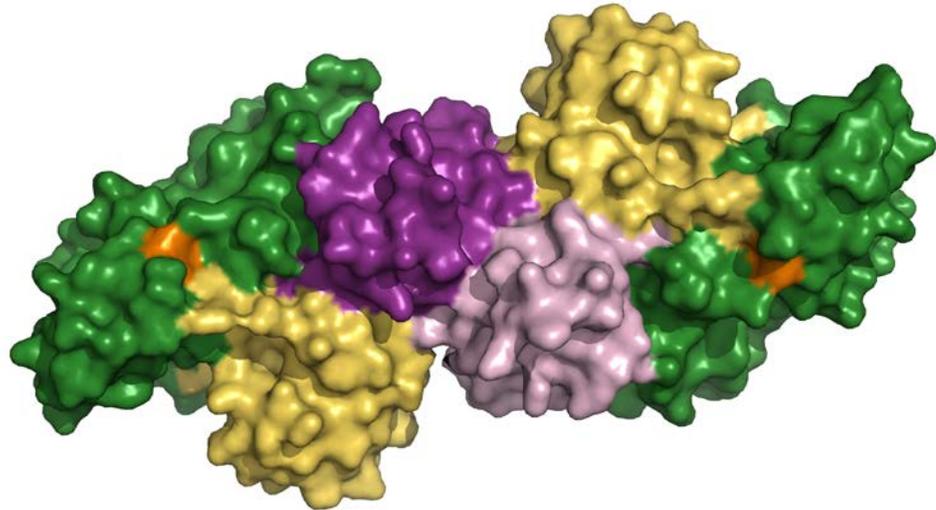




## Role of RNF4 in SUMO-dependent, Ubiquitin-mediated protein degradation



SUMO-targeted ubiquitin E3 ligase RNF4 uses multiple SUMO Interaction Motifs to engage polySUMO substrates and activate the RNF4 RING domain by inducing its dimerization. RNF4 is required for degradation of the PML-RAR $\square$  oncogene in response to arsenic treatment for Acute Promyelocytic Leukemia. Structural analysis of RNF4 has suggested a common mechanism for RING dependent E3 ligase action. To test this we use Single Molecule Fluorescence Resonance Energy Transfer to monitor conformational changes induced in ubiquitin loaded E2 conjugating enzyme by RNF4. This provides a framework for understanding how RNF4 manipulates the conformation of the E2~Ub conjugate to facilitate ubiquitin transfer.

**Dr. Ron Hay**

**University of Dundee**

Host: Dr. Lori Frappier

**Date:** Monday Oct. 22, 2018

**Time:** 4PM

**Place:** MSB 2172