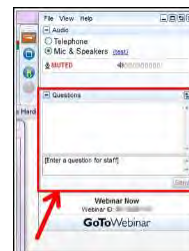
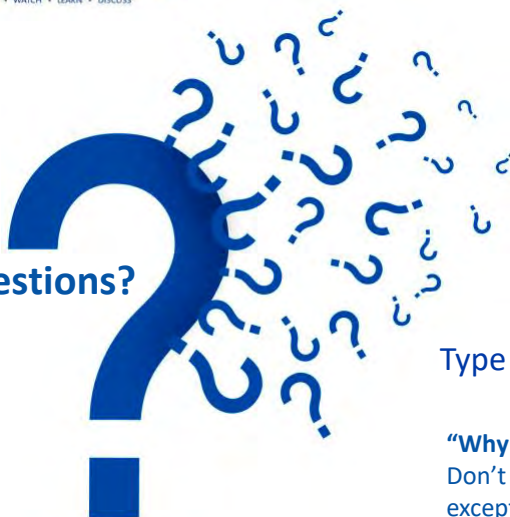




Have Questions?



Type them into questions box!

“Why am I muted?”

Don't worry. Everyone is muted except the presenter and host. Thank you and enjoy the show.

Contact ACS Webinars® at acswebinars@acs.org

1



@AmericanChemicalSociety



@AmerChemSociety



@AmerChemSociety



<https://www.linkedin.com/company/american-chemical-society>

Contact ACS Webinars® at acswebinars@acs.org

2

Check out the ACS Webinar Library!

An ACS member exclusive benefit



Hundreds of presentations from the best and brightest minds that chemistry has to offer are available to you on-demand. The Library is divided into 6 different sections to help you more easily find what you are searching.

Professional Development

▶ View the Collection

Learn how to write better abstracts, deliver more engaging presentations, and network to your next dream job. Brush up on your soft skills and set a new career path by mastering what can not be taught in the lab.

Technology & Innovation

▶ View the Collection

From renewable fuels to creating the materials for the technology of tomorrow, chemistry plays a pivotal role in advancing our world. Meet the chemists that are building a better world and see how their science is making it happen.

Drug Design and Delivery

▶ View the Collection

The Drug Design Delivery Series has built a collection of the top minds in the field to explain the mechanics of drug discovery. Discover the latest research, receive an overview on different fields of study, and gain insight on how to possibly overcome your own med chem roadblocks.

Culinary Chemistry

▶ View the Collection

Why does food taste better when it is grilled or what molecular compounds make a great wine? Discover the delectable science of your favorite food and drink and don't forget to come back for a second helping.

Popular Chemistry

▶ View the Collection

Feeling burdened by all that molecular weight? Listen to experts expound on the amazing side of current hot science topics. Discover the chemistry of rockets, how viruses have affected human history, or the molecular breakdown of a hangover.

Business & Entrepreneurship

▶ View the Collection

How do ideas make it from the lab to the real world? Discover the ins and outs of the chemical industry whether you are looking to start a business or desire a priceless industry-wide perspective.

<https://www.acs.org/content/acs/en/acs-webinars/videos.html>

3



ACS Webinars®

CLICK • WATCH • LEARN • DISCUSS



Learn from the best and brightest minds in chemistry! Hundreds of webinars on diverse topics presented by experts in the chemical sciences and enterprise.

Edited Recordings are an exclusive ACS member benefit and are made available once the recording has been edited and posted.

Live Broadcasts of ACS Webinars® continue to be available to the general public several times a week generally from 2-3pm ET!

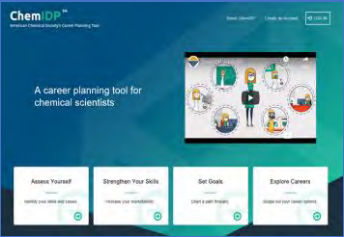
A **collection of the best recordings** from the ACS Webinars Library will occasionally be rebroadcast to highlight the value of the content.

www.acs.org/acswebinars

4

Advance YOUR CAREER

ChemIDP™



ChemIDP.org

Discover ACS PUBLICATIONS

Publishing Resources



publish.acs.org

Connect WITH CHEMISTS AND OTHER SCIENCE PROFESSIONALS

CAS SciFinder Future Leaders



171 alumni, 35 countries
and over 120 institutions

acs campus.acs.org/resources



From ACS Industry Member Programs

◆ Industry Matters Newsletter

ACS Member-only weekly newsletter with exclusive interviews with industry leaders and insights to advance your career.

