

Prof. Dr. Christian Hertweck

Biomolecular Chemistry · Head +49 3641 532-1101 christian.hertweck@leibniz-hki.de

Curriculum vitae

Main Research Areas

- Investigation of biosynthetic pathways of the secondary metabolism of bacteria and fungi
- Use of enzymes and recombinant microorganisms for synthetic implementation
- Isolation and structural identification of natural products
- Molecular basis of fungus-bacteria-interactions

Professional Career

2008	Rejection of professorship, Eidgenössische Technische Hochschule Zurich, Switzerland
2008 – 2023	Deputy Director at the Leibniz Institute for Natural Product Research and Infection Biology – Hans Knöll Institute (HKI) Jena, Germany
2008	Rejection of professorship, Technical University Munich, Germany
Since 2006	Head of Department of Biomolecular Chemistry, HKI Jena
Since 2006	Professor (W3) and chair of Natural Product Chemistry, Friedrich Schiller University Jena (FSU), Germany
2006	Habilitation (Venia legendi) in organic chemistry, FSU Jena
2005	Rejection of professorship (W3), Rheinische Friedrich Willhelms University of Bonn, Germany
2005	Acceptance of professorship (W3), FSU Jena
2001– 2005	Head of junior research group, HKI Jena
1999 – 2000	Research assistant, University of Washington, Seattle, USA, funded through a Feodor Lynen fellowship for postdocs (Alexander von Humboldt Foundation)
1996 – 1999	PhD, Friedrich Willhelms University Bonn and Max Planck Institute for Chemical Ecology, Jena, funded through a Max Planck doctoral fellowship
1996	Diploma in chemistry at the Friedrich Willhelms University Bonn, Germany

Awards · Appointments · Scientific Activities

2015	Member of the National Academy of Sciences Leopoldina
2015	Gottfried Wilhelm Leibniz Award
2015	David Gottlieb Memorial Lecture Award, University of Illinois
2014	Wilhelm Manchot-Research Professor
Since 2013	Member of the editorial board *Bioorganic Chemistry*
Since 2012	Editor, *Chemistry & Biology*
Since 2012	Member of the faculty of 1000
Since 2011	Member of the editorial board, *Organic and Biomolecular Chemistry*
Since 2011	Member of the editorial board, *Journal of Antibiotics*
2011	NPR lecture award
Since 2010	Member of the editorial board, *ChemBioChem*
2009 – 2012	Member of the editorial board, *Chemistry & Biology*

2006	Research prize of the Dr. Otto Röhm-Memorial-Foundation
Since 2005	Member of the Association for General and Applied Microbiology (VAAM)
2005	DECHEMA award for natural product research
2005	Science award for life sciences and physics from the Beutenberg Campus Jena e.V.
2005	Thuringian research award (category: basic research)
Since 2003	Member of the programme committee, Natural Product Meeting, Irsee
Since 2002	Member of the DECHEMA Society for Chemical Engineering and Biotechnology
Since 2001	Member of the Gesellschaft Deutscher Chemiker (GDCh)

Topics

Medicinal natural products

Biosynthetic pathways

Genome mining

Biotransformations

Microbial interactions

Publications

Haensch VG, Hertweck C (2024) Photosensitizers enable the formation of biphenyls with UV-LEDs and sunlight. *Chemistry* , e202400605.

Details



Little RF, Trottmann F, Hashizume H, Preissler M, Unger S, Sawa R, Kries H, Pidot S, Igarashi M, Hertweck C (2024) Analysis of the valgamicin biosynthetic pathway reveals a general mechanism for cyclopropanol formation across diverse natural product scaffolds. *ACS Chem Biol* 19(3), 660-668.

Details



Roman D, Meisinger P, Guillonneau R, Peng CC, Peltner LK, Jordan PM, Haensch V, Götze S, Werz O, Hertweck C, Chen Y, Beemelmanns C (2024) Structure revision of a widespread marine sulfonolipid class based on isolation and total synthesis. *Angew Chem Int Ed Engl* , e202401195.

