Oral Contributions

[MS3-01] Unlocking the mysteries of chromatin modifying complexes

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Eukaryotic DNA is packaged into nucleosomes in which the DNA is wrapped around a histone protein core. While this provides greater stability and protection for the DNA, this causes problems for processes that require access to the genetic material. Access is required for processes such as transcription but also for DNA repair. Access is regulated by chromatin remodelling complexes that shuffle nucleosomes along the DNA. Signaling at DNA damage also involves covalent modification of histones and exchange of histones within the nucleosome core *in situ*.

The INO80 complex has twin roles in remodelling nucleosomes to allow access for the DNA repair machinery and also the removal of histone H2AZ from nucelosomes. The enzyme complex comprises a nine protein core with a molecular weight in excess of 1.3 MDa. We have initiated studies on INO80 complex to try and understand more about the enzyme complex catalyses its reactions. Progress to date will be presented which is already providing insight into the workings of this complex machine.