ROSALIND FRANKLIN SOCIETY

RFS Briefings

July 15, 2016

MacArthur to Give $100 Million to 1 Group to Solve 1 Big Problem, philanthropy.com, June 2, 2016
"Dream big," says the John D. and Catherine T. MacArthur Foundation to organizations that are pitching proposals on how to solve any of the world's biggest problems in order to win a single $100 million grant through the competition 100%Change. The goal? "To find ideas that would 'significantly mitigate a major problem or seize a compelling opportunity,'" according to Julia Stasch, the new leader of the MacArthur Foundation. The prize is open to all organizations with a proven solution to any major social problem. The application deadline is September 2, 2016. Read more.

How We Became Human, live.newscientist.com, May 30, 2016
Do you ever wonder what makes us human? Alice Roberts, professor at University of Birmingham, has spent years exploring this very question. She has looked deep inside the human body, looked back in time to discover how we as humans have evolved to the way we are, followed the ancestral journeys which led to humans emerging from their homeland of Africa to colonize the globe, and she's even had her own brain scanned and 3D printed to see if she can find any clues there. Are you ready to hear all of Professor Roberts' discoveries and find out where you came from? Hear Professor Roberts speak at Scientist Live, a four-day festival of ideas and discovery in London on September 22-25, 2016. Read more.

Whitehall Foundation Invites LOIs for Bioscience Research Projects, philanthropynewsdigest.com, June 3, 2016
The Whitehall Foundation, which assists scholarly research in the life sciences through its research grants and grants-in-aid programs, is accepting Letters of Intent (LOI). Young scientists of all ages working at accredited institutions in the

U.S. can apply for research grants of up to $225,000 (over three years). Researchers at the assistant professor level and senior scientists can apply for grants-in-aid (one-year grants) of up to $30,000. LOIs must be received no later than October 1, 2016. Selected applicants will be invited to submit complete applications, which are due February 15, 2017. Read more.

Designing Tiny Tools to Find a Tumor: Sangeeta Bhatia, Cross-Pollinating Medical Scientist, tedmed.com, June 2016
Sangeeta Bhatia, Harvard-MIT physician, bioengineer and entrepreneur, shares on a TEDMED talk how she led her multidisciplinary lab to develop an unusual breakthrough in cancer diagnostics. Bhatia leverages 'tiny technologies' of miniaturization to generate inventions with new applications in tissue regeneration, stem cell differentiation, medical diagnostics, predictive toxicology, and drug delivery. An advocate for the participation of women and girls in the Science, Technology, Engineering and Mathematics (STEM) fields, Bhatia hopes her TEDMED Talk will encourage girls and women across the world to develop their skills in engineering and promote a healthier world. Additionally, she and colleagues at MIT launched Keys to Empowering Youth, an organization that connects girls, ages 11-13, with students and women in science and provides mentorship and support through hands-on workshops in engineering. Apply to attend TEDMED 2016 in Palm Springs, CA at The La Quinta Resort and Club, Nov 30 - Dec 2, 2016. Read more.

A Family-Friendly Policy That's Friendliest to Male Professors, nytimes.com, June 24, 2016
Women are underrepresented in the senior ranks of scholars, which has led to dozens of universities to implement family-friendly employment policies. Why? The tenure process can be extremely challenging for women as career pressures usually overlaps with prime childbearing years. Many universities have adopted a tenure-extension policy in order to overcome the gender-disparities and give new parents more flexibility. But, are these gender-neutral policies actually having positive impacts on women's careers? Read more.

Sheryl Sandberg on the Myth of the Catty Woman, nytimes.com, June 23, 2016
Is a powerful woman really the biggest enemy of another woman? Norwegians Therese Johaug and Marit Bjorgen are not only the top female cross-country skiers in the world and competitors, but they are also best friends. The two women exemplify what happens every day – women helping each other, both professionally and personally. If women continue to support each other, they will in turn break down the gender (and racial) disparities that exist. Sandberg writes, "When a woman helps another woman, they both benefit. And when women celebrate one another's accomplishments, we're all lifted up." Read more.

