West Virginia Research and Innovation

More state and federal support for medical and health research could help solve West Virginia’s opioid crisis and reposition the state as a research leader, according to panelists at Research!America’s program “West Virginia Research and Innovation: A Catalyst for Better Health and Economic Growth” on October 16 at Shepherd University.

“If we’re going to talk about the opioid and drug abuse issue where we are ground central, why shouldn’t our universities be at the leading edge of providing that expertise in research and technology?” said Senator Shelley Moore Capito (R-W.Va.).

A strong majority of West Virginians agree that federal taxpayer funds should be used to support scientific research at public universities (77%), and that the state and federal government should assign a higher priority to improving science, technology, engineering and math (STEM) careers (85%).

Brad Fenwick, Ph.D., senior VP, global strategic alliances, Elsevier, said that in order to attract more public and private-sector research investments, West Virginia must inform outsiders about its research strengths, noting that the state is a world scientific leader in nanotubes, carbon and nanostructures.

“If you’re a company working in [nanotubes, carbon and nanostructures], and you’re looking for expertise or a place to locate your research or somebody to collaborate with, if they don’t know West Virginia and these researchers are that strong, they’ll go to the usual suspects. They’ll show up at Stanford or MIT and miss the opportunity of working with West Virginia,” Fenwick said.

Nora Volkow, M.D., director of the National Institute on Drug Abuse (NIDA), explained how the National Institutes of Health (NIH) Opioid Research Initiative is pursuing three aims: non-opioid based strategies for management of pain and pain disorders; innovative medications and technologies for opioid addiction treatment; and interventions to reduce the mortality of opioid overdose.

Opiates are incredibly potent pain relievers, she continued. “Through the same mechanisms, they are activating highly rewarding [brain] areas that can lead to and trigger addiction.” This presents a unique problem because many people who develop an opioid abuse disorder were first exposed to the drug in a safe, legal, therapeutic setting: a prescription for pain.

Combating the Opioid Epidemic Through Research and Public Health

Drug overdose is the leading cause of unintentional death for U.S. adults under age 50, with more than half of these fatalities involving opioids. At more than 40,000 deaths per year, opioid overdoses account for more loss of life than gun violence and motor vehicle accidents combined. On Friday, October 13, Research!America hosted a webinar, “Innovative Research and the Opioid Epidemic: Are We Closer to Finding Solutions?” Speakers discussed how researchers, public health officials and pharmacists serve pivotal roles in combating this ongoing crisis.

continued on page 3
This is the time for all hands on deck advocacy to assure that the draconian caps on federal discretionary spending are lifted. “Sequestration” budget caps established under the 2011 Budget Control Act (BCA) will come back into full force after a partial, two year reprieve. If Congress does not lift the spending caps again, science is in trouble. And that means finding solutions to what ails us, which are dependent on research and innovation, is also in trouble. Our initiative to raise the caps is designed to give you advocacy tools to weigh in with members of Congress to help guarantee they are hearing from their constituents that the status quo is in fact not okay. Cuts are worse, much worse. I urge you not to assume that Congress will do what they have done for several years now, and vote to life the caps. There is so much in play right now—tax reform, looming debt ceiling, much-needed resources to combat the opioid epidemic, and more -- it is not a time for complacency. I urge you to engage (see our action alert on page 8 of this newsletter). Watch for a joint digital and print ad campaign on raising the caps to support broad science later this month. We encourage you to join us on social media using the hashtag #RaisetheCaps, and to contact your representatives!

Research!America Extends Special Thanks to our Supporters who Have Contributed Since the Publication of our October Newsletter

**2018 Advocacy Awards**
- AcademyHealth
- ACT for NIH

**West Virginia Research Forum**
- Global Science and Technology, Inc.
- West Virginia University School of Medicine

Visit [www.researchamerica.org/partnership_opportunities](http://www.researchamerica.org/partnership_opportunities) for ways to support Research!America.

