

Curriculum Vitae
Tiffany M Love, Ph.D.

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Dr. Love's research focuses on the neurobiological mechanisms conferring risk and resilience for the development of psychiatric conditions including substance use disorders. Her work utilizes a variety of behavioral, genetic, and neuroimaging techniques including positron emission tomography (PET), functional magnetic resonance imaging (fMRI), arterial spin labeling (ASL), and magnetic resonance spectroscopy (MRS) to investigate the underlying processes that drive sensitivity to stress, pain, reward, and, ultimately, addiction.

EDUCATION

<u>Years</u>	<u>Degree</u>	<u>Institution (Area of Study)</u>
2010 - 2012	Postdoc	Molecular & Behavioral Neuroscience Institute, University of Michigan, (Translational Neuroimaging)
2004 - 2010	Ph.D.	University of Michigan (Neuroscience)
1998 - 2002	B.S.	University of New Mexico (Biology & Psychology; Minor: Chemistry)

PROFESSIONAL EXPERIENCE

2015 - Present	Assistant Professor, University of Utah, Salt Lake City, UT
2015 - Present	Adjunct Research Assistant Professor, University of Michigan, Ann Arbor, MI
2015	Research Assistant Professor, Department of Psychiatry, University of Michigan, Ann Arbor, MI
2012 - 2015	Research Investigator, Department of Psychiatry, University of Michigan, Ann Arbor, MI

AWARDS & HONORS

2020	Associate Member, American College of Neuropsychopharmacology (ACNP), Brentwood, TN
2017	NARSAD Young Investigator Awardee, Brain & Behavior Research Foundation, New York, NY
2016	Chair's Choice Award, Society for Biological Psychiatry, Jacksonville, FL
2014	Travel Award, American College of Neuropsychopharmacology (ACNP), Phoenix, AZ
2012	Trainee, Career Development Institute (CDI) for Psychiatry, Stanford University, Stanford, CA & University of Pittsburgh, Pittsburgh, PA
2011	Scholar, Postdoctoral Translational Scholars Program, University of Michigan, Ann Arbor, MI
2005	Outstanding Graduate Student Instructor (GSI) Teaching Honor Roll, University of Michigan, Ann Arbor, MI
2004	Rackham Merit Fellowship, University of Michigan, Ann Arbor, MI

