make sure that everyone uses their card after hours to get into the building, even if you are coming in to work with someone else.

All of us are part of the BTI family therefore all of us are responsible for the BTI data. Each of us needs to do our best to protect that data as well as our personal data from those that want to sell or abuse that data.
Liz Brauer Wins Barbara McClintock Award

Congratulations to Liz Brauer, graduate researcher in the Popescu Lab and student in plant pathology and plant-microbe biology at Cornell University. She is the recipient of the 2015 Barbara McClintock Award from the directors of graduate studies in the plant sciences graduate fields. Winners of the award are chosen because they have made significant contributions to plant science through their research and have "the best potential and greatest background merit." She shares the award with fellow graduate student Giovanna Danies.

As noted by Sorina Popescu: "Liz is an amazing student with a bright future in science. The McClintock Award recognizes her diligence, creativity and productivity in the lab but also her qualities as a mentor for younger scientists."

Liz will be graduating with her doctorate in May and plans to find a postdoctoral position, possibly in her home country of Canada or in the United Kingdom. Previous award winners from BTI include André Velasquez in 2012 and Robert Abramovitch in 2005.

Congrats Liz!

Promote Your Research: Contract Patricia Waldron, BTI Science Writer

Patricia Waldron, BTI’s on-site science writer, would like to encourage graduate students, postdocs and professors alike to notify her of any accepted publications BEFORE they are published (preferably at least two weeks before) so that press releases can be written and science journalists can quote you in their publications. She would like nothing better than to tell others about BTI’s significant and fascinating plant research! Anything she writes must be approved by the relevant researchers.

Contact Patricia via email at pjw85@cornell.edu, by phone at 4-7476 or stop by her office in the Resource Center.
BTI Safety: New Email Address BTISafety@cornell.edu

To improve communication between the BTI Community and the safety committee, we created a new email account BTISafety@cornell.edu. It works very similar to BTIhelp@cornell.edu. If you have a safety problem, question, or concern, or notice a potential situation (accident) - send an email to BTISafety@cornell.edu. It will reach almost everyone on the safety committee. Someone (or everyone) from the safety committee will respond to your concern or need. BTI is committed to your safety.

If you encounter an emergency, refer to the new Emergency Procedures Guide found on safety bulletin boards. The Emergency Procedures Guide was recently updated and includes a few key reminders on what should be done during an emergency or accident. There are phone numbers to call on the last page.

On March 12th, Cornell EHS hosted their Department Safety Representative Roundtable meeting. In the DSR meeting several changes to the safety programs were announced, including some re-organization. One very positive change is Jerry Gordon has returned to Cornell EHS from his overseas project. He indicated he would like to work closely with the BTI safety program and collaborate on future opportunities. We will see more from Jerry Gordon.

BTI Data: Is Yours Being Backed Up?

BTI covers the cost of the EzBackup service for machines housing BTI data (up to a monthly dollar limit per machine). If you do not already have EzBackup installed on your computer, please contact bthelp@cornell.edu and request an account. Backups occur daily for identified folders/files on your machine. Once an initial full backup is complete, incremental backups occur for any new or changed data.

For those currently subscribing to EzBackup, be sure to periodically verify that the data you believe is backed up is really recoverable. Download the Quick Tips pamphlet or contact bthelp@cornell.edu.
BTI People

The Cilia Lab welcomes Faith Robinson. Faith has her MS degree in Plant Pathology from Colorado State and will be working on the citrus greening projects.

Former Klessig Lab member, Patricia Manosalva, joined University of California Riverside as Assistant Professor in the Department of Plant Pathology and Microbiology at the beginning of 2015.

Jander Lab undergraduate student Felix Fernandez-Penny, received a MaGNET travel award to attend the Maize Genetics Conference, March 12-15 in St. Charles, Illinois. He presented a poster titled “Targeting the role of benzoxazinoid genes in maize-aphid resistance.”

Congratulations to Jeffrey Hodgson in the Blissard Lab, who welcomed a new child into the world in February. Welcome to Ithaca, Rui.

