

Sex Differences in the Social Brain: Insights from Autism



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Understanding sex differences in brain function and genetics is critical to delineating the systems biology of autism spectrum disorder (ASD), but female ASD is understudied. In this talk, I describe integrating imaging and genetic data in a sex-balanced sample of ASD and neurotypical youth to characterize female-specific pathways of ASD risk and resilience. FMRI data reveal a neurofunctional profile of female ASD characterized by motor, striatal, and frontal involvement not observed in male ASD. Further, greater recruitment of salience and executive control networks among neurotypical girls versus neurotypical boys and autistic girls suggests potential neural correlates of the “Female Protective Effect.” Larger rare copy number variants affecting genes expressed in striatal (and, to a lesser extent, motor and frontal) cortex in autistic girls versus boys suggest an female-specific etiological role for impacts to these brain regions. Our findings advocate caution in drawing conclusions regarding autistic girls based on work comprised of male-predominant samples.

**Friday, September 20th @ 1:00 p.m.
Krasnow Institute, Room 229**