On a humid Sunday morning on the tail of a Boston heat wave, the steady thwok...thwok...thwok of sharply hit tennis volleys echoes from a secluded court on the Harvard Medical School campus.

Bright yellow-green balls explode off the racquet of a dark-haired biology student and slice toward her rallying partner and summer lab mentor, HHMI investigator George Daley of Children’s Hospital Boston.

It’s the first time the two have faced off. “You hit hard—really hard,” says Daley. “I like that!”

Alana Van Dervort, an HHMI-supported EXROP (Exceptional Research Opportunities Program) student, returns the compliment. “He’s a player,” she comments knowingly to a bystander.

After a long layoff, Van Dervort is knocking the rust off the powerful game she honed since early childhood. Between 2003 and 2006, she traveled by herself to places like China, South Korea, Mexico, and Dubai on the professional women’s tennis circuit, earning enough prize money to cover her expenses.

Van Dervort’s approach to tennis—and life—shows a gritty determination and a certain readiness—like a player bouncing on the balls of her feet—to change directions as needed.

“At 5-foot-5, I’m a smaller player, so I made up for it by becoming a meticulous technician,” she says. She hits the ball early in its upward bounce and powers her shots with the weight of her entire body, not just her arm.

At age 22, in part because of injuries, Van Dervort shifted gears. She enrolled as a freshman at Florida International University, trading the court for the laboratory to train in biological sciences. Last June, she was selected to work in the lab of Daley, a renowned stem cell biologist, for the summer between her junior and senior years. Energetic and animated, Van Dervort credits her father, who did research on septic shock and critical care medicine at the National Institutes of Health, with guiding her toward science and tennis.

“He used to let me ‘help’ him put test tubes in the centrifuge,” recalls Van Dervort. “The NIH was my playground.”

Her father, who died when Alana was 10, started her on tennis when she was four or five, taking her to play in tournaments. She had early success and even won the American Tennis Association’s Women’s Open at age 17.

Van Dervort spent her high school years at the famed Nick Bollettieri Tennis Academy in Bradenton, Florida, an incubator of top tennis talent, including Maria Sharapova, Serena and Venus Williams, Andre Agassi, and Monica Seles. Van Dervort trained daily with elite players, including Sharapova, formerly ranked No. 1 in the world.

Van Dervort’s father instilled in her a strong work ethic and taught her to be prepared for the unexpected. “In drills he would purposely distract me while I was serving, or make me play left-handed or use a foam racket. It gave me confidence that I could handle anything,” she says.

Thus, Van Dervort could change her tennis tactics when needed and adjust to different cultures and locales in her travels. Today, she applies the same flexibility to her science.

“I find that the less I am attached to a specific notion—as long as I’m actively engaging the question—the faster a sounder notion evolves.” —Richard Saltus