



SCHOOL OF AGRICULTURE

MIDDLE TENNESSEE STATE UNIVERSITY

INTERNATIONAL GINSENG INSTITUTE

FALL 2022 NEWSLETTER

HIGHLIGHTS

- MTSU presents American ginseng's story on the national mall in American's capital
- SeedBroadcast interviews IGI member about ginseng
- Ginseng Board of Wisconsin hosts IGI member at Wisconsin Ginseng Field Day
- NPR hosts IGI member to tell ginseng story
- Boring Ginseng Roots and Herbs invites IGI to address growers meeting
- Collaborations and research update
- Interns in the lab: Where are they now?
- Fall growers workshop
- Ginseng in media

Ginseng in August at Hsu's Ginseng in Wausau County, Wisconsin

MTSU presents American ginseng's story on the National Mall in America's capital

Iris Gao and **Ethan Swiggart** from the International Ginseng Institute were invited by the Smithsonian Institution to participate in the Smithsonian Folklife Festival on the National Mall in Washington, D.C., in June. Bringing their passion and knowledge to thousands of attendees at the Folklife Festival, Gao and Swiggart presented talks on forest pharmacy and conservation practices relevant to this endangered plant and engaged festivalgoers in one-on-one discussions.

The Folklife Festival was established in 1967 and is produced annually by the Smithsonian's Center for Folklife and Cultural Heritage. The festival honors contemporary living cultural traditions and celebrates those who practice and sustain them. This year, the two-week festival's theme was Earth Optimism, and it drew participants from all 50 states and numerous countries.



Left to right: Iris Gao, Carole Daniels, Betty Belanus, Eric Burkhart, Ethan Swiggart, Ed Daniels



Left to right: Betty Belanus, Ed Daniels, Eric Burkhart, Ethan Swiggart



Left to right: Iris Gao, Ed Daniels, Jared Urchek, Jim Deutsch



Ethan Swiggart and Chrissie Orr

SeedBroadcast interviews IGI member about ginseng

While at the Smithsonian event, **Ethan Swiggart** was asked to sit down with Chrissie Orr from SeedBroadcast and talk about what interests him about American ginseng. SeedBroadcast explores bioregional agri-Culture through community-based and hands-on creative practices. It encourages communities to keep agri-Culture alive and vibrant through working together in creative and inspiring ways. The audio is available through Soundcloud.

Link to the recording:

soundcloud.com/seedbroadcast/ethan-swiggart

Link to their homepage:

seedbroadcast.org/SeedBroadcast/SeedBroadcast.html

Ginseng Board of Wisconsin hosts IGI member at Wisconsin Ginseng Field Day

Wausau County, Wisconsin, has been the capital of American ginseng cultivation for over half a century. More than 98% of American ginseng roots exported from the United States have been grown there. **Iris Gao** and other researchers, including Eric Burkhart from Penn State University, Hong Liu from Florida International University, and Bob Beyfuss from New York, were invited to participate in the annual Field Day on August 4—the middle of summer when the crop has its full growth.

The researchers in this group visited six large ginseng farms in Wausau: Hsu’s Ginseng, Marathon Ginseng Farm, Baumann Farms, Heil Ginseng Garden, Twin-B Dairy Farm, and Black Creek Ginseng. They observed that these large monoculture cultivation operations must constantly battle various plant diseases to protect the value of the crop. *Alternaria* and *phytophthora* are two significant pathogens affecting ginseng in Wausau, producing symptoms that include plant wilting, leaf blight, rotten root, and more, all of which severely decrease the crop’s yield and value. Mary Hausbeck of Michigan State University is leading ginseng pathogen research in field test plots at these farms and provided Gao and the others with research updates and valuable recommendations for ginseng growers.



Left to right: Bob Beyfuss, Paul Hsu, Iris Gao (MTSU), Rachel Erin Palkovitz (Penn State), Will Hsu, Ezra Houston (Penn State), Eric Burkhart (Penn State), Hong Liu (Florida International).



Unfortunately, this pretty golden color indicates fungal disease (root rot) in ginseng.



Mary Hausbeck is giving research updates in the testing plots.



You can only find these in Wausau County, Wisconsin! What great uses for ginseng!

NPR hosts IGI member to tell ginseng story

Ethan Swiggart was invited by WPLN producer Steve Haruch to share his knowledge about wild ginseng for a WPLN story in early August this year. The two met and went to the woods to observe the plant in its native habitat. The story originally aired locally on *This Is Nashville's* Pin Drop. (Don't worry. He did not disclose where the plant was found.) The story was later picked up by WBUR and aired nationally on *Here & Now*.

WPLN *This Is Nashville*:
wpln.org/post/middle-tennessee-researchers-are-studying-rare-wild-ginseng-in-a-secret-location/

Boring Ginseng Roots and Herbs invites IGI to address growers meeting

On August 20, Boring Ginseng Roots and Herbs hosted its annual growers meeting, which was timed to get ready for the harvest season starting September 1! A group of growers, diggers, buyers, and representatives from herbal companies gathered to discuss the harvest, cultivation, and herbal marketing.

Michael Boring talked about the 40-year history of his family legacy in the herb business and emphasized the guidelines and good practices in harvesting ginseng. Iris Gao gave a talk on American ginseng in Tennessee at the meeting. Ed Fletcher spoke about good agricultural and collection practices for herbal raw materials and gave a hands-on workshop on goldenseal planting. We are very glad that Fletcher has accepted an invitation to talk at the ginseng growers meeting at MTSU in October.