Preview & Subscribe: acs.org/indnews



Connect, collaborate, and stay informed about the trends leading chemical innovation

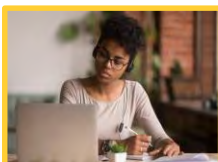
Join: bit.ly/ACSinnovationhub

ACS Career Navigator: Your Home for Career Services



Whether you are just starting your journey, transitioning jobs, or looking to brush up or learn new skills, the **ACS Career Navigator** has the resources to point you in the right direction.

We have a collection of career resources to support you during this global pandemic:



Professional
Education



Virtual Career
Consultants



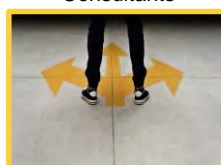
ACS Leadership
Development System



Career Navigator LIVE!



ChemIDP



College to Career



ACS Webinars



Virtual Classrooms

Visit www.ACS.org/COVID19-Network to learn more!

7

Join us in our efforts to increase the diversity of chemistry.



Valued donors like you have sustained ACS educational programs that are welcoming students from diverse backgrounds into our profession.

www.acs.org/donate



ACS Office of Philanthropy
Chemistry for Life®

8

ACS Department of Diversity Programs

Advancing ACS's Core Value of Diversity, Inclusion & Respect



We believe in the strength of diversity in all its forms, because inclusion of and respect for diverse people, experiences, and ideas lead to superior solutions to world challenges and advances chemistry as a global, multidisciplinary science.

Contact Us:

https://app.suggestionox.com/r/DI_R

Diversity@acs.org



acsvoices.podbean.com/



www.acs.org/diversity

9



Date: Thursday, March 17, 2021 @ 2-3:30pm ET

Speaker: Nick Flynn, West Texas A&M University

Moderator: Brian Guthrie, Cargill

[Register for Free!](#)

What You Will Learn:

- The major methods and processes of homebrewing
- Homebrewing tips to make the perfect pint
- How to incorporate brewing concepts into your chemistry courses

Co-produced with: ACS Division of Agricultural & Food Chemistry



Fecha: Miércoles, 24 de Marzo a las 2-3:30pm ET

Ponente: Erick Carreira, ETH Zurich y JACS

Moderadora: Ingrid Montes, Universidad de Puerto Rico, Recinto de Río Piedras y American Chemical Society

[Regístrate Gratuitamente](#)

Lo Que El Público Aprenderá:

- Las nuevas estrategias y tácticas en la síntesis asimétrica
- La química de los cannabinoides
- Las sondas para estudiar la vía de los endocannabinoides

Coproducido con: Sociedad Química de México y Chemical & Engineering News



Date: Thursday, March 25, 2021 @ 2-3:30pm ET

Speakers: Patricia Silveyra, Indiana University Bloomington / Sara Mason, University of Iowa / Allison Aldridge, U.S. Food and Drug Administration

Moderator: Lorena Tribe, Penn State Berks

[Register for Free!](#)

