

The 39th Annual Hunter College Psychology Convention



& The 20th Annual N.E.U.R.O.N. Conference

April 10th, 2011

Presented By

THE PSYCHOLOGY COLLECTIVE

OF HUNTER COLLEGE

N.E.U.R.O.N.

NorthEast Undergraduate Research Organization for Neuroscience

www.quinnipiac.edu/neuron

The Psychology Collective

Psi Chi Psychology Club Psych News

Hunter College Psychology Department

695 Park Avenue, 611HN

New York, NY 10065

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www.HunterPsych.com

Program & Scheduling by Inna Saboshchuk

~Convention Program~

8:30 – 3:00 **Registration**

8:30 – 10:00 **Buffet Breakfast**
8th Floor Hunter West

9:30 – 10:00 **Welcome and Opening Remarks**
Room 714 Hunter West

Welcome:

Jason Young, Ph.D.
Department of Psychology
Hunter College, CUNY

Faculty Advisor to The Psychology Collective

Opening Remarks:

Vanya Quinones-Jenab, Ph.D.
Chair, Department of Psychology
Hunter College, CUNY

Cheryl Frye, Ph.D.
Department of Psychology
University at Albany, SUNY

10:00 – 11:00 **Keynote Presentation**
Room 714 Hunter West

Dr. Dolores Malaspina
New York University

**" Sex Differences: From Germ Cells to Brain
Cells"**

Introduced by:

Cheryl Frye, Ph.D.
Department of Psychology
University at Albany, SUNY

11:15 AM – 5:00 PM

- **Oral Presentations, Workshops and Information Sessions**
 - –in rooms 509B, 610, 611 and 714
 - –all in Hunter West
- **NEURON Symposia**
 - –8th Floor Hunter West
- **SPSSI-NY Panels**
 - –room 509A Hunter West

11:15 – 12:45 - Poster Presentations, Session I
7th Floor West Walkway

1:30 – 3:00 - Poster Presentations, Session II
7th Floor West Walkway

12:00 – 3:00 **Buffet Luncheon**
8th Floor Hunter West

3:00 – 3:30 **Tieman Award Presentation**
8th Floor Hunter West

5:00 - 6:00 **Fruit & Cheese Reception**
8th Floor Hunter West

Psi Chi Induction Ceremony (5:00 to 5:30PM)

Officiators:

Jason Young, Ph.D.
Faculty Advisor, Psi Chi
Hunter College Chapter
Eastern Regional Vice President, Psi Chi

Andrea Vial
President, Psi Chi
Hunter College Chapter

~Schedule of Events by Room~

Hunter West 8th Floor

8:30 to 3:00	Registration
8:30 to 10:00	Breakfast
12:00 to 3:00	Lunch
3:00 to 3:30	Tieman Award Presentation
4:00 to 6:00	Fruit and Cheese Reception
5:00 to 5:30	Psi Chi Induction Ceremony

Hunter West 714

9:30 to 10:00	Opening Remarks/Welcome
10:00 to 11:00	"Sex Differences: From Germ Cells to Brain Cells" Keynote Speaker: Dr. Dolores Malaspina
11:15 to 12:00	"Brain Primer Workshop" NEURON Workshop: Angela M. Seliga, Ph.D.
12:15 to 1:15	"Planning a Profession: Creating Culturally Relevant and Identity-Affirming Careers in Psychology" Guest Lecturers: Darlene Defour , Ph.D, Hunter College (CUNY) Jamila Codrington , Ph.D., Astor Services for Children and Families Afiya Mangum , Ph.D., Barnard College, Columbia University Lorie Nicholas , Ph.D., John Jay College of Criminal Justice (CUNY)
1:30 to 2:45	Symposium: Cognitive Mechanisms in Stress-Related States and Disorders, Hunter College (CUNY)
1:30 to 1:45	“Perceived Control and PTSD Prevention Video Intervention for Sexual Assault Victims” Carey S. Pulverman and Mariann R. Weierich
1:45 to 2:00	"The Influence of Posttraumatic Cognitions on PTSD Symptoms in Survivors of Sexual Trauma” Brian R. Van Buren and Mariann R. Weierich
2:00 to 2:15	“Income and Perception of Control” Ileana M. Moses-Logan, Anna Marganska, and Mariann R. Weierich
2:15 to 2:30	“Empathy and Affect Sensitivity in People with Generalized Anxiety Disorder” Samuel E. Cooper and Mariann R. Weierich
2:30 to 2:45	“Age and Sex-related Differences in Amygdala Response to Affective Stimuli” Stephanie Soto, Katie Hodges, Nicole DaSilva, Lisa Feldman Barrett, and Mariann R. Weierich

7th Floor West Bridge

- 11:15 to 12:45 **POSTER SESSION I** – Abdul-Halim, Almeida, Amador, Bhonsle, Buckingham, Casabianca, Chitolie, Choezom, Coke, Da Silva, Del Rosario, Fam, FineSmith, Finnegan, Goodwill, Gounder, Grabie, Hotzoglou, Huynh, Jayatilaka, Joute, Keung Ko, Kohtz, L. Flores, Levine, Bodnar, Briones, Bryk, Daus, Diaz, Flores, Grahn, Happich, Kalambogias
- 1:30 to 3:00 **POSTER SESSION II** – Benbow, Franke, Lui, Ly, Machlovi, Mahmud, Mendez-Baldwin, Nasir, Nelson, Oh, Palomino, Paris, Pennings, Ramos, Reich, Roumis, Rustam, Ruta, Santarelli, Simpson, Sobrero, Stockburger, Striano, Takanashi, Walf, Yakubov, Knight, Koch, Koonce, Mowla, Ramirez, Rustam, Sahagian, Swarczewski, Tayabali

Hunter West 509 A

- 1:30 to 2:20 "A History of Psychology and Social Issues in New York City", **SPSSI Panel**, Chair: **Maureen O'Connor** (CUNY Graduate Center and President of SPSSI), **Mark E. Mattson**, **Harold Takooshian** (Fordham), **Edwin P. Hollander** (CUNY), **Florence L. Denmark** (Pace), **Henry Solomon** (Marymount Manhattan)
- 2:30 to 3:20 "How Good is this School: A Psychometric Assessment of students' Attitudes", **SPSSI Panel**, Chair: **Jazmen C. Benitez** (Fordham), **Daniela Grafman** (Fordham), **Pinar Duru**, **Molly Blake** (Fordham), **Jamie Saltamachia**, **Greg Pfeiffer** (Fordham), **Luca Vescovi** (Fordham), **Robert W. Rieber** (Fordham).
- 3:30 to 4:20 "Promoting Student Excellence through Psi Chi", **SPSSI Panel**, Chair: **Mercedes A. McCormick** (Pace, and Psi Chi Eastern Vice President-Elect) **Vincent Prohaska** (Lehman), **Harold Takooshian** (Fordham), **Alex Y. Voronov** (State Academic Univ of Humanities, Russia), **Florence L. Denmark** (Pace), **Jason R. Young** (Hunter).

Hunter West 509 B

- 11:15 to 1:45 **Animal Behavior and Conservation Group**, Hunter College (CUNY)
“Session 1: The ABC’s of Animal Behavior and Conservation”
Professor Sheila Chase will introduce the session
Professor Diana Reiss will be the moderator of 10 minute talks by ABC Alumni
1. **Elizabeth Herrelko**, MA (PhD candidate University of Stirling, Scotland). *The Chimpcam Project*. The first part of her dissertation research has been shown in the UK, Canada the US, a BBC/Animal Planet documentary in which the chimpanzees of Edinburgh Zoo were introduced to use of video technology.
 2. **Leah Michelson**, MA (Animal Keeper, Bronx Zoo). *Differences In Escape Responses of First Generation Captive Bred and Lab Strain African Cichlids*.
 3. **Preston Foeder**, MA (PhD candidate, CUNY). *Research in Zoos: From Penguins to Elephants*.
 4. **Rachel Morrison**, MA (PhD candidate, CUNY). *Whispering in a Non-Human Primate*.
 5. **Melissa Nelson**, MA (Curatorial Science Fellow for Animal Behavior, Bronx Zoo, PhD candidate CUNY). *Coercion and Social Behavior in Domestic Dogs*.
- 2:00 to 3:30 **Animal Behavior and Conservation Group**, Hunter College (CUNY)
“Session 2: The ABC’s of Animal Behavior and Conservation”
Professor Mark E. Hauber will be the moderator of 10 minute talks by three of his recent MA students.
1. **Carol Henger**, MA. (Animal Keeper, Bronx Zoo). *Measuring Anti-Parasitic Behaviors of the Red-winged Blackbird*.
 2. **Joseph Solomon**, MA (Research Assistant, E3B, Columbia University). *Eggshell Color Variation and Spectral Discrimination in North Island Brown Kiwi*.
 3. **Sarah Wallace**, MA (Research Asst, NYU, Accepted Vet School, Murdoch University, Australia) *Biological and Methodological Sources of Variation in House Sparrow Behaviors in New York City*.
- Professor Sheila Chase will be moderator of a 20 to 25 minute session on issues related to our canine companions.
4. **Elisabeth Catalano**, MA (Senior Trainer, Behavior Counselor, St. Hubert’s Dog Training School. *Will observation of appropriate behavior increase sociability of dogs?*
 5. **Vincent Catalano**, MA (Assistant Director, St. Hubert’s Dog Training School. *Will searching activity with olfactory stimulation, nose-work, inhibit fearful behavior in the presence of other dogs?*
 6. **Claire F. Cario**, MA (Trainer, Good Dog Foundation, Owner: Barnyard Behavior). *Effects of Therapy Dog Interaction with Autistic Children*.

Hunter West room 610

- 11:15 to 11:30 "Impact of World War II on Language Use in Writings of European and American Writers", **Hayk**
- 11:30 to 11:45 (last minute presentation cancellation during this period)
- 11:45 to 12:00 "Distinctions Between Principled and Statistical Connections", **Chitolie**
- 12:00 to 12:15 "Stress and Anger", **Elkady**
- 12:15 to 12:30 "Neo-Darwinian Approach of Prosociality: Influence of Dispositional Empathy, Cost and Target on the Willingness to Help", **Gagerie**
- 12:30 to 12:45 "Post stress alcohol alleviates chronic stress dependent memory impairments", **Gomez**
- 12:45 to 1:00 "The Psychological Impact of Child Abuse", **Hobbs**
- 1:15 to 1:30 "From Research to Policy to Practice: High School English Language Learners and Assessment and Validity", **Flores**
- 1:30 to 1:45 "Eat, Pray, Work Out: The Effects of Various Coping Methods on Health", **London**
- 1:45 to 2:00 "Dopamine 1 Receptor Signaling Mediates Cytogenesis in Response to Methamphetamine- Induced Damage", **Ordonez**
- 2:00 to 2:15 "Neural Correlates of Reappraisal and Links with Effortful Control in Children: An EEG Study", **Ramirez**
- 2:15 to 2:30 "The Effects of Mold Exposure on Contextual Memory in Mice", **Sant'Anna**
- 2:30 to 2:45 "Development of object concepts through visually-evoked cortical activity and behavioral measures", **Serrano**
- 2:45 to 3:00 "Future Oriented Rumination, Suicidal Ideation, and Suicide Attempts", **Wheeler**
- 3:00 to 3:15 "The Relationship between Depression and Anxiety Levels and HIV Risk Behaviors", **Koenig**
- 3:15 to 3:30 "Relational Orientation towards Sexuality and Correlates of Condom Use in Young Heterosexual College Students" **Vial**
- 3:45 to 4:00 "Reflection of 'Self-Relevance' in 'Safer-Sex' Messages" **Lamba**
- 4:15 to 4:30 "Effects of Induced Optimism on Positive Future-Event Predictions and Certainty in Individuals At-Risk for Suicidal Behavior" **Jurska**
- 4:45 to 5:00 "The Late Positive Potential and Emotional Reactivity in Children with Elevated Depression Symptoms" **Ramirez**

Hunter West room 611

- 11:15 to 11:30 "Math Ability and Personal Finance", **Alhonte**
- 11:30 to 11:45 "The Role of Rho GTPases in Circadian Rhythms", **Burgos**
- 11:45 to 12:00 "PKM ζ Activity Following Spatial Learning in *Gnathonemus petersii*", **Chowdhury**
- 12:00 to 12:15 "Does BPA Impair Memory? A Behavioral and Neurological Study in Adult male Rats", **Eilam-Stock**
- 12:15 to 12:30 "The effects of climate change on migratory restlessness and fecundity of the brood-parasitic Brown-headed Cowbird.", **French**
- 12:30 to 12:45 "Public Attitudes Toward the Ethics of Organ Donation", **Giardino**
- 12:45 to 1:00 "A Molecular Mechanism for Sex Differences in Long-Term Remote Spatial Memory", **Kattan**
- 1:00 to 1:15 "The Effects of Temporal Orientation, Sensation Seeking, Perceptions of Control, Self-Esteem, and Affect, on Decisions Regarding Condom Use", **Lane**
- 1:15 to 1:45 "The Relationship Between Discrimination and Physical Illness Symptoms", **Mobley**
- 1:45 to 2:00 "The Immigration Experience as Mediated by Acculturative Stress and Loss", **Portnoy**
- 2:00 to 2:15 "Assessment of rate of behavior acquisition with 1- trainer versus 2-trainers", **Revie**
- 2:15 to 2:30 "The Effect of Clozapine Administration during Adolescence on an Animal Model of Schizophrenia", **Santarelli**
- 2:30 to 2:45 "Neural and Temperamental Correlates of Fearful Behavior in Children", **Scott**
- 2:45 to 3:00 "Racial Discrimination's Effects on Psychological Distress and Substance Use", **Silver**
- 3:00 to 3:15 "The Effects of Mold Exposure in Mice on Learning and Spatial Memory", **Zakinaeiz**
- 3:15 to 4:00 "Underwater songs- how intrinsic membrane properties and inhibitory neuromodulators control vocal neuron discharge in a teleost fish", **Zee**
- 4:00 to 4:15 "Using RNAi to study the roles of *apl-1* and *acn-1* in heterochronic pathway of *C.elegans*" **Mock**
- 4:15 to 4:45 "Family Violence: An Examination of Same-Gender Partner Violence" **Waddington**
- 4:45 to 5:00 "The Role of Linguistic Cues in the Acquisition of Generic Knowledge About Novel Objects" **Santillan**

Hunter West 8th Floor Presentation Area

Frye Group Albany College (SUNY)

- 12:00-1:00 Current Research on Neurodevelopmental Disorders
 Anthony Santarelli- “The Effect of Clozapine Administration during Adolescence on an Animal Model of Schizophrenia”
 Danielle Llana- “Behavioral and Neuroendocrine Anomalies in a Potential Mouse Model of Autism Spectrum Disorder”
 Eniana Agolli- “Predictors of Cognitive Rehabilitation Success on a Simultaneous Multiple Attention Task in people with Schizophrenia”
 Amelia Lewis- “The Effects of Exercise on the Success of Cognitive Rehabilitation in Schizophrenia”
- 1:00- 1:45 Continuing Education and Your Bachelor’s Degree
 Daniel Dacosta and Danielle Osborne
- 2:00- 2:45 Outreach On Neuroscience Workshop
 Ruth Russell, Girija Bhonsle, Archana Narain, and Angela Seliga

Welcome to the 20th Annual New England Conference of **N.E.U.R.O.N.**

What is N.E.U.R.O.N.?

The NorthEast Under/graduate Research Organization for Neuroscience is an organization that supports undergraduate and graduate education and research in the northeast regions of the United States.

The Primary Goals of N.E.U.R.O.N. are ...

- to provide an open forum for neuroscience undergraduate and graduate students to present and discuss their work with students and faculty of similar interests.
- to provide faculty an opportunity to discuss curricular and research issues in neuroscience, biopsychology and related areas.
- to provide resources to enhance communication and collaboration among neuroscience researchers and educators.

In order to achieve these goals, **N.E.U.R.O.N.** has annual conferences that are focused on enhancing neuroscience training. The annual one-day conference provides a forum for undergraduate and graduate students to present and gain feedback from peers and faculty on the research in which they have engaged during the academic year. Students and faculty participate in workshops that discuss important topical and pipeline issues in neuroscience. Notable neuroscientists are invited to provide the keynote address. The diversity of the agenda provides a well-rounded opportunity for all attendees to engage in rigorous science, while promoting and encouraging the development of neuroscientists in training.

For more information or to get involved, visit the website:

www.quinnipiac.edu/neuron

~Keynote Speaker~

714 HW 10:00 to 11:00



Dolores Malaspina

*Steckler Professor of Psychiatry
Director the Institute for Social and Psychiatric Initiatives (InSPIRES)
Departments of Psychiatry and Environmental Medicine
NYU Behavioral Health Programs*

Topic:

Sex Differences: From Germ Cells to Brain Cells

Dr. Malaspina is the Steckler Professor of Psychiatry at the NYU Langone Medical Center as well as director of the NYU Institute for Social and Psychiatric Initiatives (InSPIRES). Her work on InSPIRES includes the Odyssey Years Project, which is directed at enhancing knowledge regarding the life transitioning of young adults and promoting awareness of health issues during this critical period of life. This project is an outreach realization of Dr. Malaspina's own work, which has emphasized translational aspects of science and the integration of animal and clinical research. This research has focused on epigenetics and psychiatric disorders such as schizophrenia and depression. She has been continuously funded by NIH for 25 years and authored 200+ manuscripts. In the process she has also been recognized for her mentoring and training of new neuroscientists, and co-hosts a radio talk show on psychiatry.

