



National Institute  
on Alcohol Abuse  
and Alcoholism



NATIONAL  
INSTITUTE  
ON ALCOHOL  
ABUSE AND  
ALCOHOLISM

# CONCEPT CLEARANCE

**A Request for Applications (RFA) for  
Developmental Projects for the  
Collaborative Initiative on Fetal Alcohol Spectrum Disorders (CIFASD)**

---

**H. Joe Wang**

**Division of Metabolism and Health Effects, NIAAA**

153th Meeting of the NATIONAL ADVISORY COUNCIL ON ALCOHOL ABUSE AND ALCOHOLISM

Feb. 6, 2020



National Institute  
on Alcohol Abuse  
and Alcoholism



NATIONAL  
INSTITUTE  
ON ALCOHOL  
ABUSE AND  
ALCOHOLISM

---

## Fetal Alcohol Spectrum Disorders (FASD)

- A spectrum of lifelong health conditions affecting individuals with prenatal alcohol exposure including facial anomalies, growth retardation, neurological abnormalities, and cognitive deficits.



National Institute  
on Alcohol Abuse  
and Alcoholism



NATIONAL  
INSTITUTE  
ON ALCOHOL  
ABUSE AND  
ALCOHOLISM

---

## Fetal Alcohol Spectrum Disorders (FASD)

- A spectrum of lifelong health conditions affecting individuals with prenatal alcohol exposure including facial anomalies, growth retardation, neurological abnormalities, and cognitive deficits.
- Estimated prevalence is 1-5% among 1<sup>st</sup> graders in four US communities (May PA et al., 2018. JAMA). Of the cases identified, only 1% had been previously recognized.



# Collaborative Initiative on Fetal Alcohol Spectrum Disorders (CIFASD)

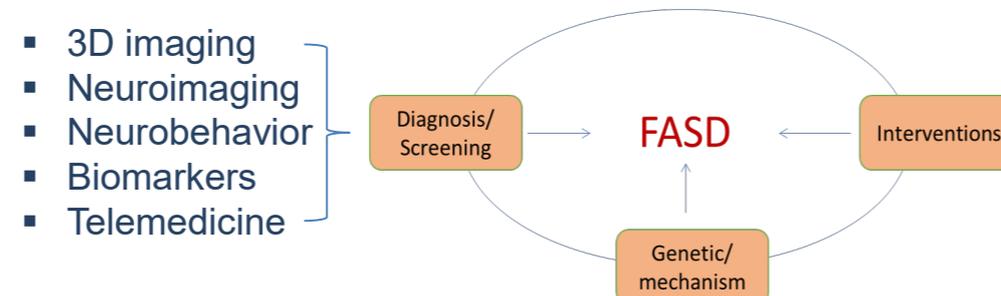


## CIFASD4

PI, Coordinator: Ed Riley

Scientific Director: Michael Charness

- **CIFASD consortium was established to meet major challenges to FASD research:**
  - need for multi-disciplinary/translational approaches;
- **CIFASD4's research (9 U01 projects; 2 UH2 developmental projects)**



# Collaborative Initiative on Fetal Alcohol Spectrum Disorders (CIFASD)



## CIFASD4

PI, Coordinator: Ed Riley

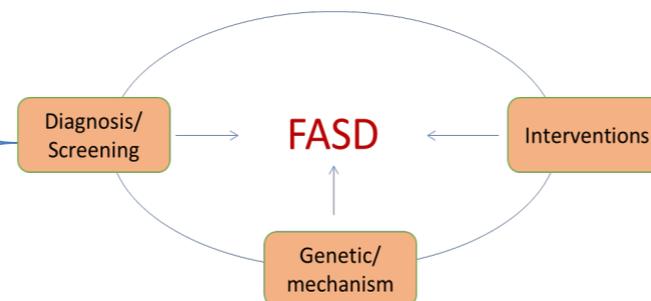
Scientific Director: Michael Charness

- **CIFASD consortium was established to meet major challenges to FASD research:**

- need for multi-disciplinary/translational approaches;
- need for a large number of study subjects to control for confounding variables

