

**Joint Spring Meeting of the  
San Diego Section, AACC and Greater San Diego Chapter, CLMA**

**"The Case of the Missing TSH"  
"How limitations in immunoassays can lead to false results and patient harm"**

**Wednesday, May 21, 2014**

**Dinner and Mixer      6:00 to 6:30pm  
Presentation          6:30 to 8pm**

*Local section members may attend online via live webex – see RSVP below*

**Location:**

USCD Center for Advanced Laboratory Medicine  
UC San Diego, 10300 Campus Point Drive, San Diego, CA 92121  
Conference Room C, on the SE side of the building; first parking lot on the right as you enter the complex.

**Speaker:**

*Julia C. Drees, PhD*, Scientific Director, Chemistry; Kaiser TMPG Regional Laboratories; Northern California, Richmond, CA

[Program Information](#)

Thyroid stimulating hormone (TSH) assays have such high selectivity and specificity that they are recommended and widely used as the sole screening test for thyroid dysfunction. Recently, four commercially available, FDA approved TSH assays were found to be hyper-selective, that is, unable to recognize a rare (~0.001% of the >2 million patients tested) variant of TSH that is functional but with altered immunoreactivity. Of the 20 individuals identified thus far with variant TSH, all hypothyroid or euthyroid, half were initially treated to reduce circulating T3/T4 based on repeated falsely undetectable TSH values. This presentation will describe the search to discover and sequence the variant TSH, the data mining of 1.6 million patient records to find potentially affected patients, and the wider implications for TSH and other peptide/protein hormone testing. Several unrelated cases of anomalous TSH results will also be reviewed.

**After attending this program, participants will be able to:**

- Describe how the hyperselectivity of some TSH assays was discovered and characterized.
- Diagram the data mining procedure of 1.6 million EMR patient records to identify potentially affected patients.
- Explain the sequencing of the novel, variant but functional TSH gene in affected patients.
- List the steps to take to investigate an immunoassay result questioned by a clinician

**1.5 hour of Category 1 ACCENT credit given**

**Please join us – AACC members and non-members are welcome!**

RSVP required to Judy Stone ([jastone@ucsd.edu](mailto:jastone@ucsd.edu) or 858-657-5746) by ***May 19, 5pm***

*To Attend online (you will receive a link and instructions via email) – RSVP by Friday, May 16*