

BRIEFLY

Alaska scientist receives \$1.6 million award for vaccine research

Dr. Andrea Ferrante, an immunologist at the Institute of Arctic Biology and College of Natural Science and Mathematics, received a \$1.6 million award from the National Institutes of Health to study how vaccines work. After some 200 years of use, those details are still unclear.

Ferrante hopes to change that.

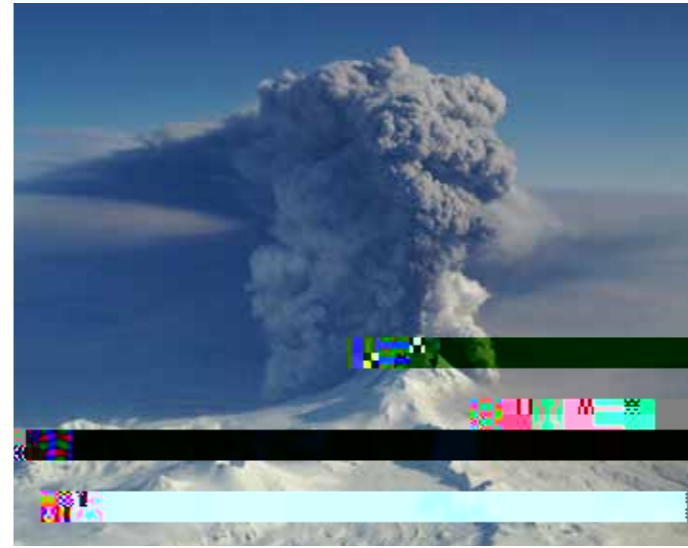
When germs such as bacteria or viruses enter a body and multiply, they cause an infection. To fight the infection, the body uses white blood cells called dendritic cells, which “swallow” and digest germs.

Bits of protein from the digested germ are pushed to the outer surface of the dendritic cell and attach to “docking stations,” where they attract another kind of white blood cells called T-cells.

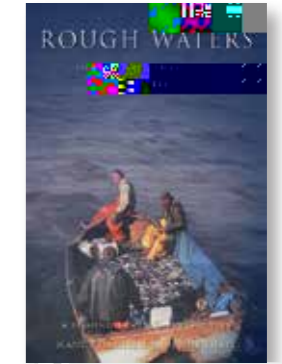
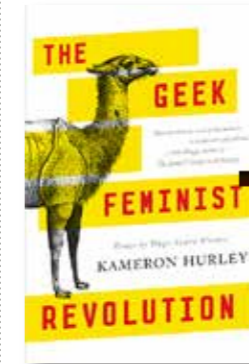
It is the attraction between those bits of germ proteins and the special T-cells that triggers a person’s immune system response. And it is the body’s “memory” of that response that enables the immune system to act faster and more robustly to specific germs in future infections.

Ferrante, two doctoral candidates and two undergraduate students are designing experiments in which they change the cellular environment of dendritic cells to answer their questions.

“We want to be able to identify whether it is pH or enzymes or something else that controls which bits of digested protein are exposed and therefore whether there’s an immune response,” said Ferrante. “A significant number of infections like those from Ebola and Zika viruses have yet to be restrained by immunization, and understanding this mechanism may enable more targeted and effective vaccine preparations for such illnesses.” Get the full story at <http://bit.ly/uaf053120>.