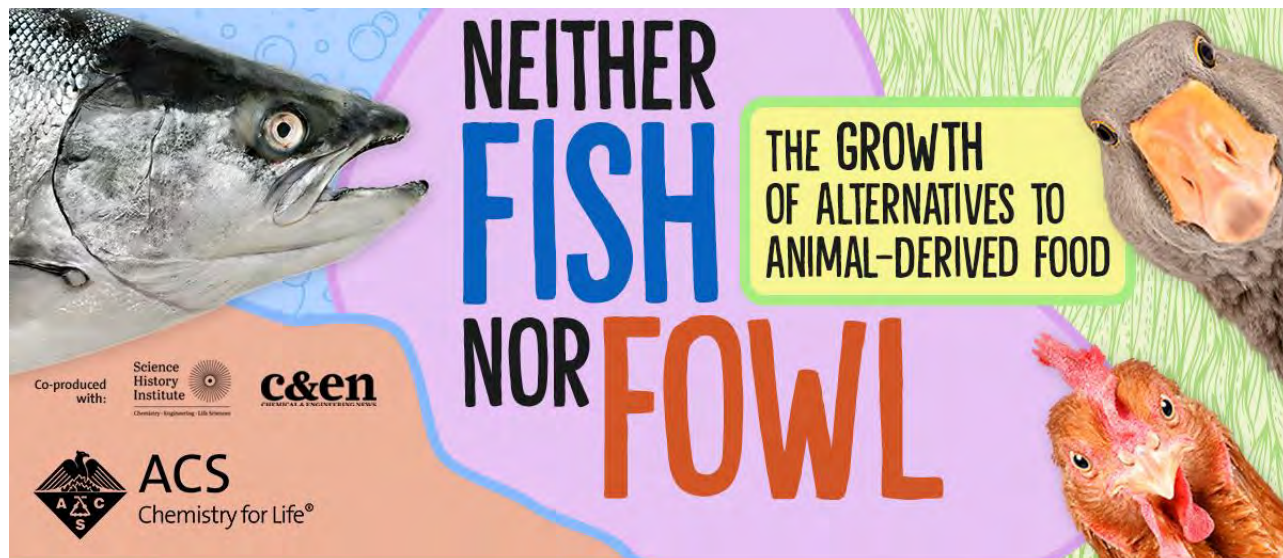
What You Will Learn:

- What are some of the common challenges women chemists experienced in 2020
- How did professionals in the chemical enterprise define success with the unprecedented conditions of the pandemic
- What are some of the sources of the resilience of successful women chemists

Co-produced with: ACS Women Chemists Committee, ACS Department of Diversity Programs, and ACS Diversity, Equity, Inclusion and Respect Advisory Board.

www.acs.org/acswebinars

10



FREE Webinar | TODAY at 1pm ET



ACS Webinars
CLICK • WATCH • LEARN • DISCUSS

THIS ACS WEBINAR WILL BEGIN SHORTLY...

11

Science
History
Institute
Chemistry • Engineering • Life Sciences

ACS
Chemistry for Life®

Neither Fish Nor Fowl: The Growth of Alternatives to Animal-Derived Food



Julie Mann
Chief Innovation Officer,
PURIS Holdings, LLC



Andrew Ive
Founder,
Big Idea Ventures



Joshua March
Cofounder and CEO,
Artemys Foods



Christopher Gregson
Founder,
Greenstalk Food Consulting LLC

Presentation slides are available now! The edited recording will be made available as soon as possible.

www.acs.org/acswebinars

This ACS Webinar is co-produced with the Science History Institute and Chemical & Engineering News.

12

Neither Fish Nor Fowl: The Growth of Alternatives to Animal-Derived Food

March 11, 2021



Moderator: **Christopher Gregson, Founder, Greenstalk Food Consulting LLC**

Panelists: **Andrew Ive, Founder, Big Idea Ventures**
Julie Mann, Chief Innovation Officer, PURIS Holdings, LLC
Joshua March, Cofounder and CEO, Artemys Foods



Christopher
Gregson

Founder, Greenstalk
Food Consulting LLC



Julie
Mann

Chief Innovation Officer,
PURIS Holdings, LLC



Andrew
Ive

Founder,
Big Idea Ventures



Joshua
March

Cofounder and CEO,
Artemys Foods



What are alternative protein foods?

Plant-based or cultured alternatives aiming for equivalence to animal-based foods



spectrum of alternatives

← **Nutrition** **Whole foods** Beans, lentils, mushrooms, etc. **Plant proteins** Tofu, tempeh, seitan, etc. **Function** **Ingredients** Egg & gelatin replacers **Veggie-centric** Black bean burger **Form** **Mimics** Plant-based meats, milks, cheese etc. →



Meat-like plants
Tomatoes (Ahimi®),
Fungi (e.g. Chicken of the Woods)



