Daniel Kaplan

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TEACHING THE TEACHERS

As part of a National Science Foundation grant, Associate Professor Daniel Kaplan has developed a program for training the trainers. In May, he taught middle and high school teachers how to teach complex molecular biology in simple ways – and he'll do so again in the next two school years.

His class consisted of Leon County teachers from Godby High, Lincoln High, Fairview Middle and Raa Middle. Next time, he and student-outreach specialists Thesla Berne-Anderson and Roosevelt Rogers hope to engage teachers from nearby counties as well.

"The teachers can go back to their public schools and teach their students about the latest research in DNA replication," Kaplan said. "And they'll have hands-on laboratory experience actually testing a hypothesis that has never been published or even attempted."

Kaplan, whose research focuses on DNA replication and genome maintenance, came to Florida State in 2012 from Vanderbilt University. Earlier he attended Yale University Medical School for two and a half years – until he fell in love with research, got his Ph.D., pursued advanced research training and never looked back. He loves to teach and was delighted with his latest class of teachers.

"I cannot possibly tell you how fantastic it was," he said. "The teachers asked a lot of very interesting questions. We covered so many topics that were not on the syllabus – because the teachers, of course, teach so many different topics to their students. For example, why is it bad to use so much antibacterial hand soap? It's very important for the teachers to actually relate issues of DNA to the students' daily lives."

For Godby science teacher Karin Johnson, learning from Kaplan was an invigorating opportunity. "This experience has rekindled and reconnected my passion for science and education," she said. "I am excited to share this knowledge and experience with my students and hope that someday they could meet Dr. Kaplan, tour or maybe work as a junior researcher in his laboratory."

Kaplan is ready for the teaching-the-teachers classes to resume. "We'll be able now to have Tallahassee at the forefront of being able to understand DNA replication," he said. "Hopefully it will inspire new young scientists from the Tallahassee area to go on to careers in cancer, antimicrobial and DNA research."

Kaplan recently published a manuscript in the *Journal of Biological Chemistry* related to his $775,000 NSF grant. He discovered ways that replication proteins, responsible for copying DNA when cells divide, communicate with each other.

"They communicate to halt DNA replication when the replication proteins encounter a region of DNA damage," he said. "The mechanism that we discovered may be important to preserve DNA integrity and prevent cancer."