Michael Boring, owner of Boring Ginseng Roots and Herbs



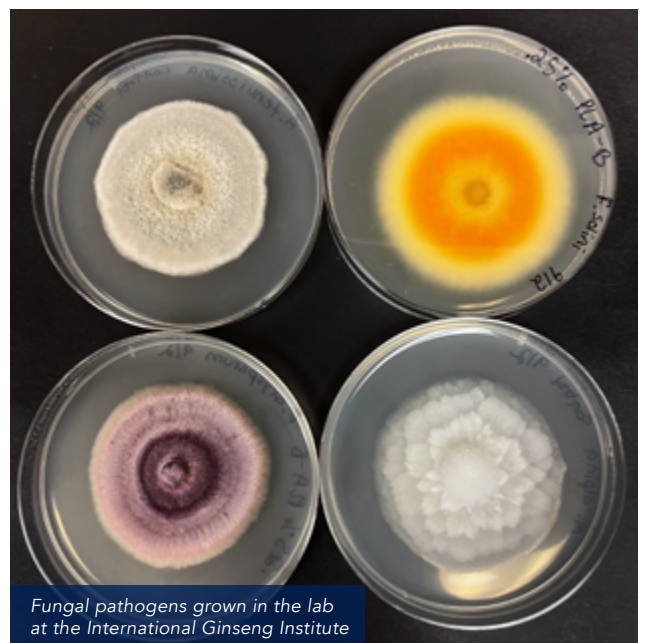
Ed Fletcher, president of Native Botanicals



Display of dried herbs and ginseng tincture

Collaborations and research update

American ginseng thrives in a diverse habitat, and so do scientists! The IGI is quite lucky to have amazing collaborators who work with us to develop solutions for protecting American ginseng. Professor **Fulya Baysal-Gurel**, post-doc fellow **Prabha Liyanapathirana**, **Farhat Avin**, and their amazing team at Tennessee State University's Otis L. Floyd Nursery Research Center have helped us identify many new fungal pathogens that are specific to American ginseng. Many are quite colorful! Once these pathogens are identified, the IGI goes to work on killing them. We are having great results using botanical extracts from companion plants to control growth and development of fungal pathogens.



Fungal pathogens grown in the lab at the International Ginseng Institute

Interns in the lab: Where are they now?

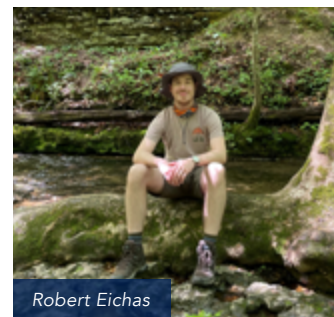
One of our great joys here at the IGI is having the opportunity to work with undergraduate and graduate students. Their fresh perspectives and willingness to try hard help keep our lab lively and productive. Three of our interns deserve special congratulations.

Robert Eichas has accepted a job with the Natural Resources Conservation Service (NRCS) in Imperial, California, where he maintains a unique focus on soil health for the greater southern portion of the state. He works with regional farmers, aiding them in adopting sustainable practices including reduced tillage, cover cropping, and adding mulches and manures. He also works with them to reduce their pesticide and salt nutrient use.

Kaela Wolkiewicz has been accepted into MTSU's Master of Science in Professional Science program with a Biotechnology concentration. She has been awarded a teaching assistantship and will lead the General Biology I laboratory. After completing her master's degree, she plans on earning her Ph.D.

Elizabeth Clippard has moved on to pursue a graduate degree at the State University of New York College of Environmental Science and Forestry (SUNY ESF). She is studying forest resources management for her master's degree.

We wish them the best of luck! We know they will do amazing things!



Robert Eichas



Kaela Wolkiewicz

Ginseng in media

Your ginseng stories

See Smithsonian's reader-submitted stories to discover how American ginseng has touched so many lives and share your own story.

Link: folklife.si.edu/american-ginseng-stories

WildAmericanGinseng.org

Created in collaboration with United Plant Savers and the Wild American Ginseng Conservation Collaborative, WildAmericanGinseng.org is improved and updated from the original McGraw Labs website. It's a great resource for the ginseng community.

Link: wildamericanginseng.org

Saving Ginseng While We Still Can

The Environmental Magazine published George Lindemann's article Sept. 23, 2022.

Link: emagazine.com/saving-ginseng-while-we-still-can/

Wild ginseng levels are too low for sustainable harvest

The Mountaineer published Becky Johnson's article May 15, 2022.

Link: themountaineer.com/outdoors/wild-ginseng-levels-are-too-low-for-sustainable-harvest/article_4b45c564-d216-11ec-a914-777f4e30046f.html

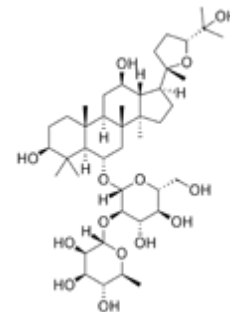
Fall growers workshop

Can you believe that fall is here? We are excited for some cooler temperatures and even more excited to see you all in person! Please join us on October 21 from 10 a.m. to 1 p.m. at Barfield Park for our fall ginseng workshop. Keep your eyes open for the schedule and list of speakers.

AG exclusive ginsenoside

The active ingredients in ginseng are called ginsenosides. These are the compounds that provide the medicinal component of the plant. There are many different types of these compounds present in ginseng; however, only one of them is unique to American ginseng! Let me introduce you to 24(R)-pseudoginsenoside F11.

This large molecule has been shown to help with Alzheimer's disease. In addition to its medical benefits, F11 can be used to identify American ginseng (*P. quinquefolius*) from Asian ginseng (*P. ginseng*), which has ginsenoside Rf6-8 instead of F11.



**MIDDLE
TENNESSEE**
STATE UNIVERSITY.

I AM *true*
BLUE

0922-1038 / Middle Tennessee State University does not discriminate on the basis of race, color, national origin, sex, or disability. See our full policy at mtsu.edu/iee.