Cornell University (II)
AR -- Rapid IDentification of Antibiotic Resistance

The global epidemic of antibiotic resistance is causing significant increases in morbidity and mortality necessitating radical interdisciplinary solutions to better detect antibiotic susceptibility and manage infections. The United States National Strategy for Combating Antibiotic Resistance outlines several goals for addressing the issue of antibiotic resistance, all of which essentially boil down to a dual strategy of slowing the emergence of antibiotic resistance through smarter use and accelerating the development of new antibiotics. Critical to the first of these strategies is the development of rapid "point-of-care" diagnostics that can quantify the resistance of an organism to an array of antibiotics, ensuring both that the patient receives an efficacious treatment and significantly reducing the unnecessary use of broad spectrum antibiotics. Cornell University will partner with the VA Hospital in Syracuse and the SUNY Upstate Medical University to develop the "RIDAR" (Rapid identification for Infectious Diseases and Antibiotic Resistance - pronounced Rye-dar) device. If successful, RIDAR will enable point-of-care discrimination between gram positive, gram negative, and viral infections from an array of biological specimens such as blood and urine in about 10 minutes and provide antibiotic susceptibility results in about 1 hour.