Details

Büttner H, Hörl J, Krabbe J, Hertweck C (2023) Discovery and biosynthesis of anthrochelin, a growth-promoting metallophore of the human pathogen *Luteibacter anthropi*. *Chembiochem* 24(17), e202300322.

Details

Büttner H, Pidot SJ, Scherlach K, Hertweck C (2023) Endofungal bacteria boost anthelminthic host protection with the biosurfactant symbiosin. *Chem Sci* 14(1), 103-112.

Details

Dell M, Tran MA, Capper MJ, Sundaram S, Fiedler J, Koehnke J, Hellmich UA, Hertweck C (2023) Trapping of a polyketide synthase module after C-C bond formation reveals transient acyl carrier domain interactions. *Angew Chem Int Ed Engl* 63(9), e202315850.

Details

Ehinger F, Niehs S, Dose B, Dell M, Krabbe J, Pidot SJ, Stinear TP, Scherlach K, Ross C, Lackner G, Hertweck C (2023) Analysis of rhizonin biosynthesis reveals origin of pharmacophoric furylalanine moieties in diverse cyclopeptides. *Angew Chem Int Ed Engl* 62(42), e202308540.

Details

Götze S, Vij R, Burow K, Thome N, Urbat L, Schlosser N, Pflanze S, Müller R, Hänsch VG, Schlabach K, Fazlikhani L, Walther G, Dahse HM, Regestein L, Brunke S, Hube B, Hertweck C, Franken P, Stallforth P (2023) Ecological niche-inspired genome mining leads to the discovery of crop-protecting nonribosomal lipopeptides featuring a transient amino acid building block. *J Am Chem Soc* 145(4), 2342-2353.

Details

Herisse M, Ishida K, Staiger-Creed J, Judd L, Williams SJ, Howden BP, Stinear TP, Dahse HM, Voigt K, Hertweck C, Pidot SJ (2023) Discovery and biosynthesis of the cytotoxic polyene terpenomycin in human pathogenic *Nocardia*. *ACS Chem Biol* 18(8), 1872-1879.

Details

Joch M, Wojtas KP, Torres-Gómez H, Li Y, Meyer F, Straßburger M, Kerndl V, Dahse HM, Hertweck C, Hoffmann H, Görls H, Walter K, Hölscher C, Kloss F (2023) Whole cell hydride Meisenheimer complex biotransformation guided optimization of antimycobacterial benzothiazinones. *Eur J Med Chem* 264, 116023.

Details

Publication list as PDF

Teachings

Lecture Biomolekulare Chemie (MBC.A1, MMB.2.13) Prof. Dr. Christian Hertweck Details

