Thousands rally for medical research

On 8 April 2013, the Rally for Medical Research (http://www.rallyformedicalresearch.org/) united almost 200 organizations and millions of people across the US in support of biomedical research. They joined together to advocate sustained government investment in the US National Institutes of Health (NIH) to "spur more progress, inspire more hope and save more lives." The rally took place on the steps of the Carnegie Library in Washington, DC, coinciding both geographically and chronologically with the 2013 Annual Meeting of the American Association for Cancer Research (AACR). Many AACR conference attendees participated in the rally, carrying signs and wearing t-shirts proclaiming their support. Rally organizers urged supporters to personalize their signs and shirts with felt-tip markers by scrawling their own responses to the question, "What do you rally for?" The rally was broadcast live online through YouTube (https://www.youtube.com/watch?v=Y23FFtBWzdY), and participation through social media was encouraged for those who could not attend in person.

Organization of the rally was motivated by concerns about declines in federal funding for medical research. NIH funding has been static since 2003 and is now facing a 5% cut under the congressional sequestration plan.

AACR, which organized the rally, estimates that a crowd of ~10,000 gathered on the lawn, streets and sidewalks in front of the Carnegie Library, joined by an 18-foot-tall inflatable microscope meant to showcase the rally's goal to "put Washington under its lens and the NIH in focus." Chants of "more progress, more hope, more life" echoed across Mt. Vernon Square as the rally got under way.

Cokie Roberts, journalist and political analyst, moderated the rally program, which included members of the US House of Representatives; officers of research organizations and institutions; celebrity spokespersons; and patients, survivors, caretakers and family members touched by diseases including cancer, diabetes, stroke and HIV. Roberts told the crowd, "It could not be a stupider time to cut funding for medical research... We are right on the cusp of so many breakthroughs. And this is exactly the moment to push forward, certainly not to pull back or stay even."

President Barack Obama provided remarks in a statement read by Margaret Foti, AACR Chief Executive Officer: "Throughout our nation's history, we have depended on the ingenuity of our people to pioneer innovation and solve the problems of our time. To meet the challenges of the twenty-first century, we must commit to a serious, sustained effort to advance medical research."

Monica Harrington

RELYING ON CHIMPANZEES FOR HEPATITIS RESEARCH

Chimpanzees are used for research on hepatitis because they are the only species other than humans that can be infected by these viruses. Such animal models are needed in order to develop and test potential vaccines. Yet there is increasing pressure from the US government to reduce the use of chimps in research; chimpanzee research is currently restricted to studies that are impossible to carry out in other animals.

Researchers in Ian Lipkin's lab at Columbia University (NY) set out to find a smaller animal that could model hepatitis C virus (HCV) infection. They searched for homologous viruses in small animals and found a virus similar to HCV in wild rodents. After characterizing the genome of the rodent virus, they confirmed that it shares several genes, proteins and translational elements with human HCV (*mBio* **4**, 2e00216–2e00213; 2013). The virus was found in the rodents' livers, suggesting that it may function similarly to HCV.

Lipkin told *New Scientist*, "I think everyone agrees that we need to reduce the use of chimps." They suggest that wild rodents infected with the virus may serve as a model for research on HCV pathogenesis, vaccine design and treatments. But they will first need to test the rodents' immune system response to the virus to see if it is the same as in humans, and they don't yet know whether the virus mutates the way it does in humans.

In the meantime, another study demonstrates that chimps continue to be useful for testing potential treatments for hepatitis viruses before they can advance to clinical trials in humans. Current treatments for hepatitis B virus (HBV) work by reducing viral load to undetectable levels, but there is currently no complete cure for the virus. A team of researchers at Gilead Sciences (Foster City, CA), led by Daniel Tumas, now hopes that a new drug may change that. The drug, called GS-9620, stimulates a receptor that recognizes pathogens and signals the immune system to attack. When GS-9620 was given to chimps infected with HBV, the immune system was able to suppress the virus and deplete infected cells in the liver, the organ most affected by HBV (*Gastroenterol.* doi:10.1053/j.gastro.2013.02.003; published online 14 February 2013).

The study's first author, Robert Lanford, explained, "This GS-9620 therapy represents the first conceptually new treatment for HBV in more than a decade, and combining it with existing antiviral therapy could be transformative in dealing with this disease."

Kara Rosania