**Special Thanks to Renewing Research!America Alliance Members**

**Renewing Members**
- American Autoimmune Related Diseases Association
- American Cancer Society
- The American Physiological Society
- Autism Speaks
- Carnegie Mellon University
- Children’s Cause for Cancer Advocacy
- City of Hope National Medical Center
- Florida International University
- Herbert Wertheim College of Medicine
- Foundation Fighting Blindness
- Galveston National Laboratory
- Georgia Research Alliance
- Georgia State University
- Gilead Sciences, Inc.
- Heat Transfer Research Inc.
- Louisiana State University
- Lupus Foundation of America, Inc.
- National Minority Quality Forum
- Nova Southeastern University
- College of Dental Medicine

**Ostrow School of Dentistry of the University of Southern California**
- Pennsylvania State University College of Medicine
- University of Georgia
- University of Nebraska Medical Center College of Dentistry
- University of Pittsburgh School of Nursing
- The University of Texas MD Anderson Cancer Center
- Wayne State University
- Weill Cornell Medicine

As of November 1, 2017

Senator Joe Manchin (D-W.Va.) said bipartisanship in Congress is key to successfully tackling the opioid epidemic, and doing so will help ensure that jobs created from increased public and private sector investments can be adequately staffed. “Every job fair we had over 100 employers looking to hire, but everybody walks away not finding the people they need,” Sen. Manchin said. “There are three things keeping you out of the workforce: addiction, conviction or lack of skill set.”

Earlier this year, Sens. Manchin and Capito re-introduced “Jessie’s Law,” legislation to help inform medical professionals of patients’ previous opioid addiction.

To watch a recording of the event, visit http://bit.ly/2z8mU1F.

Opioid Webinar continued from page 1

In response, pharmacists and pharmacy technicians are expanding their roles as medication safety specialists. Jeffrey Bratberg, PharmD, clinical professor at the University of Rhode Island College of Pharmacy, discussed how pharmacists are developing prescription monitoring programs and engaging communities in drug safety education outreach.

Georges Benjamin, M.D., executive director of the American Public Health Association and Research!America board member, said emergency departments and incarceration facilities represent opportunities to start opioid abuse patients on medication-assisted therapy (MAT), which reduces opioid cravings and alleviates opioid withdrawal symptoms. If patients admitted to the emergency room for overdoses could be linked to addiction recovery programs, the most at-risk and underserved populations would have increased access to treatment. For a recording of the webinar, visit http://bit.ly/2hxYsgo.

Federal Policy Update

Congress is under pressure to move several major pieces of legislation prior to the end of the calendar year. Both parties appear to be prepared to take action to stabilize private health insurance, and to finalize fiscal year 2018 (FY18) appropriations before the Continuing Resolution (CR) expires on December 8 or shortly thereafter (which would require another short-term CR).

In addition, the House and Senate recently passed a budget resolution that enables a simple majority vote on tax reform. It is unlikely that the tax reform package will address the medical device tax; we hope it is either repealed via a stand-alone bill or included in the FY18 budget package. We have been encouraging other interested members of the alliance to make use of an action alert on our website to urge Congress to repeal the tax. Regarding FY18 appropriations, the House passed a 12-bill omnibus (H.R.3354) on September 14 and sent it to the Senate. The Senate Appropriations Committee has passed most of the individual FY18 appropriations measures, but has yet to send any bill to the Senate floor for consideration. If either the House omnibus or the 12 Senate bills were signed into law without a deal to raise the budget caps, an across-the-board cut would automatically be triggered to reconcile spending to the budget caps.

We have heard rumblings that congressional leaders are negotiating a bipartisan budget deal to raise the caps, and that this deal could be made public by Thanksgiving. That said, the need for advocacy has intensified, rather than diminished. Throughout September and October, Research!America has made the case to Congress for a budget deal and provided weekly advocacy tools to alliance members on the value of raising the caps.

On October 5, the Energy and Commerce Committee approved a federal health program reauthorization package called the Community Health And Medical Professionals Improve Our Nation Act of 2017 (CHAMPION Act) that would be funded in part by cutting more than $6 billion from the Prevention and Public Health Fund (PPHF). Research!America sent letters to House and Senate leadership urging Congress to preserve the PPHF.

On October 24, the House Labor, Health and Human Services Appropriations Subcommittee held a hearing on the role of indirect costs in supporting NIH-funded research. So far, Congress has expressed no appetite for modifying the current indirect cost formula, and in fact the current CR prevents the Administration from taking action on implementing a cap on indirect costs. We remain aware that the tide could turn, and we will continue to monitor this issue and take action as necessary.

Research!America has also weighed in with letters and action alerts opposing provisions in the Senate’s FY18 National Defense Authorization Act (NDAA); the bill would place onerous new administrative requirements on DoD-funded medical research, and the report language would compromise the integrity and effectiveness of DoD’s technology transfer program.
Negative Impact on Work Productivity, Quality of Life Among Top Concerns Related to Migraine

Both migraine sufferers and non-sufferers are concerned about the disease’s impact on work productivity, quality of life, family/relationships, and employment, according to a survey commissioned by Research!America.