~Presentation Abstracts~
Listed Alphabetically by Presenter's Last Name

~Poster Presentations~

SESSION 1

The Relationship between Sleepiness and the Amount of Daydreams People Report

Abdul-Halim, Arij

Department of Psychology, Iona College

Authors: Abdul-Halim A, Bond T

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Purpose: To evaluate if a correlation exists between sleep reported on the Epworth Sleepiness Scale (ESS) and the amount of daydreams reported. The study explored if (1) there is a correlation between sleep reported on the ESS with the number of daydreams reported (2) if more sleep relates to less daydreaming and vice versa (3) if daydreaming has an effect on certain activities and (4) if there is a significant correlation between gender and the number of daydreams reported. Eighteen Iona College students, (9 Female, 9 Males, M= 19.83, Age Range: 18-26), took a survey with the ESS and questions about daydreaming. We found that 16 out of 18 participants reported that daydreaming affects their ability to function at school and 8 out of 18 participants reported daydreaming affects their daily activities. Further research to examine why people report that daydreaming affects their ability to function at school is needed.

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SESSION 1

The Role of PKM in Long-Term Storage in *Aplocheilus lineatus* killifish

Almeida, Laura

Department of Psychology, Hunter College City University of New York

Authors: Almeida L, Serrano P, Schwarz J, Hudspeth A J

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Functions of memory storage and retrieval are essential processes in life; however, the pathways and mechanisms of long-term memory are still not fully understood. Protein Kinase Mzeta(ζ) is an important mediator for the formation and maintenance of long term memory. Using *Aplocheilus lineatus*, a type of killifish characterized by having mechanosensory neuromasts along its lateral line, we intend to further understand and study the relationships between PKM ζ and the storage of long-term memories. In a natural habitat, these sensory receptors allow these fish to hunt prey in the dark by detecting surface waves. In captivity, this behavior is not developed but can be acquired with proper training. Thus, we hypothesize that after acquiring the dark feeding behavior levels of PKM ζ will increase. Finding out more about this protein will have important implications for disorders characterized by deficits in long-term memory such as phobias, addictions, and post-traumatic stress.

SESSION 1

Fructose-Conditioned Flavor Preferences in Rats: Site-Specific Effects of Dopamine D1 and D2 Receptor Antagonists in the Lateral Hypothalamus

Amador, Nicole

Department of Psychology, Queens College at The City University of New York

Authors: Amador N, Bernal Sonia, Rotellaa F, Malkusza D, Dela Cruza J, Gerges M, Badaliac A, Duenasc S, Kandov S, Touzanid K, Sclafani A and Bodnar R

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The present study examined whether lateral hypothalamic (LH) infusions of dopamine (DA) receptor antagonists altered expression or acquisition of fructose-conditioned flavor preferences (CFP). Cannulae were localized in either the rostral or mid-caudal LH. In rostral LH placements, the expression and acquisition of the preference for CS+/s over CS-/s failed to differ among vehicle and DA receptor antagonist treated groups. In mid-caudal LH placements, the expression of the preference for CS+/s over CS-/s was significantly less following the 48 nmol, but not the 12-24 nmol (SCH23390) SCH doses relative to vehicle; expression of preferences failed to differ among vehicle and the three (raclopride) RAC doses. In acquisition, two-bottle choice tests revealed comparable CS+/s preferences in the control and SCH mid-caudal LH groups. Thus, DA D1-like receptor antagonism site-specifically decreased the expression of fructose-CFP in the mid-caudal, but not rostral LH, including this site in a potential NAcS-AMY circuit mediating these flavor-flavor effects.

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SESSION 2

Comparing the Effects of Physical Fitness and Participation in Team Sports to the Use of Antidepressants in Adolescents- A Local Study

Benbow, Anansa

SUNY Albany (New Visions)

Author: Anansa Benbow

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Major and manic depression are two main mental health problems that are becoming more and more prevalent. This study will compare the effects of physical fitness to the effects of antidepressants on mental health and see which are more beneficial. It will also look at the effects of participation in team sports and see if this can lower the risk of depression. A survey was conducted on different groups of adolescents ranging from the ages of 14-18. Students who do not exercise were surveyed along with students who exercise and students who participate on team sports. After reading scientific publications on the topic of physical fitness and antidepressants and surveying multiple students, data showed that physical fitness has the same benefits of antidepressants. The data also indicated that participating on a team sport can help lower the risk of depression as well.

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SESSION 1

Outreach in Neuroscience: Two Interactive and Adaptable Models

Bhonsle, Girija

Department of Psychology, Boston University

Authors: Bhonsle G, Narain A, Campbell A and Seliga A

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Neuroscience outreach programs targeted at a younger demographic are vital to cultivating and sustaining an interest in the STEM disciplines. There is also a significant benefit for the volunteers in such programs, yet several issues hinder participation. The information presented are outreach programs developed and implemented by undergraduate students to provide basic neuroscience education for two

enrichment programs, Center for Talented Youth (CTY) and Upward Bound Math Science (UBMS), in an interactive workshop or a series of laboratory experiments, respectively. In the CTY workshop students quickly explored sensory stimulation and memory retrieval. The UBMS students investigated the cardiovascular anatomy and physiology of frogs through dissection and discussion. The data from both models showed a higher preference for the hands-on activities compared to the computer-related components. These results suggest that successful outreach programs should include experiential-learning environments rather than the prototypical exclusively didactic presentations.

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SESSION 1

Distinctions in Eye Gaze Interactions During Shared Reading Using a Printed Book Versus an E-Book on an iPad

Bodnar, Zsofia

Hunter College

Authors: Tricia Striano, Ph. D., habil

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Shared reading is important to children's cognitive and intellectual development. It encourages positive social interactions. Eye gaze plays a dramatic role in shared reading. At an early age children's innate ability to take part in joint attention enforces the supremacy of triadic attention. Previous research suggests that children initially look at the speaker to observe what the speaker is referencing to, thus they initiate into a triadic attention with the speaker to incorporate a referential understanding of pictures and words. In the present study, an iPad and a printed book will be used with 3.5 to 4.5 year old children to examine the eye gaze interaction during joint reading. It is hypothesized that during shared reading children will initiate into more triadic interactions when being read to using a printed book than an e-book on an I-pad.

SESSION 1

Child Characteristics as a Predictor of Parent-Interventionist Working Alliance in a Parent Training Program

Briones, Angelica

Hunter College

Author: Angelica Briones

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It is generally assumed that a strong working alliance between parent and interventionist is important for successful parent education programs. An understanding of child characteristics that influence the working alliance between parent and interventionist in parent-mediated interventions can help to educate parents more effectively. This study analyzed data of 34 parents assigned to an experimental parent-mediated intervention group as part of a larger randomized clinical trial. Working alliance was measured during two videotaped intervention sessions to evaluate the parents' alignment with intervention goals and emotional bond toward the interventionist. Child characteristics were measured and videotaped at pretreatment, including an observational measure where an examiner engaged each child in two empathetic scenarios. Independent raters coded videos for empathy on a 6-point scale. Mothers with higher working alliance scores were correlated with having children with lower empathy levels, $r(33) = -.355, p < .05$. Findings suggest that mothers who have children with greater deficits in empathy perceive a greater need for learning how to promote joint attention with their child.

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SESSION 1

A Correlation Between Traumatic Brain Injury and Cerebrovascular Stroke in Pediatric Medical Cases: Is There a Need for Awareness?

Bryk, Rachel

Questar New Visions

Author: Rachel Bryk

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Head trauma in children is a great risk that can lead to major health complications. The purpose of this study is to investigate the general knowledge of the average person of traumatic brain injuries and cerebrovascular stroke. Mild to severe head trauma can cause cerebrovascular symptoms in children. Cerebrovascular strokes are difficult to prevent, but head injuries can be prevented easily. For this study, a survey was conducted to see how aware people are the severity of head injuries. Age and gender was also recorded to see if there is a positive correlation between gender, age, and knowledge. Most of the survey takers knew very little about head trauma. None knew the risks of health complications. People need to know how dangerous a head injury can be to a child. Disabling head injuries can be prevented through greater awareness and knowledge.

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SESSION 1

Is this generation less empathetic? Exploring empathy in the 21st century

Buckingham, Mary

Department of Psychology, St Joseph's College

Authors: Buckingham M, Muniz N

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Konrath, O'Brien & Hsing (2010) demonstrated that this generation is less empathetic than previous generations. Although not examined, Konrath et al., (2010) suggested a variety of predictors which would explain this drop in empathy (i.e., technology, parenting practices, etc.). In this study, we examined the correlates of empathy in a sample of 194 young adults. They completed established self-report measures on technology use, volunteering, spirituality, religiosity, family structure, stressful life events and

empathy. Analysis indicated that this sample was comparable in empathy levels to the 2005-2009 cohort in Konrath's study. An interaction was found between parents' marital status and gender, such that females from divorced families scored higher on empathy than (1) males from divorced families and (2) females and males from intact families. In contrast, males from divorced families scored the lowest on empathy. For both genders, empathy was related to religiosity and spirituality, but not volunteering or stress.

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SESSION 1

Generalized seizure frequency predicts the amount of hippocampal cell loss.

Casabianca, Anthony

Authors: Casabiaca A, Bezsonova A, Greenwood S and Anderson B J

Focal seizures, also known as partial seizures, are most common in patients with temporal lobe epilepsy (TLE). These do not progress to continuous chronic seizures, status epilepticus (SE) (Engel and Pedley, 2008), which is the focus of most animal models epilepsy. To study moderate seizures, which we will define as focal seizures, or generalized seizures lasting less than five minutes, we used the kainic acid model of temporal lobe epilepsy. SE consistently leads to profound cell loss, whereas the amount of cell loss after moderate seizures is less predictable. To understand whether behavioral seizure frequency predicts the amount of cell loss, we tested the correlation between generalized seizures and the length of the CA3 cell layer left. The frequency of wet dog shakes did not predict the amount of CA3 cell layer left, however the number of generalized seizures, was significantly correlated with the length of CA3 cell layer left.

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SESSION 1

A study of eye tracking and drawing in 4 year old children

Chitolie, Parbatie

Department of Psychology, Hunter College City University of New York

Authors: Chitolie P, Striano T

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Facial processing is fundamental to social cognition. The present research included 21 four year old child participants who completed two studies, both of which were used to assess the importance of the eye region in facial processing. In Study 1, participants viewed a series of 10 facial images, of both adult men and women, of various races on an Eye Tracker. Results indicated that participants spent significantly more time gazing at the eye region in comparison to the mouth of the adult faces on the Eye Tracker. In Study 2, participants were then given a schematic happy face, and were asked to copy what they saw. Results indicated that participants significantly copied the schematic happy face in the order of Head Eyes Mouth. These findings are important in developing new interventions for autism.

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SESSION 1

Effects of Methylphenidate on Egocentric Spatial Memory and Navigation of Zebrafish

Choezom, Tenzin

Department of Psychology, Connecticut College

Authors: Choezom T, Cunningham J, Bajaj B, Schroeder J

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Zebrafish (*Danio rerio*) are becoming increasingly common as animal models in studies ranging from cardiovascular diseases to neurobehavioral studies. Because of the homology between teleost and mammalian brains, the zebrafish model may be a viable mechanism for studying the brain/behavior

relationship. Previous behavioral pharmacology studies have suggested that spatial learning and memory are enhanced by psychostimulants such as methylphenidate (Ritalin) which is used to treat attention deficit hyperactivity disorder. The current study investigated the effects of methylphenidate on egocentric spatial memory and navigation of zebrafish using a three-axis water maze. Low doses of methylphenidate enhanced spatial learning while high doses inhibited learning. Female zebrafish continuously surpassed male zebrafish in time-efficiency with the least number of errors made. These results suggest that similar to rodent students, the effects of methylphenidate on spatial navigation learning are biphasic.

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SESSION 1

Localization of Mesotelencephalic Dopamine (DA) Neurons Responding to IG Glucose and Oral Fructose

Coke, Tricia

Department of Psychology, Queens College City University of New York

Authors: Coke T, Cruz J D, Fitzgerald G, Sampson C, Dr. Bodnar R

tcoke100@qc.cuny.edu

We will determine whether the patterns of activation of the mesotelencephalic reward pathway by oral fructose and IG glucose are similar or different. Two groups of rats will either be given a fixed volume (10 ml) of either IG infusions of 8% glucose + 0.2% saccharin or 8% fructose + 0.2% saccharin to consume. A third group will receive IG infusion of 8% fructose + 0.2% saccharin (10 ml) and a fourth group will receive oral 8% glucose + 0.2% saccharin to consume to demonstrate both flavor-flavor and flavor-nutrient conditioning. A last group will receive oral water as a baseline control. Their brains will be processed for immunohistochemistry to detect which VTA DA neurons are activated. Sections through the NAc, AMY and mPFC will be processed for c-Fos immunohistochemical detection as well. Fos-positive neurons will be counted in at least three representative slices common to animals in the five groups.

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SESSION 1

State Anxiety and Affective Responding to Visual Scenes

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Stress states and disorders influence perception. At the extremes, for example, people with PTSD often experience severe symptoms in response to visual triggers. Prior investigations of responses to affective visual stimuli use either impoverished stimuli (e.g., faces without context), or images of single objects or staged interactions. A clear understanding of the mechanisms underlying visual processing in stress states and disorders requires experimental stimuli that better represent realistic environments. We investigate the relation between state anxiety and affective responses in the first phase of scene stimulus development. 257 participants (age $M=21.9$, $SD=5.5$; 80% female) rated 300 complex visual scenes along the affective dimensions of valence (unpleasant to pleasant) and arousal (physiological activation). State anxiety was associated with ratings of neutral (i.e., ambiguous) scenes as more unpleasant regardless of arousal ($r_s > .155$; $p_s < .05$). Controlling for state anxiety, women also rated negative stimuli as more negative than men.

SESSION 1

An Examination of the Aggravating Effects of Sleep Deprivation and its Connection to Mental Disorders

Daus, Jared

Questar III New Visions SRWH

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A growing trend in teens, sleep deprivation affects the body's development. The body needs sleep during this important time in humans, when teens experience puberty and develop mentally and physically. This project will be looking at the mental development aspect and will look into a possible connection between mental disorders and sleep deprivation. Sleep deprivation is one of the common signs found in those with depression, a commonly diagnosed mental disorder. A survey was created online with 68 participants volunteering. Based on the results, a clear conclusion could not be made because of the small survey. However, some who experienced sleep deprivation also did exhibit some of the signs of common mental disorders, including anxiety/panic attacks, depression and some cases of hallucinations, a sign of schizophrenia. A new research study is needed with a larger survey size; to see if the trend found here can be further understood.

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SESSION 1

Understanding the Effect of Genes Regulated by the Transcription Factor DAF-16 on the Vulnerability of Neuronal Cells to Stroke-Like Excitotoxicity Using RNAi

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A main cause of stroke is disruption of blood supply to the brain, triggering a neurodegenerative cascade called excitotoxicity. We use a model of excitotoxicity in the nematode *Caenorhabditis elegans* by knocking-out the GluT gene *glt-3* in a sensitive background. Excess Glu in the synapse causes stroke-like neurodegeneration in the worm. We are studying how genes that are regulated by the transcription factor DAF-16 affect the susceptibility of neuronal cells to stroke-like excitotoxicity. We seek to expedite this analysis by using RNAi. To accomplish this, we are combining our excitotoxicity strain with others strains carrying mutations that have previously been indentified as increasing RNAi sensitivity in neurons. After successfully achieving these combinations, we will proceed with the screening of specific DAF-16 target genes to identify the mechanism responsible for the decrease in stroke-like neurodegeneration. Understanding this process in nematodes might help us suggest potentially similar neuro-protective strategies in higher animals.

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SESSION 1

Modulation of Methamphetamine-induced Neuronal Nitric Oxide Formation by Somatostatin Agonist

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Studies have demonstrated that the illicit drug methamphetamine (METH) induces a prolonged overflow of dopamine (DA) within the striatum setting off a chain of events that results in extensive damage. Including degeneration of DA axon terminals, sustained depletion in tissue DA, and the death of 25% of striatal neurons. In addition, recent work has shown that a systemic bolus METH injection (30mg/kg)

significantly increases formation of 3-nitrotyrosine (3-NT) within the striatum. Production of 3-NT is used as an indirect index of the synthesis of neuronal nitric oxide (NO). Overproduction of NO and the subsequent formation of reactive oxygen species (ROS) has been implicated as one of the primary vehicles of METH-induced toxicity. Previous work in our lab demonstrated that the excitatory neuropeptide substance P (SP) is acting in a synergistic capacity with METH thus contributing to striatal injury. Perhaps doing so through the modulation of NO synthesis. The use of WIN 51,708 an SP receptor (neurokinin-1) antagonist, resulted in the substantial decrease of 3-NT levels. However, research in other models of neurotoxicity have shown that the inhibitory neuropeptide somatostatin may serve as a neuroprotectant. Of particular relevance has been work done with NMDA-induced excitotoxicity since the glutamate system and especially excessive signaling through the NMDA receptor may be a contributing factor in METH-induced DA terminal toxicity. Said injury is speculated to be partially caused by NMDA activation and the subsequent production of NO as well as superoxide radicals. We were interested in evaluating whether somatostatin could serve a neuroprotective role during METH-induced neurotoxicity. To do so we used the somatostatin analogue octreotide and measured the levels of 3-NT.

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SESSION 1

Psychological Stress Differentially Affects Active and Passive Coping Behaviors

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Stress is a physiological response that serves to maintain homeostasis in the body. Whereas physical stressors are direct threats to homeostasis, psychological stress is the anticipation of homeostatic challenge, and can be harmful when prolonged. To investigate the effects of psychological stress, rats were housed for 3 weeks with two tub cages connected by a tunnel. Randomly ($p = .25$), simultaneous presentations of predator odor, flashing LEDs, and an abrupt auditory stimuli were presented on tunnel crossings. During the condition, rats in the stress condition made fewer crossings than control rats, and had more risk assessment behaviors. Stress rats crossed enough to access adequate amounts of food and water. After three weeks, the stress group spent more time actively coping in a testing environment, but did not differ or spent less time avoiding areas of high risk. Chronic controllable psychological stress can enhance active and suppress passive coping behaviors.

