Dr. Aaron S. Kesselheim (RSI ’91), MD, JD, MPH, Professor of Medicine, Harvard Medical School, and a faculty member in the Division of Pharmacoepidemiology and Pharmacoeconomics in the Department of Medicine at Brigham and Women’s Hospital, will be presented with the Senator Joseph I. Lieberman Award for Outstanding Achievement in STEM.

Author of over 600 publications in peer-reviewed medical and health policy literatures, Dr. Kesselheim was recognized as one of the top 3 most cited health law scholars in the U.S. from 2013-2020 in Web of Science, Westlaw, and Google Scholar. Dr. Kesselheim has testified before Congress on pharmaceutical policy, medical device regulation, generic drugs, and modernizing clinical trials. In 2020, he was elected to the National Academy of Medicine.

The Lieberman award acknowledges significant accomplishments in STEM and recognizes Senator Lieberman’s longtime support as a CEE Honorary Trustee.

Jonathan Gardner, PhD, Deputy Senior Project Scientist for NASA’s James Webb Space Telescope, will deliver the keynote address at the Center for Excellence in Education’s (CEE) Annual Congressional Luncheon on Tuesday, April 25 from 11 a.m. to 2 p.m. ET in Washington, DC.

Dr. Gardner previously served as the Chief of Goddard’s Observational Cosmology Laboratory from 2006 until the launch of Webb in 2021. The James Webb Space Telescope looks backwards in time to find the first galaxies that formed after the Big Bang. The project traces their evolution into galaxies and connects the formation of stars and planets with the history of our Solar System. Dr. Gardner collaborates with other scientists to ensure the scientific success of the mission.

CEE’s annual event celebrates 40 years of success in helping STEM teachers and students. It brings together STEM leaders in the public and private sectors, friends of CEE, and alumni of the Center’s programs to hear from congressional representatives.

Great news! CEE and Massachusetts Institute of Technology (MIT) have agreed to increase the number of RSI students to 100! RSI ’23 convenes June 25 to August 5, 2023, in collaboration with MIT on its campus. Mark Kantrowitz (RSI ’84) will again serve as the Director of RSI. RSI continues to be cost-free for students to attend thanks to the generosity of donors.

(Continued on Page 3)
The Center for Excellence in Education took a bold step that necessitated manpower and funds to begin a project of outreach to identify students from underrepresented populations and to encourage them to apply to the Research Science Institute and USA Biolympiad, CEE’s programs for precocious high school STEM students. In 2022, less than 9 percent of the Research Science Institute students were constituted from underrepresented populations. It had long been assumed that some student populations could not meet the criteria in place for admission to CEE’s prestigious Institute and only could be admitted if standards were reduced for them.

The Research Science Institute, which Admiral Rickover and I founded in 1984, is collaboratively sponsored with MIT for six weeks on its campus each summer. It is the first high school research program in the U.S. and is currently offered to 100 exemplary young scholars whose credentials are laudable: almost all students have GPAs above 4.0 weighted average, up to 22 APs with scores of 5, research completed and published beginning in middle school, and over one third with completion of college level courses. In 1984, the first RSI hosted eleven females of the fifty students, all pursuing biology degrees but one, and all of Asian ethnicity but a few. In 2022, for the first time, females made up 55% of the U.S. RSI participants. In the Regeneron Science Talent Search competition, the five RSI Finalists were all women.

After significant outreach to increase the number of applications from underrepresented populations, the 2023 RSI will host 12 students from underrepresented populations representing 19 percent of the U.S. students. The Board of Trustees of the Center took the position that even in an unwelcoming economic climate a project must begin with MIT’s assistance to reach heretofore organizations, schools, and sources not before approached to help identify underrepresented students in STEM. Charter schools were referenced. The Center and a committee of CEE Trustees proposed to MIT that over a 3-year period advances would be made in the identification of meritorious underrepresented students with no compromise of the Center’s qualifications. Color would not be used as a criterion for admission to RSI.

