



NEWS & ANNOUNCEMENTS



J-WAFS spinout is a "clean tech company to watch"

Jeffrey Grossman & team created Via Separations to reduce energy use in industrial separation processes, like those in the food & beverage industry.

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Multiple J-WAFS PIs named MIT Climate Grand Challenges finalists

Finalist projects seek to eliminate emissions from fertilizer, create climate-resilient crops, better understand carbon sequestration in agricultural soils, and much more.

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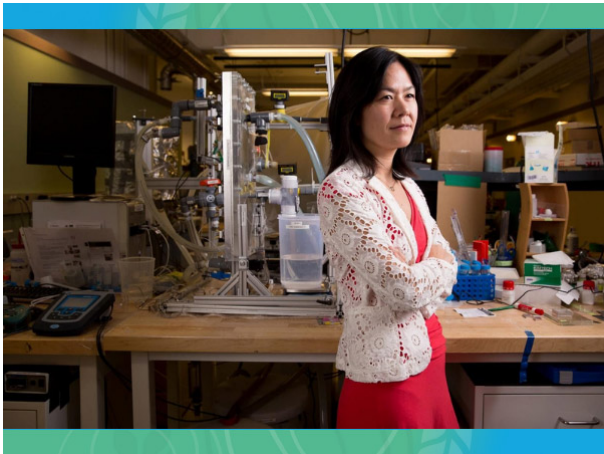
MIT Knight Journalism Fellow links agriculture, climate change, and air pollution

An increase in dust storms, that often lead to respiratory illness, have been found to coincide with the harvest & planting of crops in areas with drought.

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Pres. Biden nominates J-WAFS PI for DOE role

Evelyn Wang has been nominated for Director of the Advanced Research



Projects Agency-Energy.

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Susan Solomon celebrated for Women's Day

The Washington Post recognized the J-WAFS PI as a woman leader in Earth sciences for her work explaining the cause of the “hole in the ozone” over Antarctica.

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J-WAFS PI discusses Climate Grand Challenges project

Finalist Joann de Zegher explains how her team's project would protect and enhance natural carbon sinks in indigenous and afro-descendant communities.

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Evelyn Wang & team develop solar-powered desalination system

The passive solar evaporation system is cheaper and more efficient than previous models and could clean wastewater and provide potable drinking water.

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New MIT faculty pursue climate, soil, & agriculture research

The School of Engineering welcomes 17 faculty members working in areas including smart agriculture, soils & sediment health, and climate change & vegetation.

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J-WAFS student researcher profiled in MIT News

Senior Carene Umubyeyi, who worked

MIT improves sustainability of campus food

The MIT Office of Sustainability is

with J-WAFS PI Eric Verploegen on an off-grid food preservation system, plans to use her education to advance sustainable structural design & building methods in her native Africa.

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working to lower the climate impact of campus food by adding low-cost grocery options around campus and sourcing sustainable coffee in campus cafes.

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MIT alum Kevin Kung co-founded sustainable fertilizer company

The past J-WAFS researcher started Safi Organics to help farmers increase crop yields & improve soil health.

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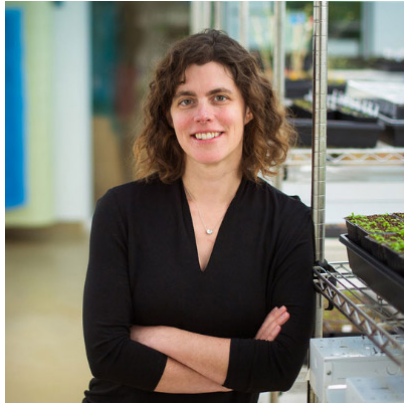
IN-DEPTH LOOK

WOMEN'S HISTORY MONTH SPOTLIGHT ON J-WAFS FUNDED SCIENTIST MARY GEHRING

Mary Gehring uses molecular biology to help reduce global food insecurity

The effects of climate change are contributing to decreased crop yields and endangering food supplies worldwide. Yet food is needed now more than ever due to the ongoing pandemic, growing populations, and social, political, and economic tensions. Mary Gehring, MIT associate professor of biology and a member of the Whitehead Institute for Biomedical Research, is using her expertise in plant biology to help solve urgent food-related challenges.

