



## MEASURED APPROACH

Pitt researchers have figured out a new way to measure distances, as small as 3 nanometers, between proteins. Angela Gronenborn, a PhD, is Pitt's UPMC Rosalind Franklin Professor and chair of structural biology. With Elena Matei, a PhD research associate, she tagged proteins with fluorine during nuclear magnetic resonance (NMR) spectroscopy.

NMR spectroscopy can detect magnetic forces in certain atoms; researchers apply the technology to figure out the structure of molecules. Using fluorine, Gronenborn and Matei were able to eliminate interference normally associated with NMR spectroscopy when analyzing HIV (the virus is shown left). The technique results in highly accurate measurements and has broad implications for understanding a wide range of pathogens on a structural level. Gronenborn and Matei's proof-of-concept report in *Angewandte Chemie* was deemed a "hot paper." "It wasn't clear that it would work, and the fact that it works really well is gratifying," Gronenborn says.

—Elizabeth Hoover