



## Pre-Conference Session Description

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**Course Title:** Epigenomics: DNA Methylation

**Presenters:**

Course Directors

- Robert Akins, PhD
- Adam Marsh, PhD
- Cecilia Arighi, PhD
- Erin Crowgey, PhD

Additional Course Presenters / Q&A Resources

- Karyn Robinson, MS
- Stephanie Lee, MS

**Target Audience:**

Clinicians, researchers, and members of the AACPDM community interested in understanding recent epigenomics studies addressing cerebral palsy. Course sessions will be delivered for the beginner / intermediate learner.

**Course Summary:**

This course provides education on epigenomics, especially DNA methylation, as it relates to cerebral palsy and other early onset disabilities. There have been a number of recent reports linking epigenetics with cerebral palsy (CP), pre-term birth, and conditions with a perinatal onset, and the field is moving quickly. The broad goal of the present course is to provide some education around how to understand and interpret these types of study. In particular, the course will provide beginner to intermediate level discussions in four areas that will each comprise a 45-50 minute presentation with 10 – 15 minutes of Q&A and discussion (times are Central).

**At the end of the Pre-Conference Session, participants will be able to discuss:**

1. List 3 current findings regarding the association of altered DNA methylation with cerebral palsy and 3 limitations in interpreting these findings.
2. Define “machine learning”, “deep learning”, and “artificial intelligence” as applied to epigenomics research.
3. Describe the use of three omics visualization tools.
4. Navigate fundamental resources on UniProt and PIR interfaces.