MS06-P01 | Structural Insights In A Mitochondrial Nucleoid Maintenance Factor

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Candida albicans is a human pathogen causative of a number of infectious diseases that can lead to life-threatening disorders in immunocompromised patients. Our aim is the structural characterization of a *C.albicans* mitochondrial DNA maintenance factor. This factor is indispensable for mitochondrial DNA maintenance and for *C.albicans* survival, thus representing a potential therapeutic target. We successfully expressed and purified the protein, and identified the DNA substrates suitable for crystallization. After performing serial screening from a custom DNA library we obtained crystals that diffract from low to medium resolution. We are currently working on structure solution by applying experimental phasing methods. Our current efforts are focused in dealing with highly anisotropic data which shows very weak anomalous signal. Strategies include addition of extra methionines by mutagenesis and heavy atom screenings. Complementary studies consist in SAXS analysis of the unbound protein and molecular microscopy imaging that shows DNA compaction by the protein.