

# 'Brilliant 10' scientist credits IU colleagues

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Indiana University chemist David Clemmer said being named one of *Popular Science* magazine's "Brilliant 10" scientists is an honor for his department, not for him.

That includes not only colleagues and graduate students, he said, but machinists and electronics experts and the predecessors who built one of the nation's top chemistry departments at IU.

"I feel like we have a really special thing going here in southern Indiana," he said. "It certainly competes with the best places in the country in terms of what you can do."

The recognition also is a nod to the new, hot field in which Clemmer works — proteomics, the study of arrays of proteins. Proteomics goes beyond the study of genomes and offers exciting potential for the treatment of disease.

*Popular Science's* November issue includes Clemmer in what it calls a "celebration of scientists who are shaking up their

fields and whose work will touch your life." It based the selections on consultation with university department heads, leaders of academic think tanks and presenters of scientific awards.

Of the 10, only Clemmer and computer scientist David Wagner of California-Berkeley are at public universities. A majority are at Harvard, Princeton and MIT.

Clemmer said other IU chemistry faculty, such as nanotechnology researcher Bogdan Dragnea, could easily have been featured.

The magazine focuses on Clemmer's work with large, complex machines to sort and analyze proteins. It describes a "room-size stainless-steel contraption sprouting an array of tubes, churning pumps and wires."

The machinery yields information about how biological information is organized at the molecular level. One possible use would be to compare normal and cancerous cells, possibly leading to better understanding of cancer and methods of treatment.

Clemmer said he learned to build such devices working as a postdoctoral researcher with Martin Jarrold at Northwestern University. Last spring, new to his role as chemistry chairman, Clemmer recruited Jarrold and his wife to move to the IU department.

"We combine existing technologies from other people in new ways, hopefully innovative ways," he said. "We certainly get

more credit than I ever expected."

He gave credit to technicians in the department's machine and electronics shops. "The culture down there is just wonderful," he said. "They have great people who can just build anything."

And he said the graduate students who run the experiments — Steve Valentine, Cherokee Hoaglund-Hyzer, Cathy Srebalus-Barnes, Anne Counterman, Sunnie Myung, Rena Sowell and Stormy Koeniger — also deserve praise.

The *Popular Science* photograph of Clemmer is superimposed over diagrams and formulas that disguise the names or initials of the graduate students.

"Now and then they have these wild ideas that I really don't think will work and they come back having made them work," he said.

While Clemmer's research involves building machines, his role as chemistry chairman involves rebuilding a department that suffered serious losses in research funding and faculty in the 1990s.

That work includes advocating for and planning a new multidisciplinary science building. IU trustees gave approval last month to the first phase of the building.

"It's a great step for Indiana University to do this," he said. "The opportunities in science are really great right now. I expect this will be a first step in moving us forward in a major way."



Clemmer