We wish Doug Carruthers a speedy healing of his broken ankle – a result of a very graceful fall on ice while walking faithful companion Carlee. He remains at the helm in the BTI Stockroom but may be a bit slower getting to the window with his very stylish ‘boot’.

BTI bid farewell to Shawn Kenaley, Teaching Laboratory Coordinator, earlier this month. Shawn can now be found down the street at Cornell’s School of Integrated Plant Science involved in rust fungi research, an area near and dear to his heart.

Kudos To IT Support from Dick Staples
"The operating system of my older Mac computer was recently upgraded by the IT Support Group. Everything went very smoothly, and I was impressed once again by how competent and knowledgeable is the group that includes Elaine Van Etten, Greg Nielson and Dale Barrows."

Media Services – New GHS Labels

The OSHA Hazard Communication update to the Global Harmonized System (GHS) is expected to be implemented this year - 2015 (see previous article in last year’s HUB). In January, Media Service began using the new GHS labels. The labels were printed on 4”x6” manila shipping label card stock and attached with a rubber band. A collection cup was placed in each lab so the labels could be recycled and re-used. Unfortunately, the 4”x6” labels were not popular. The GHS labels were redesigned to fit on 2”x4” Avery adhesive backed stock. Please look for these new labels. Media services would like some customer feedback on the new labels.

For labs and researchers that make their own media and solutions, we have adhesive backed Pictogram labels available. These can be applied to bottles of your media and solutions to identify the hazards. The stickers will supplement your tape or other label identification of the contents. The pictogram stickers are available through the Stockroom or directly from media services. Again, we would like some customer feedback on the GHS pictogram labels.

If you have other label alternatives, please share your ideas. We would like to hear from you. Contact Gary Horvath in Lab Services for information on commercial label systems for GHS compliance or if you have questions on GHS label compliance (gh329@cornell.edu).
Education & Outreach News

Update on Summer Internships:

The Education and Outreach staff have been busy finalizing summer intern selection and lab assignments. Over 300 applications were received to fill a total of 21 undergraduate and 5 high school intern slots offered in three programs: Plant Genome Research, Bioinformatics and Bioenergy Education. Some 18 labs at BTI, USDA and Cornell University are participating this year. Undergrads who are confirmed for the summer program include:

<table>
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<tr>
<th>First Name</th>
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<tr>
<td>Ilea</td>
<td>Chau</td>
<td>Duke University</td>
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<td>Cedric</td>
<td>Clark</td>
<td>University of Kansas</td>
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<tr>
<td>Luis</td>
<td>Cruz</td>
<td>University of Puerto Rico-Mayaguez</td>
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<tr>
<td>Jonata</td>
<td>Freschi</td>
<td>University of San Paulo</td>
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<td>Juan</td>
<td>Gonzalez</td>
<td>New College of Florida</td>
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<td>Kayla</td>
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<td>Sam Houston State University</td>
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<td>Michelle</td>
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<td>Sara</td>
<td>LeFevre</td>
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<td>Noah</td>
<td>Legall</td>
<td>University of North Carolina Chapel Hill</td>
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<td>Tawni</td>
<td>Middleton</td>
<td>Colorado Mesa University</td>
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<td>Laura</td>
<td>Reese</td>
<td>Pennsylvania State University</td>
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<td>Julian</td>
<td>Roberts</td>
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<td>Edaris</td>
<td>Rodriguez Izquierdo</td>
<td>University of Puerto Rico - Mayaguez</td>
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<td>Roxanna</td>
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<td>Haley</td>
<td>Wight</td>
<td>Ramapo College of New Jersey</td>
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<td>Matthew</td>
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<td>The Ohio State University</td>
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Summer Institutes – Science Teachers Grades 7 - 12:

The selection process is also underway for two week-long summer teacher institutes scheduled for July. More than 90 science teachers have applied for the two programs: Curriculum Development Projects in Plant Biology and Bioenergy & Bioproducts, with a mere 15 slots available.

Next Issue

The next issue of The Hub will be published in June.

Mark your calendar for important news and notes you’d like to share with your colleagues!