

# THE BLUE RIDGE CHEMIST

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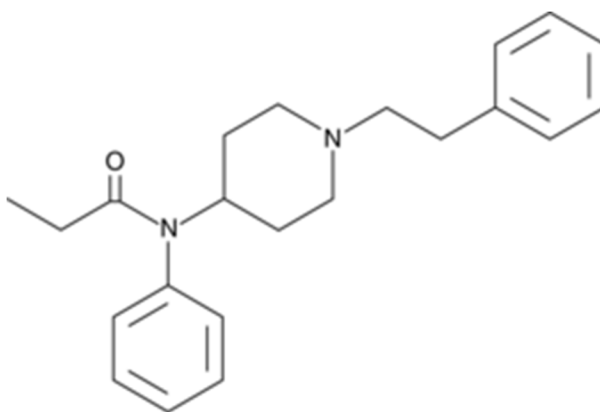
Number 1

February 2023



Virginia Western CC Hosts the February Meeting - In Person

**Tuesday February 21, 2023**



## Meeting Information

- 709<sup>th</sup> Meeting of the Virginia Blue Ridge Section, American Chemical Society.
- Neil Vowels will speak on modern techniques for forensic analysis of drugs such as fentanyl.
- Agenda for **Tuesday, February 21, 2023**
  - 5:30 PM to 6:30 PM – Dinner and Conversation at Mission BBQ in the Towers Shopping Center, 2207 Colonial Avenue SW, Roanoke. We are not making a reservation. No RSVP is required.
  - 7:00 PM to 8:00 PM – Presentation in the STEM Building at Virginia Western CC.

**Keynote Speaker: Neil Vowels**  
**Forensic Scientist in the Controlled Substances Section**  
**Virginia Department of Forensic Science**



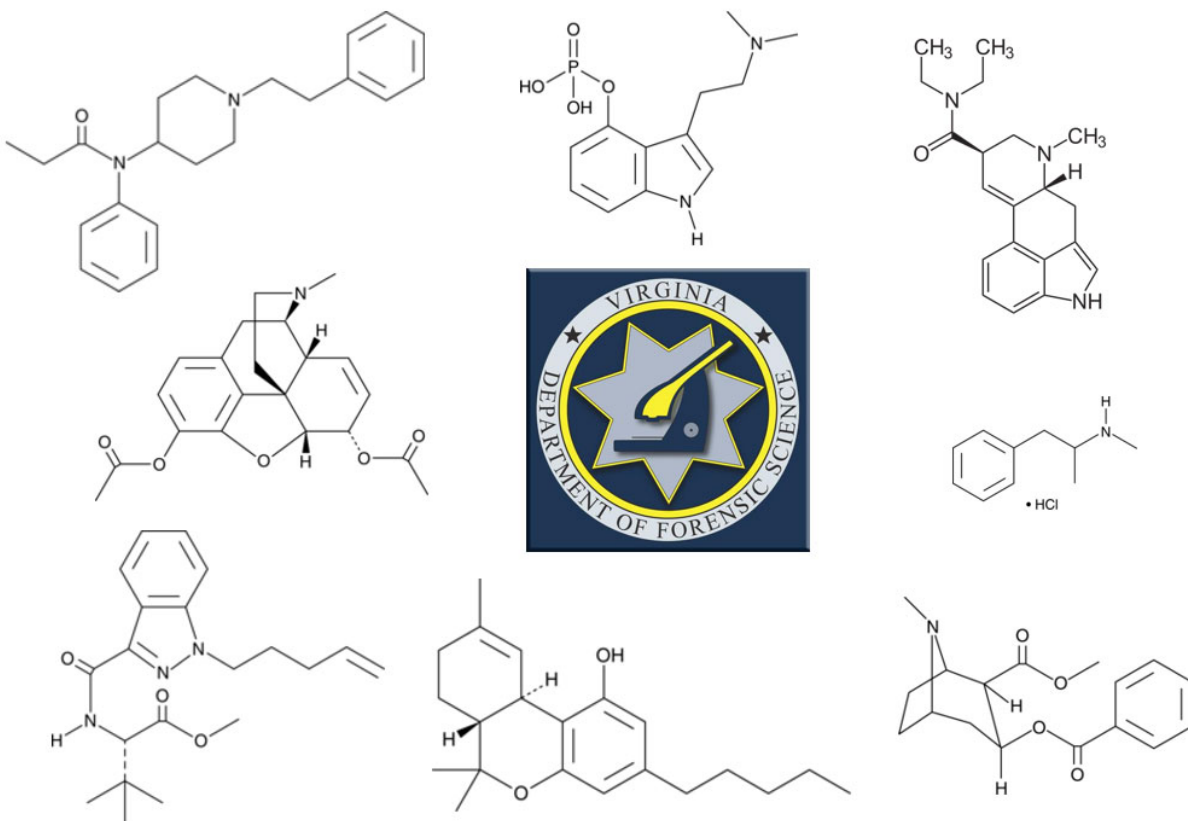
Neil Vowels obtained his B.S. in chemistry (ACS accredited) and M.S. in chemistry from Murray State University. After graduating, he served the Kentucky State Police Western Regional Laboratory in Madisonville, KY for 13 years as a Forensic Chemist. For the past six years, Neil has served as a Forensic Scientist in the Controlled Substances section at the Virginia Department of Forensic Science Western Laboratory in Roanoke. Neil has also served as an adjunct chemistry professor for 10 years, and he currently teaches General Chemistry at Virginia Western Community College.

