

National Foundation for American Policy

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New Research: Immigrants Have Been Awarded 40% of the Nobel Prizes Won by Americans in Physics, Chemistry and Medicine Since 2000; 36% Since 1901

Immigrants Won 4 of 6 U.S. Nobel Prizes in Physics, Chemistry and Medicine in 2023

Arlington, Va. – Immigrants have been awarded 40%, or 45 of 112, of the Nobel Prizes won by Americans in chemistry, medicine and physics since 2000, according to an [analysis](#) by the National Foundation for American Policy (NFAP).¹ In 2023, four of the six U.S. recipients of Nobel Prizes in medicine, chemistry and physics were immigrants to the United States. In 2021, three of the four U.S. recipients of Nobel Prizes in medicine, chemistry and physics were immigrants to America. In 2016, all 6 American winners of the Nobel Prize in economics and scientific fields were immigrants. Between 1901 and 2023, immigrants have been awarded 36%, or 115 of 319, of the Nobel Prizes won by Americans in chemistry, medicine and physics.

The study, “Immigrants and Nobel Prizes: 1901-2023,” can be found at <https://nfap.com/>.

“The achievements of immigrants in the form of Nobel Prizes, successful businesses and contributions in other fields are a testament to the American Dream,” said Stuart Anderson, executive director of the National Foundation for American Policy. “Being open to immigration has allowed the United States to reap the benefits of scientific and technological innovation and provide U.S. students the opportunity to learn from many of the world’s leading professors and researchers. It also allows many immigrants to reach their potential after coming to the United States, benefitting Americans and the U.S. economy.”

In 2023, Katalin Karikó, an immigrant from Hungary, and Drew Weissman shared the Nobel Prize in physiology or medicine “for their discoveries concerning nucleoside base modifications that enabled the development of effective mRNA vaccines against COVID-19.”² Karikó and Weissman are affiliated with the University of Pennsylvania. Karikó solved the problem plaguing mRNA: the body fought the new chemical after an injection. “While mRNA is best known for Covid vaccines, the technology’s greatest promise may be in treating cancer and other diseases,” according to the *Wall Street Journal*.

In 2023, Pierre Agostini, an immigrant to the United States from France and a professor at Ohio State, shared the Nobel Prize in physics with two French scientists “for experimental methods that generate attosecond pulses of light for the study of electron dynamics in matter.”

In 2023, immigrants Mounji G. Bawendi (born in France) and Alexei I. Ekimov (born in the former USSR) shared the Nobel Prize in chemistry with Louis E. Brus (born in the U.S.) “for the discovery and synthesis of quantum dots.” The scientists are credited with planting the seeds for

¹ This research updates *Immigrants and Nobel Prizes: 1901-2021*, NFAP Policy Brief, National Foundation for American Policy, October 2021. For more background on Nobel Prize winners, see <https://www.nobelprize.org/>.

² <https://www.nobelprize.org/prizes/medicine/2023/kariko/facts/>.

nanotechnology. “The Nobel Prize in chemistry 2023 rewards the discovery and development of *quantum dots*, nanoparticles so tiny that their size determines their properties,” according to the Royal Swedish Academy of Sciences. “These smallest components of nanotechnology now spread their light from televisions and LED lamps, and can also guide surgeons when they remove tumor tissue, among many other things.”³

In 2021, David W.C. MacMillan, born in Scotland and a professor of chemistry at Princeton University, was awarded the Nobel Prize in chemistry. He came to the United States as an international student and earned a Ph.D. at the University of California-Irvine. Syukuro Manabe, who immigrated to America from Japan to take a job at the U.S. Weather Bureau, received the 2021 Nobel Prize in physics. Ardem Patapoutian, who immigrated to America at age 18 from war-torn Lebanon, received the 2021 Nobel Prize in physiology or medicine, sharing the award with David Julius, born in the United States. Dr. Patapoutian came to America after being “[captured and held by armed militants](#)” in Lebanon and enrolled at UCLA.

