

JASMINA WIEMANN

(Phonetic spelling guide: YahS-Mee-Naa WhEE-Mun)

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Research focus: Biomolecule fossilization products reveal past, present, and predictable future interactions between life and our changing planet

Competitive funding offered (total): Million

Publications: Published (20); CNS journals (10); Lead or corresponding author (15)

CURRENT APPOINTMENTS

- 2024 – **Assistant Professor in Earth & Planetary Sciences – Johns Hopkins University**
Zanvyl Krieger School of Arts and Sciences, Baltimore, MD, USA.
- 2024 – **Affiliated Faculty in Functional Anatomy & Evolution – Johns Hopkins Medical Institute**
Baltimore, MD, USA.
- Pending **Museum Affiliate – Smithsonian Museum of Natural History**
Divisions of Mineralogy and Paleontology; Washington DC, USA.

RECENT APPOINTMENTS

- 2022 – 2024 **Agouron Institute Fellow (Geology) – University of Chicago**
Joint Appointment: Geophysical Sciences; Chicago, IL, USA.
- 2022 – 2024 **Agouron Institute Fellow (Astrobiology) – Field Museum of Natural History**
Joint Appointment: Meteoritics; Chicago, IL, USA.
- 2021 – 2022 **Trimble and Barr Fellow (Geobiology) – California Institute of Technology**
Department: Geological and Planetary Sciences; Pasadena, CA, USA.
- 2021 – 2022 **Research Associate (Paleontology) – Natural History Museum of LA County**
Dinosaur Research Institute; Los Angeles, CA, USA.
- Unable to accept **Human Frontier Science Program Cross-disciplinary Fellow – University of Oxford**
Departments: Earth Sciences & Biology; Oxford, UK.

EDUCATION

- 2021**
New Haven
CT, USA
PhD Earth and Planetary Sciences – Yale University
Focused in Organic Chemistry/Geochemistry, Paleobiology, and Astrobiology.
Thesis: *A fundamental exploration of the interactions between minerals and life's building blocks in deep time.* 5 chapters. Published: **Nature Communications, Science Advances, Nature.**
Advisor: Prof. Derek E. G. Briggs, Yale Earth and Planetary Sciences; Yale Peabody Museum.
Committee: Mark Norell, Jacques Gauthier, Jason Crawford (Yale Chemistry), Pincelli Hull.
Minor thesis: *Dinosaur egg color had a single evolutionary origin.* Published: **Nature.**
Advisor: Prof. Mark A. Norell, American Museum of Natural History.
- 2018**
New Haven
CT, USA
MPhil Geology and Geophysics – Yale University
Focused in Molecular Paleobiology, Geochemistry, and Mineralogy.
Advisor: Prof. Derek E. G. Briggs, Yale Earth and Planetary Sciences; Yale Peabody Museum.

- 2016**
Bonn
Germany
MSc Organismic and Evolutionary Biology – University of Bonn (public)
Focused in Evolutionary Biology, Paleobiology, Physiology, and Molecular Biology.
Thesis: *A molecular approach to the mechanisms of fossilization in bones, eggshells, and teeth.*
Published: **Science Advances**.
Advisor: Prof. P. Martin Sander, Steinmann Institute of Geosciences; Goldfuß Museum.
- 2014**
Bonn
Germany
BSc Geosciences – University of Bonn (public)
Focused in Geochemistry, Paleontology, and Mineralogy (*top of the class*).
Thesis: *The paleobiology of tetrapyrrolic color pigments in eggshells and their fossilization potential.* Published: **PeerJ**.
Advisor: Prof. P. Martin Sander, Steinmann Institute of Geosciences; Goldfuß Museum.
- 2007 – 2011**
Dortmund
Germany
Chemistry and Chemical Biology – Technical University of Dortmund (public)
Non-degree Program for high school students, **Excellence Scholarship (awarded at age 15)**.
Certificates earned: 12 certificates from the BSc and MSc programs. Focus: Organic & Bioinorganic Chemistry.
- 2011**
Werl
Germany
Abitur – Marien-Gymnasium Werl (public)
Numerus Clausus: 1,1 (~ GPA: 4.0). Majors: Chemistry, Biology (grade 11-13); Chemistry & Biology (grade 10). **Languages:** **German** (native), **English** (fluent), **Latin** (9 years).

PROFESSIONAL APPOINTMENTS

- 2020 – 2021
Scientific Affiliate (Environmental chemistry) – Yale Carbon Containment (CC) Laboratory
Project: Developing new approaches to permanently store organic carbon, inspired by authigenic mineralization processes of organic matter (**patent in preparation**).
- 2012 – 2015
Research Assistant (Crystal chemistry) – University of Bonn, Mineralogy
Crystallography Laboratory (H. Euler) in the Division of Geochemistry & Mineralogy.
- 2013
Visiting Researcher (Paleobiology) – Max Planck Institute for Evolutionary Biology, Plön
Project: Geometric Morphometrics, Computer Tomography (CT) scanning, Quantitative Methods; *skeletal adaptations in the skulls of rodents reveal dietary habits* (all major groups of Rodentia, >100 CT scans processed). Working with: D. Tautz & A. Schunke.

TEACHING APPOINTMENTS

¹Undergraduate and ²Graduate Teaching (total of 23 classes/seminars/courses)

- 2025^{1,2}
Upcoming
Instructor, 'Exploring Life on our Planet' [AS.270.XXX] offered in the Dept. of Earth and Planetary Science at Johns Hopkins University. Dissection- and fossil-based Lab. **3 hours/week**.
- 2024^{1,2}
Instructor, 'The Dynamic Earth'[AS.270.220 (01)] offered in the Morton K. Blaustein of Earth and Planetary Science at Johns Hopkins University. Lecture. **3 hours/week. 40** students in 2024.
- 2024^{1,2}
Instructor, 'The Dynamic Earth Laboratory' [AS.270.221 (01)] offered in the Dept. of Earth and Planetary Science at Johns Hopkins University. Lab. **2 hours/week. 15** students in 2024.
- 2024, 2025^{1,2}
Instructor, 'Deciphering the history of Life' [AS.270.406 (01)] offered in the Dept. of Earth and Planetary Science at Johns Hopkins University. **3 hours/week. 6** [3 registered] students in 2024.
- 2024¹
Instructor, 'Independent research' [AS.270.504 (17)] offered for undergraduate students in the Morton K. Blaustein of Earth and Planetary Science at Johns Hopkins University. Research under direction of a faculty advisor. **3 hours/week. 1** student in 2024.
- 2020¹-2024¹
Invited Lecturer (responsible for session design), 'How non-destructive analyses revive and enhance historical museum collections'; in EVST 040 **'Collections of the Peabody Museum'** (D. Skelly, Director of the Peabody Museum). On average **14** participating students (+ wait list).
Started at Hopkins
- 2020^{1,2}
Teaching Fellow for lectures and class projects in EPS 355/655 **'Extraordinary Glimpses of Past Life'** (D.E.G. Briggs) at Yale University. **7** participating students.

- 2020^{1,2} **Teaching Fellow** for lectures and class projects in EPS 355/655 **'Extraordinary Glimpses of Past Life'** (D.E.G. Briggs) at Yale University. **7** participating students.
- 2019¹ **Teaching Fellow** for lectures and laboratories in G&G 125 **'History of Life'** (D.E.G. Briggs, P. Hull, & B.A.S. Bhullar) at Yale University. **40/6** (lecture/laboratories) participating students.
- 2018¹ **Teaching Fellow** in G&G 274 **'Fossil Fuels and World Energy'** (M. Oristaglio) at Yale University. **105** participating students.
- 2018¹ **Teaching Fellow** for lectures and laboratories in G&G 125 **'History of Life'** (D.E.G. Briggs, P. Hull, & B.A.S. Bhullar) at Yale University. **65/12** (lecture/laboratories) participating students.
- 2018, 2020^{1,2} **Invited Lecturer (responsible for session design)**, G&G 355a/555a (D.E.G. Briggs); **'Organic preservation: structural tissues and protein preservation'**. **12** participating students.
- 2018, 2020^{1,2} **Invited Lecturer (responsible for session design)**, G&G 355a/555a (D.E.G. Briggs), **'Fossil pigments'**. **12** participating students.
- 2016¹ **Teaching Fellow** for lectures and laboratories in G&G 125 **'History of Life'** (D.E.G. Briggs, P. Hull, & B.A.S. Bhullar) at Yale University. **70/12** (lecture/laboratories) participating students.
- 2015¹ **Teaching Assistant (participating in course design)** for the lecture series **'Paleontology'** (P.M. Sander) at the University of Bonn (Germany). **120** participating students. *Taught in German.*
- 2015^{1,2} **Teaching Assistant** for lectures and laboratories in **'Applied Mineralogy'** (A. Bechtel, R. Hoffbauer) at the University of Bonn (Germany). **40** participating students. *Taught in German.*
- 2015¹ **Teaching Assistant** for lectures and laboratories in **'Crystallography and Crystal Chemistry'** (H. Euler) at the University of Bonn (Germany). **96** participating students. *Taught in German.*
- 2014¹ **Lecturer (responsible for course design)** for the introductory course **'Chemistry for Geoscientists'** (J. Wiemann) at the University of Bonn (Germany). **85** participating students. *Taught in German.*
- 2014¹ **Teaching Assistant** for lectures and laboratories in **'Crystallography and Crystal Chemistry'** (H. Euler) at the University of Bonn (Germany). **110** participating students. *Taught in German.*
- 2013¹ **Teaching Assistant** for lectures and laboratories in **'Crystallography and Crystal Chemistry'** (H. Euler) at the University of Bonn (Germany). **125** participating students. *Taught in German.*

PROFESSIONAL DEVELOPMENT

Scientific workshops (total of 15 university and industry workshops)

- 2025
Upcoming **'AFM-Raman'** 3-day in-person workshop offered by **Horiba Scientific**, hosted at JHU. Methods: Co-localized AFM and Raman spectroscopy; manual calibrations.
- 2024 **'Plasmonic and Raman: SERS and TERS'** offered by **Horiba Scientific**. Methods: coupling the plasmonic effect with the Raman effect for enhanced spectroscopies.
- 2024 **'Cross-correlated SPM and TERS/TEPL characterization: A mandatory technique for proper characterization of 2D semiconductors and other samples'** organized by **NUANCE at Northwestern University and Horiba Scientific**. Methods: Raman TERS, practical examples.
Started at Hopkins
- 2019 **'Geometric Morphometrics'** organized by D. Polly in the Department of Geology & Geophysics, **Yale University**. Methods: Landmarking and quantitative methods.
- 2014 – 2016 **'International Paleohistology Course'** organized and sponsored by the Division of Vertebrate Paleontology at the **University of Bonn** (Germany). Methods: Histo-sectioning and microscopy.
- 2010 **'Advances in Drug Design'** offered and sponsored by the **Bayer Crop Science** Center in Monheim (Germany). Methods: Synthesis and compound analyses.
- 2010 **'Soil Analyses'** offered and sponsored by the **Jülich Research Center** in Jülich (Germany).
- 2009 **'Synthesis of Nanocoatings'** offered and sponsored by the **BASF** Coatings GmbH in Bergkamen (Germany). Methods: Polymer synthesis and identification.

