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# Pioneer in RNA nanotechnology named Ohio State Innovator of the Year

*Leaders offer vision for the future at Research and Innovation Showcase*

Peixuan Guo, the Sylvan Frank Endowed Chair in Pharmaceuticals and Drug Delivery and the director of the College of Pharmacy Center for RNA Nanotechnology and Nanomedicine, is The Ohio State University 2021 Innovator of the Year.

Guo is a pioneer of [RNA nanotechnology](http://rnanano.osu.edu/Guo/GuoMolecularCell.html), developing RNA particles that target tumors. His work has led to several discoveries: the RNA rubbery property that leads to more efficient cancer targeting without toxicity, novel methods for lung and liver cancer therapies, and a simple and fast method for diagnosing COVID-19 earlier in infection.

He first proposed the concept that cells have many small RNA molecules with novel yet undiscovered functions, and named them “sRNA.” Guo is the founder and chairman of the board of directors of ExonanoRNA LLC. He has raised more than \$4 million of funding for the company to develop RNA nanoparticles for cancer therapy.

Guo’s award was announced at the [annual Research and Innovation Showcase](https://research.osu.edu/news-events/rishowcase/), co-hosted by the Office of Research and the Office of Innovation and Economic Development, formerly known as the Corporate Engagement Office. President

Kristina M. Johnson congratulated all of the finalists and encouraged them as they moved forward in their careers.

“I can tell you firsthand that the road from invention to commercialization can be long and circuitous, but it’s definitely worth it,” she said. “Moving discoveries into the marketplace from the lab is one of my proudest accomplishments as an academic, and there was nothing quite like knowing that years of work in the lab have helped an industry advance, or made our food supply safer, or improved diagnostic testing or saved lives.”

Grace Wang, executive vice president for Research, Innovation and Knowledge, discussed her vision for the future of creative discoveries at Ohio State.

“The societal challenges we are facing today call for large-scale, highly interdisciplinary research efforts. This is an exciting time for life sciences, physical sciences, social sciences, engineering, arts and humanities – because we have the opportunities to explore many uncharted areas at the interfaces of these disciplines – it is all about how creative we can be,” Wang said.

The Early Career Innovator of the Year award for early career faculty and the Next Generation Innovator of the Year award, granted to students (undergraduate and graduate) or postdocs, were also announced.

The Early Career Innovator of the Year award was presented to Abraham Badu-Tawiah, associate professor in the Department of Chemistry and Biochemistry. His research focuses on accelerated droplet chemistry, which allows fast reactivity for disease detection and analytical applications.

Jenny Barker, a postdoctoral research fellow in the Department of Plastic and Reconstructive Surgery, and Caroline Karbowski, a third-year pursuing a biology major with minors in chemistry and American Sign Language, were named the Next Generation Innovators of the Year.

Barker is pursuing the development of technologies at the interface between patients and biomaterials to improve outcomes in reconstructive surgery. Karbowski’s created See3D, a nonprofit that has organized the printing and distribution of over 1,400 3D printed models for people who are blind. Karbowski was nominated by the College of Nursing.