KUDOS



The Geek Feminist Revolution

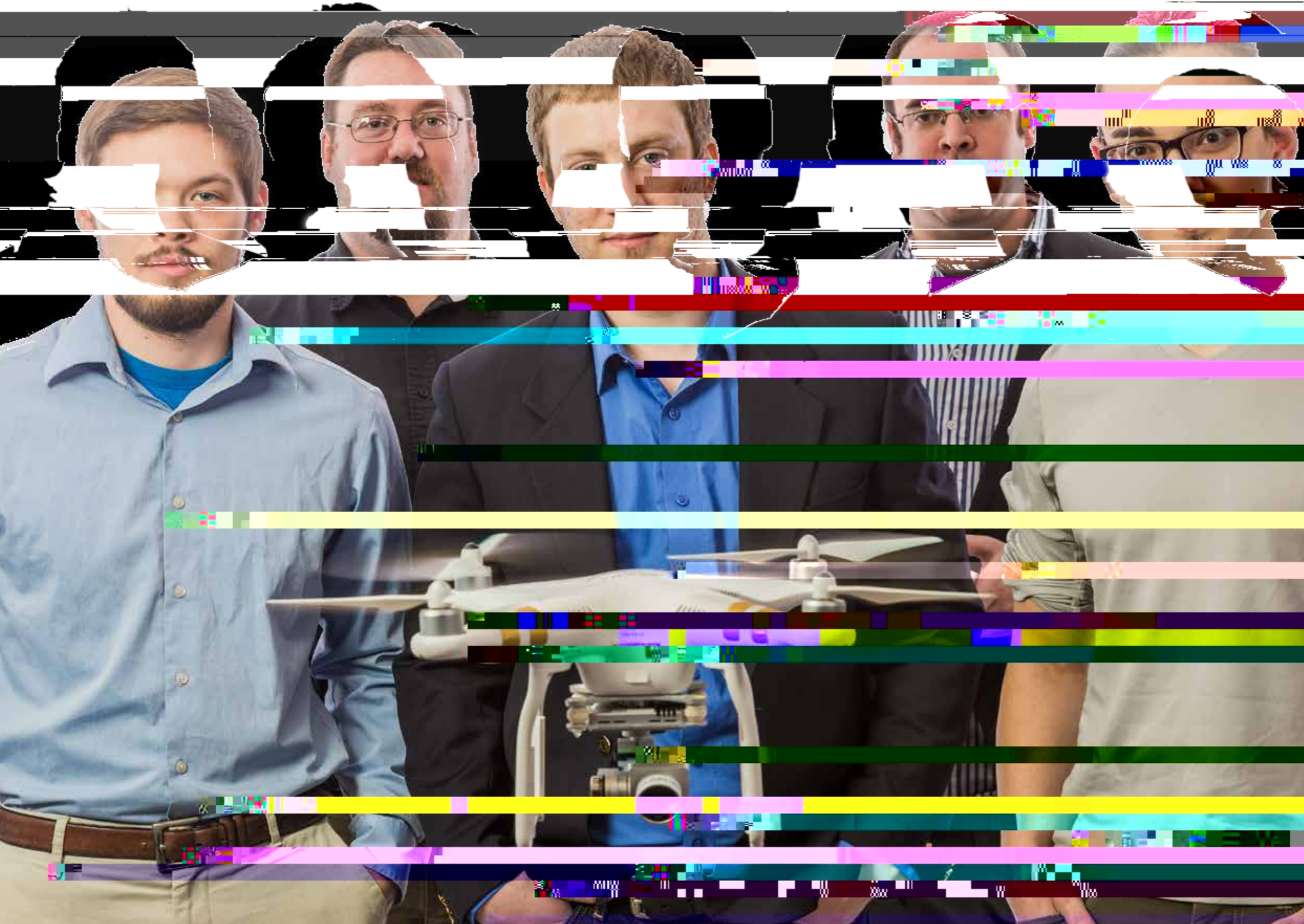
Kameron Hurley '01

2016, Tor Books

“The Geek Feminist Revolution” is a collection of essays by double Hugo Award-winning essayist and fantasy novelist Kameron Hurley.

The book collects dozens of Hurley’s essays on feminism, geek culture, and her experiences and insights as a genre writer, including “We Have Always Fought,” which won the 2014 Hugo for Best Related Work. “The Geek Feminist Revolution” will also feature several entirely new essays written specifically for this volume.

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A drone whirred overhead as sea otters splashed around scenic Kachemak Bay near Homer, Alaska, in summer 2015. The unmanned aircraft, outfitted by a startup high-tech company in Fairbanks, aimed to document whether



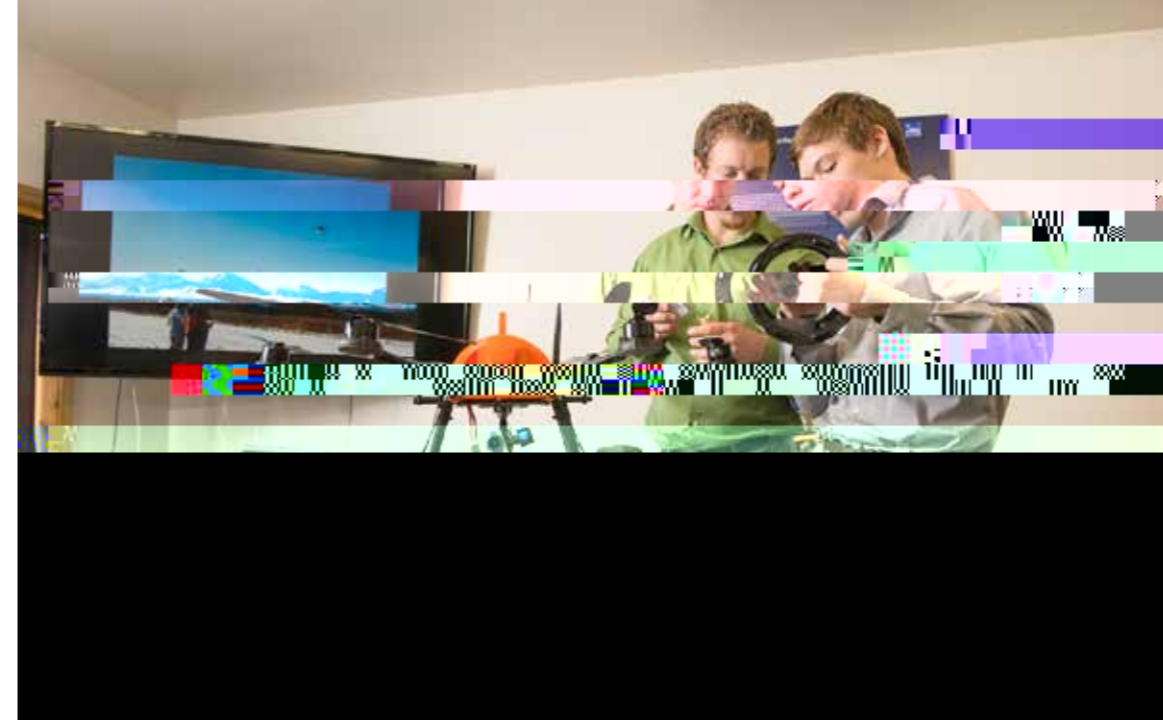
associate director for science and education.

