

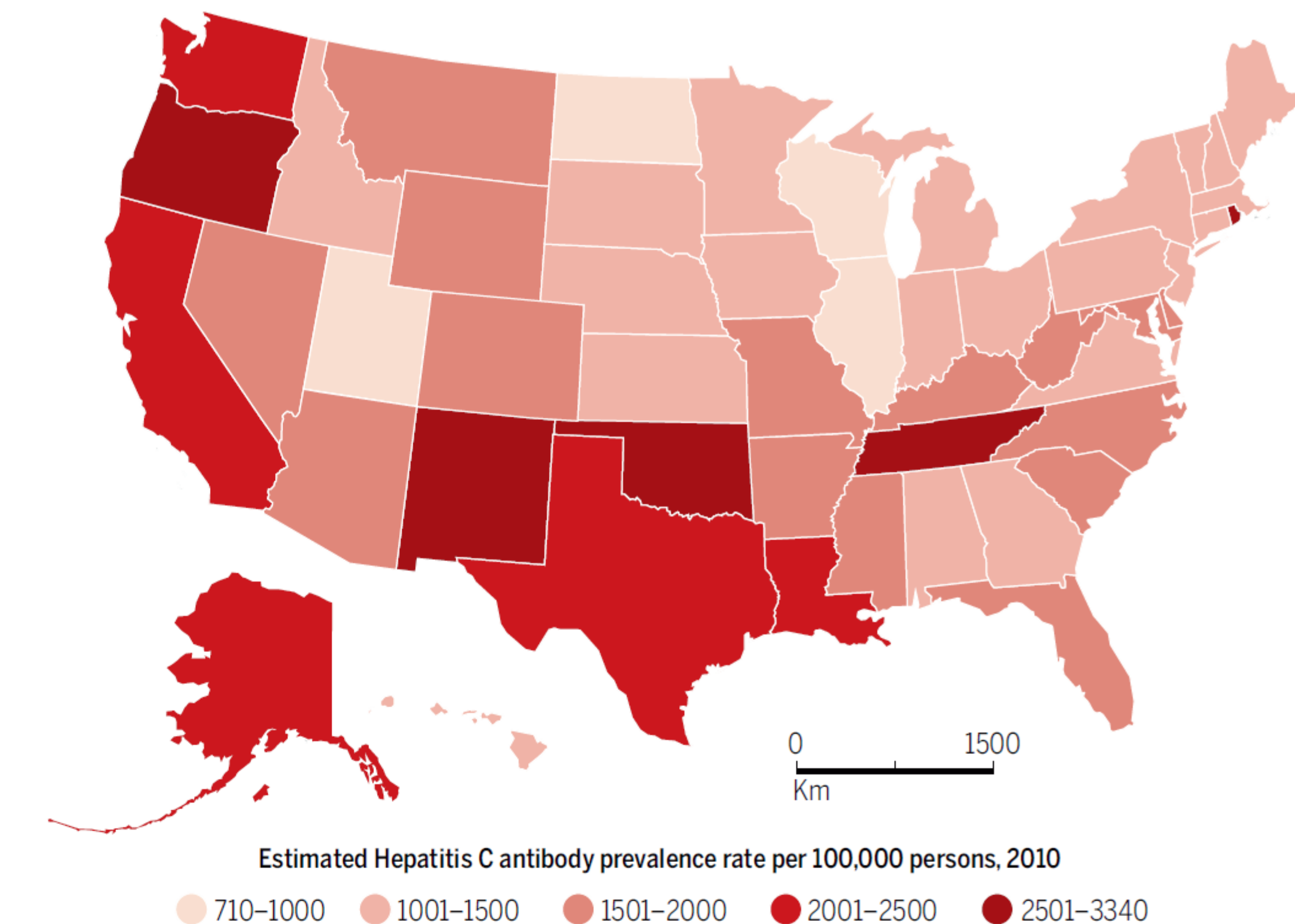
of the World Health Organization's Strategic Advisory Group of Experts on Immunization (SAGE), which met in Geneva, Switzerland, last week. Twelve candidate vaccines are in clinical development, but the group noted that only recombinant vesicular stomatitis virus–Zaire Ebola virus (rVSV-ZEBOV), produced by Merck, has shown efficacy, in a trial in Guinea in 2015. Researchers on that trial, in which “rings” of people connected to Ebola cases were vaccinated either immediately or after 21 days, reported that the vaccine was highly effective. A report published in April by the National Academy of Medicine warned, however, that a stricter statistical analysis of the trial showed that rVSV-ZEBOV could still turn out to confer little or no protection. Still, SAGE recommended that vaccinations should be launched quickly after the first confirmed case of Ebola and that they “should be used as an opportunity to accumulate additional information on vaccine safety, efficacy and effectiveness.”

U.K. to merge research councils

LONDON | A controversial bill to reform higher education and research in the United Kingdom received a green light last week from Parliament. In addition to making administrative changes to universities, the bill creates an overarching research funding agency, called UK Research and Innovation (UKRI). The seven existing research councils distribute £3 billion in government R&D spending each year. They will retain their separate disciplinary identities and functions but will be subsumed into UKRI, along with £3 billion in block grants to universities in the United Kingdom, and an agency called Innovate UK that invests about £561 million a year in R&D-related business development. Critics worry that councils could lose autonomy, but proponents say strong leadership could help protect science during upcoming Brexit negotiations. UKRI, expected to begin operations next year, will be headed by Mark Walport, the government's chief science adviser and former director of the Wellcome Trust.