PEER-REVIEWED JOURNAL ARTICLES

1. Wright HM, Griffin BJ, Shoji K, **Love TM**, Langenecker SA, Benight CC, Smith AJ (2020). Pandemic-related mental health risk among front line personnel (Epub ahead of print). *Journal of Psychiatric Research*.
2. Warthen KG, Boyse-Peacor A, Jones KG, Sanford B, **Love TM**, Mickey BJ (2020). Sex differences in the human reward system: Convergent behavioral, autonomic, and neural evidence. (Epub ahead of print) *Soc Cogn Affect Neurosci*.
3. Hsu DT, Sankar A, Malik MA, Langenecker SA, Mickey BJ, **Love TM** (2020). Common neural responses to romantic rejection and acceptance in healthy adults. (Epub ahead of print) *Soc Neurosci*.
4. Sankar A, Yttredahl AA, Fourcade EW, Mickey BJ, **Love TM**, Langenecker SA, Hsu DT (2019). Dissociable Neural Responses to Monetary and Social Gain and Loss in Women With Major Depressive Disorder. *Front Behav Neurosci*, 13, 149.
5. Langenecker SA, Mickey BJ, Eichhammer P, Sen S, Elverman KH, Kennedy SE, Heitzeg MM, Ribeiro SM, **Love TM**, Hsu DT, Koeppe R, Watson SJ, Akil H, Goldman D, Burmeister M, Zubieta JK (2019). Cognitive Control as a 5-HT1A-based Domain that is Disrupted in Major Depressive Disorder. *Front Psychol*, 10:691.
6. Berent-Spillson A, Kelley AS, Persad CC, **Love T**, Frey KA, Reame NE, Koeppe R, Zubieta JK, Smith YR (2018). Postmenopausal hormone treatment alters neural pathways but does not improve verbal cognitive function. *Menopause*, 25(12), 1424-1431.
7. **Love TM** (2018). The impact of oxytocin on stress: the role of sex. *Curr Opin Behav Sci*, 23, 136-142.
8. Yttredahl AA, McRobert E, Sheler B, Mickey BJ, **Love TM**, Langenecker SA, Zubieta JK, Hsu DT (2018). Abnormal emotional and neural responses to romantic rejection and acceptance in depressed women. *J Affect Disord*, 234, 231-238.
9. **Love TM**, Cranford JA, Burmeister M, Wojnar M, Zucker RA, J Brower K (2018). Oxytocin Genotype Moderates the Impact of Social Support on Psychiatric Distress in Alcohol-Dependent Patients. *Alcohol Alcohol*, 53(1), 57-63.
10. Mickey BJ, Heffernan J, Heisel C, Peciña M, Hsu DT, Zubieta JK, **Love TM** (2016). Oxytocin modulates hemodynamic responses to monetary incentives in humans. *Psychopharmacology (Berl)*, 233(23-24), 3905-3919.
11. Martikainen IK, Nuechterlein EB, Pecina M, **Love TM**, Cummiford CM, Green CR, Stohler CS, Zubieta JK (2015). Chronic Back Pain Is Associated with Alterations in Dopamine Neurotransmission in the Ventral Striatum. *J Neurosci*, 35(27), 9957-65.
12. Pecina M, **Love T**, Stohler CS, Goldman D, Zubieta JK (2015). Effects of the Mu opioid receptor polymorphism (OPRM1 A118G) on pain regulation, placebo effects and associated personality trait measures. *Neuropsychopharmacology*, 40(4), 957-65.
13. Hsu DT, Sanford BJ, Meyers KK, **Love TM**, Hazlett KE, Walker SJ, Mickey BJ, Koeppe RA, Langenecker SA, Zubieta JK (2015). It still hurts: altered endogenous opioid activity in the brain during social rejection and acceptance in major depressive disorder. *Mol Psychiatry*, 20(2), 193-200.
14. Weiland BJ, Heitzeg MM, Zald D, Cummiford C, **Love T**, Zucker RA, Zubieta JK (2014). Relationship between impulsivity, prefrontal anticipatory activation, and striatal dopamine release during rewarded task performance. *Psychiatry Res*, 223(3), 244-52.

15. DaSilva AF, Nascimento TD, DosSantos MF, Lucas S, van Holsbeeck H, DeBoer M, Maslowski E, **Love T**, Martikainen IK, Koeppe RA, Smith YR, Zubieta JK (2014). Association of mu-Opioid Activation in the Prefrontal Cortex with Spontaneous Migraine Attacks - Brief Report I. *Ann Clin Transl Neurol*, 1(6), 439-444.
16. Nascimento TD, DosSantos MF, Lucas S, van Holsbeeck H, DeBoer M, Maslowski E, **Love T**, Martikainen IK, Koeppe RA, Smith YR, Zubieta JK, DaSilva AF (2014). mu-Opioid activation in the midbrain during migraine allodynia - brief report II. *Ann Clin Transl Neurol*, 1(6), 445-50.
17. Pecina M, Martinez-Jauand M, **Love T**, Heffernan J, Montoya P, Hodgkinson C, Stohler CS, Goldman D, Zubieta JK (2014). Valence-specific effects of BDNF Val66Met polymorphism on dopaminergic stress and reward processing in humans. *J Neurosci*, 34(17), 5874-81.
18. **Love TM** (2014). Oxytocin, motivation and the role of dopamine. *Pharmacol Biochem Behav*, 119, 49-60.
19. DaSilva AF, Nascimento TD, **Love T**, DosSantos MF, Martikainen IK, Cummiford CM, DeBoer M, Lucas SR, Bender MA, Koeppe RA, Hall T, Petty S, Maslowski E, Smith YR, Zubieta JK (2014). 3D-neuronavigation in vivo through a patient's brain during a spontaneous migraine headache. LID - 10.3791/50682 [doi]. *J Vis Exp*, (88).
20. DosSantos MF, Martikainen IK, Nascimento TD, **Love TM**, DeBoer MD, Schambra HM, Bikson M, Zubieta JK, DaSilva AF (2014). Building up analgesia in humans via the endogenous mu-opioid system by combining placebo and active tDCS: a preliminary report. *PLoS ONE*, 9(7), e102350.
21. Hsu DT, Sanford BJ, Meyers KK, **Love TM**, Hazlett KE, Wang H, Ni L, Walker SJ, Mickey BJ, Korycinski ST, Koeppe RA, Crocker JK, Langenecker SA, Zubieta JK (2013). Response of the mu-opioid system to social rejection and acceptance. *Mol Psychiatry*, 18(11), 1211-7.
22. Martikainen IK, Pecina M, **Love TM**, Nuechterlein EB, Cummiford CM, Green CR, Harris RE, Stohler CS, Zubieta JK (2013). Alterations in endogenous opioid functional measures in chronic back pain. *J Neurosci*, 33(37), 14729-37.
23. Marsh CA, Berent-Spillson A, **Love T**, Persad CC, Pop-Busui R, Zubieta JK, Smith YR (2013). Functional neuroimaging of emotional processing in women with polycystic ovary syndrome: a case-control pilot study. *Fertil Steril*, 100(1), 200-7.e1.
24. Pecina M, Mickey BJ, **Love T**, Wang H, Langenecker SA, Hodgkinson C, Shen PH, Villafuerte S, Hsu D, Weisenbach SL, Stohler CS, Goldman D, Zubieta JK (2013). DRD2 polymorphisms modulate reward and emotion processing, dopamine neurotransmission and openness to experience. *Cortex*, 49(3), 877-90.
25. Pecina M, Azhar H, **Love TM**, Lu T, Fredrickson BL, Stohler CS, Zubieta JK (2013). Personality trait predictors of placebo analgesia and neurobiological correlates. *Neuropsychopharmacology*, 38 (4), 639-46.
26. Burghardt PR, **Love TM**, Stohler CS, Hodgkinson C, Shen PH, Enoch MA, Goldman D, Zubieta JK (2012). Leptin regulates dopamine responses to sustained stress in humans. *J Neurosci*, 32(44), 15369-76.
27. Berent-Spillson A, Persad CC, **Love T**, Sowers M, Randolph JF, Zubieta JK, Smith YR (2012). Hormonal environment affects cognition independent of age during the menopause transition. *J Clin Endocrinol Metab*, 97(9), E1686-94.
28. **Love TM**, Enoch MA, Hodgkinson CA, Pecina M, Mickey B, Koeppe RA, Stohler CS, Goldman D, Zubieta JK (2012). Oxytocin gene polymorphisms influence human dopaminergic function in a sex-dependent manner. *Biol Psychiatry*, 72(3), 198-206.

29. Mickey BJ, Sanford BJ, **Love TM**, Shen PH, Hodgkinson CA, Stohler CS, Goldman D, Zubieta JK (2012). Striatal dopamine release and genetic variation of the serotonin 2C receptor in humans. *J Neurosci*, 32(27), 9344-50.
30. Hsu DT, Mickey BJ, Langenecker SA, Heitzeg MM, **Love TM**, Wang H, Kennedy SE, Pecina M, Shafir T, Hodgkinson CA, Enoch MA, Goldman D, Zubieta JK (2012). Variation in the corticotropin-releasing hormone receptor 1 (CRHR1) gene influences fMRI signal responses during emotional stimulus processing. *J Neurosci*, 32(9), 3253-60.
31. Shafir T, **Love T**, Berent-Spillon A, Persad CC, Wang H, Reame NK, Frey KA, Zubieta JK, Smith YR (2012). Postmenopausal hormone use impact on emotion processing circuitry. *Behav Brain Res*, 226(1), 147-53.
32. DosSantos MF, **Love TM**, Martikainen IK, Nascimento TD, Fregni F, Cummiford C, Deboer MD, Zubieta JK, Dasilva AF (2012). Immediate effects of tDCS on the mu-opioid system of a chronic pain patient. *Front Psychiatry*, 3, 93.
33. DosSantos MF, Martikainen IK, Nascimento TD, **Love TM**, Deboer MD, Maslowski EC, Monteiro AA, Vincent MB, Zubieta JK, DaSilva AF (2012). Reduced basal ganglia mu-opioid receptor availability in trigeminal neuropathic pain: a pilot study. *Molecular Pain*, 8, 74.
34. Smith YR, Bowen L, **Love TM**, Berent-Spillon A, Frey KA, Persad CC, Reame NK, Koeppe RA, Zubieta JK (2011). Early initiation of hormone therapy in menopausal women is associated with increased hippocampal and posterior cingulate cholinergic activity. *J Clin Endocrinol Metab*, 96 (11), E1761-70.
35. Berent-Spillon A, **Love T**, Pop-Busui R, Sowers M, Persad CC, Pennington KP, Eyvazaddeh AD, Padmanabhan V, Zubieta JK, Smith YR (2011). Insulin resistance influences central opioid activity in polycystic ovary syndrome. *Fertil Steril*, 95(8), 2494-8.
36. Mickey BJ, Zhou Z, Heitzeg MM, Heinz E, Hodgkinson CA, Hsu DT, Langenecker SA, **Love TM**, Pecina M, Shafir T, Stohler CS, Goldman D, Zubieta JK (2011). Emotion processing, major depression, and functional genetic variation of neuropeptide Y. *JAMA Psychiatry (Formerly Arch Gen Psychiatry)*, 68(2), 158-66.
37. Prossin AR, **Love TM**, Koeppe RA, Zubieta JK, Silk KR (2010). Dysregulation of regional endogenous opioid function in borderline personality disorder. *Am J Psychiatry*, 167(8), 925-33.
38. Berent-Spillon A, Persad CC, **Love T**, Tkaczyk A, Wang H, Reame NK, Frey KA, Zubieta JK, Smith YR (2010). Early menopausal hormone use influences brain regions used for visual working memory. *Menopause*, 17(4), 692-9.
39. **Love T**, Smith YR, Persad CC, Tkaczyk A, Zubieta JK (2010). Short-term hormone treatment modulates emotion response circuitry in postmenopausal women. *Fertil Steril*, 93(6), 1929-37.
40. **Love TM**, Stohler CS, Zubieta JK (2009). Positron emission tomography measures of endogenous opioid neurotransmission and impulsiveness traits in humans. *JAMA Psychiatry (Formerly Arch Gen Psychiatry)*, 66(10), 1124-34.
41. Persad CC, Zubieta JK, **Love T**, Wang H, Tkaczyk A, Smith YR (2009). Enhanced neuroactivation during verbal memory processing in postmenopausal women receiving short-term hormone therapy. *Fertil Steril*, 92(1), 197-204.
42. Hutsler JJ, **Love T**, Zhang H (2007). Histological and magnetic resonance imaging assessment of cortical layering and thickness in autism spectrum disorders. *Biol Psychiatry*, 61(4), 449-57.

43. Smith YR, **Love T**, Persad CC, Tkaczyk A, Nichols TE, Zubieta JK (2006). Impact of combined estradiol and norethindrone therapy on visuospatial working memory assessed by functional magnetic resonance imaging. *J Clin Endocrinol Metab*, 91(11), 4476-81.
44. Jung RE, Yