

Table 1: Histone modification enzymes under study		
<i>enzyme</i>	<i>type</i>	<i>disease association</i>
NSD1	methylase	Sotos syndrome
NSD2	methylase	acute lymphoblastic leukemia (ALL)
Ash1L	methylase	mixed-lineage leukemia (MLL)
MLL1 complex	methylase	multiple cancers
LSD1/CoREST	demethylase	multiple cancers
Piccolo NuA4	acetylase	prostate cancer
SIRT6	deacetylase	aging-related diseases
RNF168	ubiquitylase	RIDDLE syndrome ⁴
Calypso	deubiquitylase	mesothelioma

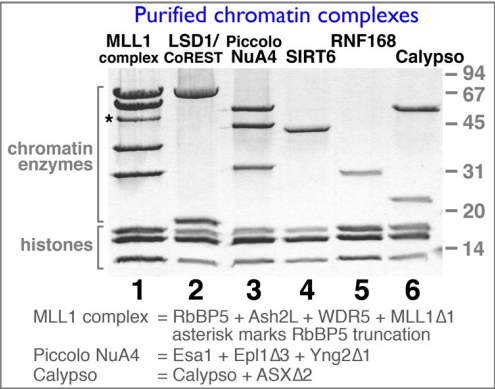


Fig. 1: Coomassie-stained SDS-PAGE gel of purified chromatin enzyme/nucleosome complexes

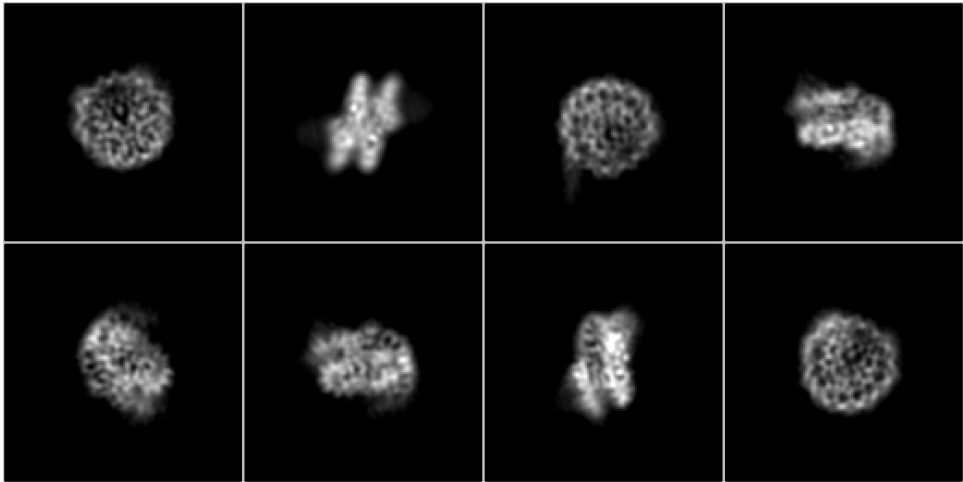
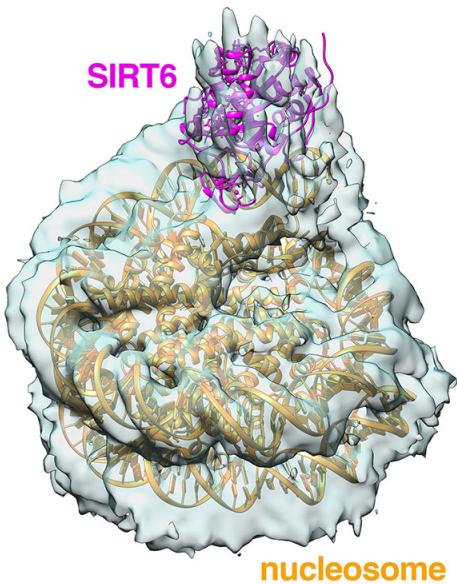


Fig. 2: Representative 2D classes of SIRT6/nucleosome complexes stabilized by crosslinking. The density for the SIRT6 enzyme is weak compared to the nucleosome partly due to incomplete occupancy and partly due to conformational flexibility



StFig. 3: Preliminary 3D reconstruction of crosslinked SIRT6/nucleosome complex. We observe additional but weak density for the SIRT6 enzyme. Model at 4.2 Å resolution using 62K particles from 524 micrographs.