Biochemists develop new technology to transfer DNA into cells

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UMSL researchers Jason Atkins (left) and Mohit Patel are racking up awards and grants for their work in developing new technology to transfer DNA into cells. Credit: August Jennewein

On any given day, Jason Atkins and Mohit Patel can be found toiling away inside a chemical biology lab at the University of Missouri–St. Louis. And they love every minute of it.

"It doesn't feel like work," Atkins said. "This is what I love to do. It's fun."

Atkins, of Maryland Heights, Mo., and Patel, of Normandy, Mo., are research associates at the university, both pursuing doctoral degrees in biology and working in the laboratory of George Gokel, director of the

Center for Nanoscience at UMSL.

Much of Atkins and Patel's research centers on ion channels – proteins that act as pores within cell membranes and enable electrical currents to pass in and out of cells. They recently developed new technology to transfer DNA into cells. The development is an inexpensive and non-toxic method to help DNA cross the cell membrane so that cells can be modified.

In honor of their work, Atkins and Patel were inducted as honorary members of the UMSL chapter of the National Academy of Inventors, and they were presented the UMSL Student Inventor of the Year Award, which brought a $500 prize.

Atkins and Patel will also share a $50,000 grant with Gokel for the trio's project "Novel, non-toxic and highly efficient chemical transformation and transfection reagents." The four-campus University of Missouri System awarded the grant through its FastTrack Funding program.

The three honors were bestowed upon Atkins and Patel on April 26 at a reception that capped UMSL's annual Research and Innovation Week.

And earlier this month, the pair picked up a fourth award, taking home a $50,000 Arch Grants to help fund their biotechnology startup company Genetix Fusion. The duo was among 20 companies chosen out of an initial field of more than 700 applicants, according to an article published May 14 in the *St. Louis Business Journal*.

"Standing among the winners not only validates our technology and the team, but also provides us the opportunity to network with entrepreneurs and scientific and business leaders," Patel said. "The grant will help us establish our operations here in St. Louis and initiate sales and marketing for our first product."

More information: www.bizjournals.com/stlouis/bl …tml?ana=twt&page=all

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