



Photo Courtesy of The University of Texas at Austin

Jason McLellan

Structure-Based Vaccine Design

U.S. PATENT NO. 9,738,689: Prefusion F RSV proteins and their use

U.S. PATENT NO. 10,960,070: Prefusion coronavirus spike proteins and their use

Inducted in 2025 Born: Jan. 29, 1981

Primary Connections:

- The University of Texas at Austin: Robert A. Welch Chair in Chemistry; Professor of Molecular Biosciences; 2018-present
- Dartmouth College: Assistant Professor, Geisel School of Medicine, 2013-18
- National Institutes of Health (NIH) National Institute of Allergy and Infectious Diseases (NIAID), Vaccine Research Center: Research Fellow, 2008-13

Education:

- Wayne State University: B.S., Chemistry, 2003
- Johns Hopkins University: Ph.D., Biophysics, 2009

Key Memberships/Awards:

- National Academy of Sciences: Award in Molecular Biology, 2023
- Welch Foundation: Norman Hackerman Award in Chemical Research, 2023
- Dartmouth College: McGuire Family Prize for Societal Impact, 2022
- International Society for Antiviral Research: William Prusoff Young Investigator Award, 2020

Structural biologist Jason McLellan and immunologist and virologist Barney Graham used structure-based vaccine design to stabilize and modify surface proteins of viruses. Their work contributed to the development of COVID-19 vaccines, and since 2020, billions of doses have been administered. The first vaccines approved for respiratory syncytial virus (RSV) are also based on their discoveries.



Full Bio: <https://www.invent.org/inductees/jason-mclellan>

Things You Should Know:

- McLellan was born in 1981 in Detroit.
- As a child, his competitive spirit led him to participate in activities from soccer and video games to spelling bees and Science Olympiad.
- McLellan said his parents taught him an important lesson: “Always do your best. Find something you love and try to be the best at it.”
- In 2013, he became an assistant professor at Dartmouth College Geisel School of Medicine and established his own lab. Here, he began focusing on coronaviruses such as SARS and MERS.
- Among his many awards are the National Academy of Sciences Award in Molecular Biology, Research!America Building the Foundation Award, Edith and Peter O’Donnell Award from the Academy of Medicine, Engineering and Science of Texas; Texas Inventor of the Year Award from the State Bar of Texas; and the AAAS Golden Goose Award.
- McLellan says of his career, “There are not a lot of viral vaccines that have been created in the history of man, and so to help contribute to two of them and possibly more – I’m very proud of that.”
- McLellan has 17 U.S. patents.