

Medical Students and the Dying Patient: Reflections on Advanced Illness and Palliative Care

GRAND ROUNDS

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LAUREN JECK, MS2, KEN BRUMMEL-SMITH, MD, SUZANNE BAKER, MA

FLORIDA STATE UNIVERSITY COLLEGE OF MEDICINE

Medical School

“Throughout medical school, I’ve been taught how to keep a patient alive. It’s a difficult thing to reverse that and learn how to allow a patient to die” –Student 61

Background

100% of patients die

2014 Institute of Medicine Report- Dying in America

- Americans unhappy with end of life care
- High cost, low quality
- Medical student training needed

Setting

4 weeks in Primary Care Geriatrics (180 hours)

Follow 4-6 patients as continuously as possible for 1 month

Clerkship Competencies:

- interview patients/caregivers/families
- perform physical exams & geriatric assessments
- assess transitions of care
- evaluate medical regimen
- elicit patient & family care goals

Assignment

Submit a 'reflections at the end of life' entry to Bb. See linked example.

Your reflection should include consideration of the following issues:

- **your personal knowledge of the patient** evidenced by **the patient summary**
- **patient *and* family goals**
- **summary of the plan of care**
- **assessment of efficacy of the existing care plan**
- ***your* recommendations for proposed changes**, alterations, modifications or enhancements of the care plan
- **critique of the healthcare delivery system** re: this particular patient
- **description of any ethical issues** in this particular patient situation

Honors

1. Reflection about self re: “issues” with palliative care, end of life, hospice
2. Includes reflections on their (personal) role in the future with patients with advanced illness

Subjects

- 82 fourth year medical students
- Completed their geriatric clerkship in years 2012-2015
- Consented to allow their assignment to be used for research

Purpose

- 1) Characterize the educational setting in which the student was participating in 'end of life care' for at least one patient on a continuous basis
- 2) Evaluate the value of the experience from the medical student's perspective and how it enhanced their medical education.

Methods

1. Students receive email, must opt in to participate in research
2. Only task for the student is to allow their assignment to be used
3. “End of Life Reflection” downloaded from BlackBoard & all identifying information removed
4. 82 assignments, 3-4 page reflection per student, 268 pages of data
5. Read through all 82 entries
6. Code for qualitative analysis created
7. Qualitative analysis using **IBM SPSS Statistics 22**
8. Identify themes

Methods

- ✓ Patient's Age
- ✓ Patient's Gender
- ✓ Place of care (Home, Hospital, SNF, ALF, Hospice House)
- ✓ Number of Transitions of Care
- ✓ Family support
- ✓ Use of Hospice Services
- ✓ Death of Patient
- ✓ Use of Feeding Tube
- ✓ Patient Advanced Planning (living will, health care surrogate)
- ✓ Dementia
- ✓ Trouble Communicating
- ✓ DNR
- ✓ Goals of Care
- ✓ Source of goals
- ✓ Treatment, interventions
- ✓ Conflicts?

Subj	Age	pSex	Ssex	Young	Young Ol	Old	Old Old	EOLC	Student Personal reflecton	Family support	patient death	Feeding tube	Home	Hospital	SNF	ALF	Hospice House	Number of Sites	Hospice Care	Hospice Exclusive Facility	Hospice Extension	Known Wishes	(family)	Surrogat	DPOA	Advanced Directives	Living Will	Five Wishes	DNR	Dementia	trouble communi cating	D	
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2	54	F	F	1	0	0	0	1	0	1	0	0	0	1	0	0	1	2	1	1	0	1	1	0	0	0	0	0	0	0	0		
3	66	M	F	0	1	0	0	1	0	1	0	0	1	1	0	0	0	2	0	0	0	1	1	0	0	0	0	0	1	0	0		
4	63	M	F	1	0	0	0	1	1	1	0	0	0	0	0	0	1	1	1	0	1	1	0	1	0	1	0	1	0	0			
5	69	M	M	0	1	0	0	1	0	1	0	0	1	1	0	0	1	3	1	1	0	1	1	1	0	0	1	0	1	1			
6	77	F	F	0	0	1	0	1	1	1	0	0	1	0	0	0	1	2	1	1	1	1	1	0	0	0	0	0	0	0	1		
7	51	F	M	1	0	0	0	1	0	1	0	0	0	1	1	0	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0		
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17	88	F	F	0	0	0	1	1	1	1	1	0	0	1	1	0	0	2	0	0	0	0	1	1	0	0	0	0	1	1	0	0	
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33	91	F	M	0	0	0	1	1	1	1	0	0	1	0	0	1	0	2	0	0	0	0	1	1	0	1	0	0	0	1	1	0	
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35	99	F	M	0	0	0	1	1	0	1	0	0	0	1	1	0	0	3	0	0	0	0	1	1	1	0	0	1	0	1	0	0	
36	49	F	M	1	0	0	0	1	1	1	0	0	1	0	0	0	1	2	1	1	0	1	1	1	0	0	1	0	0	1	0	0	
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38	87	F	F	0	0	0	1	1	1	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
39	97	F	M	0	0	0	1	1	1	1	0	0	0	0	0	0	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0
41	86	F	M	0	0	0	1	1	1	1	0	0	1	1	0	0	0	2	1	0	1	1	1	0	0	1	1	0	0	0	0	0	0
42	65	F	F	0	1	0	0	1	1	1	0	0	0	1	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0
43	64	M	F	1	0	0	0	1	0	1	1	1	0	1	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0
44	81	F	F	0	0	1	0	1	0	1	0	0	1	1	1	0	0	3	1	0	1	1	1	1	0	0	0	0	1	0	0	0	0
45	98	M	M	0	0	0	1	1	1	1	0	0	0	0	1	0	0	1	1	0	1	1	1	0	1	0	1	0	1	1	0	0	0
46	88	M	M	0	0	0	1	1	1	1	0	0	1	0	0	0	1	2	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0

Results: Patients

83 patients

Age 35-106, average 78.5

Half receiving hospice services

7 patients died during clerkship

44% patients did not have any advanced planning documents (Living Will, POA)

50% patients had impaired communication (physical, cognitive)

40% of interviews were conducted with family member instead of patient

20% had a conflict regarding their end of life care

Results: Goals of Care

#1 Pain Management

#2 Be with Family

#3 Go home

Student Experience

“I’ve actually solidified my desire to have as few interventions as possible if my previous quality of life is not readily attainable.”

