When stress goes bad: neural circuits and neurodegeneration

Stress is usually considered a bad thing, but that in fact it is only bad when the body's response to stress turns from being adaptative to maladaptive. In the brain, stress can inhibit neuronal proliferation and stimulate neuronal death and more dramatically, neuronal connectivity. These supposedly undesirable events occur primarily in corticolimbic circuits concerned with the regulation of mood and cognition. Animal and cellular studies in our lab seek to identify the major targets and some of the mechanisms through which stress can induce brain pathology (in particular, mood and cognitive dysfunction). My talk will raise the idea that stress induces a disconnection-like syndrome that may progress from depression to Alzheimer's disease.