- 2009 **'Drug Interactions and Bayer Applications'** offered and sponsored by the **Bayer Crop Science** Center in Monheim (Germany). Methods: Analytical approaches and compound synthesis.
- 2008 **'Genetics and Health: New Methods in Biotechnology'** offered and sponsored by **Bayer** Leverkusen in Cologne (Germany). Methods: Molecular engineering.
- 2008 **'Nanotronics, Analytical Chemistry, and Applications of Technical Polymerization Products'** offered and sponsored by the **ChemPark Marl** in Marl (Germany). Methods: Electrochemistry.
- 2007 **'Natural and Synthetic Dyes/Organic Food Colorants'** offered and sponsored by the **Ruhr University Bochum** in Bochum (Germany). Methods: Extraction routines and compound analyses.
- 2007 **'Research, Organization, and Company Structuring'** offered and sponsored by **Bayer** Leverkusen in Cologne (Germany). Methods: Management, process scaling.
- 2007 **'Applications in Chemistry'** offered and sponsored by the **Technical University of Dortmund** (Germany). Methods: Extraction routines and compound modification.

Mentorship training and education (total of **16** courses/seminars)

- 2024 **PI responsibilities, Inclusive Mentorship, Workplace ethics training** at **Johns Hopkins University**.
- 2022 **Workplace ethics, Bystander Intervention training** at **Field Museum** and **University of Chicago**.
- 2021 **Bystander Intervention workshop** in Geological and Planetary Sciences at **Caltech**.
- 2021, 2022 **Research ethics workshop (CITI certificate earned)** at **Caltech**.
- 2021 **'Ethics in the field'** workshop in Geological and Planetary Sciences at **Caltech**.
- 2020, 2021 **IDEA meeting** in Earth and Planetary Sciences at **Yale University**.
- 2019 **Bystander Intervention workshop** in Earth and Planetary Sciences at **Yale University**.
- 2019 **'Navigating academia as a woman in STEM'**, **IMERP** discussion panel.
- 2016 – 2021 Annual **workplace ethics workshops** at **Yale University**.

ANALYTICAL, EXPERIMENTAL, & COMPUTATIONAL SKILLS

Molecular composition, structural elucidation, biosignatures: Life's molecular building blocks

Spectroscopy: Confocal *in situ* and *ex situ* Raman microspectroscopy point analysis, line mapping, 2-D and 3-D mapping [experienced with various different brands of spectrometers: Horiba JY, Renishaw, WITec, StellarNet], SERS/TERS/TEPL coupled Plasmonic and Raman effects, UV/Vis/NIR Raman, co-localized AFM-Raman, cryo- and heat-stage Raman, Fourier-Transform Infrared spectroscopy and microspectroscopy, single-cell Raman and FT-IR, spectroscopic multi-omics, UV/Vis Spectrophotometry, Plate Reader setups, hydrothermal diamond-anvil cells, DFT/DFPT basic spectral prediction from first principles and data interpretation for complex polymers.

Mass spectrometry: High-Performance Liquid Chromatography (HPLC) & HPLC ESI ToF Mass Spectrometry (HPLC ESI ToF MS), Gas Chromatography (GC) & GC Time-of-Flight Mass Spectrometry (GC ToF MS), Matrix-assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry (MALDI ToF MS), Secondary Ion Mass Spectrometry (SIMS).

Structural elucidation: Interpretation of ¹H Nuclear Magnetic Resonance spectra, and ¹³C Nuclear Magnetic Resonance spectra, Machine Learning-aided structural inference from spectroscopic training data sets.

Biochemistry: Immunochemistry, including Enzyme-linked immuno-sorbent assays (ELISA) and Western Blots, extraction/purification/staining of DNA, proteins, lipids, and pigments, gel electrophoresis, and thin-layer chromatography (TLC).

Mineral composition, crystal structure, bioinorganic interactions: Organo-mineral interactions

Spectroscopy: Powder X-ray Diffraction, Rietveld Analysis, and diffractogram processing in EVA (XRD), Environmental and regular (sample-coated) Scanning Electron Microscopy (SEM) of fresh and fossil tissues, Electron Microprobe Analysis (EMPA), Energy- and Wavelength-dispersive X-ray Spectroscopy (EDS/WDS) and X-ray Fluorescence (XRF).

Regular and petrographic microscopy: Petrographic and histological thin-sectioning, polarized and regular light microscopy.

Virtually capturing and analyzing morphology: Organismal and inorganic form

Dissections and detailed anatomical study: *Lumbricus* (earth worm/whole), *Blattella* (cock roach/whole), *Limulus* (horseshoe crab/whole), *Cucumaria* (sea cucumber/whole), *Carassius* (carp/whole), *Squalus* (shark/whole), *Didelphis* (opossum/whole), *Ovis* (sheep/cranial), Rodentia (> 300 CT scans across the rodent clade/digital, skulls; collaboration with the MPI for Evolutionary Biology in Plön), *Iguana* (lizard/whole), *Struthio* (ostrich/whole; collaboration with the Cologne Zoo), *Columba* (pigeon/whole), *Gallus* (chicken/whole).

Imaging: μ -Computer Tomography (μ -CT); *Phoenix v | tome | x s 180/240* (GE Measurement & Control), 180 kV/15W [nanofocus] + 240 kV/320 W [microfocus], Photogrammetry.

Shape analysis: ImageJ (Freeware), MorphoJ (Freeware), Amira, Fiji (Freeware).

Computational modelling, comparative methods, sequence and character data analysis, and visualization

Chemistry: LabSpec 5 Software (Horiba), Spekwin 32 (Freeware) & SpectraGryph 1.2 Software (Freeware), EVA (Bruker), LAS 5 (Leica).

Phylogeny: Mesquite 3.4 for sequence and character data (Freeware), TNT (Freeware), PAUP (Freeware).

Data Analysis: MATLAB/Simulink (MathWorks), Paleontological Statistical Software PAST 3 (Freeware), MorphoJ (Freeware), ImageJ (Freeware), Prism (Graphpad).

Visualization: Illustrator (Adobe), Photoshop CS5 Professional (Adobe), Powerpoint (Microsoft), Publisher (Microsoft), CorelDraw (Corel).

Sample (meteoritic, paleontological, mineralogical, biological, etc.) and data curation and handling

Specimen collection and handling: Safe and sterile specimen handling and shipping, organic endogeneity screening, application and identification of consolidants, invasive sampling forms, invasive sampling documentation, responsible use of collections (YPM/LACM/FMNH).

Curation/Digitization: EMu (collections management system), RRUFF (spectroscopic library), Microsoft Database/Excel (self-built and maintained spectroscopic library), SpectraGryph Database (self-built spectroscopic library).

FIELD EXPERIENCE & TRAINING, EXCAVATIONS, & EXPEDITIONS

Fieldwork for sample acquisition (total of **15** different sites; age range: Cambrian to Eocene)

American Red Cross Certified Trainee: Adult & Pediatrics

First Aid/CPR/AED with Life-Threatening Bleeding and Tourniquet Application – valid until 2025

Deutsches Rotes Kreuz Certified Trainee: Adult & Pediatrics First Aid/Traffic Accidents/CPR – Certificate is linked to German Driver's License

2025	
2024	Initial exploration of fossiliferous sediments across the Cretaceous/Paleogene boundary in Gubbio , Italy; non-invasive exploration for <i>National Geographic Proposal</i> . – 2 days <i>Started at Hopkins</i>
2022	Cretaceous fossiliferous (vertebrates) sediments of the Hell Creek Formation , Montana, USA; microsites, screen washing – 14 days
2022	Eocene fossiliferous (plants, invertebrates, vertebrates) sediments of the Green River Formation , Wyoming, USA; prospecting and excavation – 10 days
2019	Cretaceous <i>in situ</i> dinosaur nesting site in the Quinglongshan National Park Shiyan , Hubei Province in China. – Field trip
2019	Cretaceous fossiliferous (plants, invertebrates, vertebrates) sediments of the Las Hoyas locality in Cuenca, Spain; quarrying – 14 days
2018	Triassic fossiliferous (plants, vertebrates) sediments of the Petrified Forest , Arizona, USA; prospecting and excavation – 22 days
2017	Triassic fossiliferous (plants, vertebrates) sediments of the Petrified Forest , Arizona, USA; prospecting and excavation – 14 days
2017	Jurassic sediments at Lourinha in Portugal. Trip associated with the Dinosaur Eggs and Babies Conference in Lisbon. – Field trip

- 2015 **Jurassic** fossiliferous (invertebrates, vertebrates) sediments of the **Coastlines of Great Britain**, UK; prospecting and collecting – 15 days
- 2015 **Triassic** fossiliferous (ammonites, marine reptiles) sediments of the **Augusta Mountains**, Nevada, USA; prospecting and quarrying – 13 days
- 2015 **Cretaceous** Two-Medicine Formation on **Egg Mountain**, MT, USA; prospecting and quarrying – 10 days
- 2015 **Cretaceous** fluvial sediments of the **Dinosaur Provincial Park** in Canada. – Field trip
- 2015 **Triassic, Jurassic, and Cretaceous** fossiliferous sediments of **Southern Germany**. – Field trip
- 2014 **Phanerozoic** Lagerstätten of **Central and Southern Germany** (including the Hunsrück slate, Maar lakes of the Eifel region, Messel, Solnhofen, Dotternhausen, Nusplingen). – Field trip
- 2013 **Triassic, Jurassic, and Cretaceous** rocks of **Southern Germany**. – Field trip
- 2012 **Paleozoic to Cenozoic** rocks of El Pont de Suerte, **Catalan Pyrenees**, Spain; geological mapping – 20 days

AWARDS & HONORS

- 2025
- 2023 **BMC Evolutionary Biology Photography Award (Paleoecology, Runner up)** by the **Nature BMC Publishing Group** awarded for outstanding imaging of biological samples.
- 2021 **Winifred Goldring Award (Molecular Paleobiology)** by the **Association of Women in Geoscience** and the **Paleontological Society** awarded to an outstanding female student in paleontology.
- 2021 **Phillip M. Orville Prize (Geology)** in recognition of outstanding research and scholarship in the Earth Sciences, awarded by the **Department of Earth and Planetary Sciences at Yale University**.
- 2020 **Alfred Sherwood Romer Prize Finalist (Paleontology)** at the Annual Meeting of the **Society of Vertebrate Paleontology** in 2020.
- 2019 **Geobiology and Geomicrobiology Student Award Honorable Mention (Geobiology)** for the best student talk at the Annual Meeting of the **Geological Society of America**, Phoenix, AZ, USA.
- 2019 **Estwing Hammer Prize (Geology)** awarded by the **Department of Geology and Geophysics at Yale University** as outstanding geology graduate student.
- 2019 **George Gaylord Simpson Award (Evolutionary Biology)** of the **Yale Peabody Museum** for the study "Dinosaur egg color had a single evolutionary origin" (2018, *Nature*) as best paper on evolution and the fossil record.
- 2015 **Steven Cohen Award for Excellent Student Research (Molecular Paleobiology)** awarded by the **Society of Vertebrate Paleontology** for the discovery of non-avian dinosaur egg color. Inaugural award 2015; international competition; recognizes innovative research in the field of vertebrate paleontology conducted by an exemplary student.
- 2011 **GDCh Student Award (Chemistry)** by the **Society of German Chemists**, as best student of the year in the field of chemistry.

