

**Katherine Cabrera**  
**Alliance/Merck *Ciencia* Scholar Class of 2013**  
**Studying mathematics at Union County College**  
**Interned at Kean University in the department of mathematics**

Katherine was raised by her grandmother in Ecuador. Her grandmother left school in the third grade, but she understood the fundamentals of math perfectly. With her grandmother's help, Katherine also grew to love math.

Like her grandmother, Katherine was a perfectionist. She couldn't sleep or eat if her homework wasn't finished. One night, Katherine and her grandmother came upon a math problem that neither could solve. Knowing Katherine would be anxious until she found an answer, her grandmother looked for help. Katherine's grandmother returned home around 11 o'clock at night, bringing with her a reluctant college student who worked at the local grocery store. Her grandmother's extraordinary efforts paid off. The student helped Katherine complete her work and Katherine slept peacefully.

In 2008, Katherine moved to New Jersey with her grandmother, her mother and her siblings. She was admitted to Union County College in the fall of 2013. Katherine has to pay for college herself, so being selected as an Alliance/Merck *Ciencia* Scholar award recipient has helped tremendously, she said. During the school year, Katherine still has to work two jobs to help finance her studies when she transfers to a four-year college.

This past summer, with support from the Alliance, Katherine interned at Kean University with the assistant chair of the mathematics department, Dr. Louis Beaugris. Dr. Beaugris guided Katherine through an independent project focused on fractals and recurrence relations. When the summer ended, he invited Katherine to audit a small, advanced mathematics course was teaching in the fall. Despite not earning credit for the extra hours of schoolwork, Katherine was thrilled to join his class.

Katherine is debating whether to pursue her dream of becoming a college professor or to become an accountant, so she can help support her family more quickly.

In addition to her mother and grandmother, Katherine draws inspiration from books, in particular the work of Paulo Coelho. Wherever her path takes her, Katherine's advanced experience in math will provide the foundation for a rewarding career.