



**Principal Investigator Candidate  
Seminar Series  
For Molecular, Cell and Systems Biology**

**Dr. Hilla Weidberg**

Massachusetts Institute of Technology  
Cambridge, MA, USA

**Title:**

**mitoCPR– a stress response that maintains  
mitochondria homeostasis**

**Wednesday, December 12, 2018  
9:30 a.m.**

**Location:**

**Mount Sinai Hospital  
Level 3 Conferences Rooms L3-201-202-203  
60 Murray Street, 3<sup>rd</sup> floor**

**Host: Dr. Anne-Claude Gingras**

Dr. Weidberg obtained her PhD in Life Science at the Weizmann Institute of Science, under the supervision of Prof. Zvulun Elazar. She studied the role of mammalian Atg8 proteins during autophagosome biogenesis, resulting in first author publications in the EMBO Journal (2010; PMID: 20418806) and Developmental Cell (2011; PMID: 21497758). She is currently a postdoctoral fellow with Prof. Angelika Amon at the MIT where she first demonstrated that nutrient control of yeast gametogenesis is mediated by TORC1, PKA and energy availability (PLOS Genetics, 2016; PMID:27272508). She next began to explore how mitochondria communicate with the rest of the cell to maintain their homeostasis. All mitochondrial functions rely on the import of proteins into the organelle, a process challenged during cellular stress, and associated with disease. She uncovered a new surveillance pathway (mitoCPR) that protects mitochondria in response to protein import stress (Science, 2018; PMID: 29650645). This last study prompted the development of her future research program that explores how defects in the import of proteins to the mitochondria are sensed and repaired by the cell. This will enable her to manipulate the mitochondrial import defects that occur in diseases such as Alzheimer's and Parkinson's diseases.