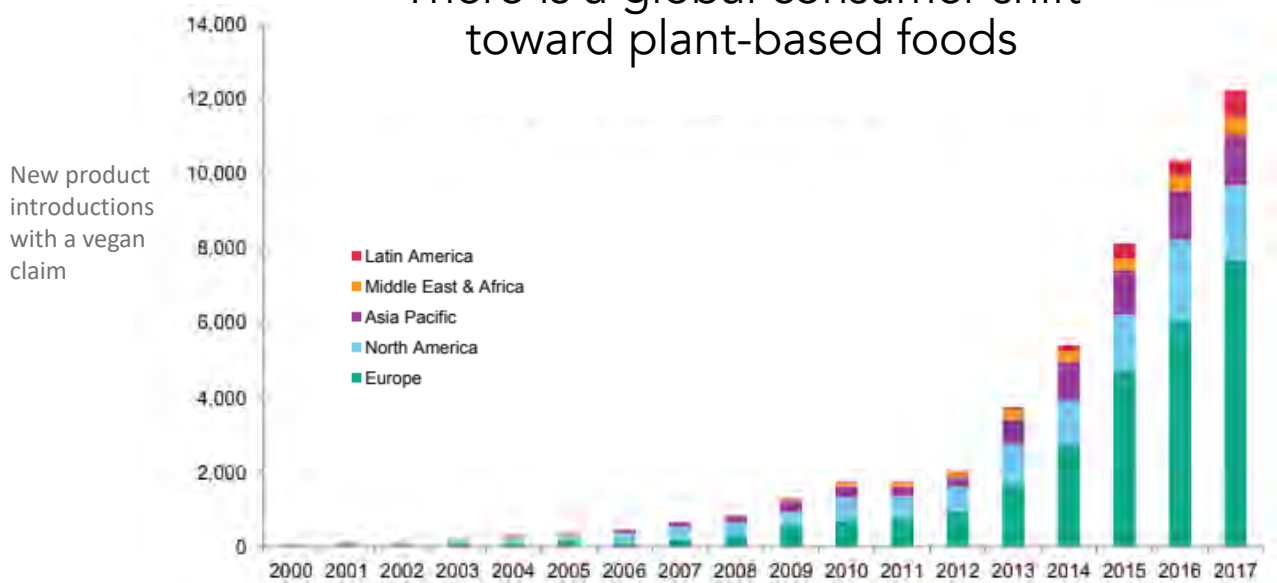
Plant-based meat
Textured plant protein
e.g. Boka, Impossible,
Tofurky, Morningstar



