startribune.com

Last update: March 10, 2005 at 1:19 PM

Roseville student has all the elements of science stardom

Eric Hanson
Star Tribune
Published March 9,
2005

Michael Barany calls it his "summer of chemistry." His father, George, calls it Michael's "breakthrough" year.

Two summers ago, Michael, 17, a senior at Roseville Area High School, began riding with his father, a professor, on a tandem bike to his dad's chemistry lab at the University of Minnesota. They would rise at dawn and wouldn't return to their Falcon Heights home until it was dark.

"On the way in, we'd discuss what we were going to do. Then on the way home in the evening we would discuss what the results meant," George said.

In the time between those rides -- in the long lab hours that added up to 60- to 80-hour weeks -- Michael worked on a project that would lead to publication in the Journal of the American Chemical Society and a shot at a $100,000, four-year scholarship through the Intel Science Talent Search competition.

The project was an extension of his father's thesis from the late 1970s. Essentially, Michael had discovered a better way to synthesize sulfur and nitrogen-based chemicals that are used in medical and chemical safety applications.

The winner of the STS contest -- sometimes referred to as the "Junior Nobels" -- will be announced Tuesday in Washington, D.C.

Barany, who takes postsecondary courses at the University of Minnesota, is one of 40 finalists from a field of 1,600.

Science destiny

There is little doubt that for the 39 finalists who do not end up with the top prize, all of this is a beginning. People who know Michael say that certainly is true of him.

"He's definitely going to be a star," said Gianluigi Veglia, a chemistry professor at the University of Minnesota. "He's totally independent not only in the acquisition of data but also in the interpretation."

Victor Reiner, a math professor at the university who has advised Michael on a research project, said he has taught some precocious students in the past. "But nobody like Michael," he said.

In some respects, Michael conforms to the stereotype of the science prodigy. He is tremendously driven, naturally talented and almost genetically pedigreed for success.

Both his parents hold doctorate degrees in chemistry. His uncle was an STS finalist, and his father and cousin were semifinalists.

"When I was born, I was the only person on my father's side of the family without a Ph.D. in chemistry," Michael said. "Since then, my uncle has married someone who has a master's."

Michael remembers playing with his younger sister, Deborah, in the hallways outside the chemistry labs at the University of Minnesota. They'd color in coloring books, and later, he'd build molecular model kits.

"I'd always been interested in the work and the lab," Michael said. "When I was 8, I would come in on Sundays and learn about amino acids and play with the kits. It's always been an important bonding activity between me and my father."

Last year, Michael presented his project at the 28th European Peptide Symposium in Prague. Even in a setting designed for so-called "young scientists" -- graduate students and postdoctoral candidates -- he was the youngest presenter by far.

He took another step with his publication in the Journal of the American Chemical Society.

"It's the most prestigious thing in all of chemistry. People give their right arm to be published in JACS," George Barany said.

Renaissance method

Still, despite his prodigious talent in science, Michael doesn't entirely conform to a type. He likes sports and is fully capable of breaking down the failures of the Minnesota Timberwolves this season. ("I don't know why they fired Flip, because he's done a really good job taking the team where they are. But McHale obviously has something going on.")

He listens to classical music, but lest you think he does so to be highbrow, he also plays video games such as NBA Live 2004 and watches "The Simpsons" and "The Daily Show."

He has participated in debate and tennis and played a little basketball, was a speedskater and has rejected some top-drawer potential colleges, such as the Massachusetts Institute of Technology, because he wants a rigorous humanities program.

He is interested in philosophy and lately has been getting into the writings of French theoreticians such as Michel Foucault and Jacques Derrida.

"What I get out of modern philosophy is a counterbalance to the types of determinism that come up in science," Michael said.

Reiner, his math adviser, called it a Renaissance approach and said he finds Michael's ability to articulate himself particularly striking.

Alex Miller, a university classmate and friend, said despite Michael's achievements, he remains humble. He described him as funny and trustworthy and educated in the best, fullest sense.

"Confucius said a man who is earnest, encouraging and kind may be called educated. And that's what Michael is," he said.

Contact the writer at 612-673-7517 or ehanson@startribune.com.