National Foundation for American Policy

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Research: Immigrants Have Been Awarded Nearly 40% of U.S. Nobel Prizes in Chemistry, Medicine and Physics Since 2000

Arlington, Va. – Immigrants have been awarded 38%, or 36 of 95, of the Nobel Prizes won by Americans in Chemistry, Medicine and Physics since 2000, according to a <u>new report</u> released by the National Foundation for American Policy (NFAP), an Arlington, Va.-based policy research group. In 2019, the U.S. winner of the Nobel Prize in Physics (James Peebles) and one of the two American winners of the Nobel Prize in Chemistry (M. Stanley Whittingham) were immigrants to the United States.

This showing by immigrants in 2019 is consistent with recent history and illustrates the contributions of immigrants to America. 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. In 2016, all 6 American winners of the Nobel Prize in economics and scientific fields were immigrants.

Table 1
U.S. Nobel Prize Winners in Chemistry, Medicine and Physics: 2000-2019

Category	Immigrant	Native-Born	Percentage of Immigrant Winners
Physics	14	19	42%
Chemistry	12	21	36%
Medicine	10	19	35%
TOTAL	36	59	38%

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

The report, "Immigrants and Nobel Prizes: 1901-2019," can be found at https://nfap.com/.

"These achievements by immigrants point to the gains to America of welcoming talent from across the globe," said NFAP Executive Director Stuart Anderson.

Between 1901 and 2019, immigrants have been awarded 35%, or 105 of 302, of the Nobel Prizes won by Americans in Chemistry, Medicine and Physics. (See Table 2.) Since 1901, immigrants have been awarded 36% of the U.S. Nobel Prizes in Physics, 35% in Chemistry and 34% in Medicine. These numbers could be considered an underestimate, since they do not include Nobel Prize winners who immigrated to America *after* receiving a Nobel Prize, such as Albert Einstein, Enrico Fermi and Niels Bohr. Donna Strickland, who shared a 2018 Nobel Prize in Physics with Gérard Mourou, is also not included as a U.S. recipient, though the Canadian-born professor was an international student in America when she conducted her groundbreaking research and received a Ph.D. from the University of Rochester in New York.

Table 2
U.S. Nobel Prize Winners in Chemistry, Medicine and Physics: 1901-2019

Category	Immigrant	Native-Born	Percentage of Immigrant Winners
Physics	39	70	36%
Chemistry	28	52	35%
Medicine	38	75	34%
TOTAL	105	197	35%

Source: National Foundation for American Policy, Royal Swedish Academy of Sciences, George Mason University Institute for Immigration Research. Numbers and percentage for chemistry, medicine and physics prizes.

The findings do not mean America should welcome only Nobel Prize winners. Such a policy would be quite restrictive. Moreover, most immigrant Nobel Prize winners enter the United States many years before being awarded this honor. Most people immigrate to another country in their twenties, particularly employment-based immigrants to the United States, who either study in America or come here to work shortly after obtaining a degree abroad. The average age of Nobel Prize winners at the time of the award is 59.5 years, according to economist Mark J. Perry.

Nobel Prize winners represent great individual achievement but also reflect the state of research, openness and scientific advancement within a society. American students, research colleagues and the U.S. economy gain from the work performed by outstanding scientists and researchers, including Nobel Prize winners.

The right 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 important 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 computers, cancer research and others.

Sir J. Fraser Stoddart, winner of the Nobel Prize in Chemistry in 2016 and an immigrant from the United Kingdom, noted that "his research group at Northwestern University has students and scientists from a dozen different countries." Stoddart believes scientific research will remain strong in America "as long as we don't enter an era where we turn our back on immigration."

Among the key findings in this report:

- One can see the increasing influence and importance of immigrants on science in America over the past half century. Between 1901 and 1959, immigrants won 21 Nobel Prizes in Chemistry, Medicine and Physics but won 84 prizes in these fields *four times as many* between 1960 and 2019.
- Between 1901 and 1959, only one immigrant to the United States (William Francis Giauque) won the Nobel Prize in Chemistry, while between 1960 and 2019, 27 immigrants won the Nobel Prize for Chemistry.

- From 1901 to 1959, 9 immigrants to the United States won the Nobel Prize for (Physiology or) Medicine, but 29 immigrants were awarded the Nobel Prize for Medicine from 1960 to 2019.
- In Physics, 11 immigrants won the Nobel Prize from 1901 to 1959, while 28 immigrants won the Nobel Prize for Physics between 1960 and 2019.

The report finds the achievements of so many immigrants as seen in the form of Nobel Prizes, successful businesses, and contributions in sports, the arts and many other fields are a testament to the American Dream. Remaining open to immigration will allow America to reap the benefits of scientific and technological innovation. When one asks successful entrepreneurs and scientists conducting groundbreaking research whether they favor liberalized policies on immigration, the answer they invariably give is that more immigration and greater openness to international students, researchers and immigrants across the skill spectrum will help America to grow and prosper.

About the National Foundation for American Policy

Established in 2003, the National Foundation for American Policy (NFAP) is a 501(c)(3) non-profit, non-partisan 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

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