Cultured meat
Animal cells grown without the
animal e.g. Memphis Meats

courtesy of
The Good
Food Institute

There is a global consumer shift toward plant-based foods

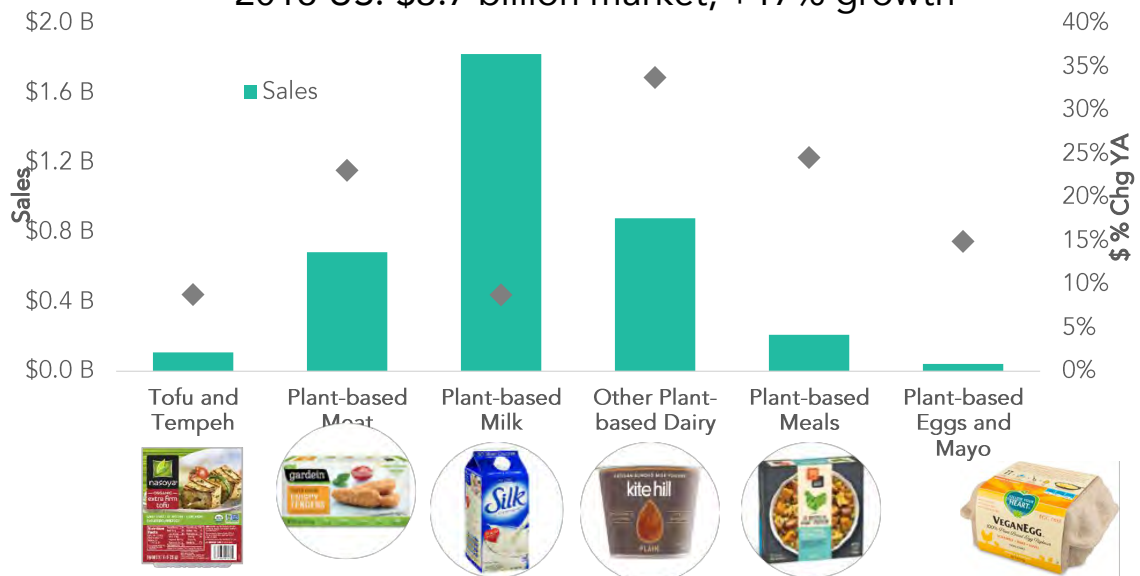


Source: Mintel, 2018; Supermarket News, 3/18/19; Innova

courtesy of The Good Food Institute

17

Plant-based foods = rapid growth market 2018 US: \$3.7 billion market, +17% growth

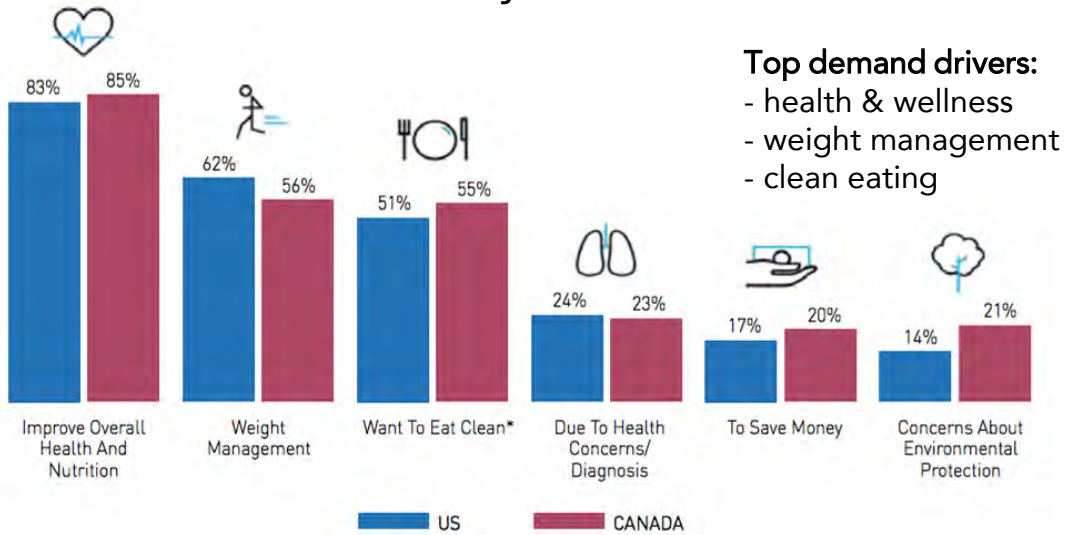


Source: Nielsen custom defined data set, xAOC + WFM, 52 weeks ending 8/11/18.

courtesy of The Good Food Institute

18

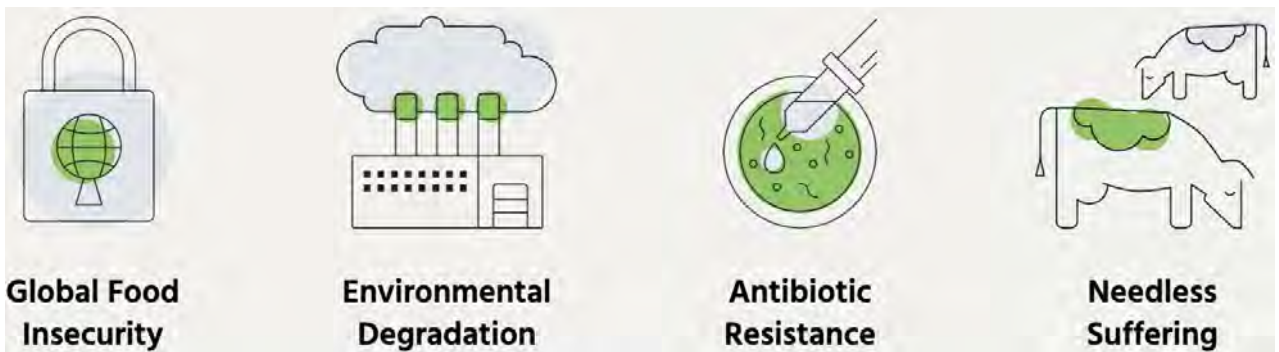
Trend is driven by consumer health



*Incorporate more foods that are unprocessed or minimally processed Source: Nielsen, Homespun Panel Protein survey, April 2017 (U.S.) Source: Nielsen Panelviews survey, March 2017 (Canada)