The Gehring Lab's primary research focus is on plant epigenetics, which refers to the heritable information that influences plant cellular function but is not encoded in the DNA sequence itself. A 2021 J-WAFS seed grant is supporting Gehring's work to increase the amount of genetic diversity in plants. She is attempting to do this by enhancing transposable element proliferation. Both human and plant genomes are made up of genes that code for proteins, but large fractions of the genome are also made up of transposable elements. Transposable elements can make multiple copies of themselves, move around, and alter gene expression. Since humans and plants do not need an infinite



number of these copies, there are systems in place to “silence” them from copying.

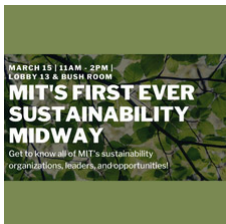
Gehring is trying to reverse that silencing in plants so that the transposable elements can move freely throughout the genome, which could increase genetic variation by creating mutations or altering the promoter of a gene – that is, what controls a certain gene’s expression. The goal is to impact multiple sites in the genome simultaneously. “This is

unexplored territory where you’re changing 50 genes at a time, or 100, rather than just one,” Gehring explains. “It’s a fairly risky project, but sometimes you have to be ambitious and take risks.”

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EVENTS

WATER AND FOOD



MIT Sustainability Event (MIT ONLY)

Tuesday, March 15, 11:00 a.m. - 2:00 p.m. ET, In-person

This event will feature all MIT sustainability organizations, leaders, and opportunities, plus free food! [MORE INFO](#)



World Water Day 2022

Tuesday, March 22, 2022, All day

Stay tuned for a special edition of our newsletter to mark World Water Day on March 22, featuring J-WAFS water-related research, a podcast with experts, and relevant articles and stories.



MIT Living Climate Futures Conference

Friday-Saturday, April 22-23, 2022, All day, In-person

Climate change is linked to problems including water & food insecurity. This symposium will bring together climate and environmental justice activists from across the country. [MORE INFO](#)

2022 Water Innovation Prize Pitch Kickoff



Monday, April 25, 2022, 5:00 p.m. ET, Online and In-person

The MIT Water Club, supported by J-WAFS, will host the 2022 Water Innovation Prize finalists as they pitch their water innovations to a panel of judges. [MORE INFO](#)



Rabobank - MIT Food & Agribusiness Innovation Prize Event

Wednesday, April 27, 2022, TBD

Co-sponsored by J-WAFS, this prize awards technologies that improve food systems. The event will showcase pitches from finalist teams. [MORE INFO](#)

FUNDING

AND OTHER OPPORTUNITIES

J-WAFS Grant for Transforming Animal Agriculture Systems

Deadline: April 27, 2022

Open to: MIT faculty, research staff, and students

Next week a call for proposals will open for this grant, which supports research addressing problems in animal agriculture, particularly in low and middle-income countries.

[MORE INFO](#)

Join the Harvard Agriculture Community

Deadline: Ongoing

Open to: Harvard alumni

The Harvard Alumni for Agriculture and Food Association Incorporated is looking for board members to further its mission of advancing knowledge of global agriculture and food systems. Candidates can email bio to beydoun@post.harvard.edu.

[MORE INFO](#)

2022 Intelligent Water Systems Challenge

Deadline: April 11, 2022

Open to: Students, professionals, & tech enthusiasts

Co-sponsored by J-WAFS research affiliate, Xylem, Inc., this challenge seeks design plans for smart water technologies for utilities.

J-PAL is hiring

Deadline: Ongoing

Open to: Master's degrees in economics, public policy, or related field

J-WAFS sister organization J-PAL is hiring a policy manager with expertise in agriculture and gender. Candidate must have work authorization in Nigeria, Kenya, Tanzania, or Uganda.

INTERESTED IN SUPPORTING J-WAFS?

When you make a gift, you are making an investment in both the future of J-WAFS and our Institute-wide work to improve the productivity, accessibility, and sustainability of the world's water and food systems.

DONATE ONLINE

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ABOUT SPONSORSHIP OPPORTUNITIES, CONTACT:**

RENEE J. ROBINS
Executive Director, J-WAFS
rrobins@mit.edu or (617) 324-6726



J-WAFS is an Institute-wide effort that brings MIT's unique strengths to bear on the many challenges our food and water systems face.

Our program catalyzes MIT research, innovation, and technology for ensuring safe and resilient supplies of water and food while reducing environmental impact, to meet the local and global needs of a rapidly expanding and evolving population on a changing planet.



Abdul Latif Jameel Water and Food Systems Lab
Massachusetts Institute of Technology
77 Massachusetts Avenue, E38-329
Cambridge, MA 02139
E: jwafs@mit.edu
P: (617) 715-4222
W: jwafs.mit.edu

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