

JONATHAN CACHAT

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EDUCATION

B.S. Denison University (Granville, OH)

Social Neuroscience, Individually Designed Major – May 2008

- Thesis: "The Social Neuroscience of Sex; Human Male-Female Similarities and Differences from Neurological Biochemistry to Social Behavior" – Dr. Susan Kennedy, Dr. Kristina Mead, Dr. Frank Hassebrock

Tulane University (New Orleans, LA)

Neuroscience Graduate Program, PhD Student – 2009 to present

- A.V. Kalueff Lab, Dept. of Pharmacology & Neuroscience Program – kaluefflab.com

RESEARCH EXPERIENCE

Post-Baccalaureate Research Assistant, A.V. Kalueff Lab – Jan 2009 to Aug 2009

Dept. of Pharmacology, Tulane University Medical School (New Orleans, LA)

- Pharmacological research in mice, zebrafish and *C. elegans* investigating interactions between environmental stress and drug action.
- Designing and performing studies in animal models for neurological and affective disorders.
- Data collection and statistical analysis of experiments.
- Peer-reviewed and drafted manuscripts for scientific journals.
- Mentored and oversaw daily activities for undergraduates involved in laboratory research.
- Managed and maintain lab electronics and multimedia, including lab website.

Research Assistant, Center for Cognitive and Social Neuroscience – Summer 2007

John T. Cacioppo & Adam Waytz, University of Chicago (Chicago, IL)

- Assisted with social neuroscience research on anthropomorphism; administered, developed and analyzed survey and computer based experiments, aided with fMRI designs.
- Extensive literature review on social and religious sentiments in scientific context.

Digital Media Arts-Production – Summer 2004

Northwestern University (Evanston, IL)

- Final Project: *Progression*

PEER-REVIEWED ARTICLES

- Egan R, Bergner C, Hart R, **Cachat J**, Canavello P, Elegante M, Elkhayat S, Bartels B, Tien A, Tien D, Mohnot S, Beeson E, Glasgow E, Amri H, Zukowska Z, Kalueff A. Understanding behavioral and physiological phenotypes of stress and anxiety in zebrafish. Behav Brain Res 2009; 205: 38-44.
- Tuohimaa P, Keisala T, **Cachat J**, Kalueff A. Vitamin D, nervous system and aging. Psychoneuroendocrinology 2009, 34S: S278-S286.
- LaPorte J, Egan R, Hart P, Bergner C, **Cachat J**, Canavello P, Kalueff AV. Qui non proficit, deficit: Experimental models for 'integrative' research of affective disorders. J Affect Disorders 2010; 121: 1-9.
- **Cachat J**, Canavello P, Elegante M, Bartels B, Hart P, Bergner C, Egan R, Duncan A, Tien D, Chung A, Wong K, Goodspeed J, Grimes C, Elkhayat S, Suci C, Rosenberg M, Chung K, Kadri F, Roy S, Gaikwad S, Stewart A, Zapolsky I, Gilder T, Mohnot S, Beeson E, Tan J, Amri H, Zukowska A, Glasgow E, Soignier R, Kalueff A. Modeling withdrawal syndrome in zebrafish. Behav Brain Res 2010; 208 (2): 371-376.
- Wong K, Elegante M, Bartels B, Elkhayat S, Tien D, Roy S, Goodspeed J, Suci C, Tan J, Grimes C,

- Wong K, Elegante M, Bartels B, Elkhayat S, Tien D, Roy S, Goodspeed J, Suci C, Tan J, Grimes C, Chung A, Rosenberg M, Gaikwad S, Duncan A, Jackson A, Kadri F, Chung K, Stewart A, Gilder T, Beeson E, Zapolsky I, Wu N, **Cachat J**, Kalueff A. Analyzing habituation responses to novelty in zebrafish (*Danio rerio*). Behav Brain Res 2010; 208: 450-457.
- Denmark A, Tien D, Wong K, Chung A, **Cachat J**, Goodspeed J, Grimes C, Elegante M, Suci C, Elkhayat S, Bartels B, Jackson A, Rosenberg M, Chung K, Badani H, Kadri F, Tan J, Roy S, Gaikwad S, Stewart A, Zapolsky I, Gilder T, Kalueff A. The effects of chronic social defeat stress on mouse self-grooming behavior and its patterning. Behav Brain Res 2010; 208 (2): 553-559.
- Stewart A, Kadri F, DiLeo J, Chung K, **Cachat J**, Goodspeed J, Suci C, Roy S, Gaikwad S, Wong K, Elegante M, Elkhayat S, Wu N, Gilder T, Tien D, Grossman L, Tan J, Denmark A, Bartels B, Frank K, Beeson E, Kalueff A. The developing utility of zebrafish in modeling neurobehavioral disorders. Int J. Compar Psychol, 2010; 23: 104-121.
- Stewart A, Wong K, **Cachat J**, Elegante M, Gilder T, Mohnot S, Wu N, Minasyan A, Tuohimaa P, Kalueff A. Neurosteroid vitamin D system as a non-traditional drug target in neuropsychopharmacology. Behav Pharmacol. 2010 Jun 21.
- Grossman L, Utterback E, Stewart A, Gaikwad S, Wong K, Elegante M, Tan J, Gilder T, Wu N, DiLeo J, **Cachat J**, Kalueff A. Characterization of behavioral and endocrine effects of LSD on zebrafish. Behav Brain Res. 2010 Dec 25;214(2):277-284
- Wong K, Stewart A, Gilder T, Wu N, Frank K, Gaikwad S, Suci C, DiLeo J, Utterback E, Chang K, Grossman L, **Cachat J**, Kalueff A. Modeling seizure-related behavioral and endocrine phenotypes in adult zebrafish. Brain Res. 2010 Aug 12;1348:209-15.
- Stewart A, **Cachat J**, Wong K, Gaikwad S, Gilder T, Dileo J, Chang K, Utterback E, Kalueff AV. Homebase behavior of zebrafish in novelty-based paradigms. Behav Processes. 2010 Jul 29.
- Stewart A, Wong K, **Cachat J**, Gaikwad S, Kyzar E, Wu N, Hart P, Piet V, Utterback E, Elegante M, Tien D, Kalueff A. Zebrafish models to study drug abuse-related phenotypes. Reviews in Neurosciences, in press.
- **Cachat J**, Stewart A, Grossman L, Gaikwad S, Kadri F, Chung K, Wu N, Wong K, Roy S, Suci C, Goodspeed J, Elegante M, Bartels B, Elkhayat S, Tien D, Tan J, Denmark A, Gilder T, Kyzar E, DiLeo J, Frank K, Chang K, Utterback E, Hart P, Kalueff A. Measuring behavioral and endocrine responses to novelty stress in adult zebrafish. Nature Protocols, in press.

