HEINRICH WIELAND PRIZE

LAUREATE 2026 | PROFILE

Professor Jason W. Chin, PhD
Ellison Institute of Technology Oxford, UK

Jason W. Chin receives the 2026 Heinrich Wieland Prize for his groundbreaking work in synthetic biology. He has pioneered methods to reprogramme the genetic code of living organisms, rewriting the near-universal genetic code of natural life to create organisms that operate on entirely new genetic codes. To achieve this, he created novel translational machinery — including orthogonal ribosomes, aminoacyl-tRNA synthetases, and tRNAs — and subsequently synthesised a complete bacterial genome with a reduced number of sense codons for protein translation. He then reassigned the freed-up codons in the resulting synthetic bacteria to direct the biosynthesis non-canonical polymers, macrocycles, and proteins containing non-canonical monomers via orthogonal translational machinery. Jason Chin's strategy for expanding the genetic code is the most widely used approach worldwide for the biosynthesis of non-natural proteins and polymers that are not accessible through chemical synthesis. It enables the synthesis of proteins with specific chemical modifications that control important biological functions. Jason Chin adapted the method to control the activity of proteins in real time using light, or to label them precisely, so that their activity, movement, or interactions can be tracked in living cells and, more recently, in multicellular organisms. In 2022 he founded Constructive Bio, a company focusing on the scalable discovery and manufacture of therapeutics and materials using his approaches.

Jason Chin read Chemistry at the University of Oxford before moving to Yale University in New Haven, as a Fulbright awardee, where he completed his PhD in 2001. He then joined The Scripps Research Institute in La Jolla as a Damon Runyon Fellow, before becoming Programme Leader at the MRC Laboratory of Molecular Biology (LMB) in Cambridge in 2003. He was appointed Head of the Centre for Chemical and Synthetic Biology at MRC-LMB in 2010 and Professor of Chemistry and Chemical Biology at the University of Cambridge in 2012. He also co-headed the Division of Protein and Nucleic Acid Chemistry at MRC-LMB from 2018. In 2025, he was appointed Founding Director of the Generative Biology Institute at the Ellison Institute of Technology Oxford, Professor of Chemistry and Chemical Biology at the University of Oxford, and Fellow of Magdalen College. His work has been recognised with numerous honours, including the Francis Crick Prize by the Royal Society, the Corday Morgan Prize by the Royal Society of Chemistry, the EMBO Gold Medal, the inaugural Louis-Jeantet Young Investigator Career Award, the Meyerhof Medal of the MPI for Medical Research, and the Sackler International Prize in the Physical Sciences. He received an honorary doctorate from ETH Zurich, was inducted into the European Patent Office Inventor Hall of Fame, and is a Fellow of the Academy of Medical Sciences and the Royal Society, as well as a Member of EMBO.

Boehringer Ingelheim Stiftung