Part of Neil's duties as a Forensic Scientist involve the analysis of suspected drug evidence submitted by law enforcement agencies for the presence of controlled substances. This evidence includes but is not limited to plant material, solids, powders, liquids, tablets, capsules, and various paraphernalia. The drug landscapes, both legitimate and illicit, of the states of Kentucky and Virginia, have changed quite dramatically over the last 20 years, requiring Neil to receive frequent updates to his training.

## Presentation Abstract

The Virginia Department of Forensic Science comprises four labs serving law enforcement agencies of the Commonwealth of Virginia. They are the Western Lab in Roanoke, the Northern Lab in Manassas, the Central Lab in Richmond, and the Eastern Lab in Norfolk. The Western Lab services a total of 50 counties and independent cities in southwestern Virginia. The agencies of those jurisdictions submit evidence on a daily basis both in-person and via trackable mail services. On average, there are approximately 800-1,000 drug cases submitted each month. The number of drug cases being submitted necessitated an increase in staff for the Controlled Substances section, so over the last six years the Western Lab has hired nine Forensic Scientists, bringing the current total to seventeen.

In addition to the increase in drug submissions over the years, there has been a marked increase in the quantity of cases that have involved fentanyl, fentanyl analogs, synthetic cannabinoids, and research chemicals. These substances have contributed to a greater overall complexity of analysis. Most of the compounds identified are controlled under Virginia Code. However, there are novel psychoactive substances (NPS) that frequently present a challenge for the analysts to identify. Thanks to the up-to-date instrumentation found at the Western Lab, these NPS are meticulously analyzed in order to submit them to the Board of Pharmacy for review to suggest entering them into Schedule I through VI in Virginia Code. This presentation will share the type of items submitted for controlled substance analysis, the techniques employed in their identification, the instrumentation used to process the case samples, and some of the chemistry of drugs.