“I will admit that before my third year of medical school, I knew very little about what was available within Hospice. I thought it was an immediate sign of defeat.”

“As a future uro-oncologist, I will have patients that have metastatic bladder, prostate and renal carcinoma. Reflecting back to this clerkship will allow me to appreciate the multidisciplinary approach that is needed for palliative care and end of life issues”

“The part of the process that I find most difficult is when a surrogate is forced to make a decision with little or no input from the patient” ... “I couldn’t imagine leaving my family wondering if they should feel guilty or if they made the right decision in my eyes.”

“This experience has instilled in me the importance of dying with dignity and with sanity”

Student Experience

“Being able to tactfully tell family that we have exhausted our options for treatment sort of goes against everything we believe in as doctors, but it is actually a very important skill to be able to recognize when this has occurred.”

“The experience of following a patient at the end of life has been a very enlightening and educational one.”

“I learned that end of life care isn’t one size fits all.”

“Having this experience has definitely made me realize how important it is for patients to have advance directives and health care surrogates, it is definitely a conversation I will be having with all of my future patients so that they do not end up like this patient.”

“I want to use my experiences to improve the quality of care that my dying patients will receive. I have set one main goal for myself: **to make every patient feel like a valued human being while under my care.**”

“No matter what, we can always do something for our patients”

Conclusion

What's Next?

Thank you FSU Department of Geriatrics & the Charles R. Mathews Geriatrics Education and Research Scholarship Committee

Thank you Dr. Ken Brummel-Smith & Suzanne Baker

HIV Complacency and Pre-Exposure Prophylaxis and Corresponding HIV Complacency

Florida State University College of Medicine

Faculty Mentor: Jonathan Appelbaum

By Dwight Kemp

HIV Incidence in North America

- 50,000 new HIV infections occur annually in the US
- Men who have sex with men (MSM) carry the heaviest burden of new infections in this country
 - Steadily increasing since the early 1990s
 - In 2010, 63% of all newly infected individuals were MSM
- Young, minority MSM have been severely impacted

HIV Infection Among Young, Minority MSM

- In 2010, Black MSM ages 13-29 represented 50% of HIV infections in their age group
 - Increased by 48% from 2006-2009
- The HIV incidence of Hispanic/Latino MSM ages 13-29 increased by 36% from 2009-2010

HIV/AIDS Complacency Literature

- HIV/AIDS complacency
 - Some young MSM no longer perceive HIV/AIDS as a major health concern because of advances in HIV treatment
- Data show that those with HIV/AIDS complacency
 - Engage in more sexual risk behavior
 - Become HIV positive at higher rates
- Young black and Hispanic/Latino MSM are more likely to exhibit HIV/AIDS complacency than white MSM and become HIV positive

Pre-exposure Prophylaxis (PrEP)

- New HIV prevention method
 - HIV-negative persons take tenofovir disoproxil fumarate and emtricitabine (Tuvada)
 - Safer sex practices
 - Greater than 90% efficacy
- As of July 2014, the World Health Organization endorsed the use of PrEP in MSM and other “key populations”
- Recent research indicates that those on PrEP have fewer sexual partners and engage in less risky sexual behavior

