

# Wrestler's Research Hopes to Pin Cancer

By A.J. Carr

On days when there are no classes, when there is a chance to take a break from the books, many college students just like to chill.

But on Martin Luther King Day, a time for honoring the late Civil Rights leader and doing service projects, **Robert Holbrook** spent several hours in a Duke chemistry lab.

A senior on the Blue Devils' wrestling team, Holbrook is among the multitude who would like to find a way to pin cancer.

So under the guidance of assistant professor **Katherine Franz**, he is doing extensive research along with graduate student **Sarah Crider**. The trio recently produced an article for the Royal Society of Chemistry journal titled: "Coordination of Platinum Therapeutic Agents to Met-Rich Motifs of Human Transport Protein."

That's not to be confused with the pinch head lock or an escape move on the mat.

Franz, via e-mail, explained Holbrook's experiment this way, using a little athletic lingo:

"Robert's research involved investigating how platinum-based anticancer drugs interact with synthetic peptides derived from the copper transport protein nicknamed Ctr1. To make a sports analogy, Ctr1 is kind of like a defensive line . . . it allows nutritional levels of copper to enter the cell, but for the

most part keeps other things out.

"Platinum-based drugs, like the widely used drug cisplatin, can break through this defensive line. What Robert's work shows, however, is that some of these compounds pay a price for their offensive move. They may break through the line, but the process alters their composition in a way that changes their anticancer activity. . . in other words, unlikely to make it to the endzone. These results have ramifications for understanding why some cancers become resistant to this class of pharmaceutical agents."

## WELL ROUNDED

As a chemistry major, wrestler and leadership-team member for Athletes In Action -- a campus Christian organization -- Holbrook often has to hustle like a football player running a two-minute drill. He squeezes in lab time often at odd times, sometimes popping in after midnight or before breakfast to conduct experiments.

"Robert's ability to handle both competition and scientific research is impressive," Franz said. "Research requires considerable commitment, especially to follow through and complete a study for publication. Robert is self-motivated and works well on his own, but is also a team player. No doubt this attribute comes in part from his wrestler's mentality."

Like millions, Holbrook has been impacted by cancer. His fiancée, **Ashley Laquey**, is a cancer survivor and doing well. Their wedding is set for May

23 in Tempe, Ariz., the couple's hometown.

"We started dating during the middle of her treatment," Holbrook said. "I got to see the success. It helps motivate me to pursue a topic applicable to the medical field to help people sick with cancer. She graduated with a nursing degree [and] is very supportive of my research."

Long interested in science, Holbrook took general chemistry initially at Duke, then added organic chemistry, and eventually made that subject his major.

"I was taking it out of curiosity amid a sea of pre-med students; I was in the class for fun," said Holbrook, who has taken the courses seriously enough to earn an overall 3.6 grade point average.

"I don't have to tutor him," quipped **Clar Anderson**, Duke's wrestling coach.

## HEAVY LIFTING

As a youngster in Arizona, Holbrook's first love was track and field. But in the eighth grade he followed in the footsteps of his father, Jim, turned to wrestling and made it his year-round sport.

On the mat he was tough as a cactus, going undefeated (48-0), winning the state title and ranking among the nation's top 12 as a senior in his weight class. He finished with a 129-18 prep record.

At Duke, which doesn't give wrestling scholarships, the grappling has been tougher (20-31 career record). This year Holbrook (1-5) was sidelined for several matches after suffering a neck injury in the first tournament.

Though officially in the 197-pound class, he has periodically had to wrestle in the heavyweight division. And while he hasn't beaten the heavies, neither has he ever covered from the bigger challenge.

"I kind of love going out there against some pretty good heavyweights that are nationally ranked," said Holbrook. "I got to battle them pretty well; in my mind that was a lot of fun."

Nobody questions his pugnacity or tenacity. But wrestling can be exhausting and painful as well as euphoric in victory.

"I just like the work ethic," Holbrook said, explaining his affinity for the sport. "I like putting 100 percent effort into something. That meshed well with my personality. I like the combative aspect of the sport, to be physical, and I really like the technical aspect of it."

Anderson, a 1984 national champion in the 134-pound class and three-time All-America at Oklahoma State, is a staunch fan of Holbrook's.

"He's an amazing young man that is just a leader in all aspects of the word," Anderson said. "If I had a whole team of Roberts, I would be pleased."

## This Week In Duke Athletic History

January 25, 1995

The women's basketball team pulls off one of its great early victories in the **Coach G** era when junior **Ali Day** hits a jumper at the buzzer to beat defending national champion North Carolina 74-72 and end the Tar Heels 32-game win streak. Duke won three of the next four against the Tar Heels.

January 26, 2000

The women's basketball team defeats North Carolina, 101-58, their biggest victory to date over the Tar Heels. **Peppi Browne**, **Lauren Rice** and **Georgia Schweitzer** each have 16 points for Duke.

January 27, 1958

Duke welcomes top-ranked and undefeated West Virginia, starring Jerry West, to Durham and sends the Mountaineers home with a 72-68 defeat, their only loss in a 27-game regular season. **Jim Newcome** leads the Blue Devils with 20 points.

January 27, 2001

Duke, trailing Maryland by 10 with 1:01 left to play, is triggered by **Jason Williams**, who goes on a 10-0 run in 33 seconds with a pair of three-pointers and Duke ties the game at 90 to force overtime. Duke rides the momentum of "The Miracle Minute" and wins, 98-96.

## GoDuke Weekly

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