A bi-weekly roundup of research news items curated from the professional development groups within the AAMC’s Scientific Affairs cluster, and other sources.

From the Council of Faculty and Academic Societies (CFAS)

The National Academies of Sciences, Engineering, and Medicine released a report saying that in rare circumstances and with stringent oversight, editing the DNA of a human embryo to prevent disease could be permitted in the future. An article in Science covering the report said that a clinical trial using gene editing could be permitted only after further research on risks and benefits and only for compelling reasons.
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The Broad Institute of MIT and Harvard University have won a legal battle over CRISPR patents, according to an article in Nature. The piece reported that the University of California, which was the first of the two academic organizations to apply for a patent, alleged it held the intellectual property rights to CRISPR, but three patent judges ruled the Broad Institute’s invention was distinct from that of the University of California.
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A piece in STAT News reported that Barbara Schaal, PhD, president of the American Association for the Advancement of Science (AAAS), predicts that the Obama administration’s “big science” initiatives like the BRAIN Initiative and the Precision Medicine Initiative have enough momentum to survive, even if they are neglected by the Trump administration.
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To defend science, we must depolarize it, stated an opinion piece in Pacific Standard. “If we force people to choose between science and their political or religious loyalties, science will lose. … We need to do more than push back against flawed arguments and bad policy. We need to engage the public, across the political spectrum, to engage with science,” wrote Michael White, PhD, assistant professor of genetics at Washington University in St. Louis.
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As reported in recent weeks, spurred by what they see as a lack of support for science in Washington, scientists are increasingly becoming involved in politics, this time reported in an article in phys.org.
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The proportion of postdoctoral researchers in American universities is shifting, reported an Inside Higher Education article, leading to a decline in the number of postdoctoral researchers in the biomedical fields and an increase in fields such as neuroscience, engineering, and other social sciences.
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A viewpoint in JAMA by John Ioannidis, MD, DSc, of Stanford School of Medicine, discussed the causes of nonreproducibility in basic and preclinical research and described how to overcome the pervasive issue.
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An op-ed in the Pittsburgh Post-Gazette claimed that the environment of modern medicine is too risk-
averse to produce major breakthroughs. “[Jonas Salk’s polio vaccine] would likely be impossible in 2017, thanks to strictures that have stiffened since 1955. A present-day Salk, for example, would likely be derailed by institutional review boards, which must pre-approve such research. The mutually reinforcing components of the credentialist infrastructure make it difficult to shift back from risk-aversion toward innovation,” wrote Robert Graboyes, a senior research fellow at George Mason University.

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An article in Crain’s Detroit Business described efforts by the University of Michigan School of Medicine and Wayne State University to integrate research into their clinical care.

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To help advance medical research, an opinion piece in STAT News encouraged people to not only donate their organs when they die, but also to donate their medical data.

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The University of Maryland School of Medicine announced the recruitment of a broad group of scientists as the first part of the school’s Special Trans-Disciplinary Recruitment Award Program (STRAP).

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Today’s “war on science” could be a trap, warned an article in Slate, which contrasted the political reality behind pro-science activism during the George W. Bush administration with the political reality today. “In the same way that fighting the War on Journalism delegitimizes the press by making it seem partisan and petty, so might the present fight against the War on Science sap scientific credibility,” the article said.

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From the Graduate Research, Education, and Training Group (GREAT)

Revised Mentorship Compacts for Graduate Students and Postdocs Now Available
The AAMC has released updated mentorship compacts for graduate students and postdoctoral appointees, which provide a set of broad guidelines intended to initiate discussions at the local and national levels about the student-mentor and postdoctoral appointee-mentor relationship. These newly released compacts were updated and revised by members of the GREAT Group as well as the AAMC’s Council of Faculty and Academic Societies (CFAS).

Francis Collins to Remain as NIH Director for Now
As reported by the Washington Post and other sources, the NIH announced last week that current Director Francis Collins, MD, PhD, has been "held over by the Trump administration" and will remain in his position for now. Also currently retained in a leadership role is France Córdova, PhD, head of the National Science Foundation.

NIGMS Advisory Council Meeting Approves Concept for New T32 Training Grant
The Advisory Council of the NIH’s National Institute of General Medical Sciences (NIGMS) met from January 26-27, and discussed several items of interest, including an update on the NIH Division of Biomedical Research Workforce Programs. The council also approved a concept for an NIGMS-specific predoctoral T32 training grant, with publication of the funding announcement expected in fall 2017. NIGMS previously noted that the community responses to its RFI on modernizing graduate education would be used to inform the development of this new grant.

Science Careers: Student Performance Measures Don’t Perform
Two research studies published recently in PLoS One by the University of North Carolina at Chapel Hill
(UNC) and Vanderbilt University in Nashville, find that neither GRE scores nor GPA are positively correlated with the number of first-author papers a biological/biomedical doctoral student publishes, or his/her progress through the PhD training program. More coverage is available from Science Careers.