“The survey findings indicate that the health and economic impact of migraine is broad and must be addressed in order to overcome stigma and aid those suffering from this disabling condition,” said Mary Woolley, president and CEO of Research!America.

Among the survey’s other findings: a strong majority of migraine sufferers (85%) and a majority of non-sufferers (61%) agree that exposure to excessive light is associated with greater risk of migraine. This is consistent with scientific evidence that people with migraine tend to have recurring attacks triggered by stress, anxiety, hormonal changes, bright or flashing lights, lack of food or sleep, and dietary substances. Sudden changes in weather or environment also increase the risk of migraine.

And a majority of both migraine sufferers (77%) and non-sufferers (68%) agree it’s important that our nation supports research that focuses on the prevention and treatment of migraine.

For the full survey, visit http://bit.ly/2h6kPMG.

Public Health Thank You Day November 20

Public health professionals are dedicated to preventing disease and injury, promoting healthy lifestyles, detecting and controlling outbreaks, and much more. From anti-smoking campaigns to the development of vaccines against polio to pinpointing the source of food-borne illness outbreaks, our daily lives are touched by the work of these individuals. Join Research!America and leading public health organizations on Monday, November 20 to recognize public health professionals who work tirelessly to protect the health of all Americans.

“The public health workforce is dedicated to assuring our health and the health of our communities. From protecting against disease and preventing injury to addressing the determinants that influence our health, public health professionals work tirelessly with too little recognition for their efforts,” said Georges Benjamin, M.D., executive director of the American Public Health Association and Research!America board member. “Here at APHA, we are proud of and grateful for their service and honored to work alongside them in creating the healthiest nation in one generation.”

There are a number of easy ways to get involved through our website: send a message on Twitter or Facebook with the hashtag #PHTYD; share our banner online; give a certificate to a public health hero you know; submit a letter to the editor. Learn more at www.publichealththankyouday.org.

Federal Research Budget

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<th>AGENCY</th>
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* indicates that program level is reported in this chart

** indicates that budget authority is reported in this chart
Research Matters in West Virginia

The West Virginia Research and Innovation Forum led by Shepherd University and Research!America was featured in a West Virginia Public Broadcasting segment which included remarks from Research!America President and CEO Mary Woolley and state survey data.

A Herald-Mail article included comments from Research!America board member Mary Hendrix, Ph.D., president of Shepherd University, about the importance of stronger investments in research for the state’s workforce and population health. Articles about the forum were also included in Becker’s Hospital Review, The Martinsburg (W.V.) Journal, and WEPM-AM.

Science Advocacy

Research!America’s Chair The Hon. Michael N. Castle, described why scientists should engage lawmakers to support research funding and combat misinformation in Neuroscience Quarterly: “To stimulate a meaningful and productive public dialogue about science, researchers and advocates must be a part of the national conversation around “lightning rod” and noncontroversial science issues alike.”

Opioid Crisis

Woolley penned a letter-to-the-editor that was published in the Pittsburgh Post-Gazette about finding a solution to the opioid epidemic. “We urge Congress to provide additional resources for research. It’s time for new ideas, the kind that come from putting innovative minds to work.”

Gun Violence

Research!America board member Georges Benjamin, M.D., executive director, American Public Health Association, wrote a guest commentary for Modern Healthcare about reducing the risk of gun violence with a comprehensive public health approach.

Childhood Obesity

In a MedPage Today article about a Lancet study which showed the increase in the number of obese children worldwide, Research!America board member Nancy Brown, CEO, American Heart Association, commented on the importance of implementing evidence-based strategies and policies to curb childhood obesity.

Gene Therapy

Research!America board member Mark McClellan, M.D., Ph.D., director, Duke-Robert J. Margolis, MD, Center for Health Policy, Duke University, was quoted in a STAT news article about the cost of a new gene therapy drug.

Cancer Treatments

An op-ed in The Hill penned by Research!America board member Susan Dentzer, president and CEO, Network for Excellence in Health Innovation (NEHI), and Tom Hubbard, vice president of policy research, NEHI, underscored the need to remove barriers for high-cost cancer drugs.

