

## **2016-2017 IACC Strategic Plan for Autism Spectrum Disorder**

### **Outline of Question 3 (What Caused This to Happen and Can It Be Prevented?)**

#### **Understand genetic risk factors**

- Identification of risk genes in human populations
- Genome-wide and sequencing studies; genomics and proteomics
- Autism heritability
- Genetic testing
- Risk communication
- Data access and data sharing
- Workforce needs

#### **Understand environmental risk factors, individually and in combinations over time**

- Environmental exposures – chemical, nutritional, social stressors, etc.
- Prenatal and postnatal influences
- Epidemiological studies of risk factors
- Need improved tools for exposomics
- Data access and data sharing
- Workforce needs

#### **Elucidate linkages between genes and environment**

- Gene-environment studies
- Complex systems
- Impact of environmental exposures on diverse populations
- Animal models
- Epigenetics
- Microbiome
- Immune System
- Need for multidisciplinary workforce and approaches
- Data access and data sharing