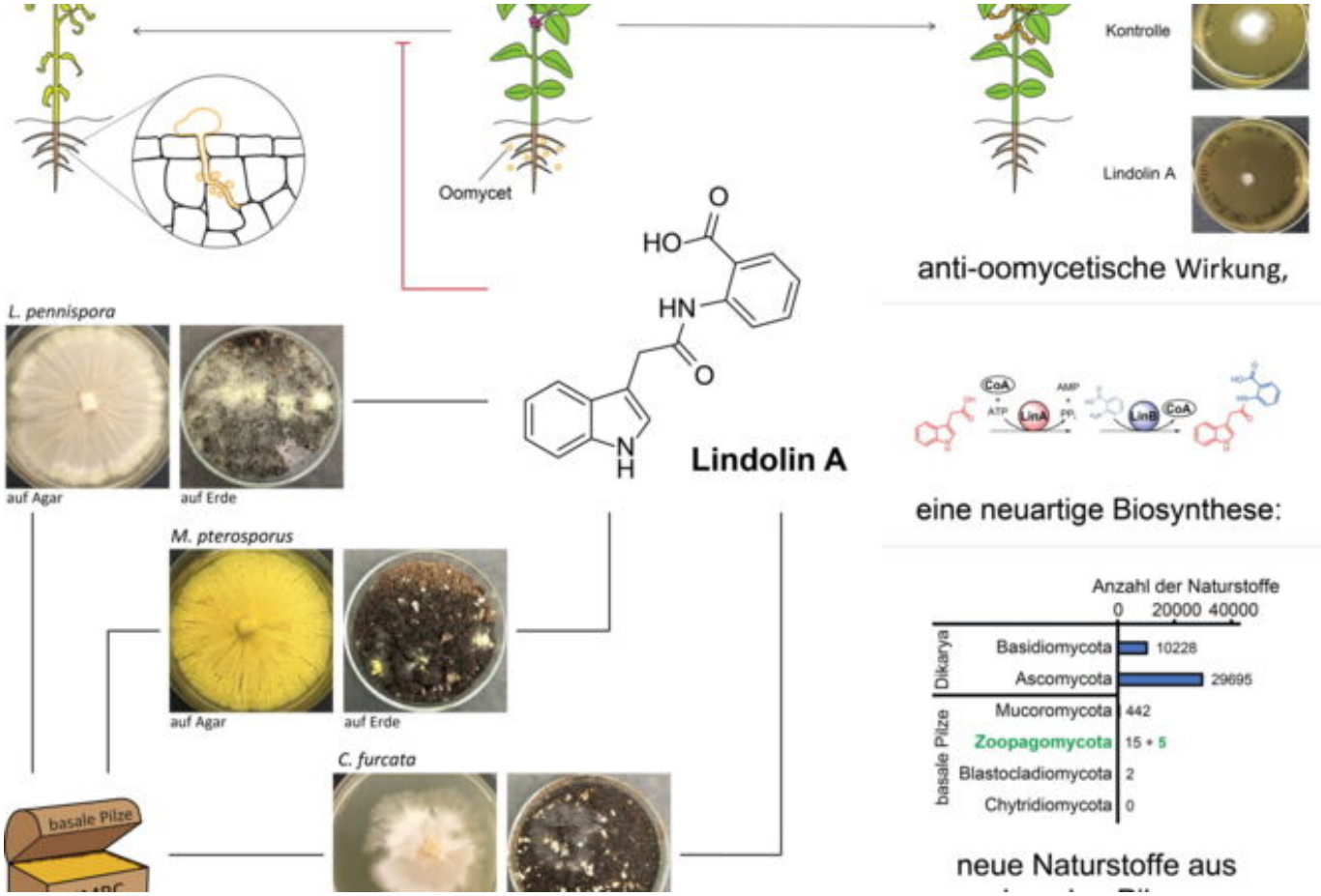
Seminar Naturstoffchemie für Fortgeschrittene (BBC3.A1) Prof. Dr. Christian Hertweck Details

Practical course Biomolekulare Chemie (MBC.A1, MMB.2.13) Prof. Dr. Christian Hertweck Details