Plunge through Saturn's rings

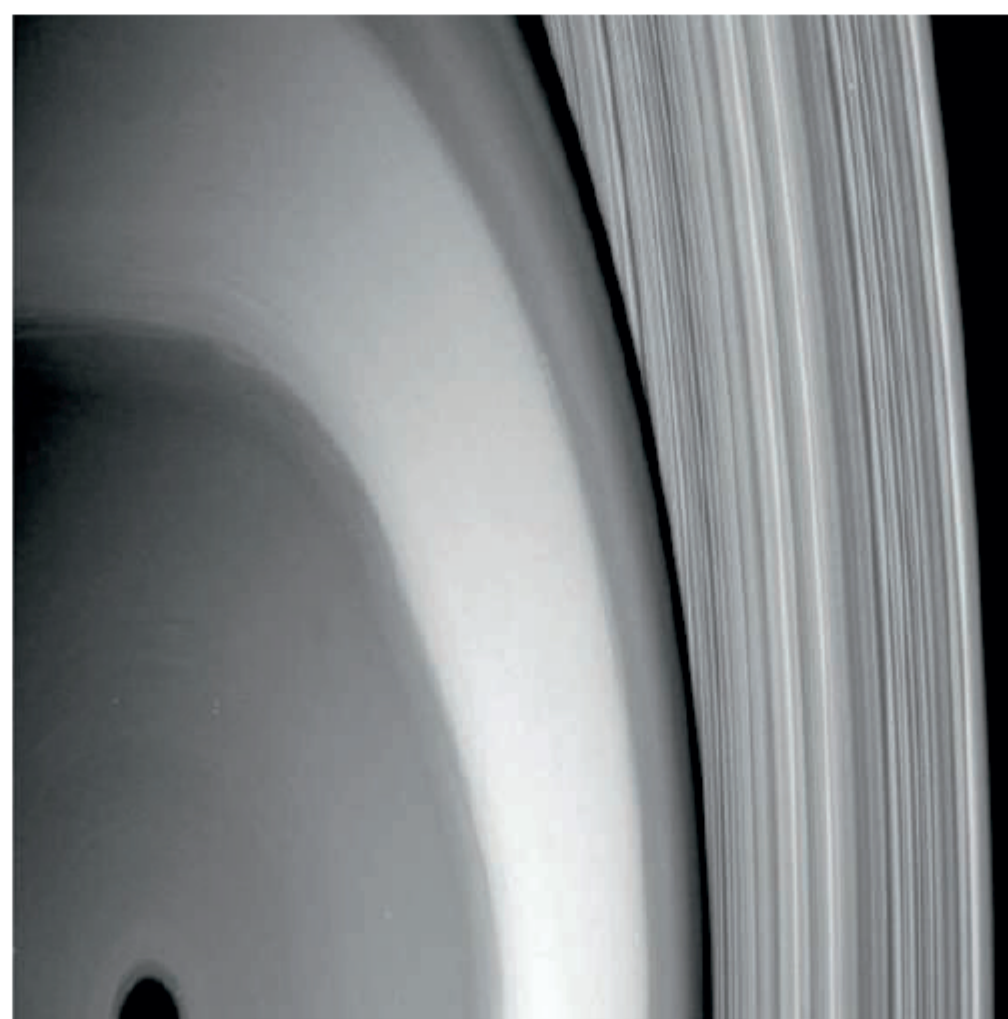
WASHINGTON, D.C. | Last week, NASA's Cassini spacecraft threaded the gap between Saturn and its rings, bringing it closer than any spacecraft has been before to the gas giant in search of answers to long-standing questions about its rings, atmosphere, and interior. The orbit is one of 22 planned weeklong deep-dive forays



Hepatitis C across the United States, state by state

A new study has compiled the first state-by-state map of the prevalence of the liver-damaging hepatitis C virus (HCV) across the United States. The map, published last week in *Clinical Infectious Diseases*, reveals that some surprising states—Tennessee, Oregon, and Oklahoma, for example—had high prevalences in 2010. HCV is spread primarily when people who inject drugs share their needles and syringes. The findings, conducted by researchers at Emory University and the U.S. Centers for Disease Control and Prevention, both in Atlanta, weave together population data from what's known as the U.S. National Health and Nutrition Examination Survey as well as death records and numbers from the U.S. Census. The researchers hope their model ultimately will help improve targeting of efforts to screen for the virus and treat the more than 3 million people in the country who are living with the infection. <http://scim.ag/hepCmap>

for Cassini, which NASA is calling the spacecraft's Grand Finale; Cassini will end its mission with a crash into the planet in September. From the first foray, scientists have discovered that the gap appears to be relatively dust-free—puzzling to scientists, but good news for engineers worried about the danger posed by the particles to the spacecraft. This stunning image of the



Saturn's north pole (bottom left) and rings.

rings as a backdrop for the swirling storm at Saturn's north pole was snapped by Cassini just before it began that first dive.

Winner of world's tiniest race

TOULOUSE, FRANCE | Six cars vied last week for dominance on a racetrack about one-hundredth the width of a human hair—and the cars, designed by researchers from Japan, France, Germany, Switzerland, Austria, and the United States, were single molecules. To propel the molecular machines forward on their silver and gold tracks, researchers used electric jolts from the tip of a scanning tunneling microscope. The Austrian-U.S. entry, Dipolar Racer, was the first to cross the finish line. That car, which resembles a molecular Segway without a handle, completed three runs down its 150-nanometer silver track at an average speed of 35 nanometers per hour. Four teams couldn't complete the race, which has been billed as a way to advance the manipulation of molecular machines—a field that won last year's Nobel Prize in Chemistry. <http://scim.ag/nanocarrace>