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SESSION 1

The effect of enriched environment on object recognition in male Sprague Dawley rats

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The impact of an enriched environment (EE) compared to a standard environment (SE) on memory formation in male Sprague Dawley rats was examined. The EE consisted of an environment with tunnels, houses and toys, while the standard environment contained only shavings, food and water. In addition, the EE group was exposed to socialization in a novel environment periodically. After two weeks, the Novel Object Recognition (NOR) test was preformed. This involved exposing each rat to a set of two unfamiliar objects, followed by second exposure two hours later to one familiar object and a new, unfamiliar object. The rats in the EE group spent more time exploring the novel object. The results of this study suggest that

EE may improve the rat's ability to learn. Analysis of the brain tissue will be done to compare the hippocampus and dorsal striatum of the two groups of rats.

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SESSION 1

Juvenile Accountability

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Juvenile accountability is a rising issue in the United States. Six percent of all juvenile crimes are violent and the number of crimes keeps going up every year. In this presentation there will be six cases presented about juveniles who have all committed violent crimes. Through ethical subjectivism, moral reasoning, moral upstanding, Freud's structural and topographical models, ethical forgiveness, and Thomas Aquinas four types of law it will be determined if any of the juveniles should be held accountable for their crimes. The purpose of this study is when should juveniles be held accountable for criminal behavior? Materials in order to conduct this research were gathered from articles, databases, books, magazines, and newspapers. The conclusion of the research was all juveniles should be held accountable although through ethical subjectivism some juveniles are held more accountable than others.

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SESSION 1

Play and Early Learning: A Developmental Perspective

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With the rise of the standards reform and the pressure for children to succeed recent years have seen a decline in a focus on young children's play in early childhood settings. A glaring example of this trend is the recent lawsuit filed by a mother against her child's preschool for allowing her four year old to "play" as opposed to helping her acquire the skills she would ultimately need to secure a space in a private prep school that would eventually lead to acceptance into an Ivy League college. Piaget and Vygotsky have argued that young children's engagement in make-believe play is the basis for symbol formation as well as a means of self regulation. Together both theorists have suggested that play is necessary for both school readiness and early learning. The present paper will describe the relationship between play and early learning from a developmental perspective.

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SESSION 1

Enrichment attenuates developmental lead exposure-induced deficits on egocentric and allocentric spatial navigation in rats.

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The neurotoxic effects of developmental lead exposure as well as lead-induced cognitive deficits have been widely documented; reflected in humans through IQ deficits and learning disabilities. Recent evidence also suggests that exposure to an enriched environment during development is neuroprotective and may be sufficient to overcome lead-induced cognitive deficits. The present study evaluated the effects of an enriched rearing condition on spatial learning and memory deficits induced by post-weanling lead

exposure. Fischer rats were given lead acetate (0.4%)-laced drinking water and were exposed to an enriched (2-3 peer cagemates, housing enclosures, novel objects) environment, or housed alone from post-natal day 21 to day 100. Allocentric spatial navigation was assessed using the Morris Water Maze and egocentric navigation was assessed using the Cincinnati maze. Single-housed, lead-exposed rats displayed significant spatial learning deficits in an allocentric navigation task, whereas group-housed, lead-exposed animals performed as well as non-lead exposed control animals. Lead exposure did not affect performance in an egocentric spatial navigation task suggesting that brain areas responsible for cognitive map formation are not as susceptible to lead toxicity. Behavioral results are compared to NeuN histochemical evaluations of neuronal cell counts in the hippocampus and atomic absorption spectrophotometric determinations of brain and blood lead levels.

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SESSION 1

Types of anxiety that influence the prenatal mental health

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The Impact of prenatal stress during pregnancy is well known to have an adverse effect on the developing child's psychopathology. In our study we are trying to find specific type of stress that influences the developing child (n=94). Participants were given baseline questionnaires during their second trimester (16-24 weeks). These questionnaires consist of the State-Trait Anxiety Inventory (STAI), Pregnancy Related Anxieties Questionnaire-Revised (PRAQ-R), and Perceived Stress scale (PPS) that measured the levels of stress. We found that significant amount of women (M=42.21) experienced three types of anxiety; anxiety of giving birth (M=2.94, p=0.001), fear of appearance (M =2.39, p=0.005) and fear of giving birth to a handicapped child (M=2.27, p=0.020). From the results, we know the specific types of anxiety that is predominant during pregnancy. Knowledge gained from our study will lead to interventions necessary to reduce the level of stress experienced during pregnancy.

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SESSION 1

Suboptimal Cognitive And Social Development In Children Born Pre-Term

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Early childhood development is critical for future development of the child. Therefore, this study was designed to examine the association between pre-term birth (≤ 37 weeks) and neurodevelopmental abnormalities from birth to age 4. The data came from the Collaborative Perinatal Project, which consisted of pregnant women who received prenatal care and delivered their babies between the years of 1960-1966. Their 1625 offspring were followed longitudinally. The participants were evaluated for mental deviation, neurological abnormalities, language perception, hearing, and speech production. Chi Square tests found that pre-term children, relative to full-term children, showed significantly greater mental deviation ($P < .0001$), neurological abnormalities ($P < .0001$), and a greater prevalence of abnormal deficits in language perception ($P = .013$), hearing ($P = .021$), and speech production ($P = .026$). The study found that pre-term children exhibit developmental deficits which put them at greater risk for suboptimal cognitive and social development later in childhood. Timely intervention may help these children to overcome their deficits.

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SESSION 1

Nicotine Enhances Consolidation of Hippocampus-Dependent Memory

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The present studies were designed to examine the impact of nicotine on memory consolidation, using 2 hippocampus-dependent tasks. Male Sprague-Dawley rats were trained for 10 trials to locate a hidden platform in the Morris Water Maze. They were administered 0.3 mg/kg nicotine or saline immediately after training and then tested 3 hours later. The nicotine-treated rats spent more time exploring the maze quadrant where the platform was located during training. In a second study, male Sprague-Dawley rats were administered nicotine (0.3 mg/kg) or saline immediately after a 5-min exposure to 2 novel objects. They were tested 2 or 24 hours later with 1 familiar object and 1 new object. The nicotine-treated rats spent more time investigating the new object. Both studies demonstrated that nicotine enhances recall when it is administered during the process of consolidation. C-fos immunohistochemistry is being used to examine neural activity in memory related brain areas.

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SESSION 1

Gender Perception in College Students

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This study is part of a larger study that sought to extend the empirical literature on how gender is perceived in a target individual. Participants were college students in a public university in a Northeastern metropolis. Participants were given vignettes of fictional individuals consisting of four components or factors of gender for a 2x2x2x2 design. The four components were (a) sex chromosomes, (b) physical genitalia, (c) gender identity, and (d) sexual orientation. Several self-surveys were also administered including a short personality inventory, Bem Sex Role Inventory, Childhood Gender Nonconformity Scale as well as demographic information regarding place of birth, ethnicity, age, participants' gender identity, SES, and religion. (Gosling, Rentfrow & Swann, 2003; Bem, 1987; Lippa, 2008) This particular study looks at the proposed relationship between Childhood Gender Nonconformity scores, religious beliefs, and gender component (c) target individual's gender identity. Results were unavailable at the time of submission.

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SESSION 1

Mother-Interventionist Working Alliance During a Randomized Control Study

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Strong working alliance has been linked to better outcomes in therapy (Summers & Barber, 2003). The current study focused on the working alliance between parents and interventionists in the context of a parent mediated intervention targeting joint attention and a short advocacy training program. A sample of 70 children with a confirmed diagnosis of ASD were randomized to one of the two treatment groups and data was collected from each of the mother-child dyads. Previously recorded intervention sessions were

reviewed by two independent observers. Excellent inter-rater reliability was established (ICC=.78-.91) on the 6 questions used to score working alliance. Our aim is to better understand what contributes to the efficacy of a parent mediated intervention. We hypothesize that mother's characteristics such as level of education, annual income, employment, and insightfulness assessment score will have an effect on the level of working alliance (high or low) between mothers and their interventionist.

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SESSION 1

Exposure to Prenatal Smoking on Infant Behavior

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Previous studies have shown that maternal smoking during pregnancy has been related to many negative outcomes in offspring. This study measures the behavioral effects after prenatal exposure to maternal smoking on infants' behavior and functioning. Pregnant women were given self-report questionnaires about their smoking status during the second trimester. During post-partum assessment, mothers (n= 24) were given the Infant Behavior Questionnaire-Revised (IBQ-R) and asked to rate their infant's behavior and temperament. Results show that pregnant women who were former and current smokers, infants received lower scores on specifically Fear (p=.067), Duration of Orienting (p=.001), Smiling and Laughter (p=.058) and Approach (p<.0001) scales compared to the scores of the infants whose mothers did not smoke. Prenatal maternal smoking adversely influences infants' temperament. Raised awareness on the adverse effects of maternal smoking should be implemented for future mothers and their unborn children which may help to improve mothers' well-being and birth outcomes.

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SESSION 1

Exposure to Benzyl Butyl Phthalate in Peri-adolescent Rats and Effects on Anxiety-like Behavior

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Phthalates are by far the most widely used plasticizers, primarily to make soft and flexible polyvinyl chloride for the applications in construction materials, medical devices, and toys. Benzyl Butyl Phthalate (BBP) is used to increase the flexibility of plastic items, but because it is not chemically complexed to the plastic, it leaches off into the environment (Lassen et al., 2009). We found that BBP does indeed affect anxiety-like behaviors in a dose specific manner. In the Open Field test, 10 ppm produced anxiolytic response while 5 ppm more closely resembled anxiogenic responses. In Light-Dark Test we found 5 ppm as a possible agitating dose. We have also measured anxiety behavior in the Hole-Board test and have completed molecular analysis of corticosterone levels related to the specific doses.

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SESSION 1

The Role of Depression in Parent-Child Relationships

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Depression continues to be a growing issue, which is seen as a problem because it is a mood disorder that has effects on behavior. It has been shown to be influenced by a number of variables including social factors such as low income, education, bad neighborhoods etc. Depression may not only affect the individual, may impact others around them as well. For instance, parental depression may be related to negative child outcomes. However, the mechanism by which depression influences behavior is not fully established. Given that past research has shown that depression can negatively affect cognition it could be that depression has its effects on parenting via its effect on cognition.

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SESSION 1

Microglia Within the Mouse Somatosensory Barrel Cortex: Development and Sensory Experience Dependent Reorganization

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The barrel cortex is the region of the adult mouse in the somatosensory cortex which processes signals from the animal's whiskers. We investigated the normal development of microglia in the barrel cortex of mice, as well as the effects of sensory deprivation. Microglia are macrophages of the central nervous system and is its main line of defense. Microglia constantly monitor their environment for signs of damage or infections and carry out the appropriate response to aberrations within the nervous system. Sensory deprivation was achieved by unilaterally trimming the whiskers every other day starting from birth. Animals were sacrificed at various postnatal days and the brains were post-fixed in 4% paraformaldehyde for seven days. The fixed tissue was sectioned at 70 μ m on a Vibratome. Brain slices were then processed and stained with primary antibodies specific to microglia (Iba-1, 1:1000). Slices were washed, treated with appropriate biotinylated secondary antibodies (Vector Labs or Jackson Immuno) for 2.5 h, incubated in ABC solution for 30 minutes and then incubated in DAB for 5 minutes. Sections were mounted and dehydrated prior to cover slipping. The number of microglia cells were quantified in a nonbiased fashion using a computer assisted stereology program. Results show that microglia density peaks at post-natal day 45 with significantly higher levels observed in the supragranular layers. Following one month of sensory deprivation microglia levels are slightly elevated and microglia somata are significantly larger. In sum our results suggest that microglia adapt to changes in sensory experience and development.

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SESSION 1

An Analysis of the Involvement of Apoptosis in Nematode Excitotoxicity

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Authors: Ko B K, Mano I

Stroke and brain ischemia are leading causes of mortality and long-term hospitalization in the United States. Brain damage results from disruption of blood supply to the brain, causing over-accumulation of glutamate in the synapse, intracellular buildup of toxic calcium levels, and neurodegeneration in a process called excitotoxicity. While cells mainly die by necrosis, it remains unclear to what degree apoptosis contributes to stroke. We reproduce excitotoxicity in *C. elegans* by eliminating GLT-3, a critical glutamate removal system, leading to synaptic glutamate accumulation and neurodegeneration when produced in a sensitized background. The role of apoptosis is tested by combining excitotoxicity strain Δ glt-3;nuIs5 with CED-3, CED-4 and CED-9 mutations that interfere with normal functions of the key mediators of apoptosis. We are currently searching for worms homozygous for excitotoxicity-triggering and apoptosis-preventing mutations. Understanding the molecular mechanism of excitotoxic

neurodegeneration might illuminate evolutionary-conserved death pathways and suggest future developments on neuro-protective therapy.

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SESSION 2

The Effects of Teen Drinking on High School Drop Out and Graduation Gap Rates: A Nation Wide Study

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Young adult drinking is one of the biggest problems that affects youth today. Over 19 million teens in the United States drink alcohol. In accordance, teens are dropping out of school at alarming rates. The national high school drop out rate is currently at 31%. Due to these alarming facts a survey was conducted to assess teens knowledge about the effects of alcohol on their bodies as well as specific questions about the age, ethnicities and gender of survey participants. The survey was conducted at Chatham High School in Chatham New York. A total of forty-nine people participated in this survey. The results of the survey indicated that there was a significant relationship between high school drop out rate and teen drinking. The states that had the highest teen drinking rates as well as teen binge drinking rates also had some of the highest drop out rates in the nation. There is a severe lack of knowledge in teens about drinking. The survey concluded that a vast majority of all participants drank to get drunk. This countries schools are lacking in providing proper alcohol education to their students. The human brain grows continuously into early adulthood. Students who drink during this time reduce the size of the hippocampus, a part of the brain, which decreases the ability to form new memories and recall previously learned information. These memories are vital to excelling in a learning environment. Students in the United States won't be able to compete with world economies if the high school drop out rate continues to rise.

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SESSION 2

Threat Assessment During Full-Body Eye Scans

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The purpose of this study is to determine which area or areas of the body were most focused on during a threat assessment of photographs of individuals. Participants were all students of Norwich University, and looked at 35 photos found on the internet of individuals of random phenotype, making sure experiment stimuli was not concentrated of any one specific race, culture or gender. Participant eye movements were recorded using the EyeTracker System, and interest areas of the photos were focused around the head, hands, torso, groin, legs, and any significant symbols such as tattoos or large pennants worn in the photograph. After viewing a photograph, the participant would then rate the photo on a scale of 1-9, with 1 being the least threatening and 9 being most threatening. Discussion focuses on the correlation between the interest area with the most fixation time and the perceived threat level associated with that picture, as well as an inquiry to whether or not gender of both the participant and the photo has a factor of the fixation time and threat level.

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SESSION 1

Membrane Progesterin Receptors in the Ventral Tegmental Area May Mediate Progesterin- Facilitated Reproductive Behavior of Female Rats.

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Recent novel GPCRs, membrane progesterin receptors (mPRs), may mediate rapid non-genomic actions of progestogens; however, few studies have investigated this in vivo. Reproductive behavior is a salient measure of non-genomic progesterin action among rodents. If mPRs are involved in non-genomic actions of progestins in the ventral tegmental area (VTA) for reproductive behavior, then knocking down mPR expression in the VTA will alter lordosis of female rats. Ovariectomized and hormone primed (E2 and/or P4), were infused with antisense oligodeoxynucleotides (ODNs) targeted against mPRs (mPR α and/or mPR β). Rats were tested for motor and sexual behavior, and mPR expression was analyzed in the VTA. mPR α was present in the brain and periphery, and mPR β was highly expressed in the midbrain of receptive female rats. P4-facilitated lordosis was significantly reduced with administration of ODN-mPR β , or additively with co-administration of ODN-mPR α and ODN-mPR β . Thus, mPRs may have distinct fundamental roles in mediating progesterin-facilitated behaviors.

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SESSION 2

Knocking down expression of pregnane xenobiotic receptor in the midbrain ventral tegmental area attenuates estrous cycle variations in anxiety, social, and reproductive behavior of rats

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A metabolite of progesterone, 3 α -pregnan-20-one (3 α ,5 α -THP), acts in the ventral tegmental area (VTA) to alter anxiety, social, and sexual behaviors of rodents. 3 α ,5 α -THP formation may require the pregnane xenobiotic receptor (PXR), which regulates transcription of enzymes required for 3 α ,5 α -THP biosynthesis. In this study, rats were ovariectomized and hormone-primed with estradiol (E) and progesterone (P) and then infused with PXR anti-sense oligodeoxynucleotides (AS-ODNs) or vehicle to the VTA prior to infusions of different dosages of 3 α ,5 α -THP or vehicle. Exploratory (open field), anxiety (elevated plus maze), social (social interaction), and sexual (paced mating) behavior were assessed. We predicted dose-responsive effects of 3 α ,5 α -THP to reverse effects of PXR AS-ODNs. Results supported this. There were dose-dependent effects of intra-VTA 3 α ,5 α -THP-replacement to OVX and E-primed rats that received bilateral infusions of control or PXR AS-ODNs to the VTA. Thus, PXR in the VTA may be involved in 3 α ,5 α -THP-mediated behaviors.