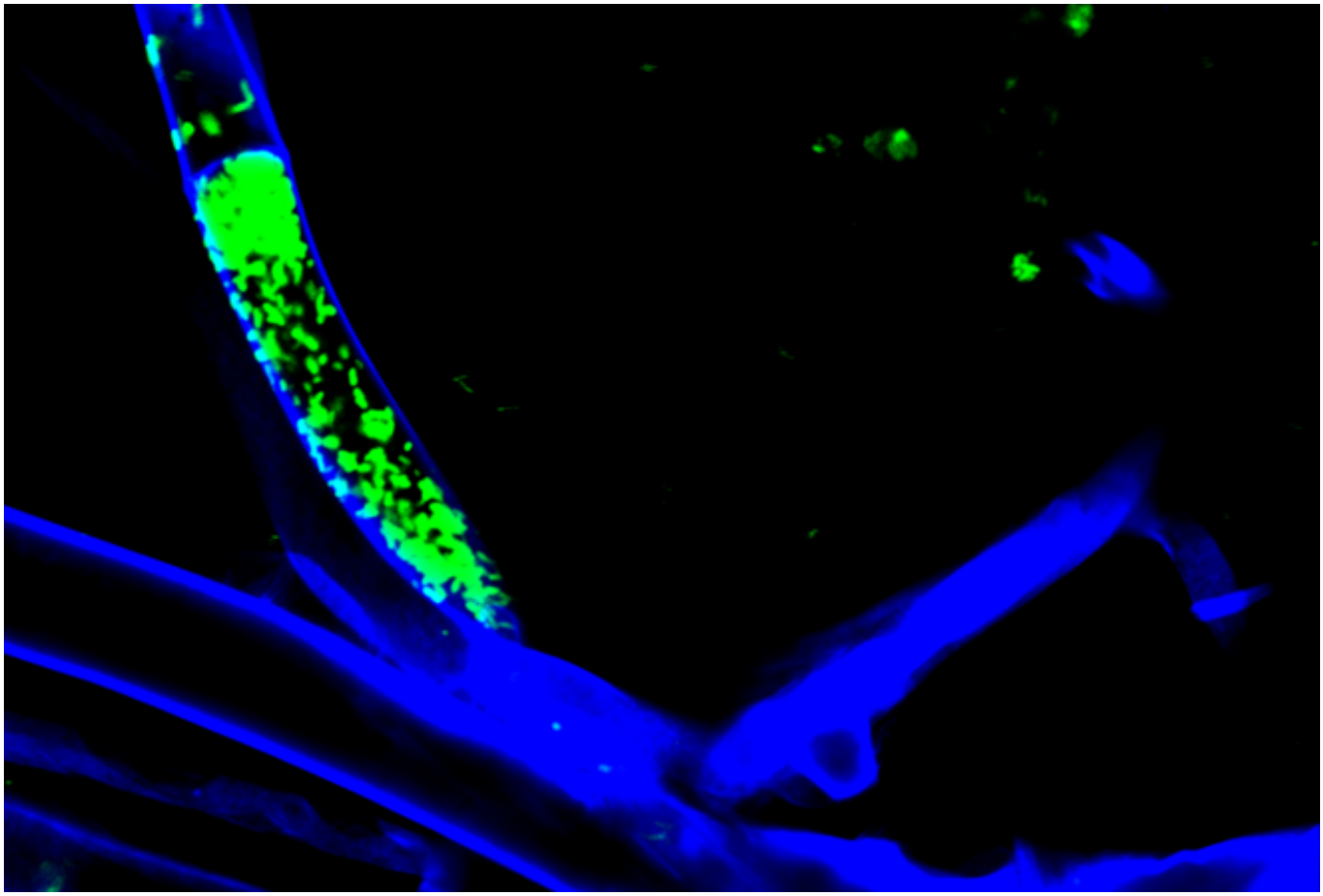
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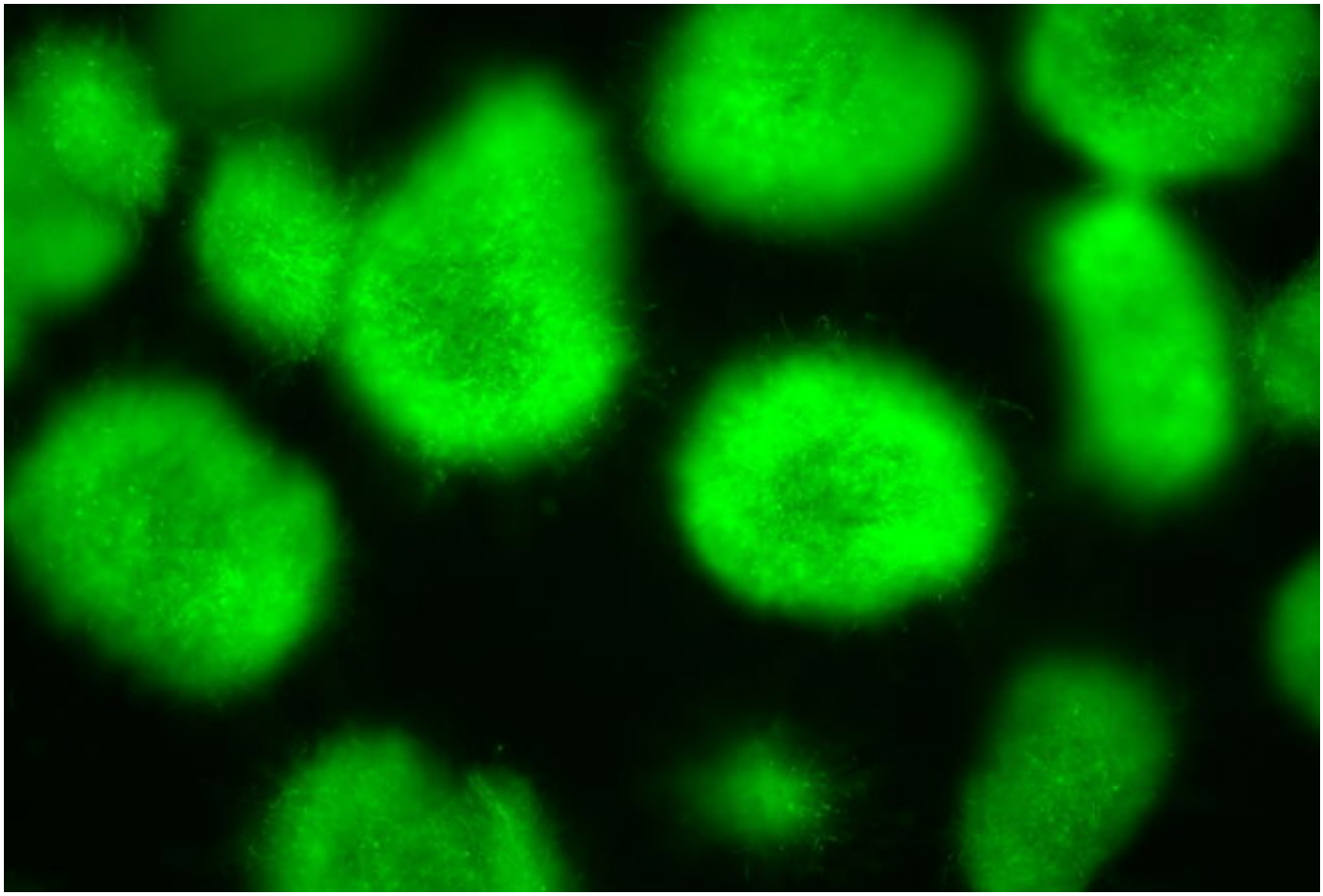
