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*By Pat Melgares, K-State Research and Extension news service*

MANHATTAN, Kan. -- Eduard Akhunov, a Kansas State University plant pathologist who specializes in bread wheat genetics and developing molecular resources and tools for improving wheat across the world, has been named the university’s Bikram S. Gill Chair in Wheat Genetics.

Akhunov is just the second person ever to hold the chair, following in the footsteps of its’ namesake, Bikram Gill, who is world-renowned for his work to conserve wild and ancient grains and use them in breading modern wheat varieties.

Gill, whose K-State career spans 50 years, is currently an Emeritus University Distinguished Professor in plant pathology, in addition to continuing in his role as the inaugural chair bearing his name.

“The Bikram S. Gill Chair is expected to use this role to further wheat genetics research, including conserving and mobilizing wheat germplasm for sustainable production worldwide,” said Megan Kennelly, head of K-State’s Department of Plant Pathology.

Kennelly said the chair is closely connected to the Wheat Genetics Resource Center, a massive gene bank of more than 4,000 wild wheat species strains and 4,000 genetic stocks founded by Gill.

Wheat is considered a staple food for more than one-third of the global population, accounting for nearly 20% of total calories and protein consumed worldwide – more than any other single food source.
In 2022, Gill noted that wild wheat species have properties that domesticated species do not have: “They are more resistant to disease and offer different health benefits. The wild species are essential to our ability to continue to create new breeds that are stronger and more nutritious.”

Akhunov, who currently serves as director of the Wheat Genetics Resource Center, uses next-generation sequencing technologies, bioinformatics, high-throughput phenotyping, molecular genetics and genome editing to develop germplasm with improved disease resistance, grain quality and yield potential.

He and his lab’s staff list numerous accomplishments, including:

- Leading the development of technologies that characterize wheat’s genetic diversity, thus creating a worldwide catalog of genetic variation in wheat. This led to establishing public resources to aid in wheat breeding.
- Advancing understanding of the mechanisms of wheat resistance against a stem rust disease capable of causing devastating epidemics.
- Leading an effort to use CRISPR genome-editing technology to improve disease resistance, and yield and quality traits in wheat germplasm.

Akhunov also serves as the director and principal investigator of the International Wheat Yield Partnership’s Winter Wheat Breeding Innovation Hub, which was established at K-State in 2020. The hub is a public-private partnership among national and international wheat breeding programs, government organizations and industry and is funded by a grant from the U.S. Department of Agriculture’s National Institute of Food and Agriculture.

The partnership's main goal is to translate research findings into improved wheat varieties for U.S. growers.

Akhunov joined K-State in 2007 and has advised 25 graduate students and postdoctoral scholars. His research has been supported by nearly $40 million in funding from such organizations as the USDA National Institute of Food and Agriculture, the National Science Foundation, the Kansas Wheat Commission and the Bill and Melinda Gates Foundation.

His work also has resulted in more than 90 peer-reviewed papers, four book chapters, one patent and more than 100 speaking invitations. He serves on the editorial board of two scientific journals.

Akhunov was noted as a Highly Cited Most Influential Researcher by the Web of Science Group in 2018. He received the 2016 Outstanding Papers in Plant Genetics Resources award from the Crop Science Society of America and the 2014 USDA NIFA Partnership Award for Program Improvements Through Global Engagement.

“Dr. Akhunov is a global leader in wheat genetics and genomics,” Kennelly said. “He has published many high-profile manuscripts and developed tools that accelerate discoveries by others.”
Before joining K-State, Akhunov was a researcher at the Institute of Biochemistry and Genetics of the Russian Academy of Sciences, and a project scientist at the University of California, Davis.

**FOR PRINT PUBLICATIONS:** Links used in this story
Wheat Genetics Resource Center, [www.k-state.edu/wgrc](http://www.k-state.edu/wgrc)

K-State Research and Extension statewide offices, [www.ksre.k-state.edu/about/statewide-locations.html](http://www.ksre.k-state.edu/about/statewide-locations.html)

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**Story by:**
Pat Melgares
785-532-1160
megas@ksu.edu

**More information:**
Megan Kennelly
785-532-1335
kennelly@ksu.edu