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SESSION 1

Play and Early Learning: A Developmental Perspective

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With the rise of the standards reform and the pressure for children to succeed recent years have seen a decline in a focus on young children's play in early childhood settings. A glaring example of this trend is the recent lawsuit filed by a mother against her child's preschool for allowing her four year old to "play" as opposed to helping her acquire the skills she would ultimately need to secure a space in a private prep school that would eventually lead to acceptance into an Ivy League college. Piaget and Vygotsky have argued that young children's engagement in make-believe play is the basis for symbol formation as well as a means of self regulation. Together both theorists have suggested that play is necessary for both school readiness and early learning. The present paper will describe the relationship between play and early learning from a developmental perspective.

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SESSION 1

Effects of Chronic Social Defeat on Hippocampal-Dependent Fear Conditioning in Adolescent Rats

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Recent studies from our lab demonstrate that Chronic-Mild-Unpredictable-Stress (CMUS), as an animal model of depression, increases hippocampal-dependent fear conditioning. To determine if this effect generalizes to other forms of stress, we tested the effects of Chronic Social Defeat Stress (CSDS) on fear conditioning in adolescent Sprague-Dawley (intruders) and Long Evans (residents) rats. Surprisingly, we observed the intruder animals to be highly more aggressive during the first five days of the seven day CSDS protocol. Twenty-four hours following the last resident-intruder encounter, all the animals underwent trace fear conditioning. During a test of fear memory, both the Sprague-Dawley and Long Evans animals that were involved in the CSDS exhibited significantly higher levels of freezing compared to a control (non-stress) group of Sprague-Dawley animals. Work supported by NIH grant R15 MHO85280-01 to CGR

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SESSION 1

Nutritious Snack Availability Positively Impacts QC Student Purchases

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It can be challenging for students to maintain healthful eating on campus. This study examines Queens College student snack preferences before (n=45) and after (n=50) addition of nutritious options to campus vending machines. Randomly selected QC students completed self-report questionnaire. Snack preference analysis was based on weekly campus hours independent of class for 1)studying/tutoring (ST) and 2)extracurricular activities (EC). Three hypotheses were tested: 1)Initial and subsequent purchase frequencies differ upon introduction of nutritious snack options; 2)Purchase frequency differs based on reason for spending time on campus; and 3)Food purchases are related to reason for spending time on campus. According to both surveys, ST students purchased snacks with greater nutritional value than EC

students. Both ST and EC students replaced previous choices with nutritious snacks upon availability, however frequency of snack purchases remained unchanged. Findings suggest that students are more likely to purchase healthier snack options when presented with the choice.

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SESSION 2

Preservice K-6 grade teachers: constructivism and formative assessment skills in mathematics

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The study objectives were to describe K-6 preservice teachers' formative assessment skills in mathematics and to test hypotheses about relationships between said skills and cognitive-constructivist beliefs about learning and teaching. Participants at an urban university (n = 30) responded to a survey on beliefs about mathematics learning and teaching, interpreted student responses to three scenarios involving fractions, and planned follow-up lessons and assessments. Model responses and a rubric for open-ended items were generated based on literature and feedback from math educators. Results indicate participants were challenged by problems involving division of fractions, and had more trouble analyzing problems conceptually than procedurally. Though not statistically significant, participants' plans for follow-up instruction were most likely to include constructivist/inquiry approaches, less likely to include plans for more assessment, and least likely to include traditional approaches. This research helps direct teacher educators in mathematics to areas where candidates' professional development should be enhanced.

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SESSION 2

Orexin Neural Activity Associated with Morphine Withdrawal-Induced Anxiety in Rats

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Hypocretins, also known as orexins have been found to play critical roles in maintaining and regulating the stability of arousal. Recently, hypocretins have raised questions about the potential role in circuitries that mediate the hypothalamic response to stress and reinstatement of drug and food seeking behaviors. With recent data, orexin has been found to innervate the VTA and strongly suggests that the activation of such neurons play a critical role in the development of the addiction process. Thirty-six rats were administered morphine or saline and broken into four different groups of chronic morphine/saline for seven days and "withdrawal" morphine/saline for 6 days. On the seventh day, rats were subjected to the elevated plus maze and behavioral measurements were taken to examine the stress levels under induced withdrawal. C-fos and orexin immunohistochemistry is being used to determine how activity in the nucleus accumbens, lateral hypothalamus, and the ventral tegmental area relates to the behavioral effects of morphine.

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SESSION 2

Neuronal Induction of the Heat Shock Protein 70 as a Possible Mechanism to Overcome Tau Post-Translational Modification Induced by Prostaglandin J2

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Alzheimer's disease (AD) is characterized by inflammation and the accumulation of ubiquitinated proteins in abnormal inclusions. Neurofibrillary tangles containing tau are one of the major hallmarks of AD. Molecular chaperones are a large group of proteins which assist other proteins to their correct assembly. In particular, heat shock proteins (HSP) facilitate synthesis and folding of proteins throughout the cell and they may prevent the formation of these aberrant inclusions due to their ability to avert protein aggregation and promote proper protein folding. Our studies focus on the molecular chaperones HSP 70 and HSP 90 because they are the major chaperone systems that protect cells against protein unfolding and aggregation. We report that a novel HSP 90 inhibitor, induces the expression of HSP 70, and reduces the levels of the aggregate-prone form of tau in rat E18 primary cortical neurons treated with prostaglandin J2. We propose that up-regulation of the HSP 70 system could help avoid the deleterious effects of tau aggregation and thus be used to prevent/treat AD.

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SESSION 2

Acquisition of Fructose-Conditioned Flavor Preference is Blocked by Dopamine D1 and D2 Receptor Antagonists in the Medial Prefrontal Cortex of Rats

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In addition to the innate sweet taste preference, learning modulates sugar appetite through orosensory (flavor-flavor) and postingestive (flavor-nutrient) processes. Systemic dopamine (DA) D1 (SCH23390: SCH) and D2 (raclopride: RAC) receptor antagonism eliminated the expression of fructose-conditioned flavor-flavor preferences (CFP). Fructose-CFP expression was also significantly reduced following central administration of SCH into the nucleus accumbens shell (NACs) and amygdala (AMY), and of RAC into the NACs, AMY and the medial prefrontal cortex (mPFC). Whereas systemic SCH and RAC also eliminate the acquisition of fructose-CFP, direct administration of these antagonists into the NACs and AMY failed to alter initial acquisition, but rather acted to hasten preference extinction. To examine the role of the mPFC in the acquisition of fructose-CFP, the present study examined whether bilateral mPFC infusions of SCH or RAC differentially altered the acquisition of fructose-CFP. Food-restricted (85% BW) rats were trained in 8 one-bottle sessions (0.5 h) to drink a more-preferred fructose (8%) + saccharin (0.2%) solution mixed with one flavor (CS+/Fs, e.g., 0.05% cherry) on odd-numbered days, and a less-preferred saccharin (0.2%) solution mixed with another flavor (CS-/s, e.g., grape) on even-numbered days 10 min following infusions of vehicle (VEH), SCH (24 nmol) or RAC (24 nmol) into the mPFC. Following training, rats were given six daily unlimited two-bottle preference tests (1 h) without microinfusions, with the two flavors mixed in saccharin (0.2%; CS+/s, CS-/s) and counterbalanced for potential position preferences. VEH-trained rats displayed a stable fructose-CFP of 67% over the six days of two-bottle preference testing. CS+/s intake was significantly greater than CS-/s intake on all six tests. Significant reductions in the acquisition of fructose-CFP were observed for rats with bilateral mPFC placements receiving SCH (53%) or RAC (54%) over the six two-bottle preference tests. CS+/s and CS-/s intakes failed to significantly differ in either SCH-trained or RAC-trained rats across all test days. Moreover, VEH-trained rats consumed significantly more of the CS+/s solution than RAC (all test pairs)-

and SCH (1st test pair)-trained rats. These data demonstrate that D1 and D2 receptor signaling in the mPFC are critical for the learning of a flavor-flavor-mediated fructose-CFP.

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SESSION 2

A Self-Esteem Program for Adolescent Girls

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Self-esteem is based on the collection of beliefs or feelings about the self; it provides armor against the challenges of the world. Healthy self-esteem is the cornerstone of psychological health. Youngsters with healthy self-esteem are better equipped for adolescence. The purpose of this study was to evaluate the Expect Respect Program., a program designed for adolescent girls. The program consisted of five sessions: 1) Brochure about Me: allows for exploration of the self; 2) Josephine: demonstrates the power of words and our impact on others; 3) Healthy Relationships; 4) Body Image: encourages acceptance of one's body and adoption of healthy behaviors; and 5) Carpet Ride to My Future: guided meditation visualization about the future. One hundred thirty adolescent girls participated. The Rosenberg Self-Esteem Scale was used to measure self-esteem before and after participation in the program. Results indicate an increase in the self-esteem scores after participation.

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SESSION 2

The Negative effects of depression during pregnancy

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The current study determines the impact of depression on levels of psychosocial stress, anxiety and glucose in pregnant women. Pregnant women (n=93) who are in their 2nd trimester and receiving prenatal care at Mount Sinai Medical Center Ob/Gyn clinic in New York City were asked to fill out self-report questionnaires that measure the level of stress and anxiety. Analysis of Variance was used to examine the difference on the various scores between depressed (n=24) and non-depressed (n=69) women. Results showed that depressed women have significantly greater perceived stress during pregnancy, overall pregnancy specific anxiety, anxiety related to giving birth, anxiety related to having a handicapped child, anxiety related to their appearance due to pregnancy, and glucose level during pregnancy. Since depression is not only associated with stress and anxiety, but also a medical condition with greater glucose levels, we should find effective intervention plans to reduce the level of depression.

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SESSION 2

The Effects of Nicotine on Egocentric Spatial Navigation in Zebrafish

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Zebrafish, a versatile laboratory model, has been widely employed by genetics and molecularbiology labs. It is only recently the value of zebrafish in behavioral pharmacology studies hasbeen realized. Previous research suggests that zebrafish form egocentric-based representations of their environment. Recent

findings also suggest that psychostimulants, especially nicotine, have beneficial effects such as cognitive enhancement in zebrafish. The aim of the present study was to further investigate the effects of nicotine on egocentric spatial navigation in zebrafish. Fish were divided into three groups: control, 200 mg/L nicotine, and 400 mg/L nicotine. Egocentric spatial navigation was assessed using a three-axis maze that measures non-cue based spatial memory. It was hypothesized that low doses of nicotine would enhance while high doses would inhibit spatial memory performance. The 200 mg/L group showed enhanced spatial memory performance as compared to the control fish. Female fish consistently outperformed males. Data collection is currently ongoing.

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SESSION 2

Investigation of the Self Medication Hypothesis: Clozapine Memory Deficits Counteracted by Nicotine Co-administration

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Clozapine is an atypical antipsychotic given to people with schizophrenia. Although schizophrenia causes major cognitive impairments, antipsychotics given to these patients can cause negative effects as well. Previous research has found that medicated patients with schizophrenia additionally self medicate with nicotine through smoking to try to alleviate symptoms. This study investigated the possibility that the nicotine is counter-acting the negative effects of anti-psychotic medication rather than affecting the schizophrenia symptoms directly. The experiment used 8 rats and the subjects performed a payoff probability decision making task on a radial arm maze in which each arm was assigned a probability of being rewarded: 100%, 75%, 50%, and 25%. There were three conditions, control, clozapine, and co administration, in which each condition was observed five times for each rat. Twelve choice pairs were made using the probabilities and observed if rats went down lower or higher probability arms when under different conditions. Nicotine was predicted and found to reduce the cognitive deficits that were caused by the antipsychotic clozapine when co-administered and perform similarly to the control condition.

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SESSION 2

Electrophysiology Techniques-Whole-Cell Patch Clamping on Excitable Cells

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Living cells utilize electrical currents to transmit information and ion channel proteins regulate the electrical properties of cells. Studying their function is critical in understanding the physiology of organ systems. Unsurprisingly, many disorders exhibit electrical signaling defects. Whole-cell patch clamp recording is one of the patch-clamp techniques that can give an abundance of information about ion channel currents in excitable cells. Using whole-cell patch clamping, one can seal a cell to an electrode surrounded by a fine glass micropipette and examine currents across an entire cell, which does not isolate one or few channels. Voltage gated calcium (Ca^{2+}) channels (Cav) are important in regulating neurotransmission, because Cav channels control the release of neurotransmitters due to the diffusion of Ca^{2+} , and Cav regulation can modify or cause neurological disorders. We performed whole-patch clamping on 12-13 day rat embryonic neurons to observe the Cav channel currents in these cells.

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SESSION 2

Inhibition of the ERK Signaling Pathway fails to prevent VEGF's neuroprotective effects in a Pilocarpine model of rat status Epilepticus

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Vascular endothelial growth factor (VEGF) is a protein shown to protect against hippocampal neuronal damage (Nicoletti et al., 2008). VEGF is a large molecule and unable to cross the blood brain barrier. If receptor mechanisms mediating protection could be identified, drugs could be developed to target responsible receptors. VEGF binds to VEGFR1, VEGFR2, and Neuropilin-1 in the brain. Preliminary in vitro studies suggested that VEGFR2 mediates VEGF's neuroprotective effects. VEGFR2 partly signals via the ERK signaling cascade. In the current study we co-infused the ERK inhibitor U0126 with VEGF during status epilepticus to investigate a potential neuroprotective role of VEGFR2 in vivo. Preliminary results show that U0126 failed to prevent VEGF's protective effects on CA1 neurons. These findings may indicate that in vivo neuroprotection may not act via VEGFR2-mediated signaling. Future studies will examine effects of blocking VEGFR1 to identify any potential neuroprotective pathways mediated by this receptor in vivo.

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SESSION 2

Alcohol promotes central androstane neurosteroidogenesis and aggression in mice

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Background: Androgens, such as testosterone (T) and its 5alpha-reduced, neuroactive metabolite, 3alpha-androstanediol (3alpha-diol), influence aggression and are increased in rats that are administered alcohol (EtOH). Whether 3alpha-diol formation is necessary for EtOH-enhanced aggression was investigated in mice. Methods and Results: Experiment 1: Compared to saline, EtOH-enhanced inter-male aggression among intact and gonadectomized (GDX) B6 and increased social dominance aggression among dominant, but not subordinate, mice. Experiment 2: Testicular feminized mutant (TFM) mice (that have androgen receptor insensitivity) had low basal levels of inter-male aggression, but EtOH enhanced social dominance aggression in dominant TFM mice administered EtOH versus saline. Experiment 3: Neither saline, nor EtOH, enhanced aggression among 5alpha-reductase knockout (5alpha-RKO) mice (that have perturbed formation of T to its 5alpha-reduced metabolites) in the resident-intruder or social dominance tasks. Conclusions: These data suggest that the neurosteroid metabolite of T, 3alpha-diol, may play an important role in EtOH-enhanced aggression.

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SESSION 2

A Picture Tells a Thousand Words: Impact of Nutritional Booklet on Eye Tracking Behavior

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Using eye-tracking methodology, this study examines the influence of a pictured based educational nutrition booklet on eye gaze at Nutrition Fact labels. Thirty-two participants' gazing was measured using a pretest-posttest design. Half the participants were given a nutrition education booklet to read and half were given a word find puzzle. Results were assessed using an independent t test and a repeated measure

analysis (ANOVA). We found that there was a significantly longer gaze at nutrition labels ($P = .007$) posttest in the nutrition education group compared to the word find group after a 10-minute exposure to an educational nutrition booklet. A booklet that provides nutrition education may be an effective tool to promote consumers to read nutrition labels.

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SESSION 2

Neural Correlates for Chronic Pain

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Chronic pain is defined as a persistent, ongoing pain lasting over 6 months, without any visible lesion or injury (Foss et al., 2006). As one of the most disabling and costly illnesses in North America (Eisenberg, 1993), little is known about the fundamental neurophysiology of the disease, resulting in inefficient treatment plans. Although much is known about normal sensation throughout the body and its corresponding regions within the brain, the possibility of a Neural Substrate Chronic pain remains an active area of research. In this report, a sample of 20 Chronic Pain patients with varying painful body parts received passive tactile stimulation of corresponding Painful and Non-Painful body parts, with simultaneous passive viewing of a contrast reversing checkerboard within an fMRI scanner. These images were acquired as part of a clinical service to document the perception of pain resulting from normal light tactile stimulation using the neural correlates revealed from fMRI as biomarkers. This report represents a preliminary summary of a sequential cohort of 20 patients to describe the common patterns of activity as a possible indicator of a specific neural correlate of chronic pain. Immediately, following each stimulation epoch, the patient provided a rating of the pain experience where 10 was a maximum and 0 was a minimum. Each run lasted 2 minutes and 24 seconds, all functions are run twice, Painful & Non-Painful. Using Brain Imaging Programs such as SPM, Pain and Non-Pain activated Voxels (3 dimensional unit of volume, volumetric pixel) within the brain were quantified and allocated within a series of 48 axial slices, 2 mm each. The highest cluster concentrations shared by all 20 subjects for both (Pain > Non-Pain ($n = 20$), $p < 0.001$, $k = 10$); and (Non-Pain > Pain. ($n = 20$), $p < 0.001$, $k = 10$) activated voxels were localized. Each cluster was identified using a 3-dimensional coordinate (X, Y, Z). These coordinates were then used to determine the corresponding cortical regions activated when experiencing Chronic Pain. This study found 17 regions ($p < .001$) throughout all subjects indiscriminate of both body part, suggesting a Neurophysiological basis for Chronic Pain. This observation shows that these patients demonstrated a common neural substrate for chronic pain regardless of the affected region and suggests a future research direction to improve diagnosis and treatment of the illness.

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SESSION 2

Molecular Phenotypes of Neocortical Malformations in C57BL/6J Mice: An in Silico Analysis Using the Allen Brain Atlas.