FELLOWSHIPS & GRANTS

Total amount of competitive funding offered: Million USD

Pending fellowships, grants, competitive instrument time, etc.

Pending

\$

Pending	
\$	
\$	
Pending	
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Fellowships, grants, competitive instrument time, and other types of funding support

2025 \$ 2,384	EPS Teaching Support Fund by the Johns Hopkins University: PI status <i>Building an osteological and paleontological teaching collection at JHU through 3-D printing.</i> <i>Started at Hopkins</i>
2023	Instrument and set-up funds offered by Johns Hopkins University as Assistant Professor in the Morton K. Blaustein Department of Earth & Planetary Sciences . Offer accepted.
2023 <i>Instr. time</i>	Instrument time (3 days) at the ToF Secondary Ion Mass Spectrometer (Iontof M6) offered by the WA Organic and Isotope Geochemistry Centre at Curtin University .
2023 \$	Instrument and set-up funds Offer declined.
2022 \$	Instrument and set-up funds Offer declined.
2022 \$	<i>Negotiations cancelled due to other opportunities</i>
2022 \$ 14,000 <i>Instr. time</i>	Instrument time (10 days) at the Secondary Ion Mass Spectrometer (SIMS) in the CMC laboratory awarded by the Center for Comparative Planetary Evolution (3 CPE) at the California Institute of Technology .
2022 \$ 150,000	Agouron Geobiology Fellowship awarded by the Agouron Institute for the project 'Life's fingerprint: Elucidating the nature and preservation of the biogenicity signal in fossil organic matter to advance the targeted search for past Life on Earth and beyond'. 2 years funded. Host Institution: University of Chicago (Advisor: Philipp Heck [Cosmochemistry]) , Chicago, IL, USA.
2021 \$ 130,000	Trimble Fellowship and Barr Fellowship on the Geobiology of Complex Multicellular Life of the Department of Geological and Planetary Sciences at the California Institute of Technology (Advisors: Mike Brown/John Eiler/Woody Fischer [Astrobiology/Geobiology]) , Pasadena, USA.
2021 \$ 225,000	Human Frontier Science Program Cross-disciplinary Individual Fellowship (LT001184/2021-C) awarded by the Human Frontier Science Program based on a global competition. 3 years funded. Host Institution: Department of Earth Sciences at the University of Oxford (Advisor: Roger Benson [Earth Sciences]) , Oxford, UK. 16 Cross-disciplinary HFSP Fellowships were funded in the 2021 cycle (based on a total of 665 applications). – <i>Unable to accept</i> .
2021	<i>Shortlist</i> for a Junior Research Fellowship in Earth Science at Christchurch College in Oxford, UK . Research Program: Elucidating the emergence, early evolution and drivers of animal biomineralisation through geochemistry and genomics. – <i>Unable to accept</i> .
2021 \$ 100,000	Collaborator on Caltech Discovery Funds Proposal (PI: Yuk Yung, Collaborators: Bethany Ehlmann, Danica Adams) on: Constraining the Timeline of the Martian Redox Dichotomy using Soil Measurements. Proposal was <i>fully funded</i> (100 %).
2021	Co-Investigator on the ARC Centre of Excellence for a Resilient and Evolving Earth (RE²) Grant Proposal (PI: Kliti Grice), Curtin University, Perth, Australia.

Predocutorial fellowships and grants

2020 – 2021 \$ 30,000	L. L. Hutchinson Memorial Fellowship awarded by Yale University to an outstanding graduate student.
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2019 \$ 1,257	Geological Society of America Graduate Student Research Grant to investigate palaeobiological information preserved in Metazoan protein fossilization products.
2019 \$ 2,369	Paleontological Association Grant-in-Aid (applied for with Derek E. G. Briggs) to support the travel of Early Career Scientists invited to present in the Podium Symposium 'From Molecules to Macroevolution' at the Annual Meeting of the Society of Vertebrate Paleontology in Brisbane, Australia.
2019 \$ 4,650	Yale Institute of Biospheric Sciences Doctoral Dissertation Improvement Grant to explore palaeobiological information retained in Metazoan fossil biomolecules.
2018 \$ 400	Jackson School Travel Grant of the Society of Vertebrate Paleontology awarded to present excellent graduate student research at the Annual Meeting.
2016 \$ 2,760	Jurassic Foundation Student Research Grant supporting innovative and promising project proposals involving dinosaur research. Project: ' <i>Biomolecular preservation of dinosaur embryonic vascularity allows quantification of reproductive success through time.</i> '
2016 – 2021 \$ 400,000	Graduate School Stipend in the Department of Geology & Geophysics at Yale University .
2016 \$ 500,000	Graduate School Stipend by the Richard Gilder Graduate School at the American Museum of Natural History – <i>Declined</i> .
2016	<i>Withdrawn</i> from the finalist competition for a NERC GW4+ DTP Graduate School Stipend in Earth Sciences at the University of Bristol due to acceptance of a different offer.
2012 – 2014 \$ 8,100	Honors Program Scholarship of the University of Bonn for outstanding undergraduate students across all disciplines (recommended by the Department of Geosciences after being ranked top of the class [180 students in the Geosciences]).
2007 – 2011 \$ 5,700	Excellence Scholarship of the Technical University of Dortmund for outstanding high school students. The scholarship covered 4 years (8 semesters) of university tuition. Scholarship was re-evaluated annually and funded for the maximum duration. Youngest female student in the program in a STEM field (awarded and enrolled at age 15).
Funding received as an underrepresented minority in academia/STEM	
2014 – 2016	German National Financial Aid (BaFöG) for promising students from socio-economically disadvantaged backgrounds in pursuit of a MSc degree (need-based; maximum amount funded).
2011 – 2014	German National Financial Aid (BaFöG) for promising students from socio-economically disadvantaged backgrounds in pursuit of a BSc degree (need-based; maximum amount funded).

PUBLICATIONS

Total number of citations: 748; h-factor: 13; i10-factor: 14

High-profile journals (published only): **Nature (8), Nature Communications (1), Science Advances (1).**

Lead/corresponding author: **Total number (15); Nature (7), Nature Communications (1), Science Advances (1).**

Ready for imminent submission (*corresponding author; mentee)

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Submitted, In Review or in Revision (*corresponding author; mentee)

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Published or in Press (*corresponding author)

20. **Wiemann, J.*** Fossil dinosaur cells – 20 years after a discovery. **Nature** (2025).
Link: <https://doi.org/10.1038/10.1038/d41586-025-00733-9>.

Started at Hopkins

19. **Wiemann, J.***, and Heck, P. R. Quantifying the impact of sample, instrument, and data processing on biological signatures detected with Raman spectroscopy. **Journal of Raman Spectroscopy** (2024).
Link: <https://doi.org/10.1002/jrs.6669> [**Caltech & FMNH Postdoc**]

18. **Wiemann, J.***, Menendez, I.*, Crawford, J.M., Fabbri, M., Gauthier, J.A., Hull, P.M., Norell, M.A., and Briggs, D.E.G. RE: Comment on amniote metabolism and the evolution of endothermy. **Nature** 621, E4–E6 (2023).
Link: <https://doi.org/10.1038/s41586-023-06412-x>.

17. Tripp, M.*, **Wiemann, J.**, Brocks, J., Mayer, P., Lidgard, S., Schwark, L., and Grice, K. Molecular evidence from coprolites reveals dietary strategies of the Carboniferous Mazon Creek fauna. **Biology**.
– Invited contribution (special issue).
Link: <https://www.mdpi.com/2079-7737/11/9/1289>

16. Norell, M. A., **Wiemann, J.***, Menendez, I.*, Fabbri, M.*, Yu, C., Marsicano, C., Pol, D., Moore-Nall, A., Varricchio, D. J., and Zelenitsky, D. Cross-methodological evidence confirms soft eggs in sauropodomorph dinosaurs. **Nature**.
Link: <https://www.nature.com/articles/s41586-022-05152-8>

15. **Wiemann, J.***, Menendez, I., Crawford, J.M., Fabbri, M., Gauthier, J.A., Hull, P.M., Norell, M.A., and Briggs, D.E.G. Fossil biomolecules reveal an avian metabolism in the ancestral dinosaur. **Nature**, 10.1038/s41586-022-04770-6. Altmetric score: 2033. [**Dissertation chapter**] – **Most widely shared paleontology paper in 2022**.
Link: <https://www.nature.com/articles/s41586-022-04770-6>

14. **Wiemann, J.*** and Briggs, D.E.G. Raman spectroscopy is a powerful tool in a range of paleobiological applications. Invited contribution, **Bioessays**, 10.1002/bies.202100070. Altmetric score: 11.
Link: <https://onlinelibrary.wiley.com/doi/abs/10.1002/bies.202100070>
Preprint: **Wiemann, J.*** and Briggs, D.E.G. Validation of biosignatures confirms the informative nature of fossil organic Raman spectra. **BioRxiv**, 10.1101/2021.02.07.430162.

