Team finds method to reduce accumulation of damaging Huntington's disease protein

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A study appearing April 14 in the journal *Neuron* suggests there may be a new way to change the damaging course of Huntington disease.

University of California, Irvine neurobiologists Leslie Thompson and Joseph Ochaba with the Departments of Neurobiology & Behavior and Psychiatry & Human Behavior and their colleagues from UCI and from Children's Hospital of Philadelphia have shown that reducing the aberrant accumulation of a particular form of the mutant Huntingtin protein corresponds to improvement in symptoms and neuroinflammation in HD mice.

They showed this by targeting and modulating levels of PIAS1 - a protein implicated in cancer and other diseases - which they found led to the reduction of the mutant Huntington protein.

The work suggests that changing levels of the PIAS1 protein and targeting this pathway could have a benefit to disease.

There are no current treatments for HD, although Thompson's ongoing work with stem cell-based therapies are showing promise.

More information: Joseph Ochaba et al. PIAS1 Regulates Mutant Huntingtin Accumulation and Huntington's Disease-Associated Phenotypes In Vivo, *Neuron* (2016). DOI: 10.1016/j.neuron.2016.03.016

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