



# BPS2023

67th Biophysical Society Annual Meeting  
February 18–22, 2023



**Monday, February 20**

**3:30 PM – 5:00 PM**

**Room 9**

**HORIBA Scientific**

## **A-TEEM Molecular Fingerprinting For Biopharmaceutical Products Such As Vaccines, Insulin, Viral Vectors (AAVs), Cell Media, Exosomes, and More**

A-TEEM is a novel, robust, and extremely sensitive analytical technique comprising the best attributes of molecular spectroscopy (speed, low per measurement cost, lab-to-line placement) and chromatography (sensitivity, selectivity, low limits of detection and quantification).

The A-TEEM technique combines absorbance and fluorescence spectroscopy in one simultaneous measurement, providing five characteristics that together create a unique A-TEEM fingerprint: The Extinction Coefficient and Absorbance Spectrum (from absorbance) as well as Quantum Efficiency and the entire Excitation and Emission Spectrum in the form of 3D EEM from fluorescence. The absorbance information is also used to correct the fluorescence EEM for inner filter effects, thus facilitating truly quantitative and highly selectable molecular fingerprints.

A-TEEM fingerprints of very similar components are often unique, enabling quantitative analysis of responsive components to ppb levels. This makes it a natural fit for the characterization of many relevant biopharmaceutical products such as Vaccines, Insulin, Viral Vectors (AAVs), Antibody-Drug Conjugates (ADCs), Cell Media, Exosomes, CRISPR/CAS9, and more.

As a spectroscopic tool, A-TEEM can be deployed for process analytics, used to monitor bioprocesses, or screen for batch-to-batch variance across a variety of relevant biomolecules.

Putting a sample in a cuvette is often the only preparation needed for measurement. For some quantitative measurements, sample dilution may be required.

### **Speaker**

*Sean Travers, Life Sciences Account Manager, HORIBA Scientific*