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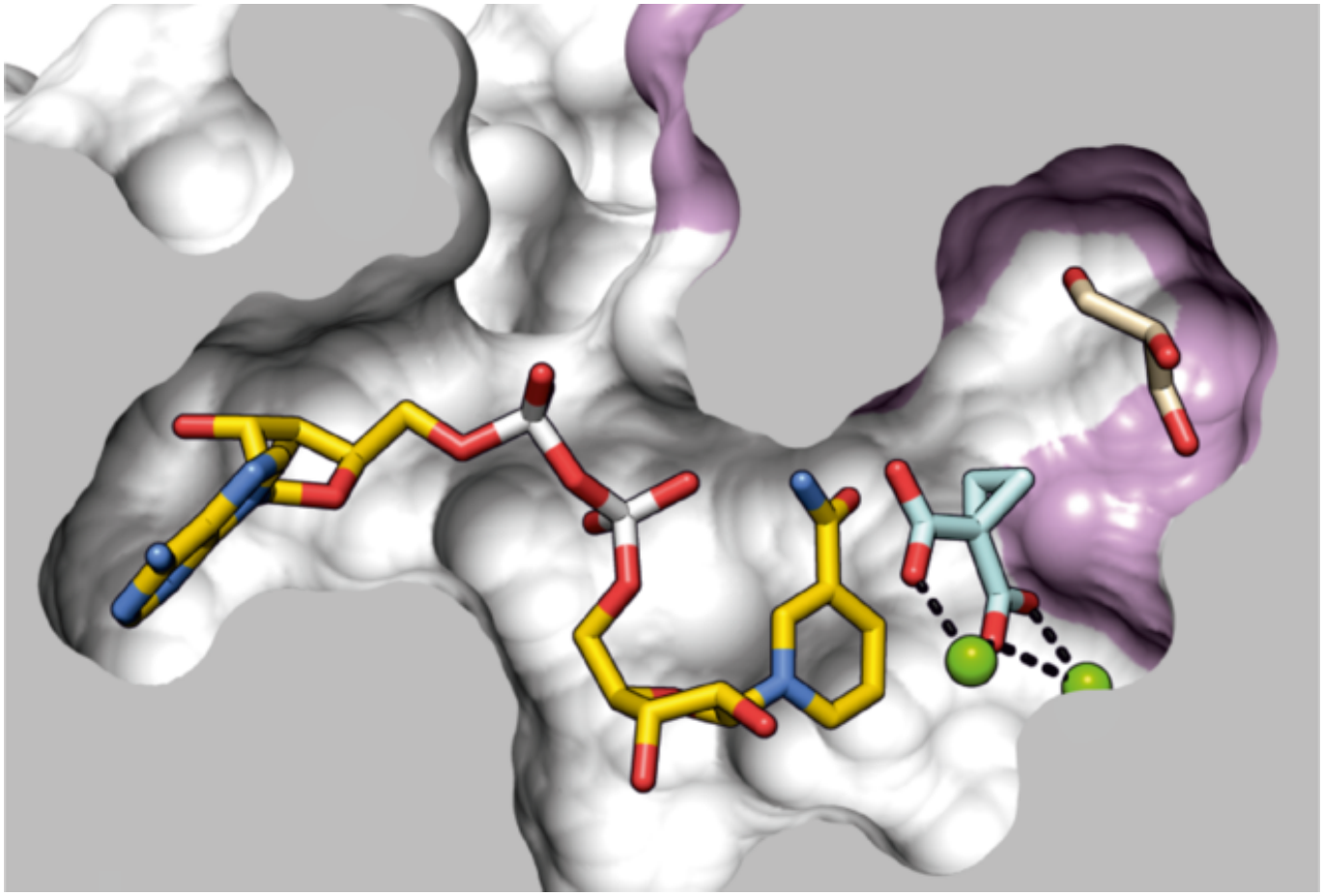
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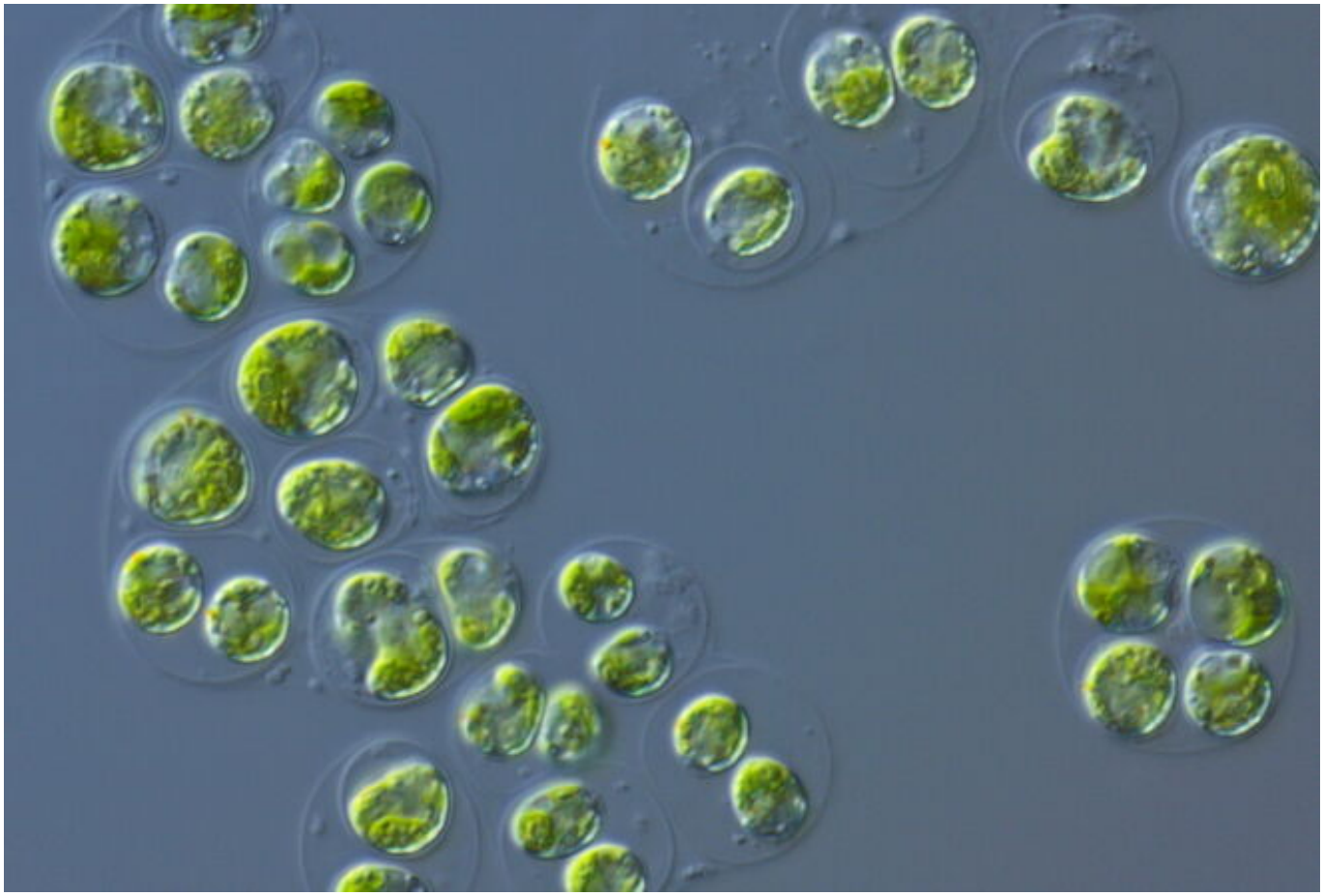
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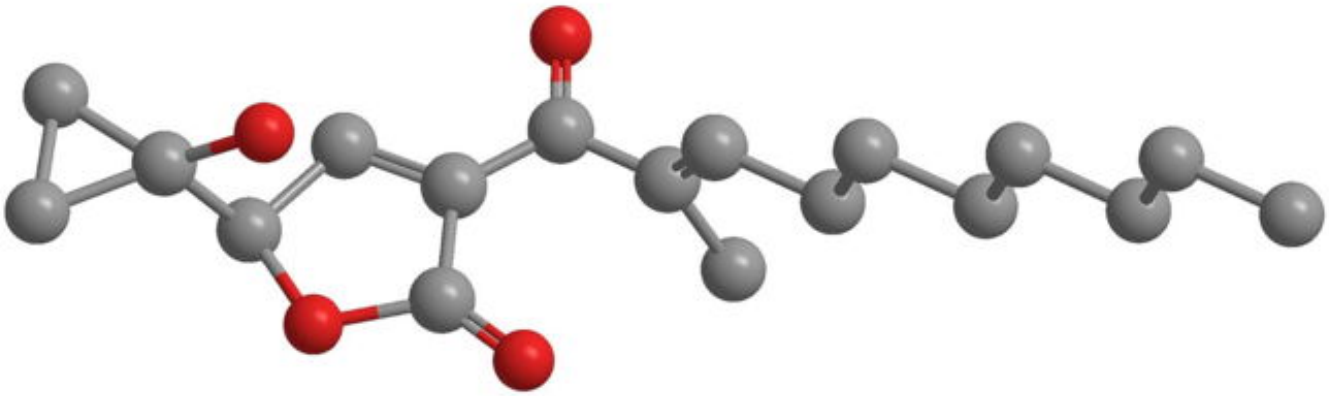
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