**NSF Releases Profile of Early Career Doctorates: 2015**
The Early Career Doctorates Survey (ECDS), sponsored by the National Center for Science and Engineering Statistics (NCSES) within the NSF, has released the results of the 2015 ECDS pilot study. The survey gathers in-depth information about individuals receiving their first doctorate within the past ten years who are employed at U.S. master's and doctorate-granting academic institutions, federally funded research and development centers, or the NIH Intramural Research Program.

**AAMC Webinar Examines Research Perspective on Opioid Epidemic**
The AAMC invites you to participate in the second in a series of free webinars examining how medical schools and teaching hospitals are responding to the opioid epidemic. Join us Monday, February 27 at 12:00 PM Eastern Time for Parallel Crises: The Over and Under Prescription of Opioids as we analyze the epidemic from a research perspective and discuss the background and clinical treatment of the epidemic as well as persistent racial and ethnic disparities in opioid prescribing.

**AAMC Webinar on Common Rule Final Revisions Now Available**
The AAMC held a webinar on the final rule revising the Common Rule, the federal regulations governing the protection of human subjects in research. The webinar is now available on the AAMC Common Rule website, along with other resources and background information on the regulation. For any questions, please contact Heather Pierce, Senior Director for Public Policy and Regulatory Counsel.

**Burroughs Wellcome Fund Grant: Career Guidance for Trainees**
The Burroughs Wellcome Fund Career Guidance for Trainees program provides grants of about $30,000 (but up to $50,000) to support demonstration projects that will model affordable approaches to improving trainees’ readiness for stable, fulfilling careers, whether by clarifying and improving their basic “Ph.D.-level” skills, or by other strategies. The deadline for grant proposals is March 6, 2017.

**CGS Resource on Professional Development for STEM Graduate Students**
A new CGS publication, Professional Development: Shaping Effective Programs for STEM Graduate Students, highlights promising practices, common challenges, recommendations, and possible next steps toward coordinated improvements to the professional development of STEM graduate students, including PhDs, master’s degree holders, and postdoctorates. More information about the project is available on the CGS website.

**Nature Biotechnology: The Impact of Postdoctoral Training on Early Careers in Biomedicine**
A recent study published in Nature Biotechnology analyzes the impact of postdoctoral training on future careers, finding that while generally necessary for tenure-track positions, they do not enhance salaries in other job sectors over time. The study, based on data from the NSF, is also covered in Science, which highlights the finding that postdocs “give up about one-fifth of their earning potential in the first 15 years after finishing their doctorates.”

**Science Letters: Building Community for Deaf Scientists**
A letter sent in to Science Magazine highlights specific challenges present for deaf and hard-of-hearing (D/HH) individuals, who remain significantly underrepresented in the biomedical research workforce. The authors, from the Rochester Institute for Technology and the University of Rochester, suggest the creation of a “D/HH hub of innovation,” which would disseminate best practices for career development and training and accelerate the inclusion of D/HH people into biomedicine.

**Top Science Journals Examine Gender Bias**
Both Science and Nature recently published pieces examining gender imbalance in their publications. An editorial from Science Editor-in-Chief Jeremy Berg focuses on percentages of women authors in the journal, with an intention to also collect reviewer data moving forward; Nature presents data on the gender of reviewers and its News & Views authors, of which women still comprise only a quarter of all
Contributors.

Chronicle of Higher Ed: The Need for More MD-PhD Hybrids
An article in the Chronicle of Higher Education examines the decreasing numbers of physician-scientists and new issues that contribute to the problem, including growing tuition costs, extremely lengthy time-to-degree, and a lack of guidance and coordination for students. The author examines strategies that universities might take, including rethinking the progression of dual degree programs and providing extra flexibility to conduct research without having to obtain an additional degree.

ABMS Seeks Applications for Visiting Scholars Program
The American Board of Medical Specialties (ABMS) Research and Education Foundation Visiting Scholars Program is accepting applications for the 2017-2018 class. The one-year, part-time program facilitates professional development and scholarship. Early career physicians, junior faculty, fellows, residents, and individuals holding advanced degrees in public health, health services research, and other relevant disciplines are invited to apply. For more information, visit abms.org.

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From Washington Highlights

AAMC Joins Letter to President Trump and Congressional Leadership on NIH Funding
The AAMC joined 259 patient, medical, scientific, and academic organizations on a Feb. 7 community letter urging President Trump and congressional leadership to complete a FY 2017 spending package that includes $34.1 billion for the National Institutes of Health. Read More.

AAMC Joins Letter to President Trump Regarding the Safety of Vaccines
The AAMC joined more than 350 organizations representing families, providers, patients, and consumers on a Feb. 7 community letter to President Donald Trump expressing "unequivocal support for the safety of vaccines" and affirming the scientific evidence base demonstrating that vaccines are safe, effective, and save lives. Read More.

Subscribe to Washington Highlights for updates on the latest legislative and regulatory activities affecting medical schools and teaching hospitals.