

October 18, 2018 | By Scott LaFee

UC San Diego Epidemiologist Named to TIME's 50 Most Influential People in Health Care

Steffanie Strathdee's efforts to save her husband's life have helped reinvigorate the therapeutic potential of bacteriophages in an era of rising antimicrobial resistance

Steffanie Strathdee, PhD, associate dean of global health sciences at University of California San Diego School of Medicine, was named today one of *TIME* magazine's 50 Most Influential People in Health Care for 2018, which identifies people who "have changed the state of health care in America this year, and bear watching for what they do next."

"It's a great honor to be recognized for my efforts to bring phage therapy into the 21st century in North America, but it all started with my single-minded desire to save my husband's life, and it truly reflects a team effort," said Strathdee.

In 2015, Strathdee and her husband, Tom Patterson, PhD, a professor in the Department of Psychiatry, garnered headlines around the world when a national team of scientists and doctors, led by Robert "Chip" Schooley, MD, professor of medicine at UC San Diego School of Medicine, used bacteriophages (phages) in a last-resort, experimental treatment to successfully save the life of Patterson, who was dying from a multidrug-resistant bacterial infection.

"To our knowledge, Tom was the first patient in the United States with an overwhelming, systemic infection to be treated with this approach using intravenous bacteriophages," said Schooley, who pursued the unprecedented therapy at the urging of Strathdee, the Harold Simon Professor in the Department of Medicine at UC San Diego School of Medicine.

Since then, five patients at UC San Diego Health have been treated with phages, including a patient this year with a years-long chronic infection that was successfully cleared, allowing him to undergo life-saving heart transplant surgery. In all cases, the phage treatments were considered experimental



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and required emergency approval by the Food and Drug Administration.

Bacteriophages are ubiquitous viruses, found wherever bacteria exist. Each viral species targets a specific strain of bacteria. Successful treatment requires finding the precise combination of phages to attack and eliminate a specific bacterial infection. Patterson was infected by a multidrug-resistant strain of *Acinetobacter baumannii*, an opportunistic pathogen that tops the World Health Organization's list of world's 12 deadliest multi-drug resistant bacteria. With rapid assistance from the U.S. Navy, FDA, Texas A&M University, San Diego State University and Amplphi BioSciences, a San Diego-based biotech, Patterson was treated with a highly refined cocktail of phages originally derived from sewage.

Though investigated as a potential treatment for infections in the early 20th century, phage therapy was broadly discarded with the advent of antibiotics. Patterson's case — and a handful of others in the United States and elsewhere — have reinvigorated interest in the approach, particularly given the growing, global threat of antibiotic resistant superbugs.

Toward that end, UC San Diego School of Medicine announced creation of the interdisciplinary Center for Innovative Phage Applications and Therapeutics (IPATH) in June 2018. Launched with a three-year, \$1.2 million grant from UC San Diego Chancellor Pradeep Khosla, it is the first such center in North America, and is co-directed by Strathdee and Schooley, who is also senior director for international initiatives in the UC San Diego Office of International Affairs.

"IPATH builds upon what we've learned and will apply rigorous principles that span from bench to bedside to better understand the potential role for phage therapeutics in the treatment of patients with infections that cannot successfully be treated with currently available antibiotics," said Strathdee.

"It taps into and enhances a wide range of existing clinical and translational research programs and fosters emerging collaborations with the U.S. Navy Medical Research Center, industry partners and the strengths of UC San Diego Health."

In recent months, IPATH researchers have consulted with dozens of patients and outside medical teams to determine whether patients were good candidates for phage therapy. Roughly half, said Schooley, qualified, with a smaller number ultimately treated elsewhere.

"The saga of Tom's remarkable recovery — and the incredible efforts of UC San Diego Health doctors and scientists, led by Steffanie and Chip, was a real-life medical drama," said David Brenner, MD, vice chancellor of health sciences at UC San Diego. "There are few places in the world with the resources, talented people and collaborative spirit required to do what was done here, to save a man's life when every other tool of modern medicine was failing."



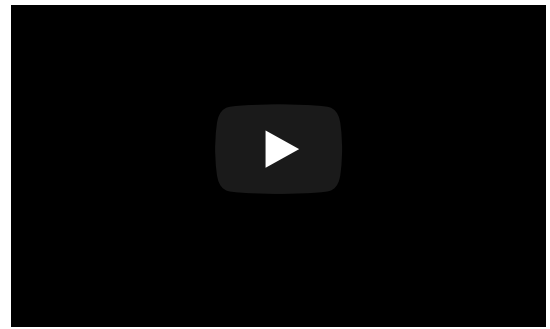
“I celebrate Steffanie’s achievement and honor all of the physicians, nurses, researchers and staff at UC San Diego Health and elsewhere who made this a story of recovery, hope and the future.”

This is the first year of *TIME*’s Health Care 50 list, launched to highlight the people — physicians, scientists, business and political leaders — behind ideas and efforts intended to fix or innovate health care in the United States. The list is curated by the magazine’s health reporters and editors.

Members of the 2018 list include philanthropists Bill and Melinda Gates, 2018 Nobel laureates James P. Allison and Tasuku Honjo and Juan Carlos Izpisua Belmonte, a stem cell researcher at Salk Institute for Biological Studies.

For more on IPATH, visit ipath.ucsd.edu

For more on bacteriophage therapy at UC San Diego Health, visit health.ucsd.edu/phage



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