BOOKS & CHAPTERS

- *Zebrafish Models in Neurobehavioral Research*. Kalueff AV, **Cachat J** (editors), Humana Press, NYC 2010, in press.
- *Zebrafish Neurobehavioral Protocols*. Kalueff AV, **Cachat J** (editors), Humana Press, NYC 2010, in press.

ABSTRACTS & PRESENTATIONS

- Social Neuroscience of Sex; Human Male-Female Similarities and Differences form Neurological Biochemistry to Social Behavior, **Cachat 2008** – Psychology Dept. Symposium – available at www.jcachat.com/socneuroppt.html - May 2008
- Hart P, Bergner C, Egan R, **Cachat J**, Canavello P, Armi H, Glasgow E, Zukowska Z, Kalueff AV. The Correlation of Neural and Physiological Endophenotypes in Zebrafish Models of Stress. 20th Annual Tulane Health Sciences Research Days. Feb 2009.
- Hart P, Bergner C, Egan R, **Cachat J**, Canavello P, Bartels B, Beeson E, Elkhayat S, Elegante M, Monhot S, Tein D, Tein A, Amri H, Glasgow E, Zhukowska Z, Kalueff A. Zebrafish (*Danio rerio*) models of drug abuse and anxiety. LSU Annual Neuroscience Retreat, March 2009

- Canavello P, **Cachat J**, Bergner C, Egan R, Hart P, Bartels B, Beeson E, Elkhayat S, Elegante M, Mohnot S, Tien A, Tien D, Amri H, Glasgow E, Zukowska Z, Kalueff AV. "Behavioral Pharmacology and Acute Stress Responses in Zebrafish". 12th International Neuroscience "Stress and Behavior" Conference. St. Petersburg. May, 2009.
- **Cachat J**, Canavello P, Bergner C, Egan R, Hart P, Bartels B, Beeson E, Elkhayat S, Elegante M, Mohnot S, Tien D, Tien A, Amri H, Glasgow E, Zukowska A, Soignier R, Kalueff AV. "Modeling Substance Withdrawal Syndrome in Zebrafish (Danio Rerio)". 12th International "Stress and Behavior" Conference. St. Petersburg. May, 2009.
- Bergner C, Hart P, Egan R, Canavello P, **Cachat J**, Armi H, Glasgow E, Zukowska Z, Kalueff AV. Neural and Physiological Phenotypes in Zebrafish Models of Stress. 9th World Congress of Biological Psychiatry, Paris, June 2009.
- Tien D, Canavello P, **Cachat J**, Egan R, Hart P, Bergner C, Elegante M, Mohnot S, Elkhayat S, Bartels B, Tien A, Beeson E, Kalueff AV, Soignier D. "Visualizing and interpreting drug-evoked anxiety behaviors in Zebrafish". Society for Neuroscience Conference 2009. Chicago, IL. October, 2009.
- **Cachat J**, Canavello P, Bergner C, Egan R, Hart P, Bartels B, Beeson E, Elkhayat S, Elegante M, Mohnot S, Tien D, Tien A, Glasgow H, Zukowska Z, Amri H, Soignier D, Kalueff, A. "Modeling Withdrawal Anxiety in Zebrafish (Danio rerio)". Society for Neuroscience Conference 2009. Chicago, IL. October, 2009.
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AWARDS & PATENTS

- Dialectical Model of Human Nature – USA Patent (6.2008)
- Award of Distinction – Dialectical Model of Human Nature – Denison University, Dept. Of Philosophy – May 2008
- Honorable Mention – NSF Graduate Research Fellowship Program – April 2010

REFERENCES

Available Upon Request.

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