

We will begin momentarily at 2pm ET



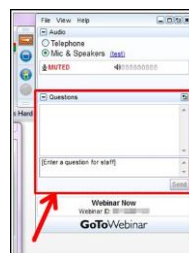
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Hongnan Cao, Ph.D.  
Senior Researcher  
Department of Pharmacology  
Baylor College of Medicine  
ACS member for 4 years strong!



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## Upcoming ACS Webinars

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Thursday, March 23, 2017



### ***Fighting Cancer: Allosteric and Targeting Cancer Cell Metabolism***

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### ***“Exploring Alternative Careers in Chemistry”***



**Tashica Amirgholizadeh**  
Corporate Counsel,  
IP Litigation, Gilead Sciences



**Bonnie Charpentier**  
Senior Vice President, Regulatory  
Affairs and Compliance, Cytokinetics



**Jyllian Kemsley**  
Senior Editor,  
*Chemical & Engineering News*

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**Jyllian Kemsley, Senior Editor,  
Chemical & Engineering News**  
j\_kemsley@acs.org, @jkemsley

<https://cen.acs.org>

**THE SAFETY ZONE**  
by c&en

**Warfarin**

**CHEMISTRY IN PICTURES**

A newly identified crystal of chiral warfarin tightly with up to a wall as an enantiomer in length (Warfarin 2018, DOI: 10.1021/acs.cen.7b00011). The small form of the enantiomer is shown. It is a natural compound, the main research team leader (J.K.) is a member of Michigan Technological University. There are the interesting layers they cause the crystal to have the same amount of molecules on the same side and molecules toward the same for the layered crystal.

**Psychdelic medicines**

Need for mental health treatments resurments research into banned drugs **P.28**

**STATE OF EXECUTIONS IN 2016**  
A REPORT BY THE U.S. DEPARTMENT OF JUSTICE

**LAB SAFETY**

**Hawaii explosion cost a researcher an arm**

Electrostatic spark likely ignited tank containing mix of hydrogen, oxygen, and carbon dioxide gases

The scientist spent his time in the lab, which cost him an arm. The Hawaii Occupational Safety and Health (OSHA) investigation found that the scientist was not properly trained in the use of the equipment. The scientist was not wearing the required safety gear and was not following the proper safety procedures.

**Jyllian Kemsley, PhD**  
Senior Editor, *Chemical & Engineering News*  
j\_kemsley@acs.org, @jkemsley



## Education and career highlights



- Amherst College B.A. in chemistry
- Merck analytical chemist
- Stanford University Ph.D. in chemistry
- UC Santa Cruz science writing certificate
- Freelance writer and consultant
- Joined C&EN staff in 2007



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**SAFETYZONE**

## Currently: Reporter, writer, blogger



- Cover
  - Basic research and techniques
  - Breast milk composition, psychedelic medicines
  - Current events like lethal injections and oil spills
  - Lab safety
- Via
  - Staying on top of local/national news
  - Reading scientific papers
  - Talking to sources
  - Attending conferences, visit research facilities
- Great job for a curious and analytical mind but:
  - Must meet deadlines
  - Must work well under constant criticism

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## Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



### Which of the following best describes why you are tuning in today?

- I am not in the workforce yet but am interested in alternative careers in chemistry.
- I would like to transition from a traditional to more alternative chemistry career.
- I am curious to find out more about alternative chemistry careers.
- It's Thursday and I always tune into ACS Webinars!

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**Tashica W. Amirgholizadeh, Ph.D.**  
**Corporate Counsel, IP Litigation**  
**Gilead Sciences, Inc.**

<http://www.linkedin.com/in/tashica-williams-amirgholizadeh-8b9a058>

<http://www.gilead.com>

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## Background



- Interest in chemistry began in middle school
- Baylor University (Waco, TX)
  - B.S. (A.C.S. certified) in Chemistry and Minor in Mathematics
  - Studied Electrochemistry with Dr. Thomas Franklin
  - Performed medicinal chemistry research at Merck
- Attended the California Institute of Technology (Caltech) (Pasadena, CA)
  - Ph.D. Chemistry
  - **Thesis:** Fundamental Aspects of DNA-mediated Charge Transport
- Law School at the University of California, Berkeley (Berkeley, CA)
  - Focused on intellectual property
- Patent litigation associate at Sidley Austin LLP (Los Angeles, CA)

## Current Position: Gilead Sciences, Inc.



- Biopharmaceutical company (Foster City, CA)
  - Portfolio and pipeline includes treatments for HIV/AIDS, liver disease, cancer, inflammatory and respiratory diseases and cardiovascular conditions
- Responsible for contested matters in the U.S. and ex-U.S.



## Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



### Are you planning to transition jobs in the near future?

- Yes, I would like to transition now.
- Yes, I plan to make a transition in a few years.
- Not sure for now but I have pondered it.
- No, I am content with my current position.

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**Bonnie Charpentier, PhD**  
**Senior Vice President,**  
**Regulatory Affairs and Compliance, Cytokinetics**

<https://cytokinetics.com>

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## Bonnie Charpentier, PhD



### Education and Career Highlights

- Bachelor degree in Anthropology
- PhD in Plant Physiology
  - Dissertation required lots of analytical chemistry (pine trees in space)
- First job post-PhD:
  - Analytical Chemist at Procter and Gamble – 10 years
    - Analytical and flavor chemistry; became interested in approval of new molecules in foods
- Moved to California – First job in Regulatory Affairs
  - Syntex, later bought by Roche (total ~10 years)
  - Small biotechs
  - Cytokinetics



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## Current Position: Senior VP Regulatory and Compliance



### Responsible for three departments

- Regulatory Affairs
  - Regulatory strategy
  - Regulatory operations
  - Technical Writing
    - Clinical
    - Chemistry, Manufacturing and Controls (CMC)
- Quality Assurance
  - QA for Good Manufacturing Practices (GMP)
  - Clinical Quality Assurance
- Drug Safety and Pharmacovigilance



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## Regulatory Affairs



### Selected responsibilities

- Strategy and planning for benefit/risk assessment of potential new drugs
  - Collaborate with clinical, nonclinical and CMC groups to ensure appropriate studies are done.
- Communication and liaison with regulatory authorities (e.g., FDA, EMA); prepare for and manage meetings
- Regulatory intelligence and currency with rules and guidances
- Preparation of regulatory documents and dossiers
- Managing collaborations with partners

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## Regulatory Affairs



### Skills useful for the job

- Technical background
- Ability to interpret data and collaborate with technical teams
- Analytical thinking skills
- Ability to communicate clearly across different disciplines
- Ability to transition quickly from detail to big picture (and back)
- Negotiating skills
- Crisis management
- Influencing others
- Patience

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## Regulatory Affairs



### Sources of Information

- U.S. Food and Drug Administration (FDA)
  - [www.fda.gov](http://www.fda.gov)
- International Conference on Harmonisation (ICH)
  - [www.ich.org](http://www.ich.org)

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Hongnan Cao, Ph.D.  
Senior Researcher  
Department of Pharmacology  
Baylor College of Medicine  
ACS member for 4 years strong!



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