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A diverse number of neocortical malformations are observed in humans arising from defective neuronal migration during fetal and early postnatal periods and are associated with intellectual delay, life-long cognitive impairment, and/or epilepsy. Molecular layer heterotopia (MLH) are small malformations seen

in the neocortex of individuals with dyslexia and epilepsy. These heterotopia are characterized by collections of dozens to hundreds of cells in the molecular layer (layer I) though the precise phenotypes of cells in these malformations is poorly understood. C57BL/6J mice have MLH with identical cytoarchitecture to that in humans, providing a model for greater study of the cellular constituents of MLH. In the present report we describe our use of the Allen Brain Atlas to reveal the molecular phenotypes of cells within MLH. We demonstrate a diverse group of both neural and glial cell-types in MLH. These data are relevant toward greater understanding of MLH in humans.

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SESSION 2

Chronic Stress regulation of the Endocannabinoid System: Effects on Hippocampal Synaptic Physiology

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Mood disorders such as major depressive disorder and PTSD are serious mental illnesses that affect over 20 million Americans. Recent studies from our lab demonstrate that Chronic-Mild-Unpredictable-Stress (CMUS), an animal model of depression, regulates the endocannabinoid system in the rodent hippocampus. Specifically, CMUS downregulates cannabinoid type 1 (CB1) receptors in male rats and upregulates CB1 in female rats (Reich et al, 2009; Hill et al., 2005), however it remains unclear how these stress-induced changes affect synaptic physiology. We began investigating the hypothesis that downregulation of CB1 would result in a diminished capability of CB1 agonists to reduce glutamate neurotransmission in the hippocampal Schaffer-Collateral-CA1 pathway. Preliminary studies indicate that application of CB1 agonist (WIN55, 212-2, 1 μ M) reduced fEPSPs by ~ 45% in control animals, but only reduced fEPSPs by ~ 10% in chronically-stressed animals.

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SESSION 2

Sleep deprivation and sub-chronic caffeine facilitates fear response extinction; implications for PTSD

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Because of the possible co-occurrence of posttraumatic stress disorder [PTSD] and high caffeine consumption among military personnel, this preliminary study examined the effect of sleep deprivation on the fear and stress response in caffeinated rats. Sub-chronic (32 mg/L) caffeine was administered to twelve Sprague-Dawley rats for six days. Rats were fear conditioned by tone-shock pairing as a model of PTSD. Six rats were subsequently sleep deprived for the remainder of fear conditioning tests. Fear response was measured by the amount of “freezing” during reactivation of the conditioned stimulus. Stress response was measured by ELISA examination of blood serum corticosterone [CORT] and western blot analysis of NF- κ B proteins in the hippocampus. Results indicate that sleep deprivation amplified fear memory extinction and increased serum concentrations of CORT. These results suggest a need to further explore the association between caffeine consumption and sleep deprivation in the manifestation of PTSD.

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SESSION 2

Mapping of visual areas in alert mice using optical imaging

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Representations of the visual world are built by the early visual system, transformed by higher visual areas, and distributed to the rest of the brain in order to guide behavior. To study the routing of this information we have developed a system for multi-area mapping using intrinsic signals of neural responses in running mice. Our chronic imaging preparation features a titanium head-post for head stabilization, an implanted EEG for monitoring brain state, and a replaceable 5 mm cranial window which allows for simultaneous access to all anatomically identified visual areas,. Functional characterization of these visual areas provides a basis for linking area-specific computations with behaviors that rely on processing distinct visual features, such as object recognition and navigation. It is now possible to examine detailed functional connectivity between visual areas using targeted calcium imaging or electrophysiological recordings, injection of viruses or tracers, and detailed post-hoc histological analysis.

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SESSION 2

Parental Stress and Differences Between Parent-Child Hedonic Tone

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This study examined the relationships among various types of stress (parenting, event and life) and parent-child interaction (per-second synchronicity of hedonic tone) in a sample of 22 parent-child dyads. Our hypothesis was: Greater parenting, life and event stress would correspond to differences between parent and child hedonic tone. Twenty-seconds of hedonic tone were each coded by two raters for both parent and child (in interaction) using a nine-point scale ranging from a positive pole of extremely pleasant, to a negative pole of extremely unpleasant. Life, parenting and event stress were measured by the Social Readjustment Scale- Revised, Parenting Stress Index- Short Form, and Impact of Event Scale- Revised respectively. Sufficient reliability was obtained regarding hedonic tone, and results indicated a correlation between the heightened affect emotion (HAE) period of 8-12 seconds on the parent-child dyads, and parenting stress, while life and event stress showed no significant correlation.

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SESSION 2

Parental stress and differences between parent-child hedonic tone.

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This study examined the relationships among various types of stress (parenting, event and life) and parent-child interaction (per-second synchronicity of hedonic tone) in a sample of 22 parent-child dyads. Our hypothesis was: Greater parenting, life and event stress would correspond to differences between parent and child hedonic tone. Twenty-seconds of hedonic tone were each coded by two raters for both parent and child (in interaction) using a nine-point scale ranging from a positive pole of extremely pleasant, to a negative pole of extremely unpleasant. Life, parenting and event stress were measured by the Social Readjustment Scale- Revised (SRRS-R), Parenting Stress Index- Short Form (PSI-SF), and

Impact of Event Scale- Revised (IES-R) respectively. Drawing upon research on ‘markedness’, and following Shaw, Sossin and Salbod (2010), a middle period within the interaction flow was demarcated by heightened affect. Sufficient reliability was obtained regarding hedonic tone, and results indicated a correlation between the heightened affect emotion (HAE) period of 8-12 seconds on the parent-child dyads, and parenting stress ($r = -0.445$, $p = 0.038$), while life and event stress showed no significant correlation. Contrary to our expectations, increased parenting stress during the HAE period does not predict differences between parent and child hedonic tone.

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SESSION 2

Clozapine reduces pre-frontal cortex serotonin 5-HT_{2A} receptor expression and attenuates hallucinogen-induced schizophrenic-like behavior in rats.

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The serotonin 5-HT_{2A} receptor has been implicated in playing a major role in schizophrenia. Studies conducted using human post mortem tissue have indicated that pre-frontal cortex (PFC) 5-HT_{2A} receptor concentration is elevated in untreated schizophrenic subjects. The 5-HT_{2A} agonist 2,5-Dimethoxy-4-iodoamphetamine (DOI) is an LSD-like hallucinogen that induces head twitching in rodents and has been suggested to be an animal model of the negative symptoms of schizophrenia. Dizocilpine (MK-801) is a non-competitive antagonist of the glutamate NMDA receptor that has been used as an animal model of the positive symptoms of schizophrenia. The purpose of this study was to correlate the effects of 21 day chronic clozapine (3 mg/kg) administration on schizophrenic-like behavior in the DOI and MK-801 animal models with PFC 5-HT_{2A} receptor levels. Results demonstrate that sub-chronic (7 days) treatment with clozapine is sufficient to attenuate DOI induced head twitch, while 21 days of chronic clozapine was unable to reduce MK-801 induced hyperlocomotion. Additionally, treatment with chronic clozapine was shown to cause a decrease in PFC [3H] ketanserin binding compared to controls, suggesting a decrease in 5-HT_{2A} receptor levels. These results suggest that chronic clozapine caused a decrease in 5-HT_{2A} receptor concentration in the PFC which was able to attenuate the negative symptoms (DOI induced) but not the positive symptoms (MK-801 induced) of schizophrenia.

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SESSION 2

Heritability of digit ratio in recombinant inbred mice

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Digit ratio (the relative length of the second to fourth fingers) is sexually dimorphic; inversely related to prenatal testosterone exposure; and correlated with a variety of medical disorders such as autism, schizophrenia, and heart disease in humans. The heritability of digit ratio has been estimated to be high (50-100%) based on the results of a few species. In this study, digit ratios of recombinant inbred strains of mice were measured and found to be significantly different between the two parental strains (C57BL/6J and Balb). Differences in digit ratio among the F1 and F2 offspring, and both types of F1 backcrosses were non-significant and indicative of complex patterns of heredity. These preliminary data suggest a much lower heritability of digit ratio in these two inbred strains of mice.

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SESSION 2

Potential of Spermine to Reverse Memory Deficits in a Rat Model of Alzheimer's Disease
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The nucleus basalis magnocellularis is a key area involved in Alzheimer's disease (AD). Damage to this structure through excitotoxic lesions in a rat model exemplifies many of the side effects observed in Alzheimer's disease, in particular deficits in working memory. The current study used 14 Long-Evans rat subjects, and through excitotoxic lesion using quinolinic acid, successfully produced working memory impairment mimicking Alzheimer's disease. Animals showing significant impairment were treated with the polyamine spermine. Deficits in working memory caused by excitotoxic lesions were repaired with this treatment and the number of sample errors made significantly decreased. No effect on reference memory was observed due to lesion or treatment. The polyamine pathway is implicated in various neurodegenerative diseases, including Alzheimer's disease. The interaction of these polyamines with NMDA receptors and the regulation mechanism they play could provide potentially new avenues for treatment of AD.

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SESSION 2

The Agreement Between Adolescent Self-Perceptions And Their Actions On Executive Function Tasks

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Previous studies have found self-perception in adolescence to be influential to the behaviors that they exhibit such as academic performance and prosocial and/or antisocial behaviors. Although this research has examined the link between self-perception and behavior in adolescence, no research has used adolescent self-reports of behavior as these relate to the abilities thought to underlie such behaviors. One such ability is executive function (EF), which is the ability to control one's emotions, thoughts and behaviors with facility. EF plays a substantial role in the behaviors that one exhibits, particularly attention problems and behaviors that represent a lack of behavioral control. In the current study a battery of neurocognitive EF tasks will be used to examine adolescents' behavior. A self-report questionnaire (The Youth Self-Report: YSR) will also be used to examine adolescents' perceptions of their own behavior along with a parent report (the Child Behavior Checklist; CBCL) of their child's behavior.

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SESSION 2

Prolonged Intrathecal Infusion of Beta-Methylamino-L-alanine: An Evaluation of a Novel Animal Model of Amyotrophic Lateral Sclerosis

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The amino acid beta-methylamino-L-alanine (BMAA) has been proposed as a candidate cause for the high incidence of Amyotrophic Lateral Sclerosis-Parkinsonism Dementia Complex (ALS-PDC) in Guam. BMAA, an active compound in cycad seeds consumed by the Chamorro people of Guam, was found to induce selective injury to motor neurons (MNs) with minimal effects on other spinal neurons at low

concentrations in in vitro studies. In light of evidence that BMAA damages MNs at lower concentrations than previously thought, this study aims to determine whether BMAA selectively targets MNs in an in vivo animal model. Specifically, we infuse BMAA intrathecally in order to bypass the rat's digestive system and allow direct access of the drug to the spinal cord. If BMAA is found to directly trigger selective MN damage after prolonged (weeks) exposure at low concentrations, its role as an etiological agent in ALS would be further solidified.

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SESSION 2

Psychological Distancing and Behavioral Mechanisms Towards Positive and Negative Stimuli Stockburger, Ellen

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Organisms have evolved an acute ability to differentiate between potentially harmful or helpful stimuli in their environment. Literature on the emotional Stroop effect and approach-avoidance behavior have demonstrated that there is an automatically processed link between the affective quality, or valence, of an object and the behavioral or cognitive response to that object. This study examines that automatic connection and the psychological distance of positive and negative words using a picture-word variant of the Stroop task. Words of positive and negative valence appeared in distal and proximal locations within an image conveying spatial depth. Positive and negative words elicited different reaction times in different spatial locations that appear to reflect mechanisms regarding valence, personality trait variation and a possible affective level of psychological distance.

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SESSION 2

Distinctions in Eye Gaze Interactions During Shared Reading Using a Printed Book Versus an E-Book on an iPad Striano, Tricia

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Shared reading is important to children's cognitive and intellectual development. It encourages positive social interactions. Eye gaze plays a dramatic role in shared reading. At an early age children's innate ability to take part in joint attention enforces the supremacy of triadic attention. Previous research suggests that children initially look at the speaker to observe what the speaker is referencing to, thus they initiate into a triadic attention with the speaker to incorporate a referential understanding of pictures and words. In the present study, an iPad and a printed book will be used with 3.5 to 4.5 year old children to examine the eye gaze interaction during joint reading. It is hypothesized that during shared reading children will initiate into more triadic interactions when being read to using a printed book than an e-book on an I-pad.

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SESSION 2

The Relative Impact of Psychological and Genetic Factors on the Emotional Status of Anorexic Adolescents

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New Visions

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Since the rate of anorexia has been increasing in the past years throughout America, a study was conducted looking more in depth on the emotions that are experienced when a person does not eat for an extended amount of time. Also, the study looked into whether anorexia was most likely brought on genetically or psychologically. To complete this task a survey of twelve questions was created. It was completely confidential. The website that the survey was developed on showed the percentages for each question. From there the information was put into graphs. The most common emotions encountered while not eating are depression, anxiety, stress, and accomplishment. This study was unsuccessful in determining if there are more cases of genetic or psychological anorexia. One of the few ways that should be used to stop anorexia is to make advertisements look more realistic rather than full of underweight, unhealthy models that are, most of the time, photo shopped.

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SESSION 2

Positive and Negative expressions impact Color Preferences for Children and Adults

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In a series of two studies, we assessed how 30 adults and 30 4-year old children link positive and negative facial expressions with different colors. Adults (Study 1) and children (Study 2) viewed images of a happy and sad schematic face surrounded with the colors yellow, black, blue, and red. Participants Eye movements were analyzed using an eye tracker. Results showed that facial expressions impacted gazing at particular colors. In particular, adults looked longer at Red and Yellow when they saw a Happy expression and looked more at Blue when they saw the colors in the context of a Sad expression. Children's responses were more pronounced when they saw a Sad expression prior to a Happy expression. In this context, Children looked reliably longer at Yellow, Black and Red when they saw a Happy compared to a Sad expression. These findings suggest that emotional contexts impact color preferences across ages.

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SESSION 2

Acquisition and expression corn oil-conditioned flavor preferences in rats: roles of dopamine d1 and d2 and opioid receptors.

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Both sugars and fats elicit innate and learned flavor preferences with the latter controlled by flavor-flavor (orosensory) and flavor-nutrient (post-ingestive) processes. Previous studies have found systemic dopamine (DA) D1 (SCH23390: SCH) and D2 (raclopride: RAC), but not opioid (naltrexone: NTX) antagonists blocked the acquisition and expression of flavor-flavor preferences conditioned by sucrose

and fructose. In addition, systemic DA D1, but not D2 or opioid antagonists blocked the acquisition of flavor-nutrient preferences conditioned by intragastric sucrose. Given that DA and opioid antagonists reduce spontaneous fat intake, the present 20 study examined systemic D1, D2 and opioid antagonist effects upon the 20 acquisition and expression of combined flavor-flavor and flavor-nutrient preferences conditioned by a more-preferred 3.5% as compared to a less-preferred 0.9% corn oil (CO: fat) solution. In the expression study, food-restricted rats, were trained (10 days, 2h) to drink either flavored 3.5% (e.g., cherry) or 0.9% (e.g., grape) CO solutions on alternate days. Two-bottle tests presented 20 with each flavor (cherry and grape) in a 0.9% CO solution occurred 0.5 h after a systemic injection of vehicle (VEH), SCH (50-800 nmol/kg), RAC (50-800 nmol/kg) or NTX (0.1-5 mg/kg). Intake of the 3.5% CO solution significantly exceeded the 0.9% CO intake during training. The expression of the robust VEH preferences (87-88%) for the flavor paired with the 3.5% CO solution was significantly attenuated by SCH [200 (56%), 400 (67%) nmol/kg], RAC [200 (61%) nmol/kg], but not NTX. In the acquisition study, five groups of rats received VEH, SCH (25, 50 nmol/kg), RAC (50 nmol/kg) or NTX (0.1 m/kg) 0.5 h prior to 10 1-bottle training trials of the 3.5% (CS+) and 0.9% (CS-) CO solutions. A Yoked VEH group was also trained with its training intakes limited to that of the SCH and RAC groups. Subsequent six 2-bottle tests with each flavor presented in 0.9% CO were conducted without injections. VEH (75-82%), Yoked (70-88%), NTX (87-93%) and SCH25 (75-84%) groups displayed persistent preferences over six days. In contrast, initial acquisition (70-76%) was observed followed by hastened extinction in rats trained with SCH50 (65%) and RAC (61%). The influence of both flavor-flavor and flavor-nutrient processes in the present study may explain why the SCH and RAC effects were less pronounced than those observed with fructose-conditioned flavor preferences. These data implicate DA D1 and D2, but not opioid receptor signaling in the expression of fat-induced conditioned flavor preferences.

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SESSION 2

Estrogen receptor beta is involved in estradiol's modulation of forced swim test behavior and stress responses of adult male and female mice

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There are sex/gender differences in stress-related disorders (e.g. depression) that may be related to actions of 17beta-estradiol (E2). Whether E2's effects involve estrogen receptor beta (ERbeta) was investigated. If ERbeta is a target, there should be sex differences and effects of endogenous E2, for depression-like behavior that are altered by restraint stress differently among wildtype and ERbeta knockout (BERKO) mice. Male and female (proestrous, diestrous) adult wildtype or BERKO mice were restraint stressed, or not, immediately before testing in the forced swim test. Results demonstrated sex differences, and a role of genotype and endogenous E2. Wildtype males and proestrous females spent less time immobile than did diestrous females. Restraint increased immobility of wildtype female mice. Compared to wildtype mice, BERKO mice had higher corticosterone levels and altered behavioral effects. Thus, ERbeta is a target of E2 for some its anti-depressive effects involving HPA responding.

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SESSION 2

Dopamine and opioids modulate fructose-conditioned flavor preferences in BALB/c and SWR inbred mice.

