

Peak Area Leadership in Science

Professional Development Opportunities
for Secondary Science Teachers

Three Ways to RSVP:

- www.sciencehubs.org
- email: RSVP@sciencehubs.org
- call Tammy Johnnie at
(719) 337-1552

“Chemistry of Medicine and Drugs”

Saturday, 22 January 2022 8:00 am – 4:00 pm

USAFA Chemistry Department Presented by:

**Dr. Gary Balaich, Dr. Ron Furstenau, Dr. Barry Hicks,
Dr. Abby Jennings, Dr. Doris Kimbrough**



Participants meet on the south steps of the Cadet Field House for check in at 8 - departure promptly at 8:15;
with escort to Chemistry Conference Room (2N189). No late arrivals or early departures allowed.

You must RSVP in advance for this workshop. We will be submitting a list of participants to the hosts in advance.

You must present a valid photo ID at the USAFA North Gate for entrance. (Update 12.7 - Proof of Vaccination will be required at the gate.) Masks are required while indoors.

Meet at the south steps of the Cadet Field House near 8:00 for check-in. We will leave the parking lot promptly at 8:15.

Presentations:

“Chemical Functional Groups, Drug Synthesis and Analysis” Dr Gary Balaich

“The Chemistry Of Vaping” Dr Doris Kimbrough

“COVID Therapeutics” Dr Barry Hicks

Laboratory Experiments:

“Identifying Drugs by Instrumental Analysis”: Different techniques will be used to analyze drugs, including high-performance liquid chromatography (HPLC), Fourier Transform Infrared Spectroscopy (FTIR), and gas chromatography/mass spectrometry (GCMS).

“Thin Layer Chromatography (TLC) to ID Drugs”: TLC is a powerful, but simple technique which can be used to separate and identify over-the-counter drug mixtures and to identify unknowns, applicable to a wide variety of middle and high school classes.

“Synthesis of Aspirin and Methyl Salicylate”: This is a straightforward lab allowing participants to make their own aspirin and methyl salicylate (oil of wintergreen; Ben Gay).

Come and update your science content... use state-of-the-art scientific equipment... network with other science teachers... win a door prize... earn professional development hours... have fun !



Bring your science notebook! We will provide a notebook for each new participant.

Bring your own lunch (Some breakfast items, snacks and beverages will be provided.)



This workshop is made possible by
GENEROUS funding from:

**FOUNDATION
MIKKELSON**

& The Mikkelson Education Fund



Providing Support for Teachers

to Improve Technical Knowledge and Skills

Additional Funding by



USAFA K-12 STEM
Outreach Program

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in Science**

Check out our website at
www.sciencehubs.org

Photo at top provided by Rose DiCenso.

In compliance with Colorado School of Mines regulations, children of participants may not attend Hub meetings or activities.
PLEASE - If you sign up for this PALS hub meeting and have to cancel, contact TAMMY asap.