Three Experts Explore the Disruptive Potential of Synthetic Biology, mckinsey.com, June 2016

Navjot Singh, senior partner at McKinsey's Boston office, discusses synthetic biology and explores its startling potential with three experts: David Berry, general partner at Flagship Ventures, Andras Forgacs, cofounder and CEO of Modern Meadow, and Ellen Jorgensen, molecular biologist and cofounder and executive director of Genspace. When asked what industries the impact of synthetic biology are seen in, Jorgensen comments, "It's such a new field that there is very little that's come to market yet… Medicine is of cure an important frontier." Read more.

PNNL Appoints Liyuan Liang Director of EMSL, pnnl.gov, June 6, 2016
Liyuan Liang, a world-class chemist, has been selected as the Director of EMSL, the Environmental Molecular Sciences Laboratory (EMSL), a Department of Energy user facility on the campus of the Pacific Northwest National Laboratory (PNNL), and will join EMSL this summer. Her responsibilities will include: creating a scientific vision that attracts exceptional staff scientists and users of EMSL facilities and programs; encouraging groundbreaking research; and cultivating the creation of strong scientific terms and communities. Read more.

What Does a Lifetime of Leers Do to Us?, nytimes.com, June 4, 2016
What do the moments – when men who aren't fictional characters, but real-life horrors in girls' and women's lives – do to us? "It would be silly to believe that who I am today isn't in part created by the distinct combinations of those moments," says Jessica Valenti, a Queens, New York native who grew up taking the subway to school and was frequently harassed by men during her commute. Valenti is a columnist for the Guardian and the author of the memoir *Sex Object*. In this influential cultural time for feminism, it is important to not "leave aside the snowball effect of all types of sexism over a lifetime," and encourage the female leaders of tomorrow to not accept roles as objects. Read more.

Women in STEM: Changing the Face of Science, normantranscript.com, June 5, 2016
Madeline Bull not only graduated from the petroleum engineering school at the University of Oklahoma (OU) in May 2016, but was also the first female president at the OU chapter of Society of Petroleum Engineers. According to the U.S. Department of Labor statistics, women make up nearly half of the U.S. workforce but only account for 14% of all engineers and 39% of chemists. Bull is excited to be a role model for female engineers. "It's just such a great job path… Problem solving in engineering is challenging and stimulating, and I really look forward to encouraging more women to become a part of it." Read more.

Women in Science – a Historical Perspective, rsc.org, June 2016,
David Neadle, a retired member of the Royal Society of Chemistry, celebrated the society's 175th anniversary by dedicating 175 minutes to researching the inspirational achievements of historical women in science. Neadle, a STEM (science, technology, engineering, and math) Ambassador in the Black Country, highlights the ongoing struggle for recognition and representation faced by

female scientists. “I have chosen six women, a very difficult task because I was spoiled for choice, and very many equally eminent women scientists have not been included,” says Neadle, who also visited the Rosalind Franklin Building at the University of Wolverhampton during his research. “The lives and achievements of these women are inspiring and I hope young women who read about them may themselves be inspired to consider a career in science.” Read more.

Three Neuroscientists win $1m Award for Discovering Brain’s Plasticity, statnews.com, June 2, 2016
The Norwegian Academy of Science and Letters announced that three neuroscientists – Michael Merzenich of the University of California, San Francisco, Carla Shatz of Stanford University, and Eve Marder of Brandeis University – have won a $1 million Kavli Prize in Neuroscience. The event was live-streamed from Oslo to the World Science Festival in New York City. The Norwegian Academy president Dr. Ole Sejersted said that Merzenich, Shatz (a Board member of the Rosalind Franklin Society), and Marder were honored for discovering “mechanisms that allow experience and neural activity to remodel brain function.” Their breakthroughs have led to the development of cochlear implants for hearing loss and to therapies that use the brain’s power of “neuroplasticity” to recover from stroke, depression, Tourette syndrome, and other conditions – all without the use of drugs. Read more.

