From Mold to Medicine: 'Traces Thursday' Explores Statins for Cholesterol Treatment

Latest story in series on scientific patience explores the development of the top prescribed drug class in the U.S.

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WASHINGTON, DC, UNITED STATES, September 25, 2026 / EINPresswire.com/ -- Stand Up for Science has published part five of “Traces Thursday,” an ongoing series exploring how breakthrough medical therapies are developed, often over the course of decades. This week’s story, “Cholesterol and cardiovascular disease,” traces the science behind the development of statins, used to treat high cholesterol and heart disease, now the most-prescribed drug class in the U.S.

Cholesterol is produced naturally in the body and is an essential building block in cells. However, too much cholesterol in the blood can form plaque, leading to heart disease or even heart attacks. Research on the cholesterol-heart disease connection dates back to the 1900s, but the pathway by which the body synthesizes cholesterol was not understood until the mid-1960s, when researchers identified the specific enzyme that controls the pace of the entire cholesterol-making process. The understanding of this pathway eventually led to the development of statins to lower cholesterol levels by targeting and inhibiting that enzyme.

Building upon the discovery of penicillin, which is derived from mold, a biochemist screened thousands of extracts from molds to find compounds that would inhibit the enzyme involved in the cholesterol-making process. In 1972, he isolated a compound called compactin that proved to be a potent inhibitor of the enzyme. Following additional development within a number of drug companies, the FDA approved the first statin, lovastatin, in 1987. Today, a quarter of the U.S. population is currently taking a statin to reduce their cholesterol levels, and the drug has essentially halved the number of cardiovascular deaths each year.

This case study is the fifth of a twelve-part weekly series written by Berg, former director of the

National Institute of General Medical Sciences at NIH and former Editor-in-Chief of Science magazine, now a member of the Board of Advisors with Stand Up for Science. Each week, Berg dives into a historical example of a major development in disease treatment to illustrate an unseen pattern: the decades (or centuries) of foundational research that precede any visible medical breakthrough or benefit.

Amid the debate over federal science funding, the “Traces Thursday” series helps underscore the need for sustained basic research investments, particularly biomedical research, as a worthwhile pursuit. The groundbreaking treatments presented in the series all depended on long-term research funding for their development, the kind that rarely shows measurable results within a single grant cycle, let alone a single presidential administration.

Stand Up for Science will publish subsequent posts on the Science Fight Club Substack each Thursday.

Berg is available for comment.

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Stand Up for Science is a grassroots, Washington, D.C. based, non-profit organization mobilizing the fight for science and democracy. Stand Up for Science was formed in February 2025 in response to actions affecting federal science agencies and funding of the American scientific ecosystem. On March 7th, Stand Up for Science mobilized over 50,000 people at 170+ events across the world on its first National Day of Action. Federal scientists across multiple agencies (NIH, EPA, NASA, FEMA) have chosen Stand Up for Science as the platform to publish their open letters of concern. Stand Up for Science is a 501(c)(4) non-profit organization [EIN: 33-4154429] and donations are not tax-deductible.

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