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## Curriculum Vitae Prof. Dr. Jonathan Gershenzon

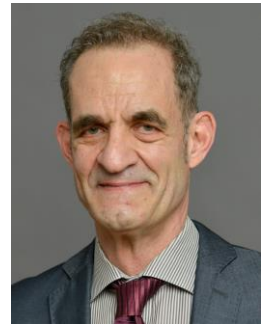


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**Name:** Jonathan Gershenzon

**Date of birth:** 8 May 1955

### **Research interests: plant protection, herbivores, biosynthesis, detoxification, ecology**

Jonathan Gershenzon is an American biochemist. He studies how plants produce defensive compounds and the role these compounds play in protecting plants. His research findings support the development of new, more sustainable methods to protect against agricultural pests.

### **Academic and Professional Career**

- since 2021 Managing Director, Max Planck Institute for Chemical Ecology, Jena, Germany
- since 1999 Honorary Professor, Faculty for Biological Sciences, Friedrich Schiller University, Jena, Germany
- since 1997 Director, Department of Biochemistry, Max Planck Institute for Chemical Ecology, Jena, Germany
- 1991 - 1996 Scientist, Institute of Biological Chemistry, Washington State University, Pullmann, Washington, USA
- 1985 - 1990 Postdoctoral Fellow, Institute of Biological Chemistry, Washington State University, Pullmann, Washington D.C., USA
- 1983 - 1984 Robert A. Welch Graduate Fellow, University of Texas, Austin, USA
- 1981 - 1982 Teaching Assistant, Department of Botany, University of Texas, Austin, USA
- 1978 - 1980 National Science Foundation Graduate Fellow, University of Texas, Austin, USA

### **Functions in Scientific Societies and Committees**

- 2014 - 2020 Spokesperson, International Max Planck Research School (IMPRS) "Exploration of Ecological Interactions with Molecular and Chemical Techniques", Max Planck Institute for Chemical Ecology, Jena, Germany
- 2012- 2016 Scientific advisory board, DynaMo Center, Department of Plant and Environmental Sciences, University of Copenhagen, Copenhagen, Denmark
- since 2007 Organising committee member, TERPNET, International Meeting on Biosynthesis, Function, and Synthetic Biology of Isoprenoids
- 2006 - 2012 Scientific advisory board, Leibniz Institute of Plant Biochemistry, Halle (Saale), Germany

### **Project Coordination, Membership in Collaborative Research Projects**

- 2018 - 2022 Subproject "Plant defence detoxification strategies of aboveground and belowground herbivores in a multitrophic context", Collaborative Research Centre 1127, German Research Foundation (DFG), Germany
- 2004 - 2008 Project "Ecological and physiological functions of biogenic isoprenoids and their impact on the environment", 6th Framework Programme for Research, European Union (EU)
- 2003 - 2006 Project "Investigation of biochemical and genetic diversity of terpenoid biosynthesis for production of high value-added compounds", 5th Framework Programme for Research, EU
- 2001 - 2007 Subproject "Synthesis and accumulation of glucosinolates in Arabidopsis thaliana in relation to sulfur metabolism", Research Group 383, German Research Foundation, Germany

### **Honours and Awarded Memberships**

- since 2021 Member, German National Academy of Sciences Leopoldina
- 2016 - 2020 Member, Review Board for subject area 202 "Plant Sciences", German Research Foundation (DFG), Germany
- 2015 - 2021 Highly Cited Researcher, Web of Science
- 2013 Elected Fellow, American Association for the Advancement of Science, USA
- 2012 Chairperson, Gordon Research Conference on Plant Volatiles, Ventura, USA

## Research Priorities

Jonathan Gershenzon is an American biochemist. He studies how plants produce defensive compounds and the role these compounds play in protecting plants. His research findings support the development of new, more sustainable methods to protect against agricultural pests.

He analyses the biosynthesis and function of plant defence compounds in order to gain new insights into the origin and role of these extraordinarily diverse chemical compounds. His research focuses, in particular, on how certain plant-eating insects are able to feed on chemically well protected plants without suffering any obviously negative effects. Through his work, he has shown how insects can bypass plants' defences using detoxification reactions or changing the target of the toxin. These findings give new insights into how plants' defences work and also how effective they are.

In recent years, Jonathan Gershenzon has focussed much of his research efforts on woody plant defence responses, in particular the question of how to protect poplar and spruce species against insect herbivores. The ongoing and significant outbreak of bark beetle in the spruce forests of central Europe prompted his research group to look into potential preventative measures, based on a better understanding of the spruce trees' natural defence mechanisms and how these mechanisms could be improved.