Joint Meeting of INIA-S and INIA-N Consortia
January 10-12, 2018
Rockville, MD

Wednesday January 10th 2017

6:30 pm **Welcome Reception** *Potomac Foyer*

Thursday January 11th 2017 *Potomac Room*

Intra-INIA Research Approaches: Highlights for Future Collaborations
(All research presentations are to be 15 minutes plus 10 minutes discussion)

8:30 am ***BREAKFAST***

9:00 am **WELCOME** *[Drs. Harris, Grant, & Noronha]*

9:15 am **SESSION I** INIA-S: Stress Interactions with Alcohol - Neurobehavioral & Endocrine Findings

- 9:15 am Forced swim stress interactions with excessive drinking in mice *[Becker]* Presenting drinking/BEC data, anxiety measures from Becker, Jones, Vazey, Mulholland & Kash.
- 9:40 am Stress and excessive drinking in monkeys *[Grant]* Presenting data on drinking/BEC, & endocrine changes as background for Hitzemann, Roberto, Mayfield, Pfefferbaum, Mulholland, Jones, Kash, Lovinger, Cuzon Carlson.

10:05 am ***BREAK***

10:20 am **SESSION II** INIA-S: Stress Interactions with Alcohol: Findings from Neurocircuitry Analyses

- 10:20 am NE changes in FSS-CIE mouse model: drinking, anxiety & cognitive effects *[Jones]* Presenting data on NE content in LC & NTS and projection areas (BLA, NAc, PFC), relation to anxiety & cognition measures from Jones, Vazey & McElligot.
- 10:45 am Dynorphin/KOR changes in FSS-CIE mouse model: drinking & anxiety effects *[Kash]* Presenting data on dialysis, chemogenetic, and genetic deletion studies in CeA, BNST & NAc from Becker, Jones & Kash.
- 11:10 am PFC adaptations in FSS-CIE mouse and monkey models: drinking & cognitive effects *[Vazey]* Presenting data from Mulholland, Vazey, & Grant.
- 11:35 am Chronic alcohol brain adaptations in monkey model: comparison with mouse data *[Cuzon Carlson]* Presenting data on CeA, BNST, dorsal and ventral striatum, & preliminary chemogenetic findings from Roberto, Jones, Kash, Lovinger & Grant.

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12:00 pm ***LUNCH***

1:00 pm **SESSION III** INIA-N: Alcohol and Neuroimmune Function: Findings from Genomic Analyses

- 1:00 pm Genomics of AUD across species *[Hitzemann]*
  Comparison of gene expression in humans, NHP and rodent models. Presenting data from Mayfield, Farris & Hitzemann.

- 1:25 pm Linking GR and neuroimmune genomics in AUD *[Farris]*
  Gene expression changes show coordinate regulation of glucocorticoid and neuroimmune signaling in AUD. Presenting data from Farris, Mayfield, Mason, Becker & Hitzemann.

- 1:50 pm Computational selection and laboratory testing of drugs for AUD *[Ozburn]*
  Using unbiased analyses of gene expression data to nominate novel compounds. Presenting data from Mayfield, Ozburn, Bell and Crabbe

2:15 pm ***BREAK***

2:30 pm **SESSION IV** INIA-N: Alcohol and Neuroimmune Function: Signaling and Therapeutics

- 2:30 pm Neuroimmune regulation of alcohol consumption *[Blednov]*
  Evidence from null mutant mice and pharmacology that immune signaling controls alcohol consumption. Emphasis on TRIF-dependent signaling in PFC. Presenting data from Blednov, Messing & Mayfield.

- 2:55 pm Comparing roles of neurons, astrocytes and microglia in alcohol actions *[Mayfield]*
  RNAseq of cells isolated from adult brain, or computational approaches, define roles of specific cell types in alcohol consumption. Presenting data from Mayfield, Mulholland, Blednov & Messing.

- 3:20 pm Linking neuroimmune to neuronal functions and behavior *[Mangieri]*
  How do novel immune mediators interact with old fashioned brain circuitry to alter alcohol effects? Presenting data from Roberto & Mangieri.

3:45 pm **GENERAL DISCUSSION – Topic 1**
How can neuroimmune-stress links be studied across projects?
[Harris and Grant lead discussion]

4:30 pm **COMMENTS FROM SAB AND NIAAA**

5:30 pm ***ADJOURN***

DINNER ON YOUR OWN

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Cross-INIA Collaborations and Integration

7:30 am ***BREAKFAST***

8:00 AM **SESSION V** Findings from Translational Imaging Studies

- 8:00 am Imaging drug action in mice *[Kieffer]*
- 8:25 am Chronic alcohol effects in rats *[Pfefferbaum/Sullivan/Zahr]*
- 8:50 am Chronic alcohol effects in monkeys *[Kroenke]*
- 9:15 am Stress x alcohol effects in humans *[Wand/McCaul]*

9:40 am ***BREAK***

9:55 am **SESSION VI** Findings from Translational Pharmacotherapy Studies

- 9:55 am Stress targets *[Mulholland]*
  Presenting from Mulholland, Grant, Becker, & Lopez.
  - GR antagonist mifepristone
  - Voltage-gated K channels
  - Oxytocin, Doxazosin
- 10:25 am Neuroimmune targets *[Lasek]*
  Presenting data from Lasek, Blednov, Bell, & Mason.
  - Alk1 inhibitor (Alectinib)
  - PDE4 inhibitors (rolipram, apremalist)
  - Testing in progress
- 10:55 am Group discussion of target prioritization

11:25 am ***BREAK – Lunch setup***

11:35 am **GENERAL DISCUSSION – Topic 2**
How do we combine genomics and circuitry to better define alcohol actions?
[Kash and Hitzemann discussion leaders]

12:15 pm **COMMENTS FROM SAB AND NIAAA**

1:00 pm ***ADJOURN***