Yakubov, Yakov

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Authors: Yakubov Y, Fitzgerald G, Acosta V, Borukhova N, Borukhov L, Elkomos-Botros M, Luu L, Kraft T, Bodnar R J

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Learning modulates rodent sugar appetite with sucrose and fructose activating orosensory preferences, but only sucrose activating post-oral preferences. Dopamine D1 (SCH23390), but not opioid (naltrexone) antagonists attenuated sucrose-conditioned flavor preferences (CFP) in rats whereas both antagonists reduced the expression of sucrose-CFP in BALB/c and SWR inbred mice. SCH23390 and naltrexone impaired sucrose-CFP acquisition in SWR and BALB/c mice respectively. The present study examined these variables for fructose-CFP expression and acquisition. Fructose-CFP expression in BALB/c and SWR mice was significantly reduced by SCH23390, but not naltrexone. SCH23390 and naltrexone reduced training intakes in both strains. SCH23390 impaired fructose-CFP acquisition in SWR, but not BALB/c mice, whereas naltrexone hastened extinction of fructose-CFP in both strains. These data demonstrate important D1 and opioid receptor signaling differences between sucrose- and fructose-CFP in inbred mice, implicating genetic variance.

~Oral Presentations~

Listed alphabetically by presenter's last name

HW 610 - 11:15-11:30

Impact of World War II on Language Use in Writings of European and American Writers

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The present exploratory archival study utilizes computerized word count technique to analyze texts of literary works written by famous authors in periods before, during and after World War II, which represents either a traumatic and disturbing event, or a large-scale threatening social and economic event. Several of the linguistic dimensions of Pennebaker's Linguistic Inquiry and Word Count along with newly created dimensions were used to analyze the data for the present study. No predicted difference in the use of personal pronouns due to World War II were found. The importance of the style of narrative and clear distinction and grouping of personal pronouns are suggested. Possible limitations of the study and the computerized word count technique and implications of the study are discussed.

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HW 611 - 11:15-11:30

Math Ability and Personal Finance

Alhonte, Matthew

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The present study examined the effect of math ability on thoughts, feelings and behaviors related to the way people manage their personal finances. Math ability was measured using a college diagnostic exam that is used to evaluate the math level of incoming college students to place them into appropriate math classes. Participants were also asked a series of questions about personal finances. We hypothesized that math ability would statistically predict improved management of personal finances. Math ability was associated with decreased likelihood of having overdrawn one's bank account in the past two years (OR = 0.93), increased likelihood of knowing the Annual Percentage Rate on one's most-used credit card (OR = 1.07) and predicted lower average money charged to one's credit card each month (beta = -0.13.) Math ability is associated with decreased spending, greater awareness of one's finances and more careful behavior with personal finances.

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HW 611 3:15-3:30

The Role of PKM in Long-Term Storage in *Aplocheilus lineatus* killifish

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Functions of memory storage and retrieval are essential processes in life; however, the pathways and mechanisms of long-term memory are still not fully understood. Protein Kinase Mzeta(ζ) is an important mediator for the formation and maintenance of long term memory. Using *Aplocheilus lineatus*, a type of killifish characterized by having mechanosensory neuromasts along its lateral line, we intend to further understand and study the relationships between PKM ζ and the storage of long-term memories. In a natural habitat, these sensory receptors allow these fish to hunt prey in the dark by detecting surface

waves. In captivity, this behavior is not developed but can be acquired with proper training. Thus, we hypothesize that after acquiring the dark feeding behavior levels of PKM ζ will increase. Finding out more about this protein will have important implications for disorders characterized by deficits in long-term memory such as phobias, addictions, and post-traumatic stress.

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HW 611 - 11:30-11:45

The Role of Rho GTPases in Circadian Rhythms

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In *Drosophila*, the molecular clock responsible for circadian rhythms have been well established, but the downstream pathways leading to circadian behavior remain unknown. Guanine exchange factors (GEF) activate GTPases by exchanging GDP for GTP. Previous studies show that the expression of a putative GEF (CG33275) is clock- regulated and highly enriched in PDF neurons (master oscillators that synchronize all of the other clock neurons), indicating that Rho GTPases might be important in generating circadian activity. Reducing Rho1 function by overexpressing dominant negative Rho1 in PDF neurons lengthens the period of circadian activity and causes constant expression of *Vrille* (*vri*) in another group of clock neurons, the lateral dorsal neurons (LNDs). Rho1 might be functioning downstream of the clock by regulating communication between groups of clock neurons via vesicle recycling or synaptic plasticity. These findings reveal a novel role for GTPases and offer a potential downstream pathway of the molecular clock.

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HW 714 - 12:15- 1:15

Planning a Profession: Creating Culturally Relevant and Identity-Affirming Careers in Psychology

DeFour, Darlene, and Cordington J, Magnum A, Nicholas L

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Career development discussions frequently focus on the nuts and bolts of applying to graduate school. However, how one carves out a culturally relevant and identity-affirming career in psychology is rarely addressed. Members of the Board of Directors of the New York Association of Black Psychologists will discuss developing such careers in areas such as academia, college student mental health, child/adolescent community mental health and correctional psychology. Specific attention will be paid to strategies that students can employ to prepare for such careers as early as undergraduate school, anticipated challenges, and the importance of mentoring.

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HW 610 - 11:45-12:00

Distinctions Between Principled and Statistical Connections

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Much of our knowledge is about kinds of things (e.g. dogs, tires). Previous research suggests that we characterize kinds by properties that have a principled connection to the kind (e.g. dogs have four legs) and by properties that have a statistical connection to the kind (e.g. tires are black). Principled

connections allow explanation of a property by referring to the kind of thing something is (e.g. That has four legs because it's a dog). This is not possible for statistical connections (e.g. That is black because it is a tire). Principled but not statistical connections also support normative expectations (e.g. we think there is something wrong with a dog that doesn't have 4 legs, but not a tire that is not black). When do children acquire these distinctions? We report two experiments using the stimuli to be used with children that suggest that adults make these distinctions using these stimuli.

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HW 611 - 11:45-12:00

PKM ζ Activity Following Spatial Learning in *Gnathonemus petersii*

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Protein kinase M ζ (PKM ζ) activity is associated with spatial learning in the mammalian hippocampus. The dorsal gray matter telencephalon of Teleost fish is structurally and functionally homologous to the mammalian hippocampus. *Gnathonemus petersii* were trained to solve the meander spatial maze with 11 consecutive days of training. Fish were retested either 1d or 80d after training. Our results showed a significant increase in latency to complete the maze after 80d compared to 1d. Western blot data of the telencephalon region showed a significant increase in PKM ζ activity in the synaptic region 1d after training compared to 80d later. The level of synaptic PKC ζ was not significantly different between fish tested 1d and 80d after training. Together the data suggest that PKM ζ up regulation but not PKC ζ after training is important for long-term memory retention in *G. petersii*.

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HW 611 - 12:00-12:15

Does BPA Impair Memory? A Behavioral and Neurological Study in Adult male Rats

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Bisphenol-A (BPA), an endocrine disruptor with mixed estrogen agonist/antagonist properties, can contaminate food and beverages from certain plastic receptacles. Recent studies suggest that BPA can cause neurological disorders, such as anxiety, hyperactivity, social and maternal abnormalities and memory deficits. Our study examines the effects of acute BPA administration on memory in adult male rats, using a dose lower than the safe daily limit, per the U.S. Food and Drug Administration (FDA). Using Object Placement (OP) and Object Recognition (OR) tasks, we found that BPA significantly impaired both spatial and non-spatial memory. Additionally, dendritic spine density was markedly decreased in the BPA group, both in the hippocampus and medial prefrontal cortex (MPFC). Together, these findings suggest that BPA affects the brain at dosages believed harmless, with current experiments investigating the biomolecular mechanism responsible for the anatomical and behavioral aberrations.

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HW 610 - 12:00-12:15

Stress and Anger

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Anger and irritability are associated with exposure to trauma and posttraumatic stress disorder. Forced displacement is also associated with anger and trauma (Hinton et al., 2010). In the current study, we attempted to estimate the effects of perceptions of refugee camps conditions on anger among 848 Darfur refugees living in Chad. Participants reported concerns about safety and basic needs their history of potentially traumatic events. Regression analysis showed that safety concerns predicted outward displays of anger ($b=.664$, $p<0.01$) above and beyond the effects of gender and previous trauma exposure. In addition, there was a statistically significant interaction effect between gender and safety concerns ($b= -.496$, $p<0.01$), such that the effect of safety concerns on anger was twice as strong for men as for women. That safety concerns were more impactful on men's anger than women's suggest that interventions designed to address anger need to be aimed at gender-specific concerns.

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HW 611 - 12:15-12:30

The effects of climate change on migratory restlessness and fecundity of the brood-parasitic Brown-headed Cowbird.

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The brood-parasitic Brown-headed Cowbird (*Molothrus ater*) lays its eggs in other species nests, and the host raises its young. Because the cowbirds' population has grown while the populations of some of their migratory hosts have declined, cowbird removal programs are a popular method in host restoration attempts, but have been met with mixed success. Many cowbird host populations are also experiencing population shifts in response to ongoing climate change, yet it remains unknown as to how climate change may be contributing to the proliferation of cowbirds. Climate change is altering temperature, exposure to photoperiodic exposure and food availability; therefore, migratory restlessness and fecundity of female cowbirds will be examined in response to altered temperature, photoperiodic and dietary conditions. This research will help elucidate the mechanisms underlying cowbird proliferation and provide a model for the impact of climatic changes on the physiological basis of migratory control in migrant songbirds.

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HW 610 - 12:15-12:30

Neo-Darwinian Approach of Prosociality: Influence of Dispositional Empathy, Cost and Target on the Willingness to Help

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Previous studies suggest that the personality characteristic of empathic concern may be a prominent antecedent of altruistic behavior. However, other studies propose that empathic-concern may not serve as a significant motivator for altruistic behaviors between strangers. The current research explored the influence of dispositional empathic-responses, kinship, and the perceived cost of helping on the likelihood of assisting someone. We hypothesized that the level of dispositional empathy would moderate willingness to help friends and strangers, but not siblings. It was also predicted that individuals with higher levels of dispositional empathy would help siblings, friends, and strangers at relatively the same level, while individuals with lower dispositional empathy would help strangers to a lesser degree than they help siblings and friends. The participants were 130 Psychology students, 95 females and 35 males.

Our findings indicate that dispositional empathy moderates whether cost of helping matters when assisting siblings vs. friends vs. strangers.

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HW 611 - 12:30-12:45

Public Attitudes Toward the Ethics of Organ Donation

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This study expanded on previous investigations exploring public attitudes toward the human rights issues involved in organ donation practices and personal support for these practices. Participants included college and graduate students, and senior citizens (N = 99). Attitudes were assessed prior to and following the presentation of a brief informational DVD on major organ donation practices. Results indicated that participants were largely divided in their attitudes toward human rights issues, as well as in personal support for donation practices. Registration status was correlated with education, $r = .47$, $p < .001$. Support for donation incentive programs varied. Registered donors showed a change in attitudes toward human rights issues, $t(22) = 2.18$, $p = .04$. For non-registered donors, personal support for donation practices decreased after viewing the DVD, $t(51) = -3.06$, $p = .004$. Results are discussed in terms of implications for increasing donation.

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HW 610 - 12:30-12:45

Post stress alcohol alleviates chronic stress dependent memory impairments

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The experience of stress and the use of alcohol are two factors predominately salient in our society. Our study aimed to test the effects of alcohol administration following chronic stress using cognitive and physiological measures in a male rat model. Rats were treated with no stress/no alcohol (CON), alcohol alone (ALC), stress alone (STR), or stress plus alcohol (STR+ALC) for 7 days. Following experimental manipulation, rats were tested for memory, anxiety, depression, blood alcohol content, and corticosterone. The results found that treatment with the combination of stress and alcohol alleviates some of negative effects found when rats were treated with alcohol or stress alone. We conclude that there is an interactive effect between stress and alcohol that may be beneficial under specific circumstances. However, the interaction should be studied in a more reductionist manner to parcel out and determine how the combination of treatments is producing the positive effects found.

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HW 610 - 12:45-1:00

The Psychological Impact of Child Abuse

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Research has shown that abuse towards a child has a psychological impact. Three million reports of child abuse are made each year and 80% of 21 year olds that suffered from abuse as children met criteria for at

least one psychological disorder (O'Meara & Fedderson, 2010). Through the introduction the four types of abuse are described, which included neglect, physical, sexual, and verbal abuse. This literature review assessed the psychological impact of abuse. The research suggests that Borderline Personality Disorder (BPD), Bulimia Nervosa, Anti-Social Personality Disorder (ASPD), and anxiety disorders are all possible outcomes for a victim of child abuse. There were a total of 17 studies reviewed and I retrieved my sources from the online journal articles provided by Mitchell College's online library and Harvard University's online library.

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HW 610 - 4:15-4:30

Effects of Induced Optimism on Positive Future-Event Predictions and Certainty in Individuals At-Risk for Suicidal Behavior

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Young people between the ages of 15 and 34 are especially prone to suicidal thoughts and behavior. This study examined whether deficits in positive future thinking and pessimistic certainty can be modified through mental rehearsal in continually considering the future with optimism. College students with suicidal ideation or attempts, versus no history of suicidal tendencies, were induced to practice making optimistic future-event predictions or to make a lexical decision using the same stimuli. Preliminary analysis suggests that at baseline, high-risk individuals endorsed fewer positive expectancies than their low-risk counterparts. Both groups, however, showed increases in optimism and a reduction in their certainty about an absence of enjoyable outcomes following practice in making optimistic future-event predictions, although at-risk individuals in the control condition also showed a decrease in their certainty. Mental rehearsal may be one way of modifying maladaptive mental representations of the future among young adults at-risk for suicidality.

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HW 611 - 12:45-1:00

A Molecular Mechanism for Sex Differences in Long-Term Remote Spatial Memory

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Protein kinase M zeta (PKMz) is a brain-specific protein that is important for long-term memories in rats. Although both males and females are known to express PKMz, no research has explored differential PKMz activity between sexes. We examined PKMz expression following the formation of long-term spatial memory using the radial-arm maze (RAM) learning task. We found that only males retained the spatial memory for 30d and showed significant increases in PKMz levels in the synaptic region of the hippocampus. This implies that the increased expression of PKMz within the synaptic region may be an important mechanism in the formation of long-term remote spatial memory in males, which suggests that females may be processing the RAM task differently.

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HW 610 - 3:00-3:15

The Relationship between Depression and Anxiety Levels and HIV Risk Behaviors in a Sample of Young Gay and Bisexual Men

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The study seeks to investigate the relationship that exists between anxiety and depression levels and the temptations for unsafe sex, unprotected anal sex acts, and the problems associated with drug and alcohol usage. Data is from the Young Men's Health Project (YMHP; R01DA20366, J. Parsons, PI), which is being conducted at the Center for HIV/AIDS Educational Studies and Training (CHEST). Based upon previous research four hypotheses have been formulated. The hypotheses are that higher levels of anxiety will correlate positively with one's number of high-risk sex acts in the past month and temptations for unsafe sex. Higher levels of depression will correlate positively with one's number of high-risk sex acts in the past month and temptations for unsafe sex. The third and fourth hypotheses are that higher levels of anxiety and depression will correlate positively with problems associated with drug and alcohol usage, respectively. A positive correlation was found a $p < .01$ and the results were consistent with past research on syndemic health effects.

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HW 610 - 1:15-1:30

From Research to Policy to Practice: High School English Language Learners and Assessment and Validity

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Recent statistics have shown that the population of English language learners (ELL) in the United States is large and is continuing to grow. It has been demonstrated that English proficiency affects scores in areas other than English, such as math and science, with ELL students performing less well on standardized tests than their non-ELL peers. This presentation will focus on why this matters, what the research says about the performance of (ELL) and non- ELL students on standardized tests in the United States and the policy implications for the use of current assessments with ELL students. The work presented in this session originated in an upper level Research Methods in Child Development course in the Department of Psychology at Hunter College that resulted in a Research Policy Brief.

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HW 610 - 4:30-4:45

Reflection of 'Self-Relevance' in 'Safer-Sex' Messages

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111 Hunter College students with an age range of 18-22 wrote a brief 'safe sex' message and selected a range of traits (worried, assertive, happy etc.) for 14 different identities (me pursuing my goal, my sexual self-etc.) and 6 sexual scenarios (no sex no condom with new partner, sex no condom with an ongoing partner etc.). The underlining belief on an idiographic level is that HICLAS based 'self-relevance' accounts for variance in the 'quality' of the message: hence people with high self-relevance are expected to produce cognitively elaborate messages. Overall Self-Relevance denotes high depth of processing, personal experience and knowledge about an issue. The 'quality' of the messages will be evaluated by developing a codebook with 7 codes (Persuasion, Informative, Fear etc.) and a 4 point rating scale; which will be rated by 3 raters. High Self-Relevance is testified when overlap of cluster of traits with other identities is observed.

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HW 611 - 1:00-1:15

The Effects of Temporal Orientation, Sensation Seeking, Perceptions of Control, Self-Esteem, and Affect, on Decisions Regarding Condom Use

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Five independent factors are being examined for their impact upon condom use. These factors are temporal orientation, whether one focuses on their present or future; sensation seeking, whether one seeks or avoids thrill and pleasure seeking; perceptions of control, does one feel personal control over sexual health and condom use or are these things determined by outside forces like a partner or mere chance; self-esteem, whether one feels confident in condom use decisions; and affect, how one's emotional state affects condom use decisions.