- **CIFASD4 shares cohorts from US, Canada, England, and Ukraine**

- 3D imaging
- Neuroimaging
- Neurobehavior
- Biomarkers
- Telemedicine



- **CIFASD4's research (9 U01 projects; 2 UH2 developmental projects)**



National Institute  
on Alcohol Abuse  
and Alcoholism



NATIONAL  
INSTITUTE  
ON ALCOHOL  
ABUSE AND  
ALCOHOLISM

---

## CIFASD Developmental Projects

### CIFASD4 UH2s (2017-19)

- **Biomarker for intellectual disability in children prenatally exposed to alcohol** (PI: Kazue Hashimoto-Torii)
  - Does peripheral, single-cell RNAs predict neurobehavioral deficits following prenatal alcohol exposure?
- **Prenatal alcohol effects on the gut microbiome contributing to failure to thrive and altered immune function** (PI: Thomas Blanchard)
  - Does prenatal alcohol alter the microbiome and immune response in exposed off-spring?





National Institute  
on Alcohol Abuse  
and Alcoholism



NATIONAL  
INSTITUTE  
ON ALCOHOL  
ABUSE AND  
ALCOHOLISM

---

## CIFASD Developmental Projects

- **Success of past CIFASD developmental projects:**
  - **Independent grants**
    - Of 7 projects in CIFASD3, 5 successfully competed for U01, R01, and R21s.  
e.g., Johann Eberhart's dev. project → R01 on genetic risk factors for alcohol-induced birth defects
  - **New research directions** (i.e., translating animal findings of dev. projects)
    - maternal miRNA predictors of child outcomes (U01, PI: Rajesh Miranda)
    - maternal cytokine biomarkers of exposure & effect (U01, PI: Joanne Weinberg)



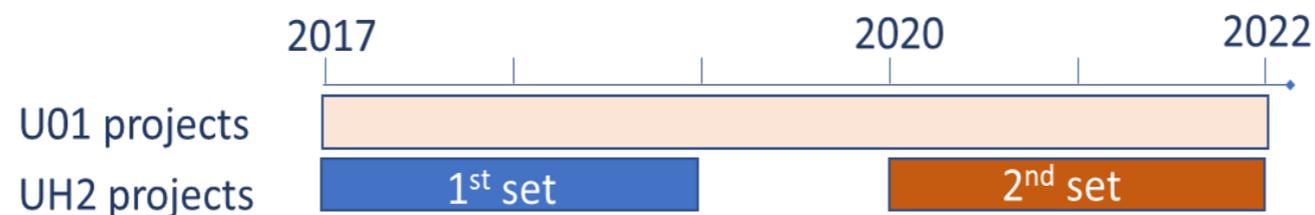
National Institute  
on Alcohol Abuse  
and Alcoholism



NATIONAL  
INSTITUTE  
ON ALCOHOL  
ABUSE AND  
ALCOHOLISM

## CIFASD Developmental Projects

- **Success of past CIFASD developmental projects:**
  - **Independent grants**
    - Of 7 projects in CIFASD3, 5 successfully competed for U01, R01, and R21s.  
e.g., Johann Eberhart's dev. project → R01 on genetic risk factors for alcohol-induced birth defects
  - **New research directions** (i.e., translating animal findings of dev. projects)
    - maternal miRNA predictors of child outcomes (U01, PI: Rajesh Miranda)
    - maternal cytokine biomarkers of exposure & effect (U01, PI: Joanne Weinberg)
- **RFA needed to solicit a new set of developmental projects**





National Institute  
on Alcohol Abuse  
and Alcoholism



NATIONAL  
INSTITUTE  
ON ALCOHOL  
ABUSE AND  
ALCOHOLISM

---

## Goals of the New CIFASD Development Projects

- **To solicit exploratory projects in novel and underexplored areas of FASD research**
- **Awardees are encouraged to establish collaborative relationships with CIFASD consortium to leverage resources and maximize the impact**



National Institute  
on Alcohol Abuse  
and Alcoholism



NATIONAL  
INSTITUTE  
ON ALCOHOL  
ABUSE AND  
ALCOHOLISM

---

## Statement of Work for the RFA

- **Mechanism:** UH2 cooperative agreement for 2 years
  - **An open competition**
  - **Research topics:**
    - Diagnosis and screening
    - Etiology and mechanism
    - Prevention approaches
    - Interventions
  - **Will be encouraged to collaborate with CIFASD**
-



National Institute  
on Alcohol Abuse  
and Alcoholism



NATIONAL  
INSTITUTE  
ON ALCOHOL  
ABUSE AND  
ALCOHOLISM

# Thank you

---