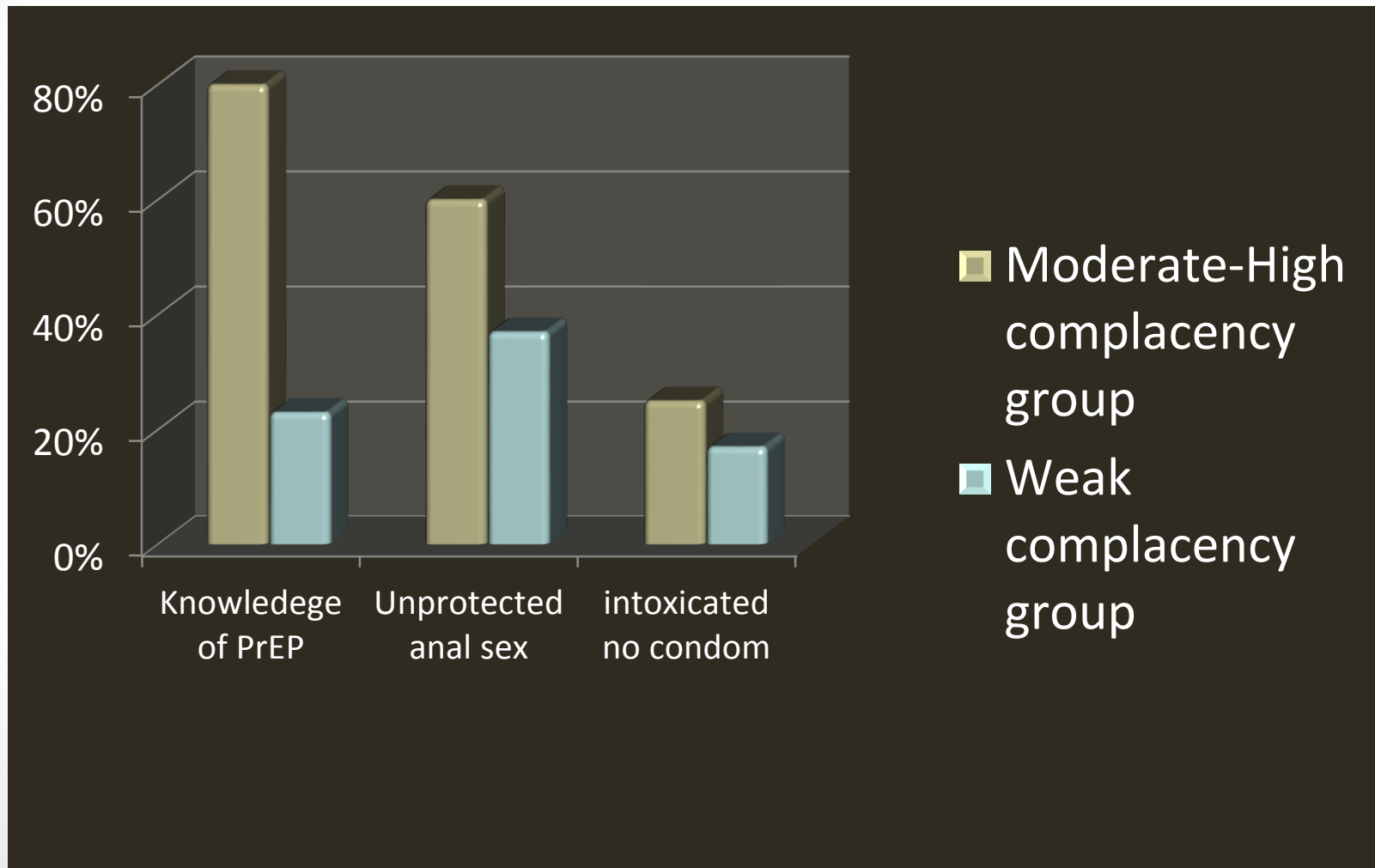
Study Purpose

- As with HIV treatment, misperceptions about the efficacy of PrEP may result in HIV/AIDS complacency and associated sexual risk behavior
- This pilot study evaluates knowledge, attitudes and perceptions about PrEP to assess HIV/AIDS complacency among young, minority MSM age 18-34

Methods

- Qualitative, cross-sectional survey analysis
- Evaluates HIV/AIDS complacency in association with knowledge of PrEP and its correlation to sexual risk behavior:
 - 35 young, minority MSM
 - Aged 18-34
 - Varying HIV statuses

Results



Discussion

- Moderate-high HIV/AIDS complacency are
 - More likely to have prior knowledge of PrEP
 - Participate in unprotected anal sex
 - Engage in unprotected sex while intoxicated by drugs or alcohol
- Further research is required as the data is not powered to make any generalized assertions

Future Research

- Increase survey response and sample size
- iPrEP recruitment strategy
 - Survey marketing utilizing population-specific social media outlets
 - BGCLive.com and Adam4adam.com
- New marketing materials are currently in development
- Recruiting a statistician to assist with data analysis

Citations

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- Kelly, J. A., Hoffman, R. G., Rompa, D., & Gray, M. (1998). Protease inhibitor combination therapies and perceptions of gay men regarding AIDS severity and the need to maintain safer sex. *AIDS*, 12(10), F91-95.
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- <http://www.who.int/mediacentre/news/releases/2014/key-populations-to-hiv/en/>

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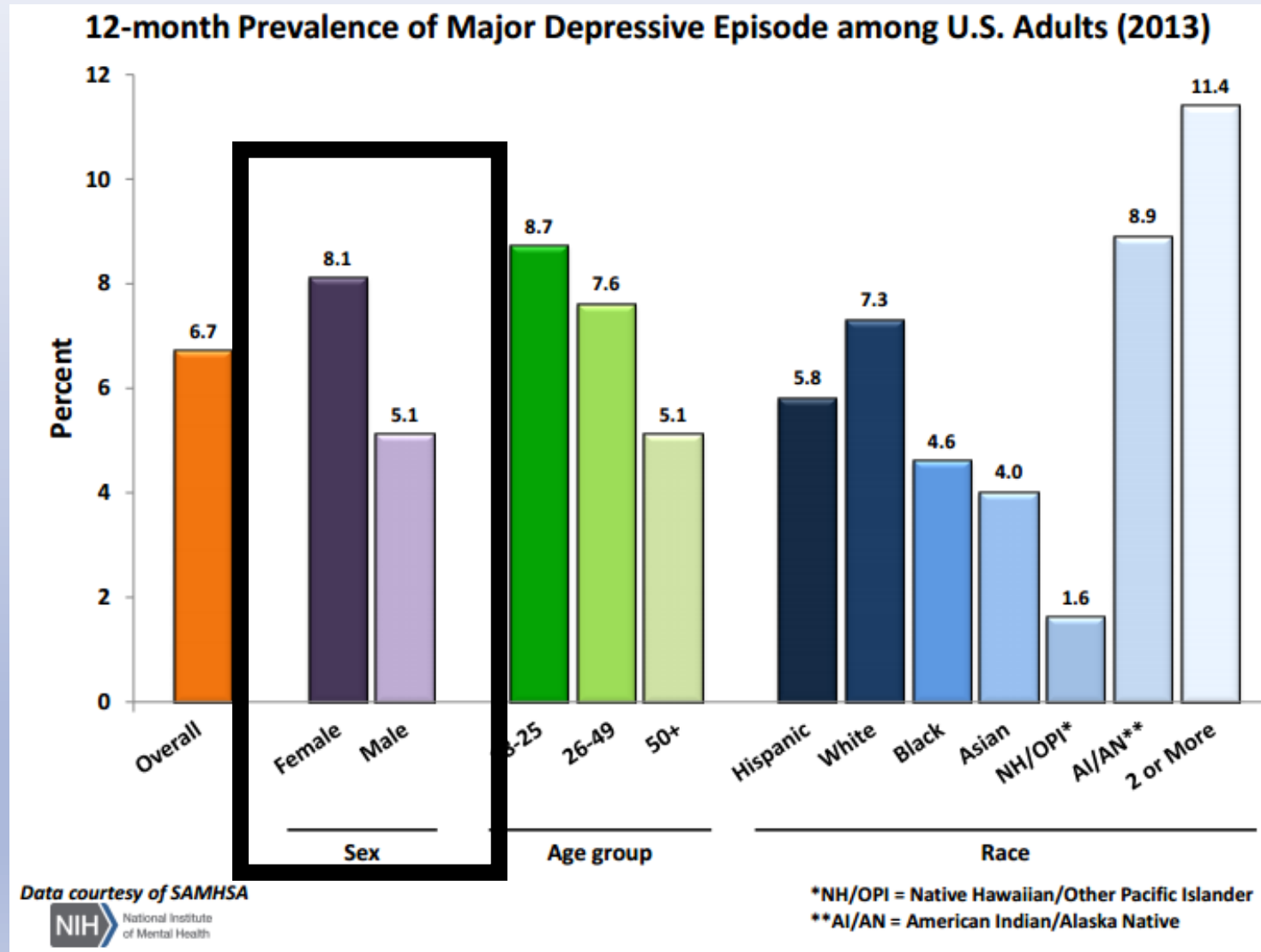
Ovarian Hormones Influence Antidepressant Response to Ketamine