CEE’s baseline was the result of the 2022 session in that 5 underrepresented students were admitted with average scores exactly like the rest of the admitted population. CEE agreed that effort and considerable hands-on time in upcoming years would show that there is no need to lower standards or have claims of victimhood be used in the selection of outstanding STEM students. Networking and introductions are in place from the Center’s Board of Trustees, and dedicated Center staff are working to make significant increases in the number of role models for unidentified young scholars. In 2023, the efforts were clear: twelve underrepresented students were admitted to the RSI.

This result was accomplished by significantly expanding the outreach to students from underrepresented populations. Our goal was to increase outreach by 20 percent. We blew that goal out of the water, more than doubling our outreach. The number of applications from underrepresented students increased 3.6-fold, leading to a 2.4-fold increase in the number of accepted students.

There are many qualified students from underrepresented populations. Our results prove it to be true. The Center is just getting started.

Are the results perfect? Of course not. Should CEE celebrate victory and move on? Of course not. Underrepresented student populations have scholars that exemplary programs need to find, and CEE plans to be a leader in finding and nurturing them. Money alone is not the answer. Personal communications and networking must be exploited across the nation and deep in states where there are feeder schools to universities from among underrepresented populations. The project calls for shoe leather and intensive labor, but the results are for long term diversity, opportunity, and excellence in U.S. STEM leadership.

Joann P. DiGennaro
President
Center for Excellence in Education
Ellen Xu (RSI ’22) placed third in the 2023 Regeneron Science Talent Search (STS) science and math competition for high school seniors. Ms. Xu, recipient of the $150,000 prize, is a student at Del Norte High School, San Diego, CA. She was selected from nearly 2,000 highly qualified entrants. Ms. Xu developed an algorithm that uses a smartphone photo of the patient to aid in the diagnosis of Kawasaki disease, the leading cause of acquired heart disease in children between one and five. Four other 2022 RSI alumni were among the top 40 finalists: Angela Chen, North Carolina School of Science and Mathematics, Durham, NC; Madeleine de Belloy, Lycée Français de San Francisco, CA; Michelle Hua, Cranbrook Kingswood School, Bloomfield Hills, MI; and Sally Zhu, The Harker School, San Jose, CA. Thirty of CEE’s RSI alumni and two USA Biolympiad alumni were among the semifinalists. These students built on their extraordinary RSI experience which included original, innovative research at RSI. CEE alumni enjoy networking and enrichment activities throughout their collegiate and professional careers. More information about RSI is at www.cee.org/programs/research-science-institute.

Preparations are underway for the 2023 USA Biolympiad (USABO), the nation’s most prestigious biology education and testing program for U.S. high school students. 580 schools registered for the exam, and more than 9,000 high school students registered for the online Open Exam. The top 20 semifinalists will attend the USABO National Finals at Marymount University June 2-16. Finalists work with leading biologists and learn from guest speakers. Students then take exams to compete for the USA Biolympiad Team. During the 2-week USABO National Finals, students participate in cost-free, intensive theoretical and practical biology tutorials. The four gold medalists from USABO’s National Finals will represent the U.S. at the 34th International Biology Olympiad (IBO), a worldwide competition involving student teams from over 70 countries. IBO will be hosted in the United Arab Emirates in July 2023. For more information on USABO, visit www.cee.org/programs/usa-biolympiad.

This spring CEE’s Teacher Enrichment Program (TEP) is hosting virtual Bite of Science workshops and College & Career Panels for STEM teachers and guidance counselors. Recent topics have included STEM in sports, information technology and computing, space, medicine, architecture and design. All the recordings are available for free on CEE’s YouTube Channel. TEP organizes exciting, cost-free STEM opportunities for underserved rural and urban high school teachers to take back to their classrooms. TEP links STEM educators across the country with professional resources and connections to advance their careers and to directly benefit their students. To date, more than 4,000 teachers from over 1,400 schools have participated, reaching more than 600,000 rural and urban students to consider STEM careers. More information about TEP is at www.cee.org/programs/teacher-enrichment-program.

