

2016-2017 IACC Strategic Plan for Autism Spectrum Disorder

Outline of Question 2 (How Can I Understand What Is Happening?)

Examine the biological basis of ASD

- Molecular pathways in autism, including systems biology and interactions between pathways
- Molecular biology of genetic conditions related to autism (Rett, TSC, Fragile X, etc.)
- Development and developmental trajectories
- Sex differences
- Neuroanatomy and circuitry
- Cognitive, sensory, motor systems and functions
- Biology across the lifespan
- Research on biology underlying abilities (vs. exclusive focus on disabilities)

Understand the underlying biology of co-occurring conditions in ASD

- Epilepsy in ASD
- Enteric nervous system and microbiome in GI disorders
- Immune/metabolic mechanisms in autism
- Sleep disorders

Integrate and collaborate across the continuum of ASD research

- Collaboration between federal and nonprofit organizations
- Creation of large, collaborative research teams and mechanisms for long-term funding of longitudinal studies
- Inclusion of people on the autism spectrum in planning and conducting research
- Inclusion of individuals on the high-needs end of the spectrum, minimally verbal
- Development of research outcome measures and quality-of-life outcome measures
- Replicability of research
- Research workforce needs, including in specific areas of expertise, such as engineering