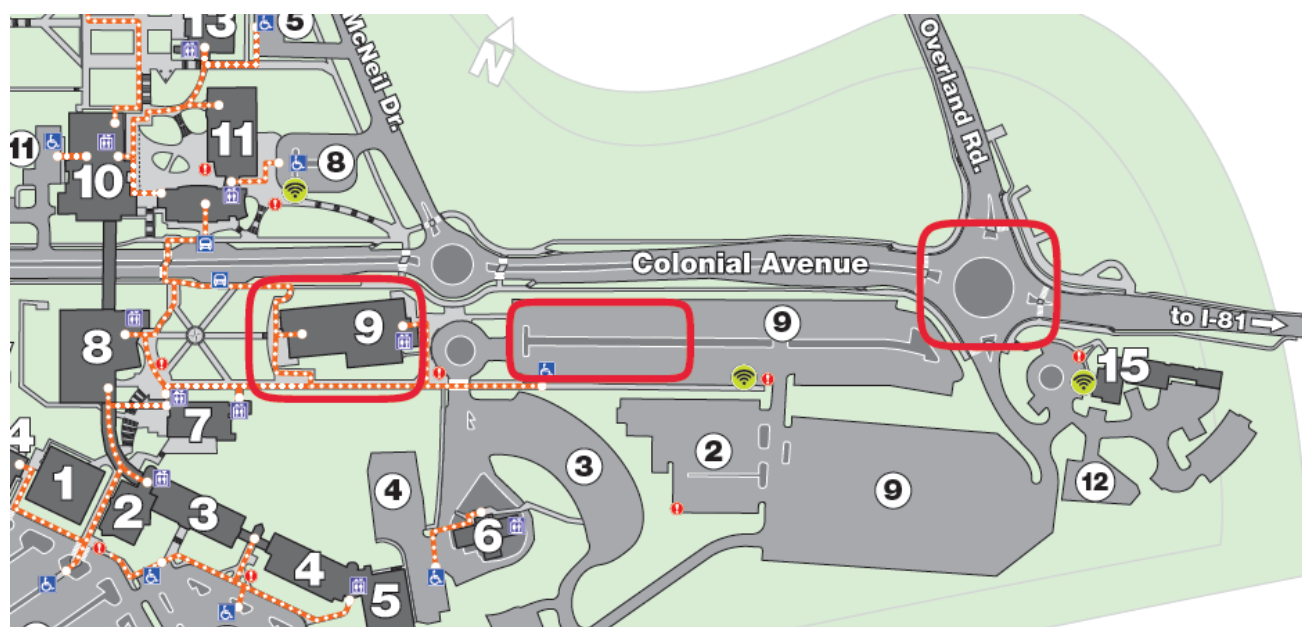


## Directions to the STEM Building at Virginia Western Community College

**From I-581 (coming from the north):** Take the Colonial Avenue exit, and bear to the left. Once on Colonial Avenue, drive about one mile, and at the first roundabout go left into the parking lot. Once in the lot, turn right. At the stop sign, turn right again. Turn left into the parking areas, and the STEM building is closest to the parking lot and is directly on Colonial Avenue. The building is labeled as “9” on the map below, with parking as indicated by the red rectangle.

**From US-220 (coming from the south):** Head north on US-220, take the Wonju Avenue exit. Turn left onto Colonial Avenue, drive approximately one mile, and at the first roundabout go left into the parking lot. Once in the lot, turn right and at the stop sign, turn right again. Turn left into the parking areas, and the STEM building is closest to the parking lot and is directly on Colonial Avenue.

- “Virginia Western Community College STEM Building” comes up in Google Maps, and the location is the parking area that has been identified on the map below with a red rectangle.



## Directions to Mission BBQ

From the north, exit US-220 at Colonial Avenue and turn right. Then make your first left into the parking lot for Towers Shopping Center. Once in the parking lot, head toward the mall then make a left in the parking lot. Mission BBQ is the last storefront on your right. For those coming from the south and taking the Wonju Avenue exit from US-220, turn right onto Colonial Avenue, then after passing through one light, turn left into the parking lot and follow the instructions above.

- The address of Mission BBQ for your GPS is 2229 Colonial Ave SW, Roanoke. The phone number of the restaurant is (540) 613-5513. No reservation or RSVP is required.
- Virginia Western Community College is straight down Colonial Avenue from Towers.