This spring, through its STEM Lyceums program, CEE is conducting cost-free webinars to connect underserved high school students with an ecosystem of top industry professionals and innovators. CEE’s STEM Lyceums is a virtual club with the purpose of building high school STEM communities, and engaging students in discussions and explorations of STEM concepts and STEM career pathways, provided at no cost to schools or students. Students interact with STEM professionals and fellow students, both national and international. Meetings foster critical thinking skills, encourage excitement for science, and prepare students to enter STEM careers. To date students have explored genomics, clean/renewable energy, engineering, smart devices, health sciences, aerospace, zoology, biomedical engineering, data science, and cybersecurity. More information about STEM Lyceums is at www.cee.org/programs/stem-lyceums.
CEE’s 2022 Up and Atom Annual Fund campaign concluded on December 31. Thanks to alumni, parents, and friends of The Center the goal was reached to support the Center’s vital science, technology, engineering, and mathematics (STEM) education programs. Thanks to the 2022 Alumni and Parent Committees for volunteering time and expertise to advance CEE. Alumni Committee members are Matthew Thrasher (RSI ’98) (Chair), Jason Koh (RSI ’85), Rich Simon (RSI ’86), John Quisel (RSI ’88), Jed Macosko (RSI ’89), Rageshree Ramachandran (RSI ’90), Evan M. Schwartz (RSI ’00), Nina Vasan (RSI ’01), Ryan Orley (RSI ’05), Caroline S. Lo (RSI ’07), and William Ellsworth (USABO ’17 & RSI ’18). CEE’s Parents Committee (CPC) members are: Doug Himberger, PhD, CEE Trustee and CPC Chair (Chair), Jaime & Jerry Horowitz (RSI ’87), Tina and Howard Kesselheim (RSI ’91 & ’94), Susan Wildstrom (RSI ’97), Roger and Marianne Pellegrini (RSI ’11), Marli Pasternak (RSI ’12), Sushovan Guha (USABO ’14 & ’15), Angela Fu (RSI ’17), John Liu and Catherine Lu (RSI ’18), Yvonne Li (USABO ’18 & ’19), Judy Rosman and Michael Vogelbaum, MD (RSI ’18), Peng Jiang, PhD and Julie Wang (RSI ’19), Sarah and Pete Meindl (RSI ’19), Dr. Fang Zhu (RSI ’19), Jin Cheng (RSI ’19), Doug Shell and Wendy Cheng-Shell (RSI ’21), Elizabeth Pan (USABO ’21), Vidya and Anand Iyer (USABO ’21), Jennifer and John Wahlig (RSI ’21 & ’22), Steven Zhu, (USABO ’20 & ’22), Annie Yan Chen (USABO ’21, ’22), and Nicholas and Chijui Liao Van Dusen (USABO ’22).

Your contribution to CEE is greatly appreciated! Your donation enables, RSI, USABO, TEP, and STEM Lyceums to remain free of cost to all participants. As a 501(3) charitable nonprofit organization, donations to CEE are tax-deductible. Your gift may kindly be made online by visiting www.cee.org/donate or by calling the Center at (703) 448-9062. Checks may be mailed to the Center’s new address: Center for Excellence in Education, 7918 Jones Branch Drive, Suite 700, McLean, VA 22102. Every gift advances the Center’s vital STEM education mission. CEE has again received top ratings from GuideStar and GreatNonProfits.org.

Kent Talma Churchill (RSI ’84) of Cumming, GA, passed away on December 22, 2022. Born in Detroit, Michigan, on August 23, 1967, Kent spent his early years in Northern Virginia but referred to the Atlanta area as his home. In 2022, Kent fought a long but successful battle with Non-Hodgkins Lymphoma and was on vacation with his family in Costa Rica where he passed away suddenly and tragically. While swimming with his son, he was overcome by a riptide.

Kent attended the premier session of the Research Science Institute in 1984. He was an active alum, participating and planning RSI events over the years.

Kent attended the Naval Academy where he received a Bachelor’s degree in History. He received a master’s degree in management from Georgia Tech. In addition, Kent was an officer for the United States Navy where he served in Desert Storm. Kent had many hobbies and interests including earning a rare certification as a high-powered distinguished rifleman, recreational welding, and creating things with 3D printing. Kent loved nature and the outdoors and was happiest when in the mountains.

He is survived by his wife Geeta Bhat Churchill of Cumming, GA, and son Kaden Talma Churchill also of Cumming, GA. His father Gerald Joseph Churchill (Jerry) served as the Chairperson of the Board’s Finance Committee on CEE’s initial Board of Trustees.

The Kent Churchill Scholarship has been established in his memory. CEE Board of Trustees Vice Chairman Steven P. Strong, PhD, (RSI ’84) Founder & Principal, Fenrir LLC, will generously match $150,000 in donations to the scholarship. Donations to the scholarship at CEE are restricted and will only be used for student costs to RSI. Online gifts at www.cee.org/donate using the GiveDirect option should add ‘Kent Churchill Scholarship’ in the comments section. Gifts mailed to CEE’s office should note ‘Kent Churchill Scholarship’ in the transmittal. Or call (703) 448-9062 for assistance.
WHERE ARE CEE ALUMNI NOW?

Shree Bose (RSI ’18) is an MD/PhD student at Duke University School of Medicine. She earned a BA in Cell/Cellular and Molecular Biology at Harvard University. She cofounded Piper, a STEM education company creating engineering kits for children. She was the grand prize winner of the inaugural Google Science Fair in 2011 and featured in the 2023 Forbes 30 Under 30.

JonLuca DeCaro (RSI ’13) is co-founder & CTO at Alta, an early-stage startup. He earned a bachelor’s degree in computer science from the University of Southern California. Previously he worked at Citadel, Pinterest, Google, and Apple. He is a full stack engineer and worked in growth, security, and product.

Helen Farrants, PhD (RSI ’09) is a Postdoctoral Researcher at the Howard Hughes Medical Institute. She completed her undergraduate degree at Sweden’s Internationella Engelska Gymnasiet Södermalm in natural sciences and her MS in chemistry at The University of Edinburgh. She earned a PhD in chemistry at the Swiss École polytechnique fédérale de Lausanne.

Conrad Poelman, PhD (RSI ’85) is Chief Scientist and Owner, Stellar Science Ltd Co. He previously served as a Major in the U.S. Air Force. He earned a BS in Computer Science and a BS in Aerospace Engineering from MIT and earned a PhD in Computer Science from Carnegie Mellon University.

Iva Rashkova, PhD (RSI ’02) is an Assistant Professor at Washington University in St. Louis. She earned a BS in Mathematics/Economics from California Institute of Technology, an MA in Economics from Yale University, and a PhD in Management Science and Operations from the London Business School.

Katerina Velcheva, PhD (RSI ’10) is a teacher of advanced mathematics at The American College of Sofia in Bulgaria. She earned a BS in Mathematics with a minor in Economics from MIT and a PhD in Mathematics from Stanford.

CEE ALUMNI EVENTS

Guests gathered in-person in Chicago and Boston for camaraderie, food, and networking with alumni and friends of RSI and USABO. The keynote speaker at The Chicago Club on Friday, November 4 was Lauren Ancel Meyers, PhD (RSI ’90), the Cooley Centennial Professor of Integrative Biology and Statistics & Data Sciences at The University of Texas at Austin. The event host was Jason L. Koh, MD, MBA, FAAOS (RSI ’85), Mark R. Neaman Family Chair of Orthopaedic Surgery and Director, Orthopaedic & Spine Institute, NorthShore University HealthSystem; and Clinical Professor, Orthopaedic Surgery, The University of Chicago.

The Boston Bash event for alumni and students in the Cambridge/Boston area, was held at the Broad Institute in Cambridge on Monday, November 7 and was hosted by CEE Trustee Feng Zhang, PhD (RSI ’99), Core Member, Broad Institute, and Developer of CRISPR; and David Cheng (RSI ’99), CTO, Arbor Biotechnologies. This annual alumni event brought together over 100 RSI & USABO scholars for an afternoon of camaraderie and fun!
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