to Allen. But the newly established Chinese Society for Gastroenterology has about 20,000 members and provides a much-needed organizational system for planning the research effort. Now, “when we throw the rope over there, someone is actually catching it,” said Allen.

Other countries with limited cooperation in the policy sphere are joining forces to solve another major public health problem: multidrug-resistant tuberculosis (MDR-TB). Tuberculosis kills 2 million people every year, and strains resistant to multiple drugs are now spreading rapidly, particularly in Russia, India, China, and South Africa.

In the 1990s, treating MDR-TB was considered a low priority by the World Health Organization. That changed somewhat after Paul Farmer and Jim Yong Kim, who went on to found Partners In Health, showed that MDR-TB could be treated successfully. Today, however, less than 1% of newly diagnosed cases of MDR-TB are treated each year, said panelist Gail Cassell, citing figures from a series of meetings hosted by the Institute of Medicine. Cassell is executive vice president of TB drug development at the Infectious Disease Research Institute and a senior lecturer at Harvard Medical School.

Understanding the genetic changes that lead to TB resistance is ground zero for fighting this disease, said Cassell: “Until you have the full spectrum of antimicrobial resistance, you cannot prescribe the right drug for the right patient at the right time.”

Cassell, along with Valery Danilenko, head of the department of Post-Genomic Biotechnology at the Russian Academy of Sciences’ Vavilov Institute of General Genetics in Moscow, and Dmitry Maslov, a research associate in that department, described an international effort launched in 2011 to sequence MDR-TB strains and support the development of new diagnostic tests, vaccines, and drugs.

The consortium includes researchers from many countries, including South Africa, Iran, Sweden, and others, who are using facilities in the United States, China, and Russia to sequence and analyze strains of drug-resistant Mycobacterium tuberculosis.

Forum on S&T policy spotlights basic research, public trust

By Kathy Wren and Earl Lane

The importance of basic research for the nation’s scientific and economic future was a recurring theme as more than 400 elected officials, government and business leaders, researchers, educators, and others gathered for the 40th annual AAAS Forum on Science and Technology Policy.

Participants at the conference, held on 30 April and 1 May in Washington, DC, explored strategies for nurturing research and innovation, at the federal level and beyond, during times of continuing fiscal austerity.

Several science-funding bills were in play on Capitol Hill as the conference convened, but legislators had not proposed a replacement for the expired congressional deal that had offset some of the worst effects of the across-the-board budget cuts known as sequestration. In sessions throughout the conference, participants delved into the factors driving the tight budget environment.

Many speakers echoed a call to better support basic research, including Rep. Jim Cooper (D-TN), Flavia Schlegel, assistant director-general for natural sciences at UNESCO, and France Córdova, director of the National Science Foundation. “Our nation’s future, including our preparedness for that future, depends on innovation,” Córdova said. “Innovation in turn depends, in large part, on discovery, and discovery is fueled by basic research. This pursuit is not discretionary.”

“A lot of folks think of basic research as a sort of frivolous approach where we’re indulging the whims of scientists who just want to follow their curiosity,” said John Holdren, White House science and technology adviser, when AAAS CEO and Science Executive Publisher Rush Holt asked Holdren what he most wished the general public understood about science. “Without investing in basic research and ‘the effort simply to understand more fully the universe, our world, ourselves, we are undermining our future,’” Holdren said.

Researchers whose work is targeted as an example of wasteful government spending need to do a better job explaining the value of their work, panelists agreed in a session on defending grants against unjustified attacks. The importance of engaging with the public, through storytelling, data-sharing projects that seek public feedback, and other strategies, also took center stage in a session on public opinion and policy.

William Press, a computer scientist and computational biologist at the University of Texas at Austin (and a former AAAS president), urged scientists to separate facts and value judgments, in order to gain the trust of a public that is skeptical about science.

Speaking in the William D. Carey lecture, Press outlined two quite different story lines for science—one tied to research, discovery, and innovation and what “can” be done, the other related to educating the public and advocating for what “should” be done. “Both are valuable,” he said, but scientists should take care to distinguish between them.
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*Science* **348**(6238), 984.
DOI: 10.1126/science.348.6238.984