EDITORIAL

Welcome to *Phytobiomes*

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THE ARRIVAL OF PHYTOBIOMES

In 2014, members of The American Phytopathological Society (APS) began to consider strategically the ways in which the accelerating flow of diverse types of complex data are fundamentally changing the ways in which we study, think about, and manage plant systems. Advancing technical capacities to generate plant, microbial and other organismal ‘omics’, environmental, and data produced at very fine spatial scales, coupled with expanding capabilities to integrate data across diverse scales of space and time, are providing novel insights into the networks of interaction that mediate plant productivity. In response to these enormous advances in technical capacities, APS created a Phytobiomes Initiative to chart a path forward. In 2015, APS brought together a diverse community of scientists in Washington DC for a strategically timed meeting to spearhead a new paradigm for crop improvement focusing on phytobiome-based approaches. The success of the human microbiome project paved the way, challenging us to push the boundaries to expand our knowledge of sustainable agriculture to meet the demands of feeding the growing global population. This meeting was instrumental in clarifying the vision of phytobiomes research, encapsulating systems-level understanding of diverse interacting components spanning multiple disciplines, species, and environments. To fully appreciate the breadth of scope of the Phytobiomes Initiative, we encourage you to review the Phytobiomes Roadmap (<http://www.phytobiomes.org/roadmap>), released in March 2016. The *Phytobiomes* journal was launched as an integral but independent part of the Phytobiomes Initiative. The *Phytobiomes* journal provides an international platform for fundamental, translational,

and integrated research that accomplishes the overarching objective of offering a new vision for agriculture in which sustainable crop productivity is achieved through a systems-level understanding of the diverse interacting components of the phytobiome.

A TRANSDISCIPLINARY JOURNAL OF SUSTAINABLE PLANT PRODUCTIVITY

The *Phytobiomes* journal was launched as an open access journal published by APS. *Phytobiomes* seeks to build a distinct scope and way of thinking about plant systems by actively integrating diverse factors that interact to mediate plant productivity. Phytobiomes goes beyond the plant microbiome and amalgamates aspects including animals, management, physical environment, and other elements of sustainable ecosystems, leveraging the computational power of ‘omics’ and analytical capacities to enhance our scientific understanding of plant biomes. *Phytobiomes* includes work spanning the fundamental to translational research of scientists in the areas of microbiology, virology, nutrient cycling, climate change, ecology, agronomy, entomology, computational biology, nematology, plant pathology, soil biology, and more. These multiple disciplines of the journal are also reflected in the expertise of the international editorial board, who are members of diverse scientific societies and recognize how these disciplines interrelate and how they can impact sustainable plant productivity. We enthusiastically solicit and support publication of research across diverse fields with a focus on integrating information to optimize sustainability and productivity of phytobiomes and ecosystem health.

100 YEARS OF PUBLISHING GREAT SCIENCE

Phytobiomes joins a legacy of over 100 years of APS publishing history with both *Phytopathology* and *Plant Disease* and nearly 30 years with *Molecular Plant-Microbe Interactions*® (MPMI). The

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timing is right for *Phytobiomes*, with the need for a journal to encompass transdisciplinary research associated with sustainable plant productivity. *Phytobiomes* is complementary to the suite of APS journals and is its first open access, online only journal. Each editor-in-chief within the collection of APS journals will continue to maintain their journal's unique scope, but will also work collectively to facilitate a new option in 2016 for lateral transfers among all of the APS journals.

PHYTOBIOMES, THE NEW COMMUNITY JOURNAL

The *Phytobiomes* journal wants to be the journal for your scientific community that will provide more than just a place to publish your research. We know that now, more than ever, there is an abundance of places where you can publish. However, we also know how important it is to publish in the right journal, a journal that publishes high quality research, a journal that recognizes why your research is important, and a journal with broad enough scope that your research belongs, but not so expansive that your work will get lost.

Research published in *Phytobiomes* will focus on advancing our understanding of the composition and functions of the phytobiome, the characteristics of healthy phytobiomes, the development of enhanced methods for the study of phytobiomes, and establishing a comprehensive understanding of the role of the phytobiome in supporting global food production. Topics of interest for *Phytobiomes* include the role of interspecies interactions, including competitive and signaling interactions, in mediating the effects of the phytobiome on plant and ecosystem productivity in cropping, forest, and grassland systems, and the effects of phytobiome perturbations on soil and crop health. *Phytobiomes* will feature work that provides novel insights into the optimization and management of phytobiomes to enhance sustainable crop production and ecosystem health. *Phytobiomes* will also highlight practical approaches for phytobiome management in diverse systems, and welcomes contributions that provide fundamental information on underexplored members of the phytobiome, including nematodes, viruses, and archaea. Submissions that explore the development of analytical tools, best practices and standards for data collection and analysis for phytobiomes, advances in imaging and sensor technologies to enhance our capacities to study phytobiomes through time and space, and work that advances our understanding beyond description to the creation of conceptual and predictive models for phytobiomes are encouraged.

We will strive for reasonable turnaround times for first decision (APS journals average 33 days), and rapid processing and First Look will provide the earliest publication of your manuscript. We

support Creative Commons license options, which allow authors to retain copyright while allowing others to copy, distribute, and make uses of their work with appropriate acknowledgment of the original source. The *Phytobiomes* Editorial Board is especially interested in advancing the development of our early-career scientists and will highlight student contributions both in the journal and on our website to bring extra visibility to the student(s) and to your research.

Just as important as publishing, is capturing the readership for a new journal. As an open access journal there will be no walls around who can see, read, download, and cite your research. In addition to research articles, *Phytobiomes* is planning invited reviews, technical advances, meeting reports, and opinion articles based on a phytobiome perspective. *Phytobiomes* will provide a cohesive resource of literature where advances are documented. Research exposure will be further facilitated by social media—follow us on twitter @PhytobiomesJ—and we will continue to build and broaden our mailing list.

The *Phytobiomes* journal was officially launched in July 2016 when we opened for submissions. Since then we have promoted the journal at major scientific meetings where we have talked to many people about phytobiomes research as we tried to reel you in by giving away *Phytobiomes* t-shirts and stickers. In 2016, *Phytobiomes* editors attended the International Society of Molecular Plant-Microbe Interactions (IS-MPMI) Congress (Portland, Oregon), The American Phytopathological Society Meeting (Tampa, Florida), International Congress of Entomology (Orlando, Florida), the Agronomy, Crop and Soil Science (ASA/CSSA/SSSA) Meeting (Phoenix, Arizona), and the Keystone Phytobiomes Meeting (Santa Fe, New Mexico). As we head into 2017, symposiums and workshops that promote phytobiomes research, standards, and opportunities will continue. Look for symposia at the American Geophysical Union Meeting (San Francisco, December 2016), Plant and Animal Genome Conference (San Diego, January 2017), American Meteorological Society Meeting (Seattle, January 2017), and the AAAS Annual Meeting (Boston, February 2016), along with some international meetings in Austria, France, and Korea (more details to follow).

The editorial team of the *Phytobiomes* journal would like to welcome you to your emerging research community and we encourage you to submit your manuscript for publication. Let us help your research be discovered! Come publish in *Phytobiomes*.

AUTHOR-RECOMMENDED INTERNET RESOURCE

A Roadmap for Research and Translation: <http://www.phytobiomes.org/roadmap>