IN BRIEF

- NIH and a consortium of 11 pharmaceutical companies announced they are launching a public-private partnership to find cancer biomarkers for immunotherapies.
  
  http://bit.ly/2zYXmB0

- Nominations are open through January 12 for the National Organization for Rare Disorders 2018 Rare Impact Awards.
  

- Research!America board member Mark McClellan, M.D., Ph.D., was named to the board of directors for the NAACOS Institute for Accountable Care.
  
  http://prn.to/2yovom4

- The Clinical Research Forum announced the call for nominations for the 2018 Top Ten Clinical Research Achievement Awards. The deadline is January 12.
  
  http://bit.ly/2iR7Dfd
Americans Support More Funding for Cancer Research

More than a third of Americans report having firsthand experience with cancer: four percent have or had cancer themselves, and 32% have an immediate family member who has or had cancer, according to the National Cancer Opinion Survey commissioned by the American Society for Clinical Oncology (ASCO).

More than 9 in 10 Americans (91%) believe that the U.S. government should dedicate substantial funding to diagnose, prevent and treat cancer. Nearly three in four Americans (73%) say the government should spend more to develop cancer treatments and cures, even if it means higher taxes or adding to the deficit. That’s despite more varied views on other cancer-related priorities: just over half of Americans (54%) think the government should spend more to help Americans afford cancer screenings and care, and just under half (49%) believe more money should be spent on cancer prevention.

“Federal investment in cancer research plays a critical role in the search for new cures, and Americans clearly recognize this. This poll shows that people are not only expecting, but counting on Congress and the Administration to invest more in cancer research,” said ASCO President Bruce Johnson, M.D., FASCO, in a press release. “More funding for cancer research would mean more innovation, more studies launched, more patients enrolled in clinical trials, more researchers entering the field, and faster progress toward new and improved treatments for patients.”

For the full survey results, visit http://bit.ly/2z2HRsm.

Federal Research Funding Fuels the Commercialization of Medical Technology

Federal funding of research, even when the science seems to have no obvious or immediate practical application, catalyzes life-saving discoveries in science, medicine and technology. At an October 25 congressional briefing sponsored by the Science Coalition, “American-Made Innovation: Sparking Economic Growth,” a panel of scientists turned biotechnology entrepreneurs gathered in Washington D.C. to discuss the role of federal funding in the formation of their companies.

They described how grants from federal agencies such as the National Institutes of Health, National Science Foundation, Department of Defense, and Department of Energy became seed money for startups that now successfully develop and market products in medical diagnostics, medical imaging, precision medicine, chemotherapy and preventative health.

Jeb Connor, chairman, CEO & co-founder, Genome Profiling, described how investigations in thermal stress and genetic changes in Antarctic ice worms led to the development of an advanced computational statistical model program. This software is now used to identify the genetic signatures of various cancers and other diseases, and to identify biomarkers that predict responsiveness to therapy.

The origin of so many new medical technologies begin as “happy accidents,” said Representative Bill Foster (D-IL-11). When federal funding of research is cut, progress in research and development is stifled which could have long-term negative consequences, he continued.

Patents, licenses, and new business ventures emerge based on the work of federally-funded academic laboratories, said panel moderator Orin Herskowitz, senior vice president of intellectual property and technology transfer at Columbia University and executive director of Columbia Technology Ventures. Over 1,000 start-ups in the U.S. each year emerge to commercialize technologies that originated in federally-supported laboratories, he continued.

Other panelists included Andrew Hansen, president, HylaPharm; Michael Abramoff, president and founder, IdxLLC; Jack O’Toole, founder, FreshAirSensor; Carmela Abraham, founder, co-chair Science Advisory Board, KogeneTherapeutics; Robert Hamers, chief science officer & co-founder, Silatronix; Robin Berthier, president, Network Perception; and Jessica Winter, founder, Core Quantum Technologies.


Commission Issues Roadmap for Cancer Moonshot

Cancer specialists and researchers are increasingly optimistic as the National Cancer Institute (NCI) Cancer Moonshot Initiative continues to drive momentum for research in cancer prevention, detection, treatment, basic science and translational medicine. With $1.8 billion over 7 years from the 21st Century Cures Act, the Cancer Moonshot not only provides crucial supplemental funding, it continues to cultivate cooperation and resolution across agencies, hospitals and research institutions.

As an example of this momentum, The Lancet Oncology Commission recently published a report outlining future cancer research priorities in the U.S., intending the document to serve as a granular perspective on the research roadmap outlined by Moonshot’s Blue Ribbon Panel. The commission details effective implementation strategies, the promise of immunotherapy and precision-based therapies, and ways of understanding and eliminating health disparities, all part of a larger call to action to achieve 10 years of research progress in five.