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HW 610 - 1:30-1:45

Eat, Pray, Work Out: The Effects of Various Coping Methods on Health

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The purpose of this study was to investigate the effects of eating to cope, spiritual coping, and exercise coping on mental and physical health. The stress-buffering hypothesis predicts that coping strategies serve as protective resources during times of stress. Past studies have provided mixed results as to whether these strategies are functional or sabotage physical and psychological health. The current study analyzed data from web-survey responses of 1600 ethnically-diverse urban college students. The findings from multiple-regression analyses suggest that coping by turning to spirituality and/or exercising were generally healthy strategies, under stress or in general. In contrast, coping by eating comfort foods during high stress was related to higher self-esteem and life satisfaction, but also predicted more somatic health symptoms, greater depression and more anxiety. Further research on specific behavioral coping methods will allow a deeper understanding of both short-term and longer-term health consequences of these common strategies.

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HW 611 - 1:15-1:45

The Relationship Between Discrimination and Physical Illness Symptoms

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Racial/ethnic discrimination is the unfair treatment of an individual due to his/her race or ethnicity. Individuals who experience discrimination may have negative outcomes, e.g., poorer academic performance, poorer health. This study examines the relationship between racial/ethnic discrimination and upper respiratory illness (URI). The sample comprises 784 first-year college students: 73% females; mean age =18; ethnicity: Black/African American 39%, Latino 25%, Asian 14%, White 7%, Other 15%. Data were gathered by self-administered questionnaires. Data on "Racial/Ethnic Discrimination" were collected using a 12-item additive scale (Cronbach's alpha = .93). "Level of URI" was measured using a

10-item additive scale (Cronbach's alpha = .84). Findings indicate a statistically significant relationship ($r=.23$) between racial/ethnic discrimination and URI; this means that the more a person is discriminated against the more the individual reports symptoms of URI. Implications such as the need to increase awareness about the negative effects of racial/ethnic discrimination will be discussed.

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HW 611 - 4:00-4:15

Using RNAi to study the roles of *apl-1* and *acn-1* in heterochronic pathway of *C.elegans*

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During the developmental process of an organism, proper relative timing of stage-specific cell fate is essential for an organism to mature normally. In *C. elegans*, the timing component of the developmental process is regulated by the heterochronic pathway. While important regulators such as *lin-4* and *let-7* families of microRNAs (miRNAs) have already been identified, the mechanism of how the timely expressions of the regulators lead to proper cell fates and overall phenotypes during development remains unclear. This results in the need to identify additional players that play either direct or indirect role in the heterochronic pathway in order to understand the mechanism. Recently, our lab has identified a suppressor of *let-7* phenotypes, namely the APP-like-1 (*apl-1*) gene, which is a homologue of the human amyloid precursor protein (APP). Further studies have been done on the role of *apl-1* gene in earlier and later developmental stages. Moreover, a recent screen by our lab member has identified another gene, *acn-1*, whose mutant shares similar phenotypes with *apl-1* mutants. We have cloned both *apl-1* and *acn-1* RNAi constructs into L4440 vector and have verified the insert sequence through sequencing. We will next feed the synchronized *C.elegans* with *E. coli* containing a plasmid vector expressing *apl-1* and *acn-1* to observe the phenotype when knocking down both genes simultaneously. Investigation of *apl-1* gene in relation with *acn-1* gene in *C. elegans* may lead us to a better understanding of developmental timing.

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HW 610 - 1:45-2:00

Dopamine 1 Receptor Signaling Mediates Cytogenesis in Response to Methamphetamine- Induced Damage

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Methamphetamine (METH) is a highly addictive psychostimulant that induces dopamine (DA) overflow and excitotoxic damage in several areas of the brain. The striatum is the major DA input area of the brain and is particularly vulnerable to METH damage. DA signaling is involved in the proliferation and differentiation of precursor cells in both the developing and adult brain. We tested the hypothesis that blocking the D1 receptor would alter the proliferative response to METH-induced striatal injury. To this end, mice ($n=20$) received SCH223390 (0.1mg/kg; SC) or vehicle (saline). Thirty minutes after antagonist treatment, mice were treated with METH (30mg/kg; IP) or Saline. Thirty-six hours later, animals were given the proliferation marker bromodeoxyuridine (BrdU) (100mg/kg; IP). Animals that received METH only showed a significantly greater number of cell genesis compared to the other treatment groups ($p=0.0002$). This suggests that D1 receptor may be directly involved in the proliferative response to METH damage.

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HW 611 - 1:45-2:00

The Immigration Experience as Mediated by Acculturative Stress and Loss

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The purpose of this study was to examine the relationship between immigrants' acculturative strategy and psychological well-being. Specifically, researchers were interested in determining the extent to which acculturative stress and loss of personal identity mediated the relationship between social acculturative affiliation and life satisfaction. We collected data from 117 Hunter College undergraduate students; each participant was born outside of the United States. We measured participants' American culture affiliation, birth culture affiliation and psychological well-being, including, depression, anxiety, life satisfaction, loss and growth of personal identity and levels of acculturative stress. Results demonstrated that socially separated immigrants were more likely than socially integrated immigrants to experience acculturative stress, loss of personal identity and lower life satisfaction. These results imply that those immigrants who feel socially disconnected from American born individuals are more likely to be dissatisfied with their lives.

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HW 610 - 4:45-5:00

The Late Positive Potential and Emotional Reactivity in Children with Elevated Depression Symptoms

Ramirez, Evelyn

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Major Depressive disorder (MDD), is a mental disorder characterized by feelings of hopelessness, helplessness, inactivity and a loss of interest or pleasure in activities that were once enjoyed for at least 2 weeks. Research shows that depressed individuals exhibit blunted autonomic response to a variety of stimuli, including decreased levels of sadness to sad films, and decreased levels of amusement to amusing films (Rottenberg, 2002). The Emotion Context Insensitivity (ECI) model of depression states that a depressed mood state causes the individual to disengage from his or her environment, thus, less emotionally reactive to both pleasant and unpleasant stimuli (Rottenberg, 2005). Consistent with the ECI model, recent studies using event-related potentials (ERPs), have shown that depressed individuals display reduced neural responding to emotional stimuli. For example, individuals with MDD, unlike non-depressed individuals, fail to show increased late positive potential amplitudes in response to threatening images. The LPP is an ERP that occurs approximately 200-300 ms following presentation of emotional stimuli, and is thought to reflect both visual attention and perceptive processing of emotion. The current study endeavors to examine the emotional response of children showing elevated depression symptoms, to emotional stimuli using the LPP. In this experiment, 45 typically developing children 7-9 year olds were shown 90 developmentally appropriate emotional and neutral images from the International Affective Pictures System (IAPS), while EEG recordings were made of their brain activity. We predicted, consistent with the ECI model, that children showing relatively elevated depression symptoms will show reduced LPP amplitudes to emotional versus neutral pictures. Results may provide further evidence that depressed mood is linked to emotional disengagement and reduced emotional reactivity. Furthermore, the LPP may be a viable biomarker for emotional disruptions in depression.

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HW 610 - 2:00-2:15

**Neural Correlates of Reappraisal and Links with Effortful Control in Children: An EEG Study
Ramirez, Helene**

Department of Psychology, Hunter College; City University of New York

Authors: Ramirez H, DeCicco J M, Dennis T A

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Reappraisal, a cognitive emotion regulation strategy, changes how we experience emotional events by reframing them in a more positive light. Effective use of reappraisal is associated with positive adjustment. Reappraisal might also be tied to effortful control: the capacity to voluntarily inhibit emotional responses; however, few studies have investigated this link in children. We examined whether the ability to reappraise (measured via the late positive potential, LPP) is associated with effortful control (measured via maternal report on the Child Behavior Questionnaire). Thirty two children were tested at ages 5 to 6 and 7 to 8. Negative or reappraisal stories were presented prior to 60 unpleasant stimuli and 30 neutral comparison pictures. Electroencephalography (EEG) was recorded, to generate the LPP in response to the picture stimuli. We hypothesized that children who score higher on effortful control will be more adept at using reappraisal (reduced LPPs during reappraisal versus negative story conditions).

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HW 611 - 2:00-2:15

Assessment of rate of behavior acquisition with 1- trainer versus 2-trainers

Revie, Daphne

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Authors: Daphne Revie

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In order to increase their welfare, zoo animals are often trained to perform task that allows them to voluntarily participate in their care. Lab lore states that for fast acquisition, new behaviors must be taught by a single trainer. This assumption hadn't been scientifically tested. The purpose of this research was to compare training by a single or by two trainers. For this study, eight ebony langurs were trained successively on up to 4 tasks. Sessions were 2 minutes long and occurred on separate days. A new task was introduced after the task was performed correctly 7 out of 10 times in three consecutive sessions. Only four langurs, those previously identified as "high learners," reached criterion on more than one task—one on 4, two on 2 and one on 1. There were no obvious disadvantages or benefits of training by one or two trainers under the conditions of this study.

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HW 610 - 2:15-2:30

The Effects of Mold Exposure on Contextual Memory in Mice

Sant'Anna, Marianna

Department of Psychology, Hunter College, City University of New York

Authors: Marianna S, Harewood A

People exposed to mold frequently suffer from cognitive deficits. This study sought to create an animal model to determine how mold affects neural function to cause cognitive deficits. Many of the deficits displayed by mold-exposed people appear to be hippocampal. We used a conditioned fear test that quantifies both hippocampal and non-hippocampal memory. It tests the mice's memory by pairing an aversive stimulus with a context and a tone. Adult male C57Bl/6 mice were exposed to one of three treatments: intact *Stachybotrys* spores, extracted spores with the proteins and toxins removed, or vehicle control. Conditioned fear tests were performed during weeks 3 and 5 of treatment. Mice that received both mold treatments showed dose-dependent contextual memory deficits but remembered the tone that

was presented. Thus, exposure to spore skeletons with toxins removed, was sufficient to cause cognitive deficits. Having shown these deficits, we are now investigating the underlying neural mechanisms.

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HW 611 - 2:15-2:30

The Effect of Clozapine Administration during Adolescence on an Animal Model of Schizophrenia

Santarelli, Anthony

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The dopamine hypothesis of schizophrenia is a widely accepted theory for the disorder, and research into it has led to the development of acute dopamine antagonistic treatment. However acute treatment does not support the theory that schizophrenia is a developmental disorder. Previous research has shown that chronic clozapine administration during rat adolescence can reduce the neuroanatomical abnormalities that arise from a poly I-C injection model. In order to further support the idea that a dopamine antagonist can prevent the onset of schizophrenic the ventral hippocampus lesion was used to induce schizophrenic like symptoms in Long Evans rats, and then the administration of clozapine from PND 34-47 was predicted to normalize the behavior of the animals. The lesion to the ventral hippocampus did produce behavioral deficits and the chronic drug administration did normalize the behaviors, however behavioral abnormalities due to the drugs administration were also discovered.

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HW 611 - 4:45-5:00

The Role of Linguistic Cues in the Acquisition of Generic Knowledge About Novel Objects

Santillan, Jimena

Hunter College

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Do we use language as a tool to acquire generic knowledge about novel objects? We hypothesized that when a generic statement (Blicks are friendly/A blick is friendly) is used to introduce a property about a novel object the property will be interpreted as a normative property that should be present in all objects of that kind. In contrast, when a non-generic statement (This blick is friendly) is used, the property will not be interpreted as a normative property of the kind. As predicted, participants more often judged items lacking the property as having something wrong with them when the property was introduced via a generic statement than when it was introduced via a non-generic statement. These findings suggest that generic language may be used as a tool to form overarching hypotheses concerning novel kinds of objects and their properties.

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HW 611 - 2:30-2:45

Neural and Temperamental Correlates of Fearful Behavior in Children

Scott, Carlyn

Department of Psychology, Hunter College; City University of New York

Authors: Scott C J, DeCicco J M, Dennis T A

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Temperamentally fearful children show increased fear, shyness, and discomfort in unfamiliar situations. Temperamental fearfulness has been associated with a risk for developing anxiety disorders and some theories posit that only those fearful children who also show an attentional bias towards threat develop

anxiety. It is critical to identify measures of the attentional bias to threat. This study sought to determine if two neural measures of attention to threat (the late positive potential; LPP, and early posterior negativity; EPN) are associated with state (behavioral) and trait measures of temperamental fearfulness in typically-developing children. Results showed that, as predicted, larger LPP amplitudes to unpleasant versus neutral emotional pictures (the threat bias score) were associated with greater observed fearfulness. Contrary to hypotheses, the threat bias score was not correlated with measures of temperamental fearfulness. Additional analyzes will examine correlations between the EPN and state and trait measures of child fear.

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HW 610 - 2:30-2:45

**Development of object concepts through visually-evoked cortical activity and behavioral measures
Serrano, David**

Department of Psychology, New York University

Authors: Serrano D, Kiorpes Lynne

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The development of extrastriate visual areas is responsible for the perception of more integrative visual functions such as global motion and global form. In this study we track the developmental trajectory of global processing in non human primates (*Macaca nemestrina*) as a model for human visual development. While humans tend to begin processing images globally, rather than locally, by about the age of 5, monkeys tend to do so by about 6 months of age. However, infant monkey's neurons show mature response signals much earlier than behavioral measures would suggest, so the perceptual limitation seems to be coming from circuitry at some extrastriate level. Using electroencephalography to track visually evoked potentials, we show when and if neurons of higher level cortical populations respond to stimuli that require global processing and link this data to behavioral measures obtained from the same animals to track overall visual development in primates.

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HW 611 - 2:45-3:00

**Racial Discrimination's Effects on Psychological Distress and Substance Use
Silver, Jessica**

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Effects of racial discrimination on distress and substance use were examined across race and socio-economic status (SES) groups. Perceived discrimination and race-based rejection sensitivity (RBRS) differed across race, and were differentially related to distress. SES moderated effects of RBRS on distress, whereas race moderated RBRS effects on substance use.

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HW 610 - 3:15-4:00

**Relational Orientation towards Sexuality and Correlates of Condom Use in Young Heterosexual
College Students**

Vial, Andrea

Hunter College of the City University of New York

Authors: Andrea C. Vial, Warren A. Reich, Ph.D.

Unprotected sex puts college students at risk for negative consequences including STI/HIV infection and unwanted pregnancy. The social norm among college students seems to prescribe a relational orientation towards sexuality (ROS) for women— making sex acceptable only in terms of expressing or achieving

intimacy within certain prescribed relationships (i.e. committed relationships.) The sexual script consistent with ROS rarely includes condom negotiation— thus, endorsement of ROS would be related to inconsistent condom use. We report preliminary findings on heterosexual Hunter students who completed questionnaires on condom use, sexual history, condom-use self-efficacy and condom attitudes, and endorsement of ROS. Females and those never having had sex with a casual partner endorsed ROS significantly more than males and those reporting a history of sex with casual partners. However, endorsement of ROS was not linked to condom use. Significant correlates of condom use included positive attitudes towards condoms and high condom-use self-efficacy. "

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HW 611 - 4:15-4:45

Family Violence: An Examination of Same-Gender Partner Violence

Waddington, Tiffany

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Comparable incident rates between same-gender partner violence (SGPV) and heterosexual partner violence exist (Turell, 2000). However, culturally sensitive treatment programming for affected lesbian, gay, bisexual, and transgender (LGBT) persons has yet to be designed. The current study explored the relationship between LGBT's perceptions of SGPV, culturally sensitive treatment programming, and treatment seeking behavior. Participants (n = 34), with the mean age of 31.18 years, consisted of 12 males, 21 females, and 1 male to female transgender that self-identified their sexual orientation as lesbian 17.6%, gay 32.4%, bisexual 17.6%, and heterosexual 32.4%. In bivariate analyses, a significant relationship was found between participants' perceptions that treatment existed and intention to seek treatment. Further examination is warranted to fully understand SGPV, so that the need for culturally sensitive treatment programming will not remain unmet and affected family will receive sufficient care.

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HW 610 - 2:45-3:00

Future Oriented Rumination, Suicidal Ideation, and Suicide Attempts

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Hopelessness is an often-studied predictor of depression and suicidal behavior, but the thought processes leading to its development are not well understood. Previous research has suggests that individuals develop hopeless expectations through rumination about the future. The present study examined the relation between a recently developed measure of rumination about the future and suicidal ideation and behavior. College undergraduates (N = 211; 72.5% female), ages 18-50, (M = 20.15, SD = 4.49) pre-selected for either their high or low scores on a depression inventory completed a measure of future-oriented rumination and reported on their history of suicidal ideation and attempts. Rumination about the future was positively associated with depression symptoms and hopelessness. Suicidal ideation and attempts were associated with greater pessimistic rumination about the future and lower goal-oriented rumination. Implications for the development of hopelessness and risk for suicidal thoughts and behaviors will be discussed.

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HW 611 - 3:00-3:15

The Effects of Mold Exposure in Mice on Learning and Spatial Memory

Zakinaeiz, Yasmin

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Authors: Zakinaeiz Y, Harding C

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Humans are exposed to moldy homes and buildings everyday. Mold inhalation causes health problems, including respiratory, neurological and cognitive impairments. We hypothesized that *Stachybotrys*, a well-studied wet-building mold containing potent protein synthesis inhibitors, can lead to hippocampal damage and impairments in learning and spatial memory. We investigated this topic using C57BL/6 mice as models for neural and cognitive function in humans. The aim of the current study is to determine if *Stachybotrys* exposure affects spatial memory using the Morris water maze, a commonly used spatial learning test for rodents. Experimenters, blind to the mice's treatments, administered intact mold spores, extracted mold spores (toxins/proteins removed), or saline vehicle treatment three times a week for six weeks. Experimenters ran the Morris water maze test after three weeks of intranasal exposure to *Stachybotrys* while treatment continued. Results are pending.