Malav Patel FSU COM Class of 2018,
Kabbaj Lab

What is Depression?

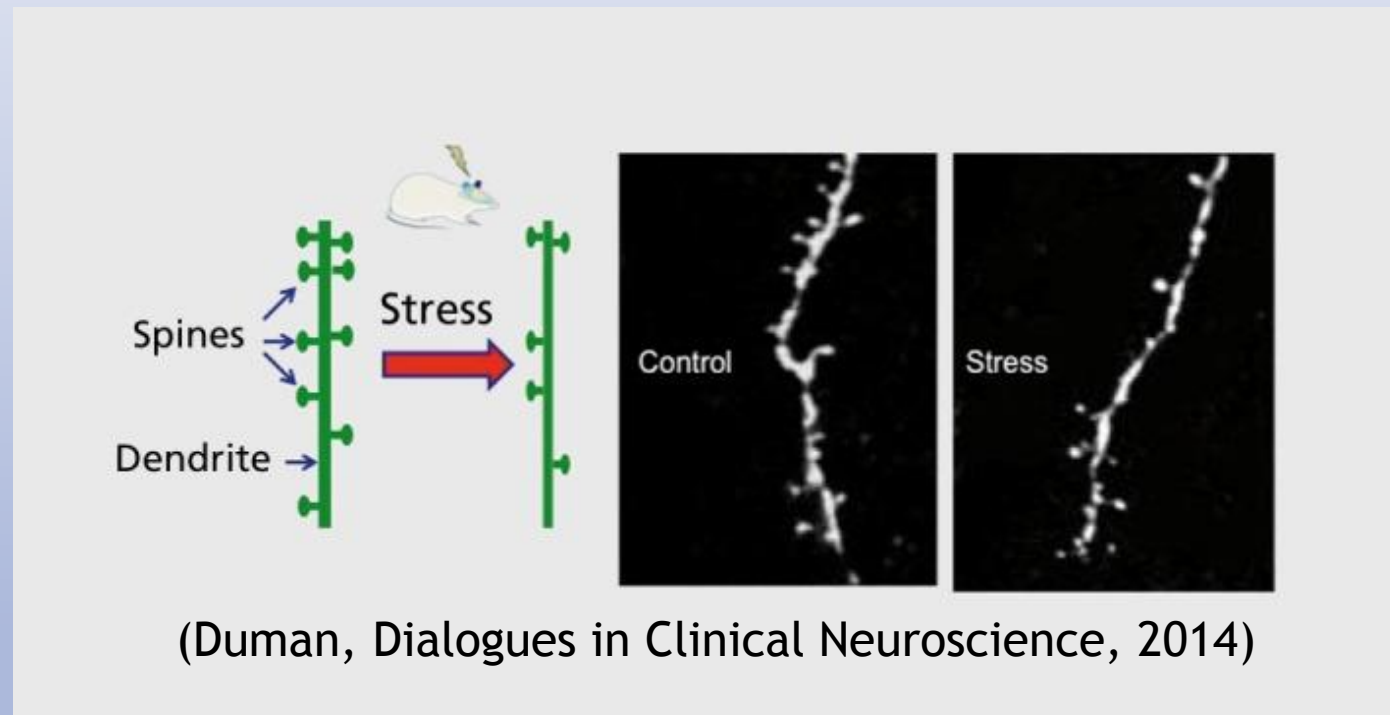
- Depression is defined as:
 - A period of two weeks or longer during which there is either depressed mood or loss of interest or pleasure
 - Plus, at least four other symptoms that reflect a change in functioning, such as problems with sleep, eating, energy, concentration, and self-image. (**DSM V**)

Gender Differences in Depression CDC 2013



How Does Depression Change the Brain?

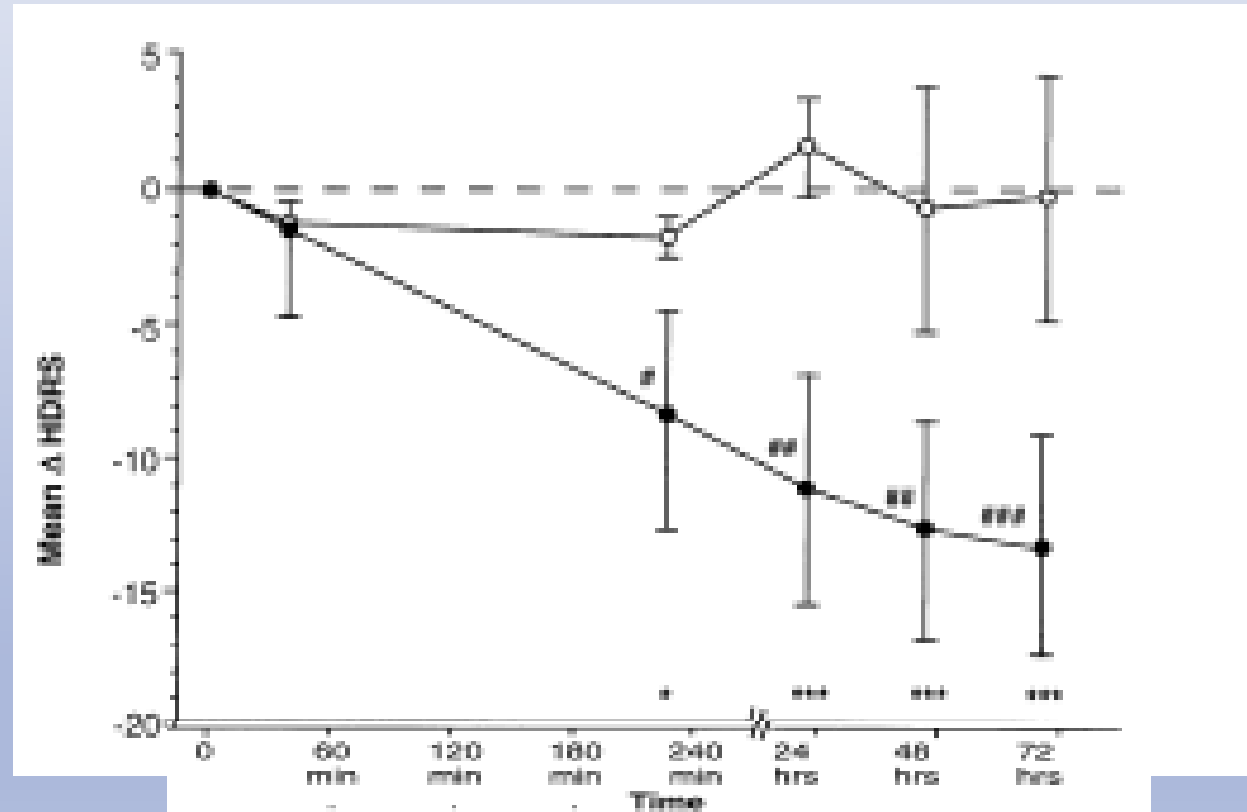
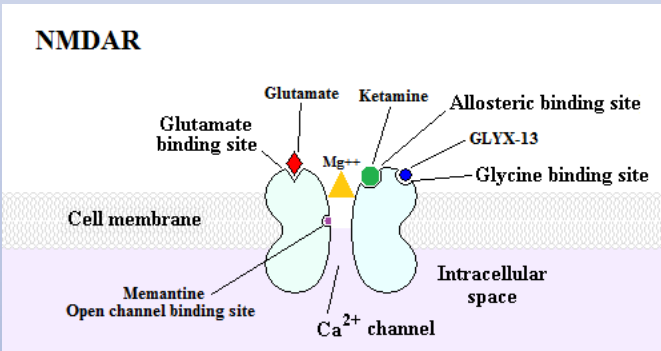
- Depression can induce neuronal atrophy in cortical and limbic brain regions, and reduction in spine density (Duman, Dialogues in Clinical Neuroscience, 2014)
 - These areas are implicated in regulation of mood
 - Decreased expression of BDNF and other major growth factors



Current Treatment Strategies and Gaps

- Themes and challenges of current strategies to treat depression (Duval et al., 2006)
 - Treatment focuses on the use of antidepressant medication, psychotherapy, and electroconvulsive therapy
 - Determining the correct balance of these therapies can take months to years
 - This poses a strong challenge to those who possess urgent aspects of the disorder:
 - suicidal ideation
 - medication resistance

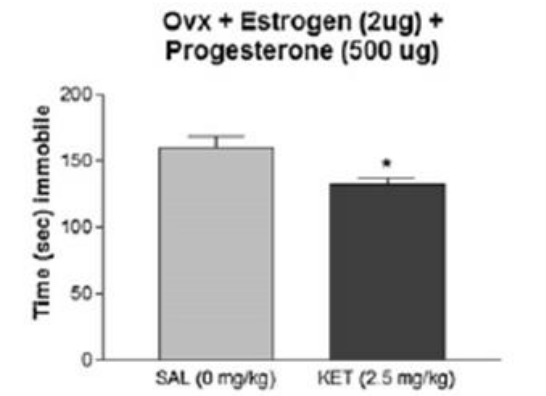
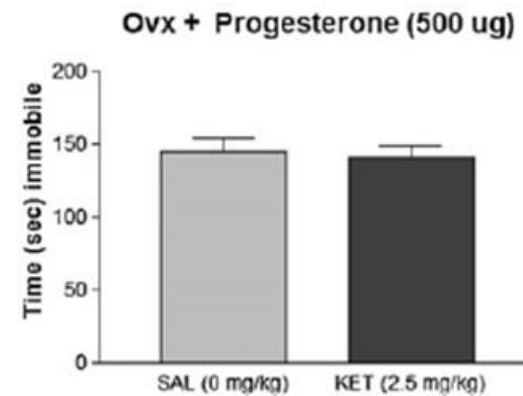
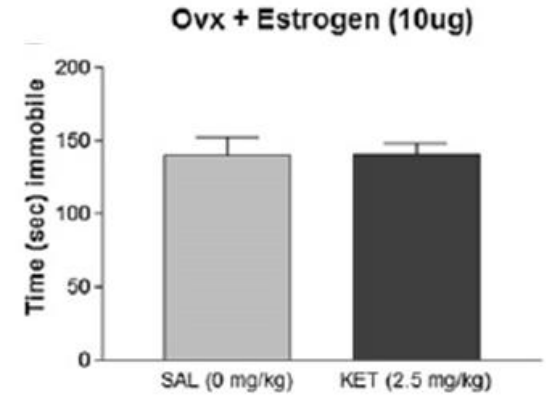
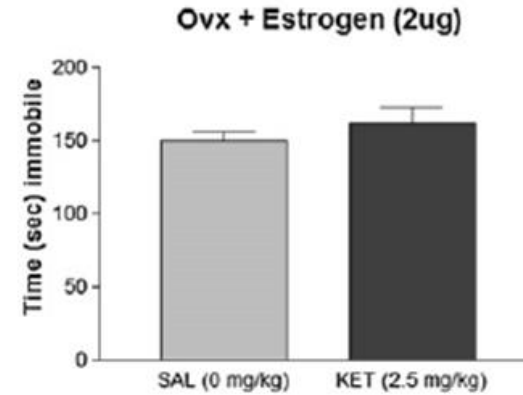
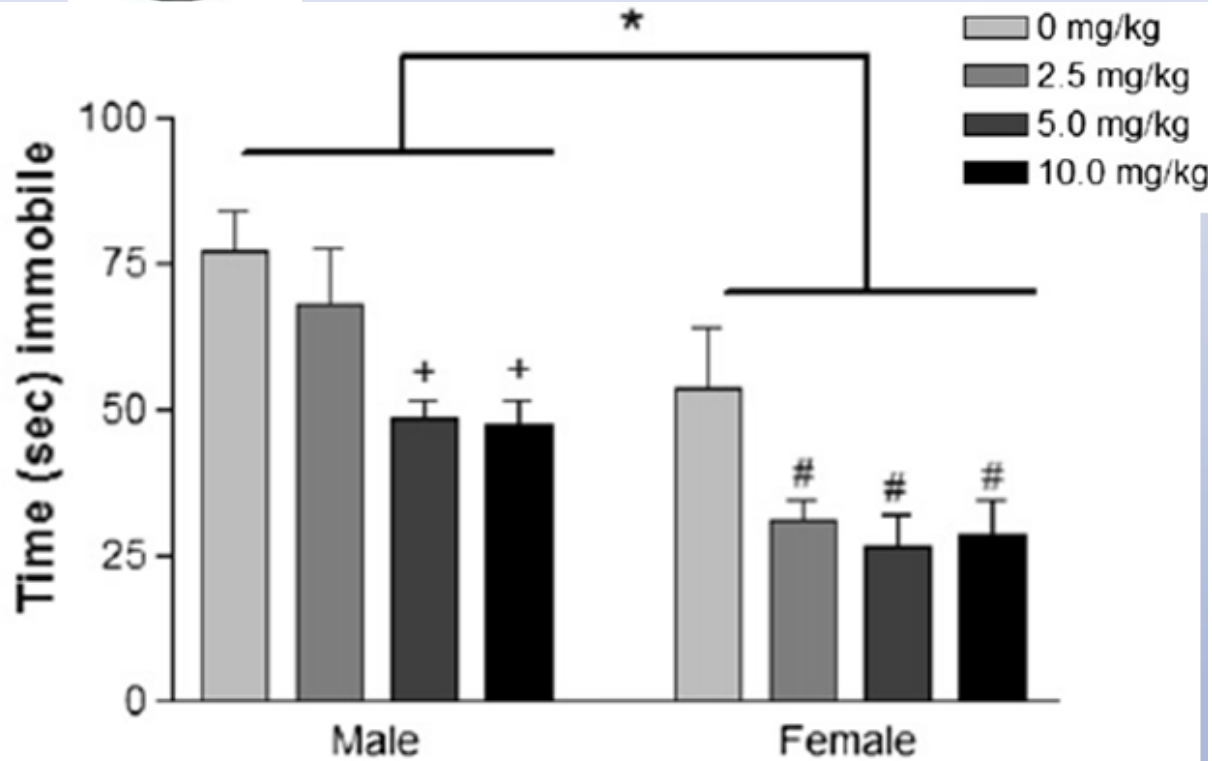
Ketamine - A noncompetitive NMDA antagonist is a potential solution to this treatment gap



(Berman, Society of Biological Psychiatry, 2000)



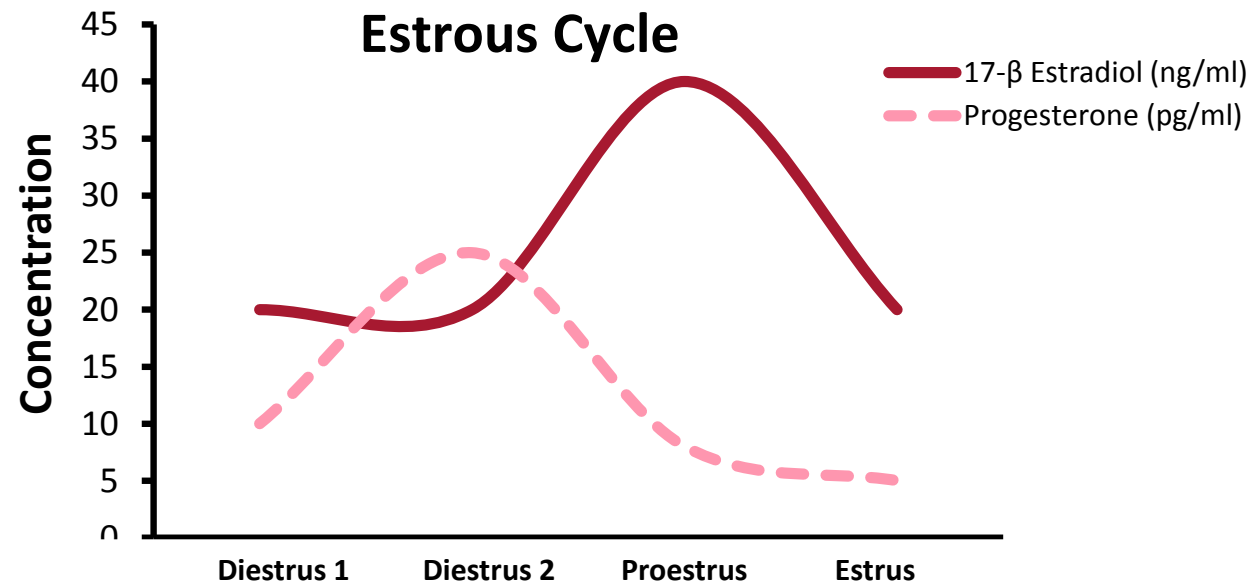
Gonadal hormones (P4 & E2) make female rats more sensitive to ketamine than males



(Carrier & Kabbaj, Neuropharmacology, 2013)

Sex Differences in Ketamine as a Fast Acting Antidepressant in Mice? - Study Goals

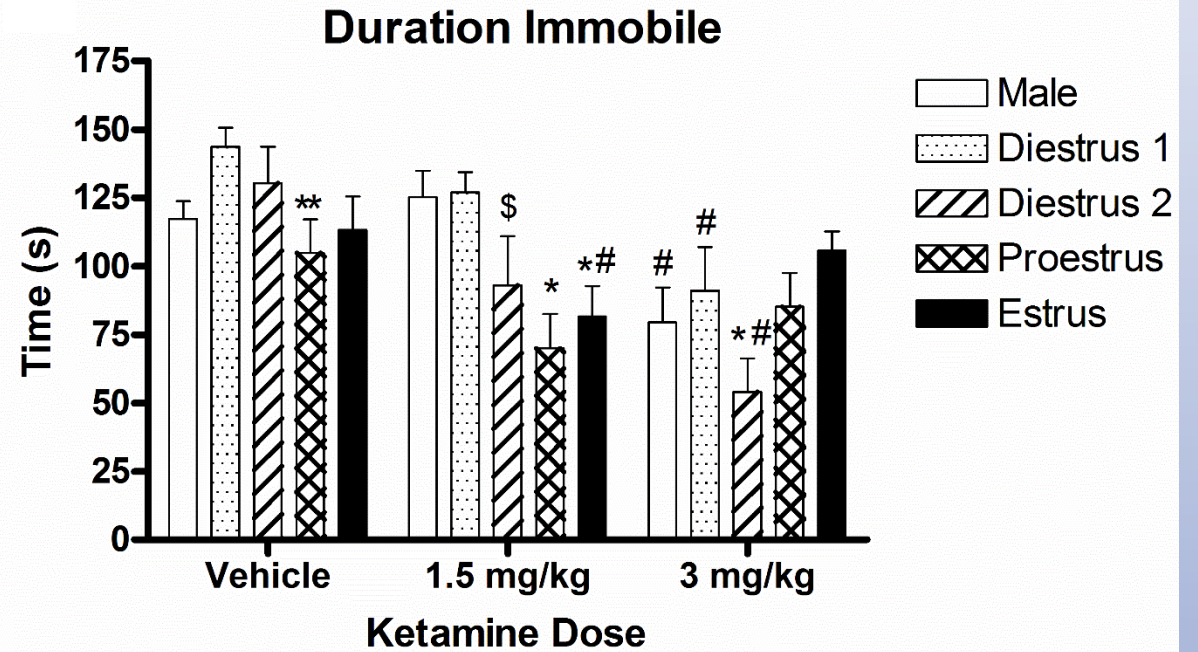
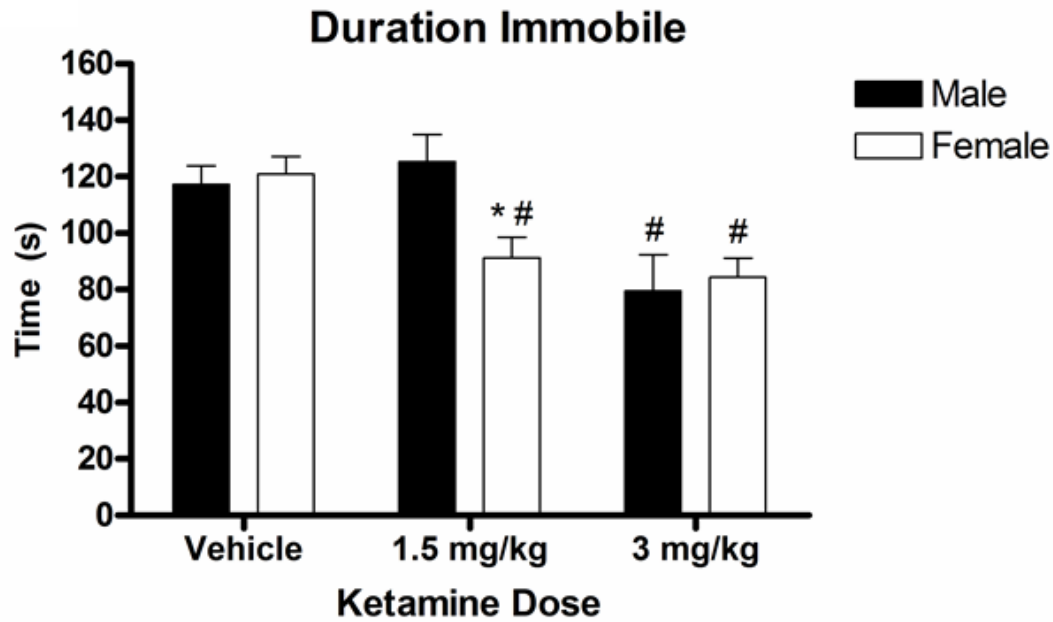
- Our work further investigated the influence of female gonadal hormones on sensitivity to low-dose ketamine in female subjects and if dosage should vary among sexes.
 - Progesterone (P4) - highest during diestrus 2
 - Estrogen (E2) - highest during proestrus



Representative plasma/serum levels of estradiol and progesterone in female mice across each stage of the estrous cycle, as reported by: Nelson et al., 1992; Walmer et al., 1992; Fata et al., 2001; Wood et al., 2007; Saito et al., 2009.