13. **Wiemann, J.***, Crawford, J.M., and Briggs, D.E.G., 2020. Phylogenetic and physiological signals in metazoan fossil biomolecules. **Science Advances**, 10.1126/sciadv.aba6883. Altmetric score: 103.
Link: <https://advances.sciencemag.org/content/6/28/eaba6883> [**Dissertation chapter**]

12. Norell, M. A.*, **Wiemann, J.***, Fabbri, M.*, Yu, C., Marsicano, C., Pol, D., Moore-Nall, A., Varricchio, D. J., and

- Zelenitsky, D., 2020. *The first dinosaur egg was soft*. **Nature**. Altmetric score: 1439.
 Link: <https://www.nature.com/articles/s41586-020-2412-8>
11. McCoy, V. E.*, **Wiemann, J.***, Lamsdell, J.C., Whalen, C.D., Lidgard, S., Mayer, P., Petermann, H., and Briggs, D.E.G., 2020. *Chemical signatures of soft tissues distinguish between vertebrates and invertebrates from the Carboniferous Mazon Creek Lagerstätte of Illinois*. **Geobiology**, 10.1111/gbi.12397. Altmetric score: 179.
 Link: <https://onlinelibrary.wiley.com/doi/abs/10.1111/gbi.12397>
 10. Ibrahim, N., Maganuco, S., Dal Sasso, C., Fabbri, M., Audifore, M., Bindellini, G., Martill, D.M., **Wiemann, J.**, Zouhri, S., Matarelli, D., Unwin, D.M., Joger, U., Amane, A., Jakubczak, J., Bonadonna, D., Lauder, G., and Pierce S., 2020. *Tail-propelled aquatic locomotion in a theropod dinosaur*. **Nature**, 10.1038/s41586-020-2190-3. Altmetric score: 3780.
 Link: <https://www.nature.com/articles/s41586-020-2190-3>
 9. **Wiemann, J.***, de Queiroz, K., Rowe, T. B., Planavsky, N. J., Anderson, R. P., Gogarten, J. P., Turner, P. E., and Gauthier, J. A., 2020. *Biota*. In: de Queiroz, K., Cantino, P. D., and Gauthier, J. A., Editors. **Phylonoms: a companion to the PhyloCode**. Berkeley, University of California Press - *Invited contribution*. Registration number: 298.
 Link: <https://www.taylorfrancis.com/books/9780429446276/chapters/10.1201/9780429446276-3>
 8. **Wiemann, J.***, de Queiroz, K., Rowe, T. B., Planavsky, N. J., Anderson, R. P., Gogarten, J. P., Turner, P. E., and Gauthier, J. A., 2020. *Pan-Biota*. In: de Queiroz, K., Cantino, P. D., and Gauthier, J. A., Editors. **Phylonoms: a companion to the PhyloCode**. Berkeley, University of California Press - *Invited contribution*. Registration number: 299.
 Link: <https://www.taylorfrancis.com/books/9780429446276/chapters/10.1201/9780429446276-2>
 7. Fabbri, M., **Wiemann, J.**, Manucci, F., Briggs, D.E.G., 2020. *3-D soft tissue preservation revealed in the skin of a non-avian dinosaur*. **Palaeontology**, 10.1111/pala.12470. Altmetric score: 53.
 Link: <https://onlinelibrary.wiley.com/doi/full/10.1111/pala.12470>
 6. Yang, T.-R., **Wiemann, J.**, Xu, L., Cheng, Y.-N., Wu, X.-C., and Sander, P. M., 2019. *Reconstruction of oviraptorid clutches illuminates their unique nesting biology*. **Acta Palaeontologica Polonica**, 10.4202/app.00597.2018.
 Link: <http://www.app.pan.pl/article/item/app004972018.html>
 5. **Wiemann, J.***, Yang, T.R., and Norell, M.A., 2019. *Reply to: Egg pigmentation probably has an archosaurian origin*. **Nature**, 10.1038/s41586-019-1283-3. Altmetric score: 35.
 Link: <https://www.nature.com/articles/s41586-019-1283-3>
 4. **Wiemann, J.***, Fabbri, M., Yang, T.R., Stein, K., Sander, P.M., Norell, M.A., and Briggs, D.E.G., 2018. *Fossilization transforms vertebrate hard tissue proteins into N-heterocyclic polymers*. **Nature Communications**, 10.1038/s41467-018-07013-3. Altmetric score: 200.
 Link: <https://www.nature.com/articles/s41467-018-07013-3> [**Dissertation chapter**]
 3. **Wiemann, J.***, Yang, T.R., and Norell, M.A., 2018. *Dinosaur egg color had a single evolutionary origin*. **Nature**, 10.1038/s41586-018-0646-5. Altmetric score: 1624.
 Link: <https://www.nature.com/articles/s41586-018-0646-5> [**Minor dissertation project**]
 2. Yang, T.R., Chen, Y.-H., **Wiemann, J.**, Spiering, B., and Sander, P.M., 2018. *Fossil eggshell cuticle elucidates dinosaur nesting ecology*. **PeerJ**, 6, p.e5144. Altmetric score: 25.
 Link: <https://peerj.com/articles/5144/>
 1. **Wiemann, J.***, Yang, T.R., Sander, P.N., Schneider, M., Engeser, M., Kath-Schorr, S., Müller, C.E. and Sander, P.M., 2017. *Dinosaur origin of egg color: oviraptors laid blue-green eggs*. **PeerJ**, 5, p.e3706. Altmetric score: 461.
 Link: <https://peerj.com/articles/3706/>

SELECTED CONFERENCE PRESENTATIONS

Total number of scientific presentations: > 90

Invited and keynote talks (invited teaching lectures/seminars are listed separately in the *Teaching section*)

56.



55.
54.
53. **Wiemann, J.** 2025. *Life finds a way: Biomolecule fossilization products reveal the history of Life on Earth and beyond.* Department Seminar, Geosciences, Virginia Tech, Blacksburg, VA, USA. – **Invited talk.**
52. **Wiemann, J.** 2024. *Life finds a way: Biomolecule fossilization products reveal the history of Life on Earth and beyond.* Department Seminar, Biology, George Washington University, Washington DC, USA. – **Invited talk.**
51. **Wiemann, J.** 2024. *Life finds a way: Biomolecule fossilization products reveal the history of Life on Earth and beyond.* Paleontology Lecture series, Macalester College, MN, USA. – **Invited talk.**
50. **Wiemann, J.** 2024. *How fossil biomolecules reveal the onset of endothermy as a prerequisite for the evolution of mammalian pregnancy.* Podium Symposium on Mammal Evolution at the Annual Meeting of the Society of Vertebrate Paleontology, Minneapolis, MN. – **Invited talk.**
49. **Wiemann, J.** 2024. *Biomolecule fossilization products reveal the history of Life on Earth and beyond.* Smithsonian seminar series, Smithsonian Museum of Natural History, Washington DC, USA. – **Invited talk.**
48. **Wiemann, J.** 2024. *Mass extinctions make way for metabolic makeovers: The rise and fall of the dinosaurs.* Symposium on Dinosaur Evolution at the International Geological Congress in Busan, South Korea. – **Keynote talk.**
47. **Wiemann, J.** 2024. *Multivariate statistics and machine learning reveal the molecular fingerprint of Life.* Symposium on 'Computational Paleobiology', North American Paleontological Convention, Michigan, USA. – **Keynote talk.**
46. **Wiemann, J.** 2024. *Tracing organic matter through time and space reveals the molecular fingerprint of Life.* Symposium on 'Insights from Terrestrial Life: what evolutionary biology can bring to our understanding of life in extra-terrestrial environments', Astrobiology Science Conference (AbSciCon), Providence, USA. – **Keynote talk.**
45. **Wiemann, J.** 2024. *Life finds a way: Biomolecule fossilization products reveal the history of Life on Earth and beyond.* Pal(a)eoPERCS Early Career Online seminar series. – **Invited talk.**
44. **Wiemann, J.** 2024. *Tracing the fidelity of molecular biosignatures through geological time to reveal major steps in the History of Life on Earth and beyond.* Regular Seminar in Environmental Science and Evolution, University of Minnesota, MS, USA. – **Invited talk.**
43. **Wiemann, J.** 2024. *The evolution of avian reproduction and physiology and its impact on the rise and fall of the (non-avian) dinosaurs.* Paleontological lecture series, Philip J. Currie Dinosaur Museum, Wembley, Canada. – **Invited talk.**

Started at Hopkins

42. **Wiemann, J.** 2024. *Life finds a way: How the integration of modern and fossil biomolecular information reveals past, present, and predictable future interactions between Life and our changing planet.* Special departmental seminar, E3B, Columbia University, New York, USA. – **Invited talk** (faculty search, declined).
41. **Wiemann, J.** 2023. *Integrative molecular biosignatures reveal the evolutionary history of archosaurs.* Symposium on Dinosaur Evolution in Honor of Mark Norell, American Museum of Natural History. – **Invited talk.**
40. **Wiemann, J.** 2023. *Biomolecule fossilization products reveal the past, present, and predictable future of interactions between Life and our changing planet.* Special lecture for the 70th anniversary of the Polish Academy of Sciences, Institute of Paleobiology at the Polish Academy of Sciences, Warsaw, Poland. – **Keynote talk.**
39. **Wiemann, J.** 2023. *Life finds a way: How the integration of modern and fossil biomolecular information reveals past, present, and predictable future interactions between Life and our changing planet.* Special departmental seminar, Earth and Planetary Sciences, Johns Hopkins University, Baltimore, USA. – **Invited talk.**
38. **Wiemann, J.** 2023. *Tracing the fidelity of molecular biosignatures through geological time to reveal major steps in the History of Life on Earth and beyond.* Podium Symposium on Molecular Paleontology in the 21st Century, Australian Earth Science Congress 2023, Perth, Australia. – **Keynote talk.**
37. **Wiemann, J.** 2023. *Biomolecule fossilization products reveal the history of Life on Earth and beyond.* Special departmental seminar, Earth Sciences, University of Oxford, Oxford, UK. – **Invited talk.**
36. **Wiemann, J.** 2023. *Molecular metabolic markers reveal the physiology and paleobiology of extinct amniotes.* Annual Meeting of the American Association for Anatomy, Washington, DC, USA. – **Keynote talk.**
35. **Wiemann, J.** 2023. *The evolution of avian reproduction and physiology and its impact on the rise and fall of the (non-avian) dinosaurs.* Department seminar in Ecology and Evolutionary Biology at the University of Illinois at Urbana Champaign, Urbana Champaign, IL, USA. – **Invited talk.**