19

and issues of major global importance



courtesy of The Good Food Institute

20

The panelists

alt-protein start-ups



Andrew Ive
Big Idea Ventures

plant-protein ingredients



Julie Mann
PURIS Holdings

cultured meat



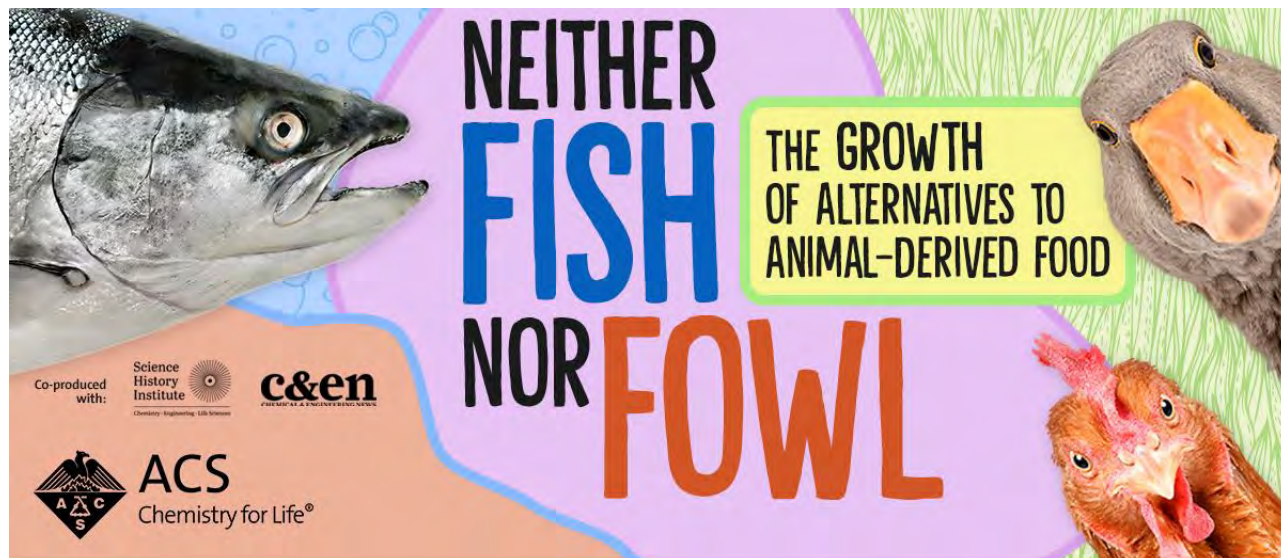
Joshua March
Artemys Foods

Making Sense of the
Global Economy: U.S.
Manufacturing, the Chemical
Industry, and You

Robert Fry,
Chief Economist,
Robert Fry Economics LLC

April 8, 2021





NEITHER FISH NOR FOWL

THE GROWTH OF ALTERNATIVES TO ANIMAL-DERIVED FOOD

Co-produced with: Science History Institute, c&en, ACS Chemistry for Life®



FREE Webinar | TODAY at 1pm ET



ACS Webinars
CLICK • WATCH • LEARN • DISCUSS

ASK YOUR QUESTIONS AND MAKE YOUR COMMENTS IN THE QUESTIONS PANEL NOW! 23

Science History Institute
Chemistry • Engineering • Life Sciences

ACS
Chemistry for Life®

Neither Fish Nor Fowl: The Growth of Alternatives to Animal-Derived Food



Julie Mann
Chief Innovation Officer,
PURIS Holdings, LLC



Andrew Ive
Founder,
Big Idea Ventures



Joshua March
Cofounder and CEO,
Artemys Foods



Christopher Gregson
Founder,
Greenstalk Food Consulting LLC

Presentation slides are available now! The edited recording will be made available as soon as possible.

www.acs.org/acswebinars

This ACS Webinar is co-produced with the Science History Institute and Chemical & Engineering News.