9 Scientific Pioneers to Receive 2016 Kavli Prizes, kavliprize.org, June 1, 2016
The Kavli Prizes recognize scientists around the world in the fields of Astrophysics, Nanoscience, and Neuroscience. Two of the nine recipients were women in science: Carla Shatz, of Stanford University and Board member of The Rosalind Franklin Society, and Eve Marder, of Brandeis University. Shatz and Marder share the honor of the Kavli Prize in Neuroscience with Michael Merzenich, of the University of California. The three scientists challenged the assumptions that by adulthood the architect of the brain is hard-wired and provided a credible examination of a far more flexible adult brain. Because of their work, there is hope for developing new ways to treat neurological conditions. Read more.

Emmanuelle Charpentier’s Still-Busy Life After Crispr, nytimes.com, May 30, 2016
For 25 years, Emmanuelle Charpentier was a scientific nomad and worked at nine institutions in five countries. She struggled for research funds but now, at 47, she is recognized as one of three scientists who started the gene editing revolution that ultimately changed her life. Her discovery of Crispr/cas9, which can be used to add or remove genes in any type of cell, ignited a scientific transformation with endless possibilities. Working with Jennifer Doudna, who spoke at a recent RFS Board meeting, a second key discovery showed how CAS9 cleaved DNA. “What was important to me was to tackle different fields and

see different institutions, different environments, learn different techniques, see different approaches." On being a woman in science, however, Dr. Charpentier says she feels "…you have to really make sure you are on the money." Dr. Charpentier received an honorary degree from New York University on May 18, 2016. Read more.

Regeneron Pharmaceuticals to Sponsor Science Talent Search, nytimes.com, May 26, 2016

On May 26, 2016, Regeneron Pharmaceuticals, a biotechnology company based in Tarrytown, NY, announced that it is taking over the sponsorship of the Science Talent Search with a 10-year, $100 million commitment to the high school competition. Intel gave up its 18-year sponsorship of the prize in 2015, and at the time, was paying $6 million a year. Regeneron will spend an additional $30 million in outreach to potential contestants in underserved areas and for mentoring and support with writing applications, as well as contest participation. Additionally, Regeneron will back the establishment and publication of sciences news to 4,000 high schools. "We need these kinds of kids to save the planet," said George D. Yancopoulos, Regeneron's founding scientist and president of its laboratory division. "The world has challenges like cancer, the Zika virus and global warming. We need to change who our heroes are." Read more.

Few Women at the Top of San Diego's Biotech Industry, kpbs.org, lifestream.com, May 25, 2016

According to a report published by Lifestream on May 25, 2016, there is only one female CEO out of 44 publicity traded biotech companies based in San Diego. "Anytime you limit yourself to one gender or one race, you are really limiting the company," said DeeAnn Visk, president of the local chapter of the Association for Women in Science. Melissa Galinato, president of the organization Graduate Women in Science and Engineering at UC San Diego found the numbers in the report disconcerting. "It's hard enough for women to rise and excel in academia, so to hear these statistics about the biotech industry tells us there is a larger problem that is not exclusive to any one field." Her suggestion? Improve gender diversity by mentoring women early in their careers. Read more.

French Women Fight Back, nytimes.com, May 20, 2016

An extraordinary "Statement Against Sexism" was published in France on May 15, 2016 and signed by 17 prominent women, including the International Monetary Fund chief, Christine Lagarde. The message was clear: French women are sick of sexual harassment and they aren't going to take it anymore. The 17 women took action following reports in France Inter and the news site Mediapart on May 9, 2016 by eight women, including four high-ranking members of France's Green Party, of regular occurrences of sexual aggression and harassment by Denis Baupin, a former Green Party politician. Mr. Baupin denied the accusations but, when the allegations went public, he resigned his post as vice president of France's National Assembly. The 17 women are current or former French government ministers and come from across the political spectrum

and said, “We got involved in politics for different reasons. We pursue different goals. But we share the will to make sexism have no place in our society... We will no longer be silent.” Read more.

Uncovering a Tale of Rocket Science, Race, and the ‘60s, nytimes.com, May 20, 2016
Despite the fact that actress Taraji P. Henson dislikes math and actress Octavia Spencer dreads calculus, they are playing the roles of two of the most significant mathematicians in the upcoming film “Hidden Figures.” The film portrays the incredible true story of female African-American mathematicians who were invaluable to NASA’s space program in the Jim Crow South in the early 1960s. “Hidden Figures” comes out as Hollywood is receiving pressure to diversify its presentations after this year’s highly criticized predominately white Oscars race. The film’s director Ted Melfi says, however, “It’s not a reactionary movie but it will be seen as one, which is unfortunate.” The film is set for wide release in January 2017. Read more.

A Child Care Gap in Resume: Whether to Explain or Not, nytimes.com, May 19, 2016
Women who hope to return to the workplace after caring for their children or taking time off are faced with a dilemma during job searching: should they explain the gap on their resumes to prospective companies, or should they ignore it? Joni Hersch, a professor of law and economics at Vanderbilt Law School, and Jennifer Bennett Shinall, an assistant law professor at Vanderbilt, co-authored a new study on the subject, “Something to Talk About: Information Exchange Under Employment Law.” While employers are afraid of running afoul of anti-discrimination laws and don’t bring up the subject, “women who conceal personal information dramatically lower their hiring prospects,” says Professor Hersch. On the other hand, “I think it comes down to the hiring manager,” says Carol Fishman Cohen, chief executive and co-founder of iRelaunch, a firm that works with returning professionals and potential employers.” Her advice to applicants is to recognize the career break, move on, and describe why they are suited for the role. Read more.

Almost 30% of Women in Medicine Experience Sexual Harassment, *The Journal of the American Medical Association (JAMA)*, May 17, 2016
JAMA published a study that surveyed 1,719 individuals who had received the National Institutes of Health's K08 and K23 grants, which offer career support to young researchers, between 2006 and 2009. Around 1,000 recipients responded. Although 4% of men in academic medicine endured sexual harassment, nearly 30% of women in the same field did as well. About 50% of these females said the experience had negatively impacted their career. Furthermore, 70% of women said they'd seen gender bias in the workplace, and 66% said they'd personally endured it. 22% of males noticed a gender bias in the workplace and only 10% of men said they'd personally experienced it. Read more.

Barriers to Board Positions Persist for Minorities and Women, Report Shows, nytimes.com, May 16, 2016
Minorities and women are still underrepresented in American's corporate boards, with Hispanics accounting for less directorship roles than other groups. Last year, 399 new directors were appointed to top company boards, however, Hispanics represented only 4% of the selections, or 16 seats. The biggest challenge for minorities to gain entry to the boardroom is lack of operating or financial experience. "The absence of Hispanic board members appears to come, in large part, from the shortage of Hispanic chief executives," said Cid D. Wilson, president and chief executive of the Hispanic Association on Corporate Responsibility. So, what is Mr. Wilson's suggested solution? "Companies need to do more to recruit Latinos into the boardroom if they are to compete successfully for the growing Latino consumers and future talent." Read more.

Yvette Fay Francis-McBarnette, a Pioneer in Treating Sickle Cell Anemia, Dies at 89, nytimes.com, April 7, 2016
Yvette Fay Francis-McBarnette died on March 28, 2016 in Alexandria, VA at the age of 89. Her daughter Elayne Sara McBarnette confirmed her passing. Dr. Francis was born in Jamaica on May 10, 1926 and later immigrated to Harlem, NY with her parents. At the age of 14, Dr. Francis enrolled in Hunter College and graduated with a bachelor's degree in physics in 3.5 years. She then earned a master's degree in chemistry from Columbia University and in 1946, at the age of 16, Dr. Francis become the second black woman to enroll at the Yale School of Medicine. Dr. Francis was directing a clinic at Jamaica Hospital Medical Center in Queens, NY when she successfully used antibiotics as a treatment for children with sickle cell anemia. As a black woman in medicine at the beginning of the civil rights movements, Dr. Francis overcame obstacles and was a medical pioneer. Read more.