34. **Wiemann, J.** 2023. *Life finds a way: Integrating modern and fossil molecular information to decipher the evolutionary history of Life on Earth and beyond.* Annual Geobiology Lecture hosted as part of the departmental seminar in the Earth, Energy, and Environmental Sciences at Stanford University, CA, USA. – **Keynote talk, invited geobiologist for the year 2023.**
33. **Wiemann, J.** 2022. *Life finds a way: Integrating modern and fossil molecular information to decipher the evolutionary history of vertebrates.* Museum-wide Special Seminar, Field Museum of Natural History, Chicago, IL, USA. – **Invited talk.**
32. **Wiemann, J.** 2022. *Life finds a way: Biomolecule fossilization products reveal the history of life on Earth and beyond.* Departmental seminar in Geology at Columbia College, Chicago, IL, USA. – **Invited talk,** representing the Field Museum of Natural History.
31. **Wiemann, J.** 2022. *Biomolecule fossilization products reveal the history of life on Earth and beyond.* Departmental seminar in Earth and Environmental Sciences at the University of Illinois, Chicago, IL, USA. – **Invited talk.**
30. **Wiemann, J.** 2022. *Chemical clues reveal the metabolism of dinosaurs.* Natural History Museum of Los Angeles County, Dinofest event, in Los Angeles, CA, USA. – **Keynote talk.**
29. **Wiemann, J.** 2022. *Biomolecule fossilization products reveal the history of life on Earth and beyond.* 10th Annual Dinosaur Shindig, Ekalaka, MT, USA. – **Invited talk.**
28. **Wiemann, J.** 2022. *Biomolecule fossilization products reveal the history of life on Earth and beyond.* Public seminar (virtual) of the Paleontological Museum at the University of Zürich, Zürich, Switzerland. – **Invited talk.**
27. **Wiemann, J.** 2022. *Biomolecule fossilization products reveal the history of life on Earth and beyond.* Departmental seminar (Planetary Geochemistry) hosted by the Earth and Space Sciences at the University of California, Los Angeles, Los Angeles, CA, USA. – **Invited talk.**
26. **Wiemann, J.** 2022. *Biomolecule fossilization products reveal the history of life on Earth and beyond.* Departmental seminar hosted by the Earth, Ocean, and Atmospheric Sciences at Florida State University, Tallahassee, FL, USA. – **Invited talk.**
25. **Wiemann, J.** 2022. *Biomolecule fossilization products reveal the history of life on Earth and beyond.* Departmental seminar hosted by the Geophysical Sciences at the University of Chicago, Chicago, IL, USA. – **Invited talk.**
24. **Wiemann, J.** 2022. *A colorful journey through the evolution of dinosaur eggs and parenting.* 6th Annual Dinofest hosted at the Natural History Museum of Utah (NHMU), Topic: Dinosaurs in Living Color. Salt Lake City, Utah, USA. – **Invited talk.**
23. **Wiemann, J.** 2021. *Biomolecule fossilization products reveal the history of life on Earth and beyond.* Seminar hosted by the Department of Earth and Space Sciences at the University of California, Los Angeles, Los Angeles, CA, USA. – **Invited talk.**
22. **Wiemann, J.** 2021. *Biomolecule fossilization products reveal the history of life on Earth and beyond.* Paleontology/Environmental Science seminar hosted at the University of Southern California, Los Angeles, CA, USA. – **Invited talk.**
21. **Wiemann, J.** 2021. *Biomolecule fossilization products reveal the history of life on Earth and beyond.* COG3 seminar hosted by the Department of Earth, Atmospheric and Planetary Sciences at MIT, Boston, MA, USA. – **Invited talk.**
20. **Wiemann, J.** 2021. *Biomolecule fossilization products reveal the history of life on Earth and beyond.* Departmental seminar hosted by the Division of Geological and Planetary Sciences at the California Institute of Technology, Pasadena, CA, USA. – **Invited talk.**
19. **Wiemann, J.** 2021. *Understanding biomolecule fossilization to reveal past, present and future interactions between Earth and life.* Virtual Departmental Seminar hosted by the Department of Earth and Planetary Sciences at Berkeley, CA, USA. – **Invited talk.**
18. **Wiemann, J.** 2021. *Fossil biomolecules reveal the evolution of reproductive physiology and behaviors in archosaurs.* Virtual Research Seminar hosted by the Integrated Behavior Research Group (Ecology & Evolutionary Biology) at Princeton University, NJ, USA. – **Invited talk.**
17. **Wiemann, J.** 2021. *Fossil organic matter preserves biosignatures in deepest time.* Virtual Research Seminar hosted by the Smithsonian National Museum of Natural History, Washington DC, USA. – **Invited talk.**
16. **Wiemann, J.** 2020. *Phylogenetic and physiological signals in metazoan fossil biomolecules.* Virtual Research Seminar hosted by the Paleobiology Group at the University of Bristol, UK. – **Invited talk.**
15. **Wiemann, J.** 2020. *Porphyryns and other biomolecule fossilization products reveal the evolution of archosaur reproduction.* Virtual Interdisciplinary Research Seminar in Bacteriology hosted by the Institute for Infection, Immunity and Inflammation at the University of Glasgow. – **Invited talk.**
14. **Wiemann, J.** 2020. *Phylogenetic and physiological signals in metazoan fossil biomolecules.* Virtual Paleo-/Geobiology Research Seminar hosted by the University of Erlangen, Bavaria, Germany. – **Invited talk.**

13. **Wiemann, J.** 2020. *The first dinosaur egg was soft*. Virtual Paleontology Research Seminar hosted by the University of Edinburgh, UK. – **Invited talk.**
12. **Wiemann, J.** 2020. *The colors of dinosaur eggs and their paleobiological importance*. Virtual Gallery Talk at the Yale Peabody Museum, New Haven, CT, USA. – **Invited talk.**
11. **Wiemann, J.** 2020. *Fossil biomolecules reveal the evolution of archosaur reproduction*. Speaker series at the Royal Tyrrell Museum in Drumheller, Alberta, Canada. – **Invited international speaker for the year 2020.**
10. **Wiemann, J.** 2020. *Pushing the limits of the fossil record: fossil biomolecules reveal the evolutionary history of life*. PaleoFest Public Science Event at the Burpee Museum in Rockford, IL, USA. – **Invited talk.**
9. **Wiemann, J.** 2019. *Fossil biomolecules illuminate the evolutionary history of animal life*. Paleontological seminar at the University of Oxford, Oxford, UK. – **Invited talk.**
8. **Wiemann, J.** 2019. *Fossil organic matter illuminates the history of life*. Organic Geochemistry and Geobiology seminar at the Massachusetts Institute of Technology (MIT), Cambridge, MA, USA. – **Invited talk.**
7. **Wiemann, J.** 2019. *A novel molecular toolkit reveals biological signals in Metazoan fossil soft tissues*. Special seminar at the Shandong Tianyu Paleontological Museum in China. – **Invited talk.**
6. **Wiemann, J.**, and Briggs, D.E.G., 2019. *Fossil soft tissues resolve the vertebrate tree of life and record metabolic rates*. Annual Meeting of the Society of Vertebrate Paleontology, Special Podium Symposium 'From molecules to macroevolution: palaeobiological applications of vertebrate soft tissue preservation'. – **Invited talk.**
5. **Wiemann, J.** 2019. *Pushing the limits: how molecular preservation can change our understanding of ancient ecosystems*. 4th International Meeting of Early Career Researchers in Paleontology. – **Keynote talk.**
4. **Wiemann, J.** 2019. *Cutting edge molecular methods shed new light on the fossil record*. Open house student representative of the Division of Paleontology in the Department of Geology & Geophysics at Yale University. – **Invited talk.**
3. **Wiemann, J.** 2018. *How fossil biomolecules unveil the hidden stories of dinosaur biology*. Annual Meeting of the Paleontological Association, Session 'Frontiers in Dinosaur Paleobiology'. – **Keynote talk.**
2. **Wiemann, J.**, Fabbri, M., Yang, T.R., Stein, K., Vinther, J., Sander, P.M., Norell, M.A., and Briggs, D.E.G., 2016. *From white to black: Maillard reaction products and endogenous porphyrins stain fossil hard tissues*. Annual Meeting of the Society of Vertebrate Paleontology, Special Podium Symposium on 'Molecular Paleontology'. – **Invited talk.**
1. **Wiemann, J.**, Yang, T.R., and Sander, P.M., 2016. *Opening a window in time: how dinosaur eggshell chemofossils store palaeobiological information*. Society of Experimental Biology, Symposium 'Integrative Biology of the Egg'. – **Invited talk.**

Regular and co-authored (invited) conference talks and *posters (including mentored students)

41. Olden, L. J., & **Wiemann, J.** A time-integrative biomineralization signal reveals templated silica precipitation as a driver of cellular preservation in Phanerozoic stromatolitic fossils. Mid-Atlantic Geobiology Meeting, hosted at Johns Hopkins University, Baltimore, MD, USA.
40. Miller, M. L., & **Wiemann, J.** Time-integrated biosignatures applied to new fossils combined with genomic evidence suggest an archosaurian origin of avian endothermy. Mid-Atlantic Geobiology Meeting, hosted at Johns Hopkins University, Baltimore, MD, USA.
39. Fabbri, M., Nebreda, S., **Wiemann, J.**, et al. A new troodontid sheds light on the assembly of the paravian body plan. Mid-Atlantic Geobiology Meeting, hosted at Johns Hopkins University, Baltimore, MD, USA.
38. **Wiemann, J.** Time-integrated molecular biosignatures reveal the evolutionary history of Life on Earth and beyond. Mid-Atlantic Geobiology Meeting, hosted at Johns Hopkins University, Baltimore, MD, USA.
37. **Wiemann, J.** 2024. Time-integrated molecular biosignatures reveal the evolutionary history of Life on Earth and beyond. Society of Integrative and Comparative Biology, Session: Big questions in organismal biology, Atlanta, GA, USA.
36. Meyvisch, P., Baranyi, V., Borondics, F., Bringué, M., Correia, V., Fensome, R. A., Fonseca, C., García Muro, V. J., Gurdebeke, P. R., Louwey, S., McLachlan, S. M. S., Niechwedowicz, M., Podor, M., Pospelova, V., Sandt, C., Servais, T., Śliwińska, K. K., Vrielinck, H., **Wiemann, J.**, Mertens, K. N. 2024. Fossil biomolecules illuminate biological affinities of enigmatic acritarchs. Annual Meeting of the Palaeontological Association, Erlangen, Germany.
35. Olden, L. J., & **Wiemann, J.** 2024. A time-integrative biomineralization signal reveals templated silica precipitation as a driver of cellular preservation in Phanerozoic stromatolitic fossils. Annual Meeting of the Palaeontological Association, Erlangen, Germany.
34. Miller, M. L., & **Wiemann, J.** 2024. Time-integrated biosignatures applied to new fossils combined with genomic evidence suggest an archosaurian origin of avian endothermy. Annual Meeting of the Palaeontological Association, Erlangen, Germany.