At The Lancet Senate Briefing on November 1, professor of oncology and deputy director of the Johns Hopkins Sidney Kimmel Cancer Center Elizabeth Jaffee, M.D., emphasized the importance of core investments for the National Institutes of Health and NCI that have supported breakthroughs in cancer research, many of which are leading the technological revolution that is driving next generation cancer treatment strategies.

To read more on The Lancet Oncology Commission, visit http://bit.ly/2z7wFxl.
The National Alliance on Mental Illness (NAMI) is the nation’s largest grassroots mental health organization dedicated to building better lives for the millions of Americans affected by mental illness. What started as a small group of families gathered around a kitchen table in 1979 has blossomed into the nation’s leading voice on mental health. Today, NAMI is an association of hundreds of local affiliates, state organizations and volunteers who work to raise awareness and provide support and education that was not previously available to those in need.

**The National Alliance on Mental Illness (NAMI)** is the foundation for hundreds of NAMI State Organizations, NAMI Affiliates and volunteer leaders who work in local communities to raise awareness and provide essential and free education, advocacy and support group programs.

An estimated 1 in 5 people live with a mental health condition in the United States which means more than 43 million Americans are affected. Almost 10 million of those live with a serious mental illness, such as schizophrenia, bipolar disorder, and major depression.

People with mental health conditions are our neighbors, our families and ourselves. They work in all sectors of the U.S. economy, from the boardroom to the factory floor, from academia to art. But, without investment in research and advancement in diagnostics and treatment, the social and economic costs associated with mental health conditions are tremendous. The numbers are overwhelming.

Over 42,000 American lives are lost each year to suicide, more than 2 ½ times the number of lives lost to homicide. Suicide is the second leading cause of death for Americans age 15-24 and the 10th leading cause of death for adults.

Mental illness is the third most costly medical condition in terms of overall health care expenditures, behind only heart conditions and traumatic injury. The direct and indirect financial costs associated with mental illness in the U.S. is estimated to be over $300 billion annually.

“Investing in mental health research can make these startling statistics a thing of the past and improve the lives of millions of Americans who live with mental health conditions and their families,” said Mary Giliberti, JD, chief executive officer of NAMI.

NAMI provides advocacy, education, support and public awareness so that all individuals and families affected by mental illness can build better lives. To meet that goal, NAMI is building a movement. The organization seeks to broaden public awareness and inclusion in every part of their alliance, and seeks to increase visibility and impact; strengthening their voice as a unified organization of lived experiences and maximize outreach to and engagement with all communities.

As a national organization, NAMI supports a number of key research priorities across government, academia and private industry, including: accelerating the pace of psychiatric drug discovery; advancing services and intervention research; addressing early mortality in adults with mental illness; and improving diagnostics and advancing precision medicine.

NAMI envisions a world where all persons affected by mental illness experience resiliency, recovery and wellness. Each individual experiences mental illness differently, and NAMI supports research, treatment and supportive services that address each individual’s needs. Many individuals living with mental illness experience recovery through a combination of community services, medication, peer support, housing, education, employment and other supports. NAMI fights to ensure that people who are not experiencing recovery, but instead cope with hardships such as homelessness, substance abuse and incarceration, receive every support possible to put them on the path to recovery.

For more information, visit www.nami.org.

**More Than Half Support Increased Funding to Combat Opioid Addiction**

Do you support or oppose increased funding for research to better understand and combat the opioid addiction?

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<thead>
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<tr>
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<td>8%</td>
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<tr>
<td>Strongly oppose</td>
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Source: A ResearchAmerica survey of U.S. adults conducted in partnership with SAGE Analytics in January 2017. Due to rounding, the total may not add to 100%.
Urge Congress to #RaisetheCaps

As Congress works on a final federal spending bill for FY18, the austerity level budget caps established under the 2011 Budget Control Act are once again in force after two-year reprieve. Unless Congress negotiates another agreement to lift these caps, the FY18 budget for non-defense agencies and programs will be constrained to a level even lower than in FY17. Under that kind of stifling spending limit, Congress simply cannot fulfill its responsibility to advance science and ensure the security, health and wellbeing of the American people.

Your input counts. Urge your representatives in Congress to #RaisetheCaps and invest in our nation’s science agencies. Tell them you want a federal budget that works for our nation.