Among the findings of this report:

- Since 1901, immigrants have been awarded 38% of the U.S. Nobel Prizes in physics, 37% in chemistry and 34% in medicine.
- Immigration laws matter, particularly in determining whether the United States gains from increased globalization and rising educational achievement in the world. The Immigration and Nationality Act of 1965 eliminated the discriminatory national origin quotas and opened the door to Asian immigrants, while the Immigration Act of 1990 increased employment-based green card numbers. Those two pieces of legislation have been essential factors in drawing international students to the country and enhancing the ability of America to assimilate talented individuals into our culture and economy.
- The rise in immigrant Nobel Prize winners reflects an overall increase in the reputation and capability of American institutions and researchers post-1960, and a greater openness to immigration has helped make the United States the leading global destination for research in many different science and technology fields, including computer and information sciences, cancer research and others.
- One can see the increasing influence and importance of immigrants on science in America reflected in Nobel Prize winners. Between 1901 and 1959, immigrants won 22 Nobel Prizes in chemistry, medicine and physics but won 93 prizes in these fields – *more than four times as many* – between 1960 and 2023.
- The pre-1960 immigrant (and U.S.) Nobel Prize total would have been lower if not for the many Jewish scientists who overcame significant restrictions against immigration in the 1930s and fled to the United States to escape European fascism.
- Since 2000, immigrants have been awarded 45% of the U.S. Nobel Prizes in physics, 41% in chemistry and 34% in medicine.

In 2020, Reinhard Genzel, born in Germany and was a professor emeritus of physics and astronomy at the University of California, Berkeley, was awarded the Nobel Prize in physics, which he shared with U.S.-born UCLA professor Andrea Ghez for their research on black holes. In 2019, the U.S. winner of the Nobel Prize in physics (James Peebles) and one of two American winners of the Nobel Prize in chemistry (M. Stanley Whittingham) were immigrants to the United States.

³ <https://www.nobelprize.org/prizes/chemistry/2023/press-release/>.

In 2019, two of the three U.S. winners of the Nobel Prize in economics were immigrants – Abhijit Banerjee, born in India, and Esther Duflo, born in France. The two MIT professors shared the award with Michael Kremer for their “new approach to obtaining reliable answers about the best ways to fight global poverty.”

In 2018, Gérard Mourou, an immigrant from France, won the Nobel Prize in physics. In 2017, the sole American winner of the Nobel Prize in chemistry was an immigrant, Joachim Frank, a Columbia University professor born in Germany. Immigrant Rainer Weiss, who was born in Germany and came to the United States as a teenager, was awarded the 2017 Nobel Prize in physics, sharing it with two other Americans, Kip S. Thorne and Barry C. Barish.

The achievements of immigrants in the form of Nobel Prizes, successful businesses and contributions in other fields are a testament to the American Dream. Being open to immigration has allowed America to attract talented and ambitious individuals and benefit from scientific and technological innovation.

Table 1
U.S. Nobel Prize Winners in Chemistry, Medicine and Physics: 2000-2023

Category	Immigrant	Native-Born	Percentage of Immigrant Winners
Physics	17	21	45%
Chemistry	16	23	41%
Medicine	12	23	34%
TOTAL	45	67	40%

Source: National Foundation for American Policy, Royal Swedish Academy of Sciences, George Mason University Institute for Immigration Research.

About the National Foundation for American Policy

Established in 2003, the National Foundation for American Policy (NFAP) is a 501(c)(3) nonprofit, nonpartisan public policy research organization based in Arlington, Virginia focusing on trade, immigration and related issues. The Advisory Board members include Columbia University economist Jagdish Bhagwati, Ohio University economist Richard Vedder, Cornell Law School professor Stephen W. Yale-Loehr and former INS Commissioner James W. Ziglar. Over the past 24 months, NFAP’s research has been written about in the *Wall Street Journal*, the *New York Times*, the *Washington Post* and other major media outlets. The organization’s reports can be found at www.nfap.com. Twitter: [@NFAPResearch](https://twitter.com/NFAPResearch)

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