“It’s hard for me to imagine a successful ACUASI research program without NES,” Hateld said. “They have been a vital component.”

The company also designs and builds electronic devices useful in other industries, Vanderwaal noted. The company is developing software for a lithium ion battery manufacturer and is putting payloads in unmanned aircraft for a major aerospace corporation.

Still, their Alaska roots and presence give them an advantage in the state.

“Our backgrounds foster an immediate rapport with potential Alaskan customers that companies from Outside wouldn’t have,” he said.





Carl Benson still chuckles when he recalls a nearly half-century-old incident while serving as chairman of the Geology Department at the University of Alaska.

It was about 1970, and Benson was working to convince a promising student from Chicago that he could study geology in Fairbanks. But during the process, the student had received some troubling news from an advisor — he was certain there was actually no such place as the University of Alaska.

“We insisted there was,” Benson said with an amused smile, “and he came here.”

The story isn’t particularly out of step with much of Benson’s career. The 89-year-old professor emeritus at UAF’s Geophysical Institute has spent much of his career educating people about conditions in less-traveled parts of the world.

Benson’s research took him on expeditions to remote parts of the North Slope, Arctic Canada and Greenland, where he gathered data that’s still fueling research today.

But his contributions at the Geophysical Institute, where he arrived a year after statehood to teach and do research, have left an equally significant mark, colleagues say.

In 2012, Benson was the first recipient of the Roger Smith Lifetime Achievement Award, which is given annually to a faculty member who shows “sustained commitment” to the Geophysical Institute.

“He has encouraged and befriended so many people up here,” said Matthan

The top of the Gruening Building is a favorite spot for UAF photographers like JR Ancheta — and those lucky few people who get to drop the watermelons during SpringFest celebrations. The circular Constitution Park fills the space between Gruening, Constitution Hall, the Fine Arts



re operations forester in Fairbanks, said he and a group of longtime colleagues put the proposal together. "We got it going beyond our normal jobs," he said.

The team included Rupp, who today leads the Scenarios Network for Alaska and Arctic Planning at UAF's International Arctic Research Center.

In summer 2006, crews under the team's direction drove down the Nenana Ridge Road, a logging track that starts on the Parks Highway southwest of Fair-

