Stand Up for Science Covers the Accidental Path to Prozac in the Latest “Traces Thursday” Installment

How an allergy pill reshaped the treatment of depression



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WASHINGTON, DC, UNITED STATES, October 23, 2026 /EINPresswire.com/ -- Stand Up for Science is pleased to announce the ninth installment of its weekly “Traces Thursday” series exploring the winding paths of scientific research that lead to groundbreaking discoveries that shape everyday life. This week’s story, “Antihistamines, antidepressants and brain chemistry,” traces the historical development of antidepressants like Prozac—which all began with Benadryl.

Medicines that work in the brain are among the hardest to develop. The brain is a tightly connected system, and a human brain is significantly different from the brains of lab animals. Many of the most important drugs for mood and mental health were found by happenstance rather than by design. Prozac is a case where luck met careful, deliberate science, resulting in a treatment that has helped millions of people living with major depression.

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> *Dr. Jeremy Berg, author of the Traces Thursday series*

Benadryl, or diphenhydramine, is a familiar antihistamine discovered in 1943. Researchers observed that for some people it did more than calm allergies: it caused drowsiness and eased anxiety. Digging into why, scientists found that the drug affects serotonin, a chemical messenger that nerve cells use to talk to one another.

Serotonin normally gets recycled quickly after it sends its signal, but Benadryl slows that recycling, so the calming message lasts longer.

That finding prompted drug manufacturer Eli Lilly and Company to ask a sharper question: could a compound be built to focus on serotonin only, without Benadryl's other effects? The company made a series of molecules modeled on Benadryl and tested them in brain tissue in the lab to see how each compound affected serotonin. One compound stood out: fluoxetine, first made in 1972. After years of additional research work and clinical trials, the FDA approved it as Prozac in 1987, the first selective serotonin reuptake inhibitor (SSRI).

"Prozac's success opened the door to many other antidepressants like Zoloft, Paxil, and Lexapro. It all began with a curious side effect of an allergy pill and ended with a treatment that changed how we care for depression. Curiosity and chance observations, followed by patience and continued rigorous research, can move medicine forward, but only if sustained investment allows it to," said Dr. Jeremy Berg, author of the Traces series and 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.

This case study is the ninth of a planned twelve-part series. Each week, Berg examines another story that illustrates an unseen pattern of medical breakthroughs: the decades or centuries of foundational research that precede any visible benefit, and the scientific, regulatory, and practical challenges that can follow it.

Amid ongoing debate over federal science funding, "Traces Thursday" underscores the importance of sustained investment in basic and biomedical research. The medical advances explored throughout the series all depend on research that unfolds over periods of time far longer than a single grant cycle or presidential administration.

Stand Up for Science will continue publishing "Traces Thursday" 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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