



**PROF. LUCIA PEIXOTO**

Washington State University's  
Elson S. Floyd College of Medicine  
(ESFCOM)



Berlin Institute  
for Medical  
Systems Biology

BIMSB GUEST SPEAKER

# BIMSB GUEST SPEAKER

## SLEEP AND TRANSCRIPTIONAL REGULATION IN NEUROTYPICAL DEVELOPMENT AND AUTISM

**Thursday, 9<sup>th</sup> October  
2025 at 10 am**

BIMSB, 0.61

and via Zoom

Meeting ID: 681 8753 2149

Pass code: 742 990

In this talk Dr. Peixoto will discuss her team's efforts to understand the molecular basis of sleep homeostasis, and how it may be altered in autism, using transcriptomic approaches. Her findings show that in neurotypical brains, acute sleep deprivation triggers massive transcriptional changes, with excitatory neurons showing the strongest response. Cellular redox homeostasis, DNA damage/repair and chromatin regulation are among the pathways that show the most pronounced sleep-pressure dependent transcriptional regulation. In the *Shank3 $\Delta$ C* autism model, this normal response is heavily repressed starting as early as post-weaning, suggesting that autism-associated genetic mutations fundamentally alter how different brain cell types may respond to sleep pressure at the molecular level from very young ages.

**Host** Prof. Ana Pombo

**Contact** +49 30 9406-1752

No registration required

Max Delbrück Center / BIMSB

Hannoversche Str. 28, 10115 Berlin

HELMHOLTZ