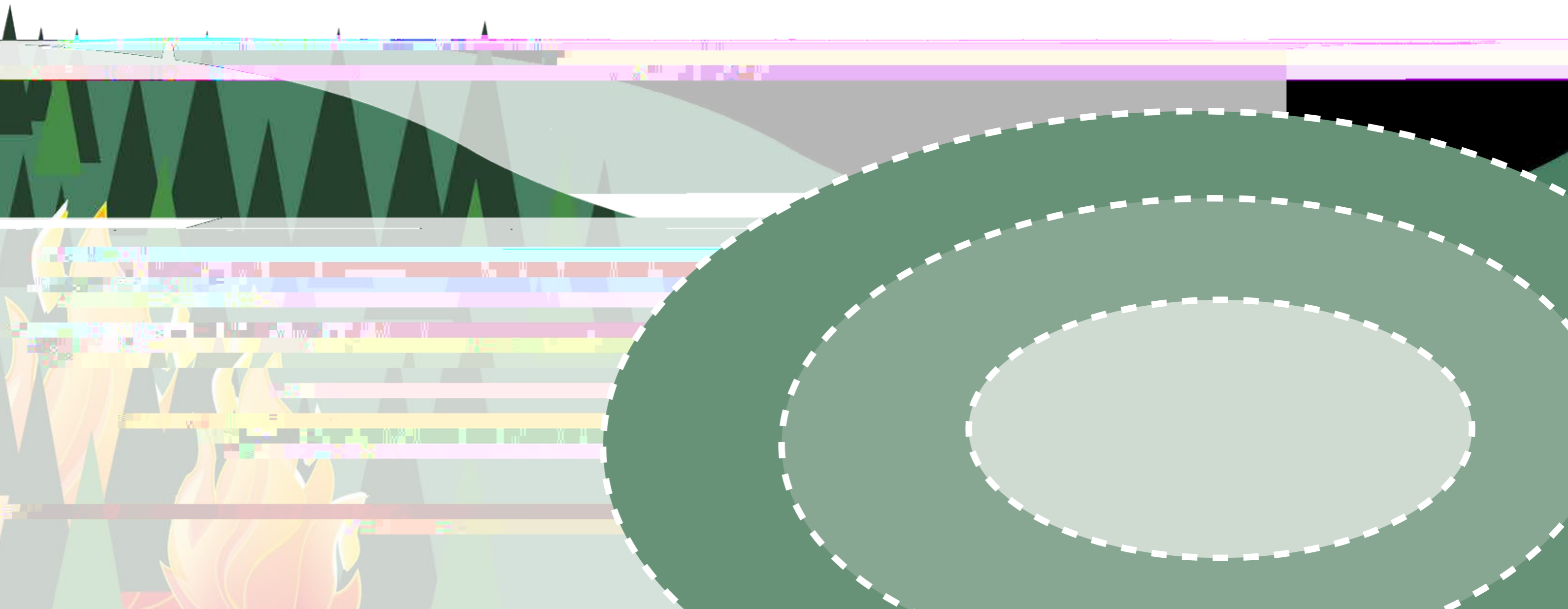
banks. The road winds 11 miles down the ridge, ending

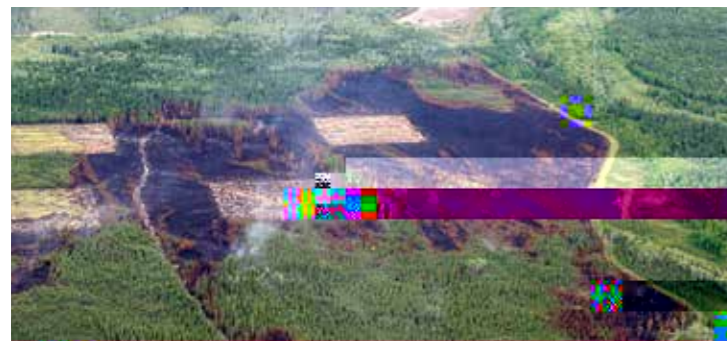
in a muddy, rutted trail near the Tanana River. A wide bend of the river encircles

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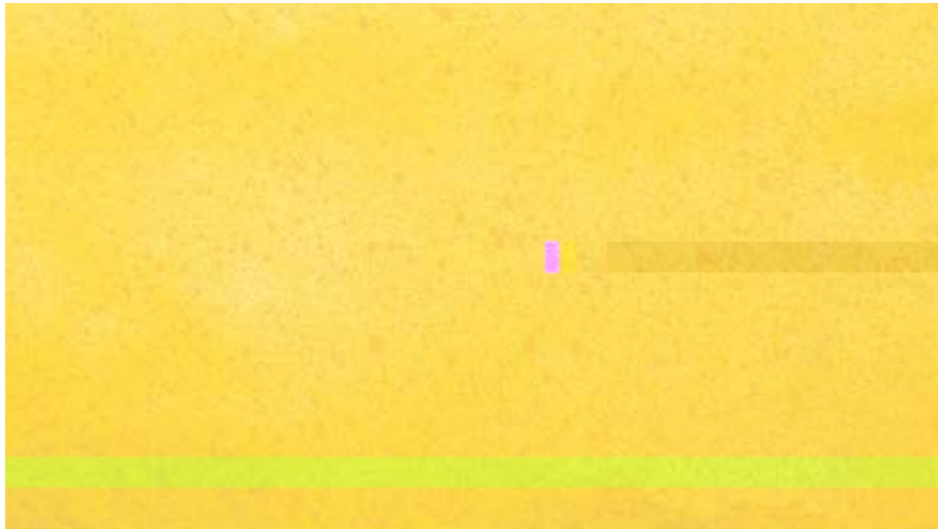




Firefighters will conduct triage on threatened properties. At homes where thinning or clearing has occurred, firefighters are more likely to have time to set up sprinklers or take other protective measures.

Places where the natural forest abuts the buildings aren't as likely to get help. "Those are the ones you write off," he said. Even in cases





Kottayam V. Natarajan '65, June 1,
Pearland, Texas

James R. Nelson '05, Feb. 13, Delta Junction,
Alaska

Henry Joseph Niebauer, professor emeritus,
Feb. 24, Middleton, Wisconsin

