Chinese scientists and US leadership in the life sciences

To the Editor — We, the undersigned, are leaders in US academic and industrial biomedical research and drug development. We are concerned that recent actions by government agencies and universities with respect to Chinese scientists in the United States could threaten US leadership in biomedical science.

Recently, some scientists from China, or American-born researchers of Chinese heritage, have been summarily dismissed from their university positions, creating a climate of fear and uncertainty in our biomedical communities.

Let us be clear: we must absolutely guard against foreign espionage and intellectual property theft, and prosecute those who engage in it, whatever their origins. At the same time, actions that more broadly limit collaboration between Chinese and American scientists and companies would be deleterious to our national interests; so too would limitations on American residents of Chinese origin receiving government research funding or being employed by the US National Institutes of Health.

In military wars between national adversaries, leaders often vilify ‘the other’. Our ‘war’ unifies an international community of medical researchers to fight a common adversary, disease: cancers, immune diseases, Alzheimer’s disease and infections, to name just a few. Vilifying or excluding any group as ‘the other’ limits our ability to win this war.

The United States’ unique constitution as a nation of immigrants has been fundamental to our world leadership in biomedical research and drug development. Our nation most prolifically attracts the best, most diverse talent from the entire world. This has enriched our economy and society. As a case in point, our preliminary research indicates that, since 1999, over 400,000 US patents have been issued to inventors of Chinese descent resident in the United States (Fig. 1), and ~28% of US biomedical science publications in 2018 included an author of Chinese descent (see Supplementary Methods and Supplementary Data 1 and 2).

An atmosphere of intimidation will encourage many outstanding scientists of Chinese origin to leave the United States or never to come. In addition, scientists from other countries who are working in the

Fig. 1 | Estimating the contribution of Chinese-ethnic researchers to the US patent landscape. US-resident inventors with top 200 Chinese ethnic names as a percentage of total US inventors.

United States cannot fail to get the message that they may well be next.

We also note that the vast majority of the results of academic biomedical research are not secret; their publication and open exchange are the cornerstone of our success against our common enemy of human disease and suffering. Thomas Jefferson wrote, “He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me.”

We support the opinions recently published by the editors of *Nature* (571, 297, 2019) and *Nature Biotechnology* (37, 827, 2019) and by former US National Institutes of Health director Elias Zerhouni in *Science* (365, 9, 2019), and advocate for measured policies that will both protect US intellectual property and continue to foster the diversity and collaboration that fuel our ability to advance science and cure disease. At a minimum, universities must effectively communicate and consistently apply their rules governing scientific collaborations and intellectual property obligations, and they, as well as government agencies, must clearly justify their actions when they accuse scientists of malfeasance or seek to dismiss them from their positions.

Ronald Reagan said, “We lead the world, because unique among nations, we draw our people, our strength from every country and every corner of the world,” and, “If we

ever close our door to new Americans, our leadership in the world will soon be lost.”

Nowhere are these thoughts more pertinent than in biomedical science. If we are to prevail in humanity’s common quest to conquer disease, our surest route is to include any person able to contribute, regardless of country of origin, religion, race, gender or other identity. The US biomedical community stands for the principles of diversity and unity embedded in the founding principles of our country, without which our leadership indeed will soon be lost. □

Steven H. Holtzman¹, Ron Cohen², Jeremy M. Levin^{3*}, John Maraganore⁴ and Signatories to the Statement⁵

¹Decibel Therapeutics, Inc., Cambridge, MA, USA.

²Acorda Therapeutics, Inc., Ardsley, NY, USA.

³Ovid Therapeutics, New York, NY, USA. ⁴Alnylam Pharmaceuticals, Cambridge, MA, USA.

⁵A list of members and affiliations appears at the end of the paper.

*e-mail: jlevin@ovidrx.com

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Competing interests

S.H.H. is president, CEO and board member of Decibel Therapeutics and on the board of Molecular Partners. R.C. is president and CEO of Acorda Therapeutics and a board member of VBL Therapeutics and the Biotechnology

Innovation Organization. J.M.L. is an officer at Ovid Therapeutics and on the board of Lundbeck A/S, Biocon Limited and the Biotechnology Innovation Organization. J. Maraganore is CEO and board member of Alnylam Pharmaceuticals and on the board of Agios Pharmaceuticals and the Biotechnology Innovation Organization. The appended signatures do not necessarily reflect the policy or position of any agency, organization, employer or company with which the signatories are affiliated.

Additional information

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Signatories to the Statement

Jeff Albers⁶, Joseph E. Aoun⁷, James E. Audia⁸, Michael P. Bailey⁹, Peter Barrett¹⁰, David Bartel^{11,12}, Jean-Jacques Bienamie¹³, Robert I. Blum¹⁴, Joshua Boger^{15,16}, Jim Bollenbacher¹⁷, Michael W. Bonney^{18,19}, Bruce Booth¹⁰, Daniel M. Bradbury²⁰, Olivier Brandicourt^{21,22}, Eugene Braunwald²³, Anne E. Carpenter²⁴, Henry E. Chang²⁵, Pavan Cheruvu²⁶, Gustav Christensen²⁷, George Church²³, Michael D. Clayman²⁸, Charles L. Cooney²⁹, Gerald F. Cox^{30,31}, Sally J. Curley³², Bassil Dahiyat³³, Ronald A. DePinho³⁴, John Diekman³⁵, Douglas Doerfler³⁶, Daniel Dornbusch³⁷, Richard H. Douglas³⁸, Deborah Dunsire³⁹, Richard H. Ebricht⁴⁰, Wayne Eskridge⁴¹, Gregory J. Flesher⁴², Kenneth Fong⁴³, Jean-Francois Formela¹⁰, Kaye Foster-Cheek⁴⁴, Cedric Francois⁴⁵, Michael P. Franken⁴⁶, Heather Franklin⁴⁷, Yang-Xin Fu⁴⁸, L. Patrick Gage⁴⁹, Phyllis Gardner⁵⁰, Jason Gardner¹⁸, Mohamed Genead⁵¹, James A. Geraghty⁵², Leo Gerweck⁵³, Simba Gill⁵⁴, Steven Gillis⁵⁵, David V. Goeddel⁵⁶, Mark Goldsmith⁵⁷, Kurt Graves⁵⁸, Mary Ann Gray⁵⁹, David Grayzel¹⁰, Barry Greene, Richard J. Gregory⁶⁰, Carol A. Greve-Philips⁶¹, David-Alexandre Gros⁶², Margaret A. Hamburg⁶³, Michael Hammerschmidt⁶⁴, Yuan Hao⁶⁵, Haro Hartounian⁶⁶, Faheem Hasnain⁶⁷, Paul J. Hastings⁶⁸, Elma S. Hawkins⁶⁹, Wei-Wu He⁷⁰, Wei He⁷¹, Alan Hirzel⁷², Zhi Hong⁷³, Hervé Hoppenot⁷⁴, William Jia⁷⁵, Johanne Kaplan⁷⁶, Jeb Keiper⁷⁷, Vanessa King⁷⁸, Peter Kolchinsky⁷⁹, Daphne Koller⁸⁰, Paul Laikind⁸¹, Eric S. Lander²⁴, Robert S. Langer²⁹, Donna L. LaVoie⁸², Alison Lawton¹⁹, John J. Lee, Jonathan S. Leff⁸³, John Lepore⁸⁴, Nick Leschly⁸⁵, Qingsheng Li⁸⁶, Matthew H. Liang^{23,87,88}, Judy Lieberman³¹, Johnathan Lim⁸⁹, Martin Lindenberg⁹⁰, Stephen J. Lippard²⁹, David R. Liu⁹¹, Yan Liu⁹², Shan-Lu Liu⁹³, Harvey Lodish¹¹, Brad Loncar⁹⁴, Uri Lopatin⁹⁵, Ted W. Love⁹⁶, Derek Lowe⁹⁷, Israel Lowy⁹⁸, Hongbo Lu⁹⁹, Liqun Luo⁵⁰, Nagesh K. Mahanthappa¹⁰⁰, Paul W. Martin Jr.¹⁰¹, Ann Martini¹⁰², W. Eddie Martucci¹⁰³, James McArthur¹⁰⁴, Corey M. McCann¹⁰⁵, Sean McCarthy¹⁰⁶, David McLachlan^{107,108}, Craig Mello^{12,109}, Steven J. Mento¹¹⁰, James Meyers^{106,111},

Rachel Meyers¹¹², Ken Mills¹¹³, Kenneth I. Moch¹¹⁴, Walter H. Moos¹¹⁵, Michael Narachi¹¹⁶, Amir Nashat¹¹⁷, William J. Newell¹¹⁸, Oleg Nodelman¹¹⁹, Bernat Olle¹²⁰, John E. Osborn¹²¹, John V. Oyler¹²², William Pao¹²³, Neil Patel¹²⁴, Rob Perez¹²⁵, Doris Peterkin¹²⁶, Alice Pompino¹²⁷, Mark Pruzanski¹²⁸, Dan Quinn¹²⁹, Amina Ann Qutub¹³⁰, Michael G. Raab¹³¹, Massimo Radaelli¹³², Amit Rakhit, Kartik Ramamoorthi¹³³, William Rastetter^{134,135,136}, John C. Reed¹³⁷, Harald Reinhart¹³⁸, Jason P. Rhodes¹⁰, William J. Rieflin¹³⁹, Lijun Rong¹⁴⁰, Daniel E. Rosan, Michael Rosenblatt¹⁴¹, William J. Rutter¹⁴², Ismael Samudio⁷⁵, Camille Samuels¹⁴³, Vicki L. Sato^{144,145}, Brent Saunders¹⁴⁶, David Scadden¹⁴⁷, George Scangos¹⁴⁵, John A. Scarlett¹⁴⁸, Marc Schegerin¹⁴⁹, Paul Schimmel^{150,151}, Stuart L. Schreiber^{24,147}, Christian R. Schubert¹⁵², Amy Schulman¹⁵³, Eric Shaff¹⁵⁴, Robert Shaffer¹⁵⁵, Phillip A. Sharp¹⁵⁶, Morgan Sheng²⁴, Guojun Sheng¹⁵⁷, Thomas Shenk¹⁵⁸, Fuxin Shi, Ada Silos-Santiago, Nancy Simonian¹⁵⁹, William Slattery⁸³, Julie A. Smith¹⁶⁰, Clifford Stocks¹⁶¹, Markus Stoffel¹⁶², Michael Su, Lishan Su¹⁶³, Nina Tandon¹⁶⁴, C. M. Tang¹⁶⁵, Alison Taunton-Rigby¹⁶⁶, Nikolaos Tezapsidis¹⁶⁷, Charles Theuer¹⁶⁸, Nancy A. Thornberry¹⁶⁹, Martin Tolar¹⁷⁰, Eric Topol¹⁵¹, Wanda Tormos⁹⁶, Anna Trask, Samantha Truex¹⁷¹, Thomas Tuschl¹⁷², Harold E. Varmus¹⁷³, Michael J. Vasconcelles¹⁷⁴, Michel Vounatsos¹⁷⁵, Timothy P. Walbert¹⁷⁶, Christopher T. Walsh⁵⁰, Jason Wang¹⁷⁷, Jie Wang⁶⁶, Nan Wang⁶⁶, Christoph Westphal¹⁷⁸, Wendell Wierenga¹⁷⁹, Douglas E. Williams¹⁸⁰, Lewis T. Williams¹⁸¹, Rick E. Winningham¹⁸², Peter Wirth¹⁸³, Ryan Witt¹⁸⁴, Charles Wood¹⁸⁵, David J. Woodhouse¹³⁹, Rob Wright¹⁸⁶, Yuntao Wu¹⁸⁷, Kleantes G. Xanthopoulos¹⁸⁸, Charlie Xiao¹⁸⁹, Tsan Sam Xiao¹⁹⁰, Jingwu Xie¹⁹¹, Yan Xu¹⁹², Zao C. Xu¹⁹¹, Gerald J. Yakatan¹⁹³, Lijuan Yuan¹⁹⁴, W. K. Alfred Yung³⁴, Phillip D. Zamore^{12,195}, Mark Zaydman^{196,197}, Xian-Ming Zeng¹⁹⁸, Elias Zerhouni^{12,199,200}, Feng Zhang^{12,24,201}, Qing Zhang⁴⁸ and Shuguang Zhang²⁹

⁶Blueprint Medicines, Cambridge, MA, USA.

⁷Northeastern University, Boston, MA, USA.

⁸Chicago Biomedical Consortium, Northwestern University, Chicago, IL, USA. ⁹AVEO Oncology, Cambridge, MA, USA. ¹⁰Atlas Venture, Cambridge, MA, USA. ¹¹Whitehead Institute for Biomedical Research – MIT, Cambridge, MA, USA. ¹²Howard Hughes Medical Institute (HHMI), Chevy Chase, MD, USA. ¹³BioMarin Pharmaceuticals Inc., San Rafael, CA, USA. ¹⁴Cytogenetics, Inc., South San Francisco, CA, USA. ¹⁵Boston, MA, USA. ¹⁶Vertex Pharmaceuticals Incorporated (former), Boston, MA, USA. ¹⁷Bridgeway Search Group, Life Sciences, Independence, OH, USA. ¹⁸Magenta Therapeutics, Cambridge, MA, USA. ¹⁹Kaleido Biosciences, Inc., Lexington, MA, USA. ²⁰Equillium, La Jolla, CA,

USA. ²¹New York, NY, USA. ²²Sanofi, S.A. (former), Paris, France. ²³Harvard Medical School, Cambridge, MA, USA. ²⁴Broad Institute of MIT & Harvard, Cambridge, MA, USA. ²⁵Hepatitis Business Solutions, LLC, Brooklyn, NY, USA. ²⁶Axovant Gene Therapies, New York, NY, USA. ²⁷Morphic Therapeutic, Waltham, MA, USA. ²⁸Flexion Therapeutics, Burlington, MA, USA. ²⁹Massachusetts Institute of Technology, Cambridge, MA, USA. ³⁰Gerald Cox Rare Care Consulting, Boston, MA, USA. ³¹Boston Children's Hospital/Harvard Medical School, Boston, MA, USA. ³²Curley Global IR (CGIR), LLC, Savannah, GA, USA. ³³Xencor, Monrovia, CA, USA. ³⁴MD Anderson Cancer Center, Department of Cancer Biology, Houston, TX, USA. ³⁵SAM Ventures, Boston, MA, USA. ³⁶MaxCyte, Inc., Gaithersburg, MD, USA. ³⁷Excision BioTherapeutics, Philadelphia, PA, USA. ³⁸Aldeyra Therapeutics, Lexington, MA, USA. ³⁹H Lundbeck A/S, Copenhagen, Denmark. ⁴⁰Rutgers University, New Brunswick, NJ, USA. ⁴¹Fatty Liver Foundation, Boise, ID, USA. ⁴²Novus Therapeutics, Inc., Irvine, CA, USA. ⁴³System Biosciences, LLC, Palo Alto, CA, USA. ⁴⁴Agios Pharmaceuticals, Cambridge, MA, USA. ⁴⁵Apellis Pharmaceuticals, Louisville, KY, USA. ⁴⁶TEQLA Therapeutics Inc., Boston, MA, USA. ⁴⁷Blaze Bioscience Inc., Seattle, WA, USA. ⁴⁸UT Southwestern Medical Center, Dallas, TX, USA. ⁴⁹enGage Biotech Consulting, Bryn Mawr, PA, USA. ⁵⁰Stanford University, Stanford, CA, USA. ⁵¹AVICEDA Therapeutics LLC, Cambridge, MA, USA. ⁵²Orchard Therapeutics, Boston, MA, USA. ⁵³Massachusetts General Hospital, Boston, MA, USA. ⁵⁴Evelo Biosciences, Cambridge, MA, USA. ⁵⁵ARCH Venture Partners, Chicago, IL, USA. ⁵⁶The Column Group, San Francisco, CA, USA. ⁵⁷Revolution Medicines, Inc., Redwood City, CA, USA. ⁵⁸Intarcia Therapeutics, Boston, MA, USA. ⁵⁹Gray Strategic Advisors, LLC, New York, NY, USA. ⁶⁰Immunogen, Waltham, MA, USA. ⁶¹Carol Greve-Philips Consulting LLC, Sharon, MA, USA. ⁶²Imbria Pharmaceuticals, San Diego, CA, USA. ⁶³Food & Drug Administration (2009–2015), Silver Spring, MD, USA. ⁶⁴Science History Institute, Philadelphia, PA, USA. ⁶⁵Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, USA. ⁶⁶Columbia University, New York, NY, USA. ⁶⁷Gossamer Bio, San Diego, CA, USA. ⁶⁸Nkarta Therapeutics, Redwood City, CA, USA. ⁶⁹Redpin Therapeutics, New York, NY, USA. ⁷⁰CASI Pharmaceuticals, Inc., Rockville, MD, USA. ⁷¹Zhejiang DTRM Biopharma LLC, Plymouth Meeting, PA, USA. ⁷²Abcam, Plc, Cambridge, UK. ⁷³Brii Biosciences, San Francisco, CA, USA. ⁷⁴Incyte, Wilmington, DE, USA. ⁷⁵Virogin Biotech Canada, Ltd., Vancouver, British Columbia, Canada. ⁷⁶ProMIS Neurosciences, Toronto, Ontario, Canada. ⁷⁷Nimbus Therapeutics, Cambridge, MA, USA. ⁷⁸Virion Biotherapeutics, London, UK. ⁷⁹RA Capital Management, LLC, Boston, MA, USA. ⁸⁰Insitro, South San Francisco, CA, USA. ⁸¹Viacyte, San Diego, CA, USA. ⁸²LaVoie HealthScience, Boston, MA, USA. ⁸³Deerfield Management, New York, NY, USA. ⁸⁴GlaxoSmithKline, Collegeville, PA, USA. ⁸⁵Bluebird Bio, Cambridge, MA, USA. ⁸⁶University of Nebraska,

Lincoln, NE, USA. ⁸⁷Brigham and Women's Hospital, Boston, MA, USA. ⁸⁸Harvard School of Public Health Cooperative Studies Program, Boston, MA, USA. ⁸⁹Erasca, San Diego, CA, USA. ⁹⁰BizDev Team, Houston, TX, USA. ⁹¹Editas Medicine, Cambridge, MA, USA. ⁹²Forward Clinical Solution, New York, NY, USA. ⁹³Ohio State University, Columbus, OH, USA. ⁹⁴Loncar Investments, Kansas City, KS, USA. ⁹⁵Assembly Biosciences, Carmel, IN, USA. ⁹⁶Global Blood Therapeutics, South San Francisco, CA, USA. ⁹⁷In the Pipeline, Cambridge, MA, USA. ⁹⁸Regeneron Pharmaceuticals, Tarrytown, NY, USA. ⁹⁹Lilly Asia Ventures, Menlo Park, CA, USA. ¹⁰⁰Scholar Rock, Cambridge, MA, USA. ¹⁰¹Clarity Resources, LLC, Knoxville, TN, USA. ¹⁰²Martini Communications, New York, NY, USA. ¹⁰³Akili Interactive, Boston, MA, USA. ¹⁰⁴Imara, Inc, Cambridge, MA, USA. ¹⁰⁵Pear Therapeutics, Boston, MA, USA. ¹⁰⁶CytomX Therapeutics Inc., South San Francisco, CA, USA. ¹⁰⁷Boston, MA, USA. ¹⁰⁸Genzyme Corporation (former), Boston, MA, USA. ¹⁰⁹University of Massachusetts Medical School, Worcester, MA, USA. ¹¹⁰Conatus Pharmaceuticals Inc., San Diego, CA, USA. ¹¹¹Arbutus Biopharma, San Francisco, CA, USA. ¹¹²Third Rock Ventures, Boston, MA, USA. ¹¹³RegenxBio Inc., Rockville, MD, USA. ¹¹⁴Cognition Therapeutics, Inc., Pittsburgh, PA, USA. ¹¹⁵ShangPharma Innovation, South San Francisco, CA, USA. ¹¹⁶CODA Biotherapeutics, South San Francisco, CA, USA. ¹¹⁷Polaris Partners, Boston, MA, USA. ¹¹⁸Sutro Biopharma, Inc., South San Francisco, CA, USA. ¹¹⁹EcoRI Capital, LLC, San Francisco, CA, USA. ¹²⁰Vedanta Biosciences, Inc., Cambridge, MA, USA. ¹²¹BioVentures Investors, Wellesley, MA, USA. ¹²²BeiGene, Ridgefield Park, NJ, USA. ¹²³F. Hoffman-La Roche, Ltd., Basel, Switzerland. ¹²⁴Gilead Sciences, Foster City, CA, USA. ¹²⁵Life Science Cares, Cambridge, MA, USA. ¹²⁶OncoPep, Inc., North Andover, MA, USA. ¹²⁷Accendo, Boston, MA, USA. ¹²⁸Intercept Pharma, New York, NY, USA. ¹²⁹Ten Bridge Communications, Boston, MA, USA. ¹³⁰DiBS, Houston, TX, USA. ¹³¹Ardelyx, Inc., Fremont, CA, USA. ¹³²Noventia Pharma, Forli, Italy. ¹³³Encoded Genomics, South San Francisco, CA, USA. ¹³⁴Neurocrine Biosciences Inc., San Diego, CA, USA. ¹³⁵Fate Therapeutics, San Diego, CA, USA. ¹³⁶Daré Biosciences, San Diego, CA, USA. ¹³⁷Sanofi, S.A., Paris, France. ¹³⁸Zai Laboratory, Palo Alto, CA, USA. ¹³⁹NGM Biopharmaceuticals, Inc., South San Francisco, CA, USA. ¹⁴⁰University of Illinois at Chicago, Chicago, IL, USA. ¹⁴¹Flagship Pioneering, Cambridge, MA, USA. ¹⁴²Synergenics, LLC, San Francisco, CA, USA. ¹⁴³Venrock, Palo Alto, CA, USA. ¹⁴⁴Denali Therapeutics, San Francisco, CA, USA. ¹⁴⁵Vir Bio, San Francisco, CA, USA. ¹⁴⁶Allergan, New York, NY, USA. ¹⁴⁷Harvard University, Cambridge, MA, USA. ¹⁴⁸Geron Corporation, Menlo Park, CA, USA. ¹⁴⁹Arqule, Burlington, MA, USA. ¹⁵⁰Scripps Research, Jupiter, Florida, USA. ¹⁵¹Scripps Research, La Jolla, CA, USA. ¹⁵²SERVIER Research and Development, Cambridge, MA, USA. ¹⁵³Lyndra Therapeutics, Watertown, MA, USA. ¹⁵⁴Seres Therapeutics, Cambridge, MA, USA. ¹⁵⁵Valerion Therapeutics, Concord, MA, USA. ¹⁵⁶The Koch Institute for Integrative Cancer Research, Massachusetts Institute of Technology, Cambridge, MA, USA. ¹⁵⁷International Research Center for Medical Sciences, Kumamoto University, Kumamoto, Japan. ¹⁵⁸Lewis Thomas Laboratory, Princeton University, Princeton, NJ, USA. ¹⁵⁹Syros Pharmaceuticals, Cambridge, MA, USA. ¹⁶⁰E-Scape Bio, Inc., San Francisco, CA, USA. ¹⁶¹OncoResponse, Seattle, WA, USA. ¹⁶²ETH Zurich, Zurich, Switzerland. ¹⁶³The University of North Carolina at Chapel Hill, Chapel Hill, NC, USA. ¹⁶⁴EpiBone, Inc., New York, NY, USA. ¹⁶⁵Good Health Capital, New York, NY, USA. ¹⁶⁶Healthcare, Life Sciences and Financial Services, Lincoln, MD, USA. ¹⁶⁷Neurotez Inc., Bridgewater, NJ, USA. ¹⁶⁸TRACON Pharmaceuticals, San Diego, CA, USA. ¹⁶⁹Kallyope, New York, NY, USA. ¹⁷⁰Alzheon, Framingham, MA, USA. ¹⁷¹Quench Bio, Cambridge, MA, USA. ¹⁷²The Rockefeller University, New York, NY, USA. ¹⁷³Weill Cornell Medicine, New York, NY, USA. ¹⁷⁴Flatiron Health, New York, NY, USA. ¹⁷⁵Biogen, Cambridge, MA, USA. ¹⁷⁶Horizon Therapeutics, Dublin, Ireland. ¹⁷⁷Fortress Biotech, New York, NY, USA. ¹⁷⁸Longwood Fund, Boston, MA, USA. ¹⁷⁹Crinetics Pharmaceuticals, San Diego, CA, USA. ¹⁸⁰Codiak BioSciences, Cambridge, MA, USA. ¹⁸¹Walking Fish Therapeutics, San Francisco, CA, USA. ¹⁸²Theravance Biopharma, Inc., South San Francisco, CA, USA. ¹⁸³Zai Lab/Quan Capital, Shanghai, China. ¹⁸⁴Immix Biopharma, Inc., Los Angeles, CA, USA. ¹⁸⁵Nebraska Center for Virology, University of Nebraska-Lincoln, Lincoln, NE, USA. ¹⁸⁶Life Science Leader, Philadelphia, PA, USA. ¹⁸⁷George Mason University, Manassas, VA, USA. ¹⁸⁸Cerus, Concord, CA, USA. ¹⁸⁹Tetraphase Pharmaceuticals, Watertown, MA, USA. ¹⁹⁰Case Western Reserve University, Cleveland, OH, USA. ¹⁹¹Indiana University School of Medicine, Bloomington, IN, USA. ¹⁹²Indiana University School of Medicine, Indianapolis, IN, USA. ¹⁹³IRISYS, LLC, San Diego, CA, USA. ¹⁹⁴Virginia Tech, Blacksburg, VA, USA. ¹⁹⁵RNA Therapeutics Institute at UMass Medical School, Worcester, MA, USA. ¹⁹⁶Barnes-Jewish Hospital, St. Louis, Missouri, USA. ¹⁹⁷Washington University School of Medicine, St. Louis, Missouri, USA. ¹⁹⁸Lupin Research Inc., Coral Springs, FL, USA. ¹⁹⁹Johns Hopkins University (emeritus), Baltimore, MD, USA. ²⁰⁰National Institutes of Health (2002–2008), Bethesda, MD, USA. ²⁰¹McGovern Institute for Brain Research at MIT, Cambridge, MA, USA.