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HW 611 - 3:30-4:00

Underwater songs- how intrinsic membrane properties and inhibitory neuromodulators control vocal neuron discharge in a teleost fish

Zee, Jade

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Most major vertebrate groups, including teleost fish, generate sound communication signals. The vocal pattern generator in teleosts provides the simplest preparation for investigating how the cellular properties of vocal neurons lead to social, context-dependent vocalizations. Whole-cell recordings in vitro of the Midshipman, *Porichthys notatus*, showed that vocal motoneurons (VMNs) fired 2-6 action potentials at a peak firing rate of 300 Hz that quickly attenuate in response to constant depolarization. When a suprathreshold, sinusoidal current is applied, VMNs can fire at this rate for at least 1 s. In contrast, non-vocal neurons fired non-adapting spikes with a peak firing rate of 140 Hz. Neurochemical studies showed abundant GABA-like immunoreactivity in fibers and terminals throughout the VMN. The results obtained support the hypothesis that VMNs have firing properties distinct from other motoneurons and that GABA plays a major inhibitory role in the vocal discharge and therefore of natural vocalizations.

~Panel Discussions~
The Society for the Psychological Study of Social Issues
(SPSSI-NY - www.SPSSI.org)
Room 509A Hunter West

1:30-2:20: SPSSI @ 75: A history of psychology and social issues in New York City

Chair: **Maureen O'Connor** (CUNY Graduate Center & President of SPSSI).

Mark E. Mattson, Harold Takooshian (Fordham). Writing a history of our own psychology department: Why and how?

Harold Takooshian (Fordham). The SPSSI-NY regional group: The first 25 years.

Edwin P. Hollander (CUNY), SPSSI in New York City: The early years

Discussants: Florence L. Denmark (Pace), **Henry Solomon** (Marymount Manhattan).

Since its founding on 1 September 1936, SPSSI has had remarkably strong connections with New York—its unique people (like Otto Klineberg, Kenneth Clark), schools (like CUNY, NYU, Columbia), institutions (like the UN), places (like Ellis Island), events (like 9-11). As part of the SPSSI-NY history project, this panel examines past connections and future documentation. It debuts a new SPSSI-NY DVD and kit that faculty can use to write a history of their own psychology program.

2:30 to 3:20: How good is this school? : A psychometric assessment of students' attitudes

Chair: **Jazmen C. Benitez** (Fordham)

Daniela Grafman (Fordham). Seeking 360-degree feedback from university students: Why and how?

Pinar Duru, Molly Blake (Fordham). How do law students view their school?

Jamie Saltamachia, Greg Pfeiffer (Fordham). How do pre-med students view their school?

Luca Vescovi (Fordham). Commuter v dormitory students' attitudes toward their school.

Discussant: **Robert W. Rieber** (Fordham).

How good is our college? In this age of educational outcomes assessment, is it overdue for universities to seek 360-degree feedback from their students, as outstanding corporations now seek from their clients and employees?

3:30-4:20: Promoting student excellence through Psi Chi

Chair: **Mercedes A. McCormick** (Pace, and Psi Chi Eastern Vice President-Elect).

Vincent Prohaska (Lehman). Getting members and officers involved

Harold Takooshian (Fordham). Coping with student activities

Alex Y. Voronov (State Academic Univ of Humanities, Russia), How can Psi Chi impact Russia?

Discussants: **Florence L. Denmark** (Pace), **Jason R. Young** (Hunter).

How can Psi Chi better promote excellence among its members and others? Experts on the newly-formed Psi Chi "Committee to Advance Student Excellence" (CASE) lead a conversation hour on "best practices" for Psi Chi chapters and individual members.

~N.E.U.R.O.N. Symposia and Workshops~

“Brain Primer Workshop”

Angela M. Seliga, Ph.D.

11:15am-noon – room 714 Hunter West

This workshop is designed for emerging neuroscientists (high school trainees and their teachers) and will run concurrent with the initial part of the poster session. Angela Seliga, the Physiology Laboratory Coordinator at Boston University, will provide an overview about the brain, which will include interesting neuroscience facts, basic neuroanatomy, and how familiar legal and illegal drugs alter neuronal function. The topic of this year’s keynote address, sex differences, will also be highlighted to provide an atmosphere of inquiry for the trainees to gain additional insight into this area of neuroscience research. Upon conclusion of the workshop, trainees will receive a guided tour of the poster session to facilitate networking opportunities as well as enhance comprehension of the original research presented at NEURON.

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“Current Research on Neurodevelopmental Disorders”

Anthony Santarelli

1:30-2:45pm -- room 714 Hunter West

Neurodevelopmental disorders encompasses an array of disorders whereby central nervous system development is compromised with detrimental results observed later in development, be it childhood or in adulthood. These disorders, which include autism spectrum disorders (ASD) and schizophrenia, are becoming increasingly common in society, yet little is known about how perturbing factors culminate into disorder phenotypes. This symposium will discuss current research being done on developmental disorders and their implications for diagnosis and treatment. Anthony Santarelli will host the symposium and present on “The Effect of Clozapine Administration during Adolescence on an Animal Model of Schizophrenia”. He will be joined by Danielle Llana presenting “Behavioral and Neuroendocrine Anomalies in a Potential Mouse Model of Autism Spectrum Disorder”, Eniana Agolli presenting “Predictors of Cognitive Rehabilitation Success on a Simultaneous Multiple Attention Task in people with Schizophrenia”, and Amelia Lewis will discuss “The Effects of Exercise on the Success of Cognitive Rehabilitation in Schizophrenia”. Together these talks will synthesize information on various neurodevelopmental disorders in both human and animal research.

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“Continuing Education after Your Bachelor’s Degree”

Daniel Dacosta and Danielle Osborne

1:00-1:45PM -- 8th Floor Hunter West

Students with an interest in neuroscience, considering advanced graduate training after their Bachelor’s Degree, may feel indecisive about what type of graduate training to pursue. Whether you are ambiguous about your educational goals, or know exactly which route you want to take and need some guidance, this workshop will provide you with the necessary information. This panel will include Danielle Osborne, a graduate student and be led by Daniel Dacosta, a medical student. Topics will include the application process, standardized exams, GPA, research experience, extracurricular activities, undergraduate major, interviews, letters of recommendation, personal statement, and experiences with graduate and medical

school. Personal perspectives will be shared on how to maximize students' chances of gaining acceptance to the program of your choice.

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“Outreach on Neuroscience”

Ruth Russell, Girija Bhonsle, Archana Narain, and Angela Seliga

2:00-2:45PM -- 8th Floor Hunter West

Promoting neuroscience outreach is a consistent goal of NEURON, as such, two outreach veterans will be providing their input and guidance in how to promote outreach to younger trainees. Whether an educator or trainee, advocating for and demonstrating outreach to trainees is a vital part of career advancement and/or enhancement of academic training. These workshops will highlight successes in outreach to high school populations and how these methods can be applied to other interested parties who seek to enhance science, technology, engineering and mathematics education to students. First, Girija Bhonsle, Archana Narain, and Angela Seliga will present “Sensory Systems and Memory Circuits: An Outreach Experience for Everyone”. This workshop will outline the ways in which high school students and their teachers can become more familiar with particular topics in neuroscience. They will further outline the concept, development, and implementation of an outreach program specifically designed to provide an interactive introduction to sensation and memory. Second, Ruth Russell will present on “Outreach: Public Awareness in Neuroscience”. As an educator with Questar III, Ruth teaches New Visions: Scientific Research & World Health and hosts Brain Awareness Week activities. She will discuss her efforts to promote outreach and diversity in the sciences, how to enact outreach in your own area, and different programs that are available to assist students. This will conclude with her leading a small group of interested students to the Museum of Natural History for the “Inside Your Brain” exhibit, as a way of demonstrating how outreach can occur in neuroscience.

~ Cognitive Mechanisms in Stress-Related States and Disorders Symposium~

1:30-2:45PM – room 714 Hunter West

Cognitive processes such as perceptions of control and sensitivity to affect have been associated with stress-related states and disorders. We used a variety of methods from cognitive science, vision science, and affective neuroscience to investigate some of the mechanisms that might drive and maintain several forms of stress. In the first two talks we approach the potential role of perceived control in trauma-related symptoms from two angles; post-trauma intervention and posttraumatic cognitions. In the third talk we address the related question of how perceived control might be associated with anxiety in the context of socioeconomic status. In the fourth talk we discuss sensitivity to affect in people with generalized anxiety disorder, and in the last talk we consider the potential moderating role of gender in affective processing across the lifespan.

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1) Perceived Control and PTSD Prevention Video Intervention for Sexual Assault Victims

Carey S. Pulverman and Mariann R. Weierich

1:30-1:45PM

Sexual assault is a potentially traumatic event that often leads to the development of posttraumatic stress disorder. We examined the impact of an intervention video for sexual assault victims on perceptions of environmental control. Prior research found the post-assault psychoeducational video to reduce current distress among victims in the ER and was associated with a reduction in the incidence of PTSD in some victims. One mechanism through which the video may function is by improving perceptions of environmental control among the victims. Perceiving higher control should reduce the victim's feelings of helplessness, which is associated with PTSD. We examined the effect of the video on perceptions of control among participants who had never experienced a sexual assault, but who read a prime scenario about a sexual assault. We hypothesized that the participants who viewed the intervention video would exhibit higher perceived control than those who viewed a neutral video.

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2) Empathy and Affect Sensitivity in People with Generalized Anxiety Disorder

Samuel E. Cooper and Mariann R. Weierich

1:45-2:00PM

People with empathy deficits have difficulty interpreting the emotions and intentions of others, which can impair social functioning. Affect sensitivity, or the degree to which a person recognizes and decodes affective information such as facial expressions, is an empathy component that might underlie impaired social functioning. Generalized anxiety disorder (GAD) a chronic form of anxiety characterized by pervasive worry, is also associated with social difficulties. GAD-specific worry might impair social functioning by reducing affect sensitivity. We hypothesized that people with GAD would display significantly lower affect sensitivity than trait-anxious and non-anxious people. Twenty adults with GAD, 20 trait-anxious adults, and 20 non-anxious controls completed a computerized affect sensitivity task and self-report measures of anxiety and empathy. Contrary to our hypotheses, preliminary analyses did not suggest people with GAD display lower affect sensitivity.

3) The Influence of Posttraumatic Cognitions on PTSD Symptoms in Survivors of Sexual Trauma

Brian R. Van Buren and Mariann R. Weierich

2:00-2:15PM

Some post-trauma cognitions endorsed by sexual assault survivors can influence the subsequent development of posttraumatic stress disorder (PTSD). For example, endorsing negative self-appraisals is associated with increased risk for PTSD in sexual assault survivors. On the other hand, greater perceptions of control have been associated with lower levels of symptom severity following sexual trauma. We examined posttraumatic cognitions, perceived control, and PTSD symptoms in participants who have experienced unwanted sexual contact in the past. Participants completed a behavioral task that measured perceived control, and questionnaires that assessed posttraumatic cognitions and PTSD symptoms. We hypothesized that stronger negative self-appraisals and lower perceived control would each be associated with greater PTSD symptom severity. Contrary to our hypotheses, preliminary analyses suggest that perceived control was not associated with PTSD symptoms. However negative self-appraisals did predict PTSD symptoms, although trauma-related self-blame did not. We will discuss clinical implications for sexual assault survivors.

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4) Income and Perception of Control

Ileana M. Moses-Logan, Anna Marganska, and Mariann R. Weierich

2:15-2:30PM

Lower socio-economic position is related to more mental health problems and life stressors. People with reduced sense of control tend to focus on details, while those with elevated sense of control tend to adopt the “big picture” view. Higher sense of control may be facilitated by higher economic status. We hypothesized that people with individual and household higher income would show higher levels of control. Sixty-nine participants completed a computerized behavioral task and a battery of questionnaires designed to assess perception of control, depression, anxiety, and income. Results show a positive correlation between income and perception of control. The results of linear regression show that, after controlling for depression and anxiety, income no longer predicts perception of control. Considering the relation between socio-economic status and anxiety and depression, we conclude that socio-economic status may facilitate control, but depression and anxiety, rather than income, is the predictor of control.

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5) Age and Sex-related Differences in Amygdala Response to Affective Stimuli

**Stephanie Soto, Katie Hodges, Nicole DaSilva, Lisa Feldman Barrett,
and Mariann R. Weierich**

2:30-2:45PM

The “positivity effect” holds that older adults (versus younger adults) are affected less by negative than positive information. Sex differences in the neural mechanisms underlying the positivity effect have been largely ignored despite findings demonstrating sex differences in amygdala reactivity. We examined age- and sex-related differences in amygdala reactivity to valenced (positive, negative, neutral) stimuli. We hypothesized that younger adults would show greater activation than older adults to negative stimuli, with greater activation in women. Twenty older (10 women; ages 65-85) and 15 young adults (7 women; ages 18-30) completed a covert disengagement task during fMRI. Although there were no sex differences in amygdala response to negative or positive stimuli, women showed greater response to neutral stimuli, suggesting greater sensitivity to affectively ambiguous, and therefore potentially threatening, information. Older women also showed decreased activation to negative stimuli compared to younger women, supporting the age-related positivity effect in women.

Suzannah Bliss Tieman Award

8th Floor HW Dining Room 3:00 to 3:30

In memory of Dr. Suzannah Bliss Tieman, an extraordinary neuroscientist, teacher, colleague, wife, and friend, N.E.U.R.O.N. will be presenting research awards to students who exhibit high quality presentations of their projects.

Dr. Tieman had very specific ideas about how research should be presented so that an audience could most readily take in and consolidate the 'take-home' message. The criteria that are used to judge presentations are those that Dr. Tieman valued most and include:

1. Format and organization of the presentation
2. Use of color, font, figures, pictures
3. Clear, succinct methodology
4. Ability to thoughtfully answer questions
5. Enthusiasm about project

Posters are judged based on the above criteria by former students and colleagues of Dr. Su Tieman, as well as other members of the NEURON Steering and/or Local Organizing Committee, and former recipients of the prize.

Presenters must be present at the Award Ceremony to be eligible to win.

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The Life of Suzannah Bliss Tieman

Su was a Psychology major at Cornell University, where she worked with Julian Hochberg on the perception of faces. In 1965, she began graduate school at MIT in what is now the Neuroscience department, studying the effects of experience on the development of visual control of motor behavior with Alan Hein. After a year as a graduate student, she decided to take a break and became a technician in Hein's lab. In 1967, she moved to Stanford, California and became a technician, splitting her time between working with Charles Hamilton on interhemispheric transfer in "split-brain" monkeys and Leo Ganz on visual deprivation in cats.

In 1969, Su wanted more control of her work and applied for the Stanford Psychology Department's graduate program just five days before registration. She was accepted and, in 1974, she completed her thesis which addressed the interhemispheric transfer of problems involving expansion and contraction patterns in monkeys. She then began a NSF postdoctoral fellowship with H.J. Ralston in the Anatomy Department at the University of California at San Francisco. Her project was an attempt to identify, at the electron microscopic level, cellular structures that were affected by monocular deprivation. She spent the next four years becoming a "neuroanatomist".

From 1977 until her death in October 2007, Su Tieman was a Senior Research Associate in the Neurobiology Research Center, a Research Professor in Biological Sciences, and an Adjunct Professor in the School of Public Health at the University at Albany (SUNY). Her research had three major foci, which included the effects of visual deprivation on synaptic organization, the effects of development and visual deprivation on the dendrites of cells in the visual pathway, and the effects of visual deprivation and deafferentation on the expression of possible neurotransmitters, most notably N-acetyl-aspartyl-glutamate. These three interacting foci led to a series of behavioral, physiological and anatomical experiments that occupied her for 30 years.

Su would not want the description to stop there, because she also loved teaching and interacting with students. In addition to seminars on vision and development, she taught three basic courses: Neuroanatomy, Sex, and Survival skills. For many years she taught a very comprehensive course on "Neuroanatomical Research Techniques". Graduate students sweated formalin after taking this course. Throughout her years as a professor, she was often contacted by former students for permission to pass

her lecture notes and lab hand-outs on to others. These materials comprised over 250 carefully prepared pages. In 2005, Su taught this course and meticulously converted nearly 2000 2x2 lecture slides into PowerPoint format, despite knowing that the class of only five would likely be the last she would teach in this course. She could never stand to do a slipshod job, no matter what the cost to her. Her Biology of Sex class was primarily for non-majors. She considered it an opportunity to trick non-biology students into learning some biology. Her favorite course evaluation came from an English major who said: "I really enjoyed it; thank you for not dumbing it down; I had expected a Mickey." You could call it a lot of things, but "Mickey Mouse" was not one of them. Finally, Su also influenced many years of graduate students by teaching a yearlong course on ethics and survival skills in science. Students from all areas of the life sciences took this course and hopefully absorbed some of Su's ideas about ethics, writing, surviving and generally getting along in their careers.

Su fought arthritis for 40 years. It sapped her strength and stamina and it left her with hands that could not open jars or grasp fine objects. In the end, its effects killed her. But it never sapped her spirit or made her a complainer. She never gave in and never wanted to be defined by her problems: she focused on what she could do, not on what she couldn't.

Su will be missed, but her ideas about science, pedagogy, and life will live on in the hearts of the many lives that she touched. Su was dedicated to science, her students, her family and friends, and lived life to the fullest. We hope to recognize and remember her extraordinary life and contributions by bestowing upon select individuals The Suzannah Bliss Tieman Research Award(s) at each NEURON conference

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Map of the Hunter College Campus
All events take place in the West Building on the 5th, 6th, 7th and 8th floors



Handicap Access Available to All Floors

**Go to the Faculty Dining Room located on the 8th Floor Hunter West for:
Registration, Breakfast, Lunch, Closing Reception**

**Poster Presentations are on the 7th Floor
West Bridge (the walkway that crosses Lexington Avenue)**



NOTES: