

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

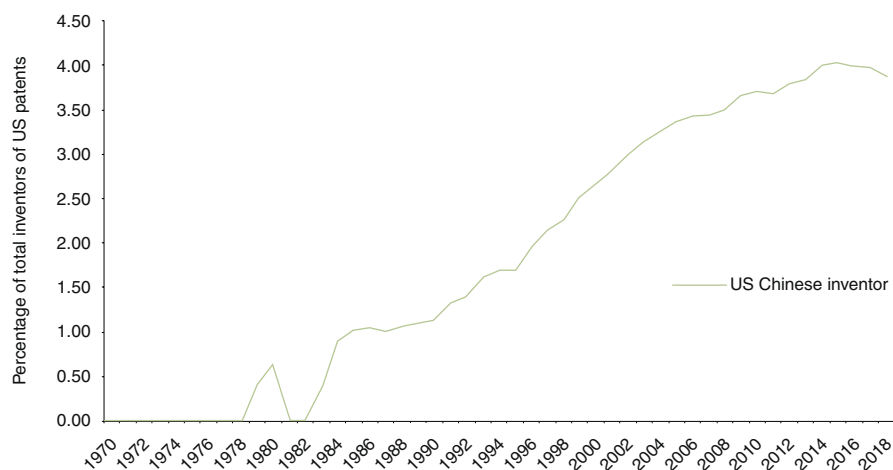


Fig. 1 | Estimating the contribution of Chinese-ethnic researchers to the US patent landscape. US-resident inventors with top 200 Chinese ethnic names as a percentage of total US inventors.

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. □

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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, Biocan 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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