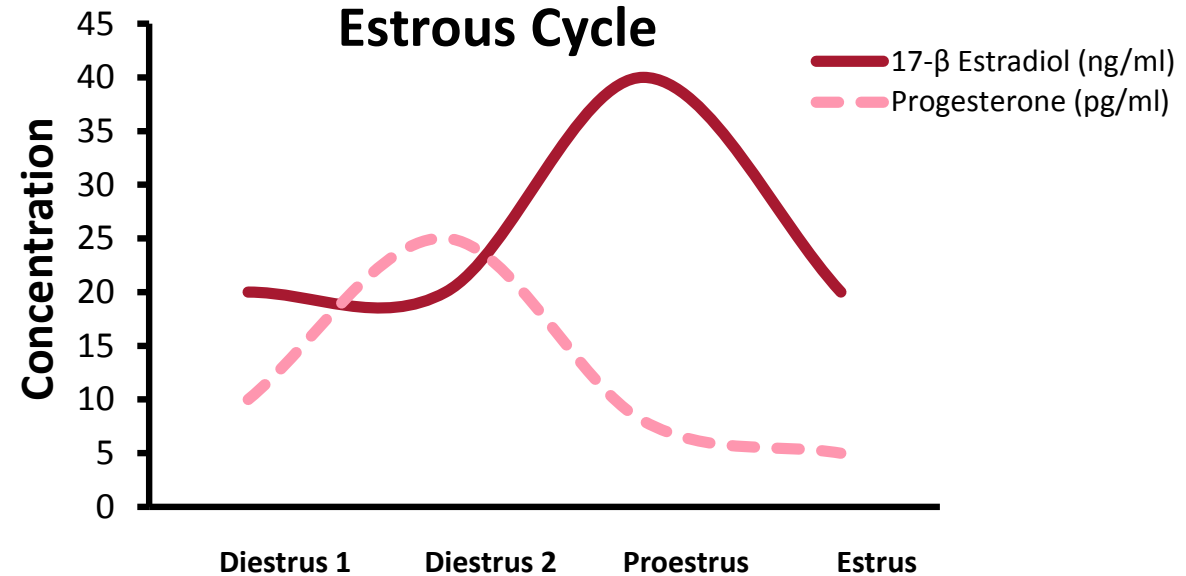
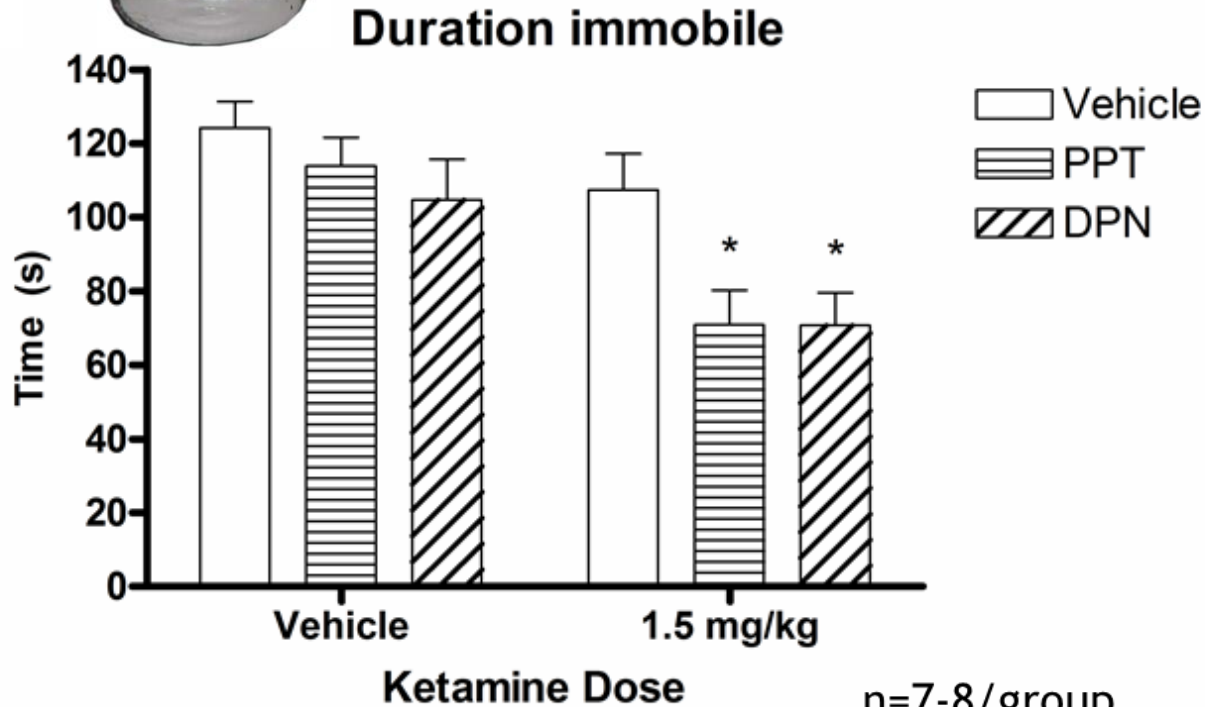
Results: Main Effect of Sex



n=8 males/group
 n=24-26 females/group
 * p < 0.05 vs. males
 # p < 0.05 vs. vehicle
 \$ p < 0.0005 females vs. males



Agonism of both ER α and ER β induce sensitivity to 1.5 mg/kg ketamine



n=7-8/group

* p<0.05 vs. Vehicle/Vehicle

#p<0.05 vs. Vehicle/1.5 mg/kg ketamine

PPT = ER α agonist

DPN = ER β agonist

Future Directions

- Investigating the potential role of Progesterone receptors
 - Collecting data from additional animals to increase our N
- Further, we are trying to determine if the effects of ketamine are diminished with ER alpha and ER beta receptor viral knockdowns in order to see if these receptors are pivotal for its antidepressive effects.
- We look to control hormones to isolate effects of various estrogen receptor subtypes via ovariectomy
 - Amanda Dossat is currently finishing this phase

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