33. **Wiemann, J.** 2023. *Mass extinctions make way for metabolic makeovers*. International Congress on Vertebrate Morphology, Cairns, Australia. – **Session chair**.
32. **Wiemann, J.** *Life's fingerprint: elucidating the nature and preservation of the biogenicity signal in fossil organic matter to advance the targeted search for past life on Earth and beyond*. Session: Carbon in the Solar System, Annual Meeting of the American Geophysical Union, Chicago, Illinois.
31. **Wiemann, J.** *Transforming deep time research: the power of molecular biosignatures and their importance for deciphering the history of Life on Earth and beyond*. Chalk talk series of the 'Origin of Life' seminar hosted by the Physical Sciences Division at the University of Chicago, IL, USA.
30. **Wiemann, J.** (upcoming). *Tracing the fidelity of molecular biosignatures through geological time to reveal major steps in the evolution of vertebrates*. Annual Meeting of the Society of Vertebrate Paleontology, Toronto, Canada.
29. Fabbri, M., Nebreda, S., **Wiemann, J.**, et al. *A new troodontid sheds light on body evolution among paravians*. Annual Meeting of the Society of Vertebrate Paleontology, Toronto, Canada.
28. **Wiemann, J.** 2021. *Molecular composition determines biases in the fossil record of vertebrate soft tissues*. Annual Meeting of the Society of Vertebrate Paleontology, Virtual.
27. **Wiemann, J.** 2021. *Fossil biomolecules reveal metabolic and thermoregulatory strategies in extinct amniotes*. Annual Meeting of the Geological Society of America, Portland, OR.
26. Tripp, M., **Wiemann, J.**, Hope, J. M., Brocks, J. J., Mayer, P., Lidgard, S., & Grice, K. 2021. *Molecular Biomarkers in coprolites illuminate dietary interactions in the Carboniferous Mazon Creek Ecosystem*. Annual Meeting of the Geological Society of America, Portland, OR.
25. Tripp, M., **Wiemann, J.**, Hope, J. M., Brocks, J. J., Mayer, P., Lidgard, S., & Grice, K. 2021. *Molecular Biomarkers in coprolites illuminate dietary interactions in the Carboniferous Mazon Creek Ecosystem*. International Meeting on Organic Geochemistry.
24. **Wiemann, J.** 2020. *Organic matter preserves biosignatures in deepest time and drives soft tissue permineralization*. Annual Meeting of the Paleontological Association, Session 14, Oxford, UK.
23. **Wiemann, J.** & Briggs, D. E. G. 2020. *Metazoan biomolecule fossilization products record phylogeny, physiology, and biomineralization*. Inaugural TaphCon Meeting, Session F, Virtual.
22. **Wiemann, J.** & Briggs, D. E. G. 2020. *Exceptional preservation is not that exceptional: Neoproterozoic-to-Recent fossils share the same mechanism of biomolecule fossilization*. Annual Meeting of the Geological Society of America, Session T 76 "Exceptional Fossilization".
21. **Wiemann, J.** 2020. *Fossil biomolecules reveal the physiology and paleobiology of extinct amniotes*. Annual Meeting of the Society of Vertebrate Paleontology, Romer Prize Session.
20. **Wiemann, J.** 2019. *On the nature, ecology, and evolution of nonavian and avian egg color*. Annual Meeting of the Paleontological Association, Session 2B, Valencia, Spain.
19. Tschopp, E., **Wiemann, J.**, Dela Pierre, F., Cavagna, S., & Norell, M. A. 2019. *Howe Quarry (Upper Jurassic Morrison Formation, western USA), a hot spot for sauropod soft tissue*. Annual Meeting of the Society of Vertebrate Paleontology, Special Podium Symposium 'From molecules to macroevolution: palaeobiological applications of vertebrate soft tissue preservation'. – **Invited talk**.
18. Meyer, D., & **Wiemann, J.** 2019. *A phylogenetic signal retained in fossil soft tissues places (stem) turtles in the reptile tree of life*. Annual Meeting of the Society of Vertebrate Paleontology, Special Podium Symposium 'From molecules to macroevolution: palaeobiological applications of vertebrate soft tissue preservation'. – **Invited talk**.
17. Briggs, D. E. G., & **Wiemann, J.** 2019. *Trends in soft tissue preservation and its role in revealing the history of life*. Annual Meeting of the Society of Vertebrate Paleontology, Special Podium Symposium 'From molecules to macroevolution: palaeobiological applications of vertebrate soft tissue preservation'. – **Invited talk**.
16. Norell, M. A., **Wiemann, J.**, Fabbri, M., Yu, C., Marsicano, C., Pol, D., Varricchio, D. J., & Zelenitsky, D. *The first dinosaur egg was soft*. Annual Meeting of the Society of Vertebrate Paleontology, Special Podium Symposium 'From molecules to macroevolution: palaeobiological applications of vertebrate soft tissue preservation'. – **Invited talk**.
15. **Wiemann, J.**, and Briggs, D.E.G. 2019. *Metazoan biomolecule fossilization products record phylogeny, physiology, and biomineralization*. Annual Meeting of the Geological Society of America, Technical Session "New Voices in Geobiology", Phoenix, USA.
14. *Theurer, M., and **Wiemann, J.** 2019. *Determining the distinction between organic compounds found in fossil plants versus fossil animals via Raman spectroscopy*. Annual Meeting of the Geological Society of America, Phoenix, USA.

13. **Wiemann, J.**, Mongiardino Koch, N., Hanson, M., Fabbri, M., Gauthier, J. A., Briggs, D. E. G., and Norell, M. A. 2019. *The nature, evolution, and ecology of nonavian and avian egg color*. Biannual Meeting on Dinosaur Eggs and Babies, Quinglongshan National Park, China. – **Session chair**.
12. Yang, T.-R., **Wiemann, J.**, Xu, L., Cheng, Y.-N., Wu, X.-C., and Sander, P. M. 2019. *Organic remains in eggshells elucidate dinosaur reproductive biology*. Biannual Meeting on Dinosaur Eggs and Babies, Quinglongshan National Park, China.
11. Fabbri, M., Bhullar, B. A. S., **Wiemann, J.**, Xu, X., and Norell, M. A. 2019. *The dinosaurian origin for the avian single oviduct*. Biannual Meeting on Dinosaur Eggs and Babies, Quinglongshan National Park, China.
10. ***Wiemann, J.**, Yang, T.R., and Norell, M.A., 2018. *Dinosaur eggs came in various colors and patterns*. Annual Meeting of the Society of Vertebrate Paleontology.
9. Tschopp, E., Mehling, C., **Wiemann, J.**, Moretti, J., Fitzgerald, B., and Norell, M.A., 2018. *The Howe Quarry project: after 80 years of neglect, a historic collection still provides invaluable scientific data and a great opportunity for scientific outreach*. Annual Meeting of the Geological Society of America, Session 'Paleontology and Outreach'.
8. **Wiemann, J.**, and Briggs, D.E.G., 2018. *Protein fossilization in vertebrate hard tissues*. 5th International Paleontological Congress, Session S06 'Biominerals through time: evolution, taphonomy, and traces in the geological record'.
7. **Wiemann, J.**, 2018. *Protein fossilization in vertebrate hard tissues*. Northeastern Geobiology Meeting in Woodshole (MA, USA).
6. **Wiemann, J.**, and Briggs, D.E.G, 2017. *Tracking down cell, nerves, and vascularity fossilized in vertebrate hard tissues: a field guide*. Annual Meeting of the Society of Vertebrate Paleontology, Session on 'Soft Tissue Preservation'.
5. Fabbri, M., Yang, T.R., **Wiemann, J.**, and Norell, M.A., 2017. *The avian single oviduct had a dinosaurian origin*. Dinosaur Eggs and Babies Biannual Meeting.
4. **Wiemann, J.**, Fabbri, M., Yang, T.R., Norell, M.A., and Briggs, D.E.G., 2017. *The biomolecular paleontology of dinosaur eggshells: a synthetic, chemoecological perspective*. Dinosaur Eggs and Babies Biannual Meeting.
3. **Wiemann, J.**, 2017. *Soft tissue preservation in fossil vertebrate hard tissues*. Symposium on 'Women in Geology & Geophysics at Yale', Yale University.
2. **Wiemann, J.**, Yang, T.R., and Sander P.M., 2015. *The colorful eggs of dinosaurs: how fossil metabolites reveal nesting behavior*. Annual Meeting of the Society of Vertebrate Paleontology, Session on 'Theropod dinosaurs'.
1. **Wiemann, J.**, Yang, T.R., and Sander P.M., 2015. *Catching the pigments of life: preservation potential and palaeobiological implications of tetrapyrrolic color pigments in dinosaur eggshell*. International Symposium on Paleohistology, Session on 'Soft Tissue Preservation'.

DEFINED & NAMED CLADES OF LIFE

Biota = Life as we know it: J. Wagner 2004 [**J. Wiemann**, K. de Queiroz, T. B. Rowe, N. J. Planavsky, R. P. Anderson, J. P. Gogarten, P. E. Turner, and J. A. Gauthier], converted clade name. **Definition:** The largest crown clade containing *Homo sapiens* Linnaeus 1758. This is a special case of the maximum-crown-clade definition in that it does not use an external specifier; it refers to the crown clade including humans and all other bioentities sharing common ancestry with them.

Panbiota = all Life: J. Wagner 2004 (as *Panbiota*) [**J. Wiemann**, K. de Queiroz, T. B. Rowe, N. J. Planavsky, R. P. Anderson, J. P. Gogarten, P. E. Turner, and J. A. Gauthier], converted clade name.

Definition: The total clade of the crown clade *Biota*. This a crown-based total-clade definition.

SYNERGISTIC ACTIVITIES

Peer review (2015 – now): > 50

Science (IF 63.714)

Nature (multiple, IF 41.577)

Science Advances (IF 14.597)

Nature Communications (multiple, IF 12.124)

Earth Science Reviews (IF 9.724)

eLIFE (IF 8.713)

Scientific Reports (multiple, IF 4.525)

Proceedings of the Royal Society B (multiple, IF 4.304)

Geobiology (multiple, IF 4.16)

Nature Communications Biology (multiple, IF 4.049)

Frontiers in Genetics (IF 3.789)

Scientific Reports (multiple, IF 4.2)

Paleontology (multiple, IF 3.730)
BMC Evolutionary Biology (multiple, IF 3.027)
Cretaceous Research (IF 2.120)
Paleogeography, -climatol., & -eol. (multiple, IF 2.375)
ACS Earth and Space Chemistry (IF 2.190)

Historical Biology (IF 1.489)
Lethaia (IF 1.454)
Palaeontologia Electronica (IF 1.410)
Alcheringa (IF 1.398)
Journal of Experimental Zoology (IF 1.246)

Book reviews (2020 – now): 1 ('The complete dinosaur')

Grant reviews (2019 – now): **Leverhulme Trust Research Grants** (2020 cycle, UK, national competition across all disciplines), **The Leakey Foundation** (2023 cycle, global competition in anthropology/archeology), **Human Frontier Science Program** (2023/2024 cycle, global competition in cross-disciplinary biology), **JHU Provost's Undergraduate Research Award** (2025 cycle, university-wide competition for undergraduate funding).

Regular abstract reviews (2020 – now): > 80, *Annual Meeting of the Society of Vertebrate Paleontology*

Symposium abstract reviews (2020 – now): > 30, *Annual Meeting of the Society of Vertebrate Paleontology*

Outreach abstract reviews (2020 – now): < 10, *Annual Meeting of the Society of Vertebrate Paleontology*

Editorial activity (2018 – now)

Guest Editor (2021 – now): (Editorial team members: 6) in *Frontiers in Earth Sciences*, Special Research Topic 'Technological advances in paleontology mark a new age of opportunity for Early Career Researchers'.

Contributing Member (2018 – now): *Nature Ecology & Evolutionary Biology* Online Community (invited).

PROFESSIONAL SERVICE

Hosted and chaired conferences, organized research symposia and meetings, scientific society service: 16

2025	
Upcoming	
2024	NAPC Student Prize Judge at the North American Paleontological Convention in Ann Arbor, MI; categories: paleobiology, taphonomy, evolution, geochemistry.
2024	STRATA Mentor for student and postdoctoral attendees representing different dimensions of diversity at the North American Paleontological Convention in Ann Arbor, MI.
2024	Colbert Prize Judge at the Society of Vertebrate Paleontology in Minneapolis, MN; technical expertise: molecular paleobiology and evolution, geochemistry [across clades].
2024	Invited Session Chair and Presenter at the International Geological Congress in Busan, Korea; technical session T37: Deep-time digital Earth - IUGS DDE sessions/symposium no. 12 (Dinosaur Macroevolution).
..... Started at Hopkins	
2023	Invited Session Chair and Presenter at the International Congress on Vertebrate Morphology in Cairns, Australia; technical session: 'Climate Change and Mass Extinctions'.
2023	Invited Member of the Symposium/Program Committee of the Society of Vertebrate Paleontology – Responsibilities: Reviewer (regular talk & poster abstracts, symposium contributions) of abstracts focused on <i>Paleobiology, Macroevolution, Geochemistry, Outreach, Preparation</i> .
2023	Invited Session Chair, Organizer, & Presenter at the Australian Earth Sciences Convention in Perth, Australia – Responsibilities: Session design for the invited symposium on ' <i>Molecular Paleobiology</i> ', speaker invitations, abstract reviews, promotion.
2022	Invited Member of the Symposium/Program Committee of the Society of Vertebrate Paleontology – Responsibilities: Reviewer (regular talk & poster abstracts, symposium contributions) of abstracts focused on <i>Paleobiology, Macroevolution, Geochemistry, Outreach, Preparation</i> .
2021	Session Chair and Presenter at the Annual Meeting of the Society of Vertebrate Paleontology , virtual conference, technical session 'Taphonomy, paleoenvironments and stratigraphy'.

- 2021 **Invited Member of the Symposium/Program Committee** of the **Society of Vertebrate Paleontology** – Responsibilities: Representative & Reviewer (regular talk & poster abstracts, symposium contributions) of abstracts focused on *Paleobiology, Macroevolution, Geochemistry, Outreach, Preparation*. – **Youngest member of the SVP Program/Symposium Committee.**
- 2019 **Organizer, Session Chair & Presenter** at the Annual Meeting of the **Society of Vertebrate Paleontology**, Brisbane (Australia), Podium Symposium 'From molecules to macroevolution: palaeobiological applications of vertebrate soft tissue preservation'.
- 2019 **Invited Member of the Scientific Committee, Invited Session Chair & Presenter** at the Biannual Meeting on **Dinosaur Eggs and Babies**, Quinglongshan National Park (China), hosted by the Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences.
- 2017 **Invited Session Chair & Presenter** at the Annual Meeting of the **Society of Vertebrate Paleontology**, Salt Lake City (USA), Technical Session 'Vertebrate soft tissue preservation and taphonomy'. 16 oral presentations/1300 attendees.
- 2016 **Invited Session Chair & Presenter** at the Annual Meeting of the **Society of Experimental Biology**, Brighton (UK), Symposium 'Integrative Biology of the Egg', Session on "Egg & eggshell evolution", 4 oral presentations/45 attendees.
- 2015 **Member of the Host Committee, Organizing Committee & Presenter** at the **International Symposium on Paleohistology**, Bonn (Germany), hosted by the Division of Vertebrate Paleontology at the University of Bonn. 200 participants, four days of successive sessions, afterhours events, and workshops.

Active professional memberships

Association for Women in Geosciences (2021 – now)

Society of Vertebrate Paleontology (2014 – now)

Geological Society of America (2018 – now)

Dinosaur Eggs and Babies Community (2017 – now)

American Geophysical Union (2021 – now)

Paleontological Association (2017 – now)

Paleontological Society (2020 – now)

OoLEN: Origin of Life ECR Network (2024 – now)

INSTITUTIONAL SERVICE

Undergraduate student, graduate student, and postdoctoral scholar mentoring

2025 – 2027

Postdoc.

2025 – 2026

Postdoc.

2024 –

Grad.

Primary PhD Advisor; *Liam Olden*, dissertation project (cross-disciplinary: organo-mineral interactions, geochemistry, paleo- & evolutionary biology, geology, global change biology): Exploring the fundamental principles of templated biomineralization across prokaryotes and eukaryotes to predict adaptability ranges of calcifying organisms on a changing planet. P³aLEO Lab in EPS at **Johns Hopkins University**.

Funding:

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2024 –

Grad.

Primary PhD Advisor; *Megan Miller*, dissertation project (cross-disciplinary: genomics, geochemistry, evolutionary biology, developmental biology, global change biology): Integrating geochemistry and genomics to reveal the environmental, ecological, and developmental factors driving the evolution of reptilian metabolic regulation. P³aLEO Lab in EPS at **Johns Hopkins University**.

Funding:

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- 2024 – **Grad.** **PhD Committee Member**; *BP Blakeley*, dissertation project (Planetary Science & astrobiology). Primary advisor: Sarah Horst. EPS at **Johns Hopkins University**.
- 2024 – **Undergrad.** **Mentor & advisor**; *Emily Pituch* [astrobiology], 2nd year undergraduate researcher (Molecular & Cellular Biology; EPS) in the P³aLEO Lab in EPS at **Johns Hopkins University**.
- 2024 – **Undergrad.** **Mentor & advisor**; *Ana Sofia Cancio Trelfa* [paleobiology], 2nd year undergraduate (EPS; FAE) researcher in the P³aLEO Lab in EPS at **Johns Hopkins University**.
- 2024 – **Undergrad.** **Mentor & advisor**; *Fanny Borukhova* [biosignatures], 4th year undergraduate (Molecular & Cellular Biology; Chemistry) researcher in the P³aLEO Lab in EPS at **Johns Hopkins University**.
- 2022 – now **Postdoc.**
Prev. **Grad.**
- 2022 – now **Grad.** **Co-advisor** (with Anne Schulp and Femke Holwerda); *Tom van der Linden*, Master thesis on Raman spectroscopic assessments of egg color in fossil dinosaur eggs, in the Department of **Earth Sciences** at **Utrecht University**, in the Netherlands; **successfully defended, manuscript in prep.**
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- 2021 – 2022 **Grad.** **Co-advisor** (with Mike Brown); *Hemani Kalucha* (previously: Princeton University), research project on the preservation potential of molecular biosignatures on Europa (now: **Geological and Planetary Sciences** graduate student at **Caltech**). *Started at Hopkins*
- 2020 – 2021 **Co-advisor**; 'Extraordinary glimpses of past life' class projects (**7 students**) at **Yale University**.
- 2019 – now **Postgrad** **Advisor**; *Mallory A. Theurer* (Bachelor Program in **Ecology and Evolutionary Biology/Chemistry**, previously: Florida Atlantic University, now: Paleontology Intern at **Yale University**), Undergraduate research project 'Biological signals in plant fossil biomolecules'; **manuscript in preparation**.
- 2019 – now **Grad.** **Advisor**; *Dalton Meyer* (PhD student, in **Earth and Planetary Sciences, Yale University**), class project/**dissertation minor research discourse** 'Extracting taphonomic, physiological, and phylogenetic signals from protein fossilization products in fossil diapsid hard tissues' in G&G 355a/555a 'Extraordinary glimpses of past life' (D.E.G. Briggs); **manuscript in preparation**.
- 2018 **Undergrad.** **Advisor**; *Ayodele Lewis* (Bachelor Program (**Pre-Med**), Amherst College), Research Experience for Undergraduates (REU by NSF) awardee at the **American Museum of Natural History**, New York (M. A. Norell) working on the project 'Chemical characterization of porphyrin pigment fossilization products'.
- 2017 – 2018 **Undergrad.** **Advisor**; *Krish Maypole* (Bachelor Program in **Ecology and Evolutionary Biology, Yale University**), Class project and extended undergraduate research project 'Is the green avian plumage pigment Turacoverdin a co-opted porphyrin?' in E&EB 272 01/E&EB 672 01 'Ornithology' (R. Prum); **manuscript in preparation**.
- 2017 **Undergrad.** **Advisor**; *Gemma Shepherd* (Bachelor Program in **Ecology and Evolutionary Biology, Yale University**), Class project 'Pterin pigments in birds – chemical characterization and functions' in E&EB 272 01/E&EB 672 01 'Ornithology' (R. Prum).

Laboratory and instrument (spectroscopy, microscopy) instructor

- 2016-2021 Thompson **Anthropology/Archaeology** lab at Yale (**3 students**)
Department of **Earth and Planetary Sciences** at Yale (**4 students**)
Geology 355a/555a 'Extraordinary glimpses of past life' class projects 2019 (**3 students**)
Ecology and Evolutionary Biology 272 01/E&EB 672 01 'Ornithology' class projects (**2 students**)
Yale Carbon Containment Laboratory (**8 team members**)

Interdepartmental, intradepartmental, and cross-institutional roles

- 2025 **Invited PhD Thesis Evaluator and Committee Member**
- 2025 **Reviewer for the Provost's Undergraduate Research Award** at JHU.

- 2025
Upcoming **EPS Bromery Seminar Host** for
[redacted]
[redacted]
- 2024 **EPS Movie Night and Trivia Organizer** for undergraduate and graduate student, and postdocs.
- 2024 **EPS Bromery Seminar Host** for Anna K. Behrensmeyer (NAS, Smithsonian Museum of Natural History, Washington DC, USA).
- 2024 **EPS Curriculum Committee Member** in the Morton K. Blaustein Department of Earth and Planetary Sciences at **Johns Hopkins University**.
- 2024 **EPS Search Committee Member** for a new *Department Chair* of Earth and Planetary Sciences in the Morton K. Blaustein Department at **Johns Hopkins University**.
----- *Started at Hopkins* -----
- 2017 – now **Peer mentor** in Yale Earth and Planetary Sciences.
- 2017 – 2020 **Volunteer contributor** to Open House/Recruitment activities in Yale Earth and Planetary Sciences.
- 2019 **Student representative** for the Paleontology Graduate Program at Yale University.
- 2018 **Nominated and elected (by democratic vote) Vice President of the Dana Club at Yale**, a student-led organization managing activity funds and advocating for student rights – *Position declined because of other responsibilities.*
- 2015 **Organizer of the weekly seminar** of the Paleontology Division at the University of Bonn.

FUNDRAISING EXPERIENCE (New York, Los Angeles, Chicago, DC)

- 2024 [redacted]
- *Started at Hopkins* -----
- 2022 [redacted]
- 2022 [redacted]
- 2022 [redacted]
- 2022 [redacted]
- 2022 [redacted]
- 2022 [redacted]
- 2018 [redacted]

ADVOCACY

- 2024 **Invited panelist** at the **Postdoctoral Career Forum of the Biological Sciences Division of the University of Chicago**, highlighting career paths in STEM and sharing advise and experiences on navigating the academic landscape with advanced postdoctoral scholars.
- 2024 **Featured Scientist in Johns Hopkins Magazine's Fall Issue** highlighting Women in Science.

- 2024 **Invited participant in the PNAS Women in Science Special Issue based on recommendation.**
Started at Hopkins
- 2022 **Featured Scientist representing the discipline of Paleobiology: 'Girls' STEMpede'** interview series highlights female science pioneers and entrepreneurs to inspire the next generation of female leaders in our society.
- 2021 **Panelist and Interviewer:** Yale Peabody **'50 Women at Yale 150' Event** highlighting the careers of inspiring women at Yale.
Link: <https://www.youtube.com/watch?v=4OIO7j5MYcw>
- 2020 **Panelist: National Geographic 'Women of Impact'** (Paleobiology edition). The series aims to spotlight women in leadership roles, and this episode encourages young women to embark on Geo-/STEM careers.
Link: <https://www.youtube.com/watch?v=KNeHOWpBCnU>
- 2020 **Editorial member and Co-organizer: Special issue** in *Frontiers in Earth Science* **spotlighting diverse early career researchers** (with special emphasis on supporting the **LGBTQIA2S+ community**).
- 2019 **Organizer and Facilitator** of the **historically first Podium Symposium** at an Annual Meeting of the Society of Vertebrate Paleontology combining an **explicit emphasis on diversity (gender identity, career stage, ethnicity, research specialization) and excellence – Special feature (2 pages) in Science**.
- 2017 – 2019 **Presenter and Participant: 'Women in Yale Earth and Planetary Sciences'** Event, highlighting outstanding research conducted by members of the Yale EPS community identifying as womxn.

SELECTED OUTREACH ACTIVITIES

Selected special features (≥ 1 page in print; short features are listed under 'In the News')

- 2025 **Invited Author** highlighting the past, present, and future of research in Molecular Paleobiology for **Nature**.
- 2024 **Featured Scientist in Johns Hopkins Magazine's Fall Issue** highlighting Women in Science at Johns Hopkins.
- 2024 **Invited participant in the PNAS Women in Science Special Issue** based on recommendation.
- 2024 **Featured scientist** in **Dr. Michael Benton's book** 'Vertebrate Paleontology' – the careers of *three paleontologists shaping the next generation of scientists* were highlighted.
Started at Hopkins
- 2024 **Featured scientist (Molecular Paleobiology)** in the **renovated, permanent exhibition of the Yale Peabody Museum**.
- 2024 **Featured scientist** in the **Guardian** news story **'The Age of extinction: Can bones of the deep past help predict extinctions of the future?'** on conservation paleobiology by Tiffany Cassidy.
- 2023 **Scientific consultant** for the **BBC series 'Prehistoric Planet'**.
- 2023 **Featured scientist** in the Field Museum's **'Women in Science' campaign** representing the discipline of Molecular Paleobiology.
- 2023 **Featured scientist** in Currie et al. 'Celebrating dinosaurs: their behavior, evolution, growth, and physiology' listing **influential women in dinosaur paleontology**.
- 2023 **Featured scientist** in the **American Scientist and Sigma Xi cover story** on the evolution of reproductive strategies.
- 2022 **Featured scientist** in **Birk Grueling's book** 'A *T. rex* named Sue' representing women in paleontology.
- 2022 **Special episode by ScienceInsider** focused on how molecular methods change the field of paleontology. **Featured scientist representing the field of Molecular Paleobiology**, together with Dr. Jingmai O'Connor. Filming days: 10/10/2021 – 10/13/2021.
Link: https://www.youtube.com/watch?v=nBqd_V418Kg2021

- 2021 **Featured scientist** in **Dr. Nick Crumpton's book** 'Everything you know about dinosaurs is wrong' representing women in paleontology.
- 2021 **Featured scientist** in **Dr. Roy Plotnick's book**, representing interdisciplinary work and underrepresented minorities in paleontology.
- 2020 **Featured Scientist** in the article 'Molekular-Paläobiologie: Von bunten Eiern und prähistorischen Zellen' introducing the recent developments and potential of the field of Molecular Paleobiology for the Redaktionsnetzwerk Deutschland (**German news association**).
Link: Molekular-Paläobiologie: Von bunten Eiern und prähistorische Zellen (rnd.de)
- 2020 **Cover story and featured scientist** in the October 2020 issue of **National Geographic** as part of the story 'Reimagining dinosaurs' by Michael Greshko. Featured research (6 pages in print) includes Wiemann et al. 2018 *Nature*, Wiemann et al. 2020 *Science Advances*, Norell, Wiemann et al. 2020 *Nature*, and Ibrahim et al. 2020 *Nature*.
- 2020 **Featured scientist** in 'Tyrannopedia' by **Dr. Akinobu Watanabe**, representing the discipline of Molecular Paleobiology (2 pages in print).

Advocacy for the importance of paleobiology and museum collections in the 21st century (≥ 2 pages in print)

- 2019 **Featured symposium organizer and scientist** (Annual Meeting of the Society of Vertebrate Paleontology) in the **Science** article 'Warm-blooded velociraptors: fossilized proteins unravel dinosaur mysteries' by Gretchen Vogel, representing the growing discipline of Molecular Paleobiology and advocating for the importance of historical collections (2 pages in print).
Link: <https://www.sciencemag.org/news/2019/10/warm-blooded-velociraptors-fossilized-proteins-unravel-dinosaur-mysteries>
- 2019 **Featured scientist** in the **BioScience** article 'The Evolution of Natural History Collections: New research tools move specimen data to center stage' showcasing how recent technological advances allow generating new data from historical collections. *BioScience*, 69 (3), 163–169.
<https://doi.org/10.1093/biosci/biy163>.
Link: <https://academic.oup.com/bioscience/article/69/3/163/5304486>

Selected exhibitions

- 2022 **Scientific Advisor** for the new permanent exhibition following the renovation of the **Yale Peabody Museum of Natural History**.
- 2021 **Primary Scientific Advisor and Contributor** for the **traveling exhibition** 'Tiny Titans' on dinosaur reproduction, eggs, nests, hatchlings, and growth.
- 2019 **Scientific Advisor (together with Mark Norell and Gregory Erickson) and Panelist** for the opening of the 2019 – 2020 Exhibition 'T. rex: the ultimate predator' at the **American Museum of Natural History** in New York.
- 2016 **Primary Scientific Advisor: strategic development, design, and facilitation** of the 2016 – 2017 Exhibition 'The Molecular Science behind Jurassic World' at the **Goldfuß Museum of Paleontology**, Bonn, Germany.

Selected contributions to educational materials and activities

- 2022 **Scientific Advisor and Content Designer** contributing to **K-12 Educational Materials** as part of the outreach program of the **American Museum of Natural History** for the classes on: **(1)** egg color evolution, **(2)** research process, **(3)** evolution of parental behaviors.
- 2020 **Presenter** at the **Yale Peabody Museum virtual family activity**: Pigments and fossil color reconstruction.
- 2020 **Scientific Guest Speaker** in the Easter Special of the **virtual, public lecture series 'Dinosaurs 101'**; episode theme: dinosaur eggs and reproduction.
- 2019 **Volunteer for the Paleo-knowledge Bowl** for children between the ages 8-12 at the **Yale Peabody Museum**.
- 2019 **Volunteer for the Dinosaur Days "Meet the Scientist" Event** at the **Yale Peabody Museum** (aimed at children between the ages 6-18).

2018 **Volunteer for the Dinosaur Days “Meet the Scientist” Event** at the **Yale Peabody Museum** (aimed at children between the ages 6-18).

In the News

Regular Scientific Consultant for: **National Geographic, New York Times, Science Magazine, NPR.**

2025 **Scientific writer & corresponding author** for **Nature News & Views** on biomolecule fossilization and biosignature preservation in deep time.

2025 **Scientific Consultant** for **Science Magazine** on the evolution of pigmentation in mammals.

2024 **Featured scientist** in the **Dr. Neurosaurus Podcast** by Eugenia Gold; **‘Forging new frontiers: Dr. Jasmina Wiemann applies paleo-methods through time and space’.**

2024 **Featured scientist** in the **Gizmodo** news story by Jeanne Timmons; **‘How to sex a dinosaur’.**

Started at Hopkins

2023 **Featured scientist** in the **PaleoNerds Podcast** by Ray Troll; **‘Episode 59 - Jasmina Wiemann: Better Paleo through Modern Chemistry’.**

2022 **Contributing scientist** to the filming of the Canadian Documentary ‘The Bones’, and PBS Montana News in the Hell Creek Formation of Ekalaka, MT, USA (PI: Jingmai O’Connor).

2022 **Corresponding author (press release and follow-up interviews)** for ‘Fossil biomolecules reveal an avian metabolism in the ancestral dinosaur’ in *Nature*. **Most widely shared paleontology paper of the year.** Special Feature in: **New York Times, Science Magazine, National Geographic, CNN.**

2021 **Panelist** at the virtual Roundtable on ‘Recent Advances in Paleobiology’ hosted by the **Yale Peabody Museum** and **National Geographic.**

Link: <https://www.youtube.com/watch?v=eXyNMe3WbBs>

2020 **Corresponding author (press release and follow-up interviews)** for ‘Phylogenetic and physiological signals in metazoan fossil biomolecules’ in *Science Advances*.

Special Feature in: **Science Magazine, Astrobiology News, Yale News.**

Link: <https://advances.sciencemag.org/content/6/28/eaba6883/tab-article-info>

2020 **Corresponding author (press release and follow-up interviews)** for ‘The first dinosaur egg was soft’ in *Nature*. Special Feature in: **NPR, Science News, National Geographic, New York Times.**

Link: <https://www.nature.com/articles/s41586-020-2412-8/metrics>

2020 **Corresponding author (press release and follow-up interviews)** for ‘Chemical signatures of soft tissues distinguish between vertebrates and invertebrates from the Carboniferous Mazon Creek Lagerstätte of Illinois’ in *Geobiology*.

Special Feature in: **New Scientist, Yale News.**

Link: <https://wiley.altmetric.com/details/80828108>

2018 **Corresponding author (press release and follow-up interviews)** for ‘Fossilization transforms vertebrate hard tissue proteins into N-heterocyclic polymers’ in *Nature Communications*.

Special Feature in: **Earth Magazine (2 pages), Science Daily, Yale News.**

Link: <https://www.nature.com/articles/s41467-018-07013-3/metrics>

2018 **Corresponding author (press release and follow-up interviews)** for ‘Dinosaur egg color had a single evolutionary origin’ in *Nature*.

Special Feature in: **Science News, New York Times, Washington Post, Yale News, Daily Mail, NPR.**

Link: <https://www.nature.com/articles/s41586-018-0646-5/metrics>

2017 **Corresponding author (press release and follow-up interviews)** for ‘Dinosaur origin of egg color: oviraptors laid blue-green eggs’ in *PeerJ*.

Special Feature in: **New York Times, Nat. Geo., New Scientist, Daily Mail, The Guardian.**

2015 **Corresponding author (press release and follow-up interviews)** for “The blue-green eggs of dinosaurs: How fossil metabolites provide insights into the evolution of bird reproduction” in *PeerJ*.

Special Feature in: **Spiegel Online, Sciences et Avenir, GMA News, Daily Mail.**

Link: <https://www.altmetric.com/details/4000237/news>

CONTACTS FOR REFERENCES (advisors and mentors)

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Yale Peabody Museum of Natural History

George Rossman (Spectroscopy)

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Dept. of Geological and Planetary Science, Caltech
Caltech Mineral Spectroscopy Database

David Skelly (Ecology, Microevolution)

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Western Australian Organic and Isotope Geochemistry Center

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Dept. of Organismal and Evolutionary Biology,
University of Chicago

Roger Benson (Quant. Methods, Evolution)

E-mail: rbenson@amnh.edu

Macaulay Curator of Paleontology, RGS Professor,
American Museum of Natural History, New York