Date: Thursday, March 17, 2021 @ 2-3:30pm ET
 Speaker: Nick Flynn, West Texas A&M University
 Moderator: Brian Guthrie, Cargill

[Register for Free!](#)

What You Will Learn:

- The major methods and processes of homebrewing
- Homebrewing tips to make the perfect pint
- How to incorporate brewing concepts into your chemistry courses

Co-produced with: ACS Division of Agricultural & Food Chemistry



Fecha: Miércoles, 24 de Marzo a las 2-3:30pm ET
 Ponente: Erick Carreira, ETH Zürich y JACS
 Moderadora: Ingrid Montes, Universidad de Puerto Rico, Recinto de Río Piedras y American Chemical Society

[Regístrate Gratuitamente](#)

Lo Que El Público Aprenderá:

- Las nuevas estrategias y tácticas en la síntesis asimétrica
- La química de los cannabinoides
- Las sondas para estudiar la vía de los endocannabinoides

Coproducido con: Sociedad Química de México y *Chemical & Engineering News*



Date: Thursday, March 25, 2021 @ 2-3:30pm ET
 Speakers: Patricia Silveyra, Indiana University Bloomington / Sara Mason, University of Iowa / Allison Aldridge, U.S. Food and Drug Administration
 Moderator: Lorena Tribe, Penn State Berks

[Register for Free!](#)

What You Will Learn:

- What are some of the common challenges women chemists experienced in 2020
- How did professionals in the chemical enterprise define success with the unprecedented conditions of the pandemic
- What are some of the sources of the resilience of successful women chemists

Co-produced with: ACS Women Chemists Committee, ACS Department of Diversity Programs, and ACS Diversity, Equity, Inclusion and Respect Advisory Board.

www.acs.org/acswebinars

25



ACS Webinars®
 CLICK • WATCH • LEARN • DISCUSS



Learn from the best and brightest minds in chemistry! Hundreds of webinars on diverse topics presented by experts in the chemical sciences and enterprise.

Edited Recordings are an exclusive ACS member benefit and are made available once the recording has been edited and posted.

Live Broadcasts of ACS Webinars® continue to be available to the general public several times a week generally from 2-3pm ET!

A **collection of the best recordings** from the ACS Webinars Library will occasionally be rebroadcast to highlight the value of the content.

www.acs.org/acswebinars

26



ACS Webinars® does not endorse any products or services. The views expressed in this presentation are those of the presenter and do not necessarily reflect the views or policies of the American Chemical Society.



Contact ACS Webinars® at acswebinars@acs.org

27



Date: Thursday, March 11, 2021 @ 1-2pm ET

Speakers: Julie Mann, PURIS Holdings, LLC / Joshua March, Artemys Foods / Andrew Ivo, Big Idea Venture

Moderator: Christopher Gregson, Greenstalk Food Consulting LLC

[Register for Free!](#)

What You Will Learn:

- A better understanding of the most significant transformation of the food industry in decades
- The challenges of formulating plant-based products or using cell cultures to "grow" meat
- How it will affect peoples' dietary choices in the future

Co-produced with: The Science History Institute and Chemical & Engineering News



Date: Thursday, March 17, 2021 @ 2-3:30pm ET

Speaker: Nick Flynn, West Texas A&M University

Moderator: Brian Guthrie, Cargill

[Register for Free!](#)

What You Will Learn:

- The major methods and processes of homebrewing
- Homebrewing tips to make the perfect pint
- How to incorporate brewing concepts into your chemistry courses

Co-produced with: ACS Division of Agricultural & Food Chemistry



Fecha: Miércoles, 24 de Marzo a las 2-3:30pm ET

Ponente: Erick Carreira, ETH Zurich y JACS

Moderadora: Ingrid Montes, Universidad de Puerto Rico, Recinto de Río Piedras y American Chemical Society

[Regístrate Gratuitamente](#)

Lo Que El Público Aprenderá:

- Las nuevas estrategias y tácticas en la síntesis asimétrica
- La química de los cannabinoides
- Las sondas para estudiar la vía de los endocannabinoides

Coproducto con: Sociedad Química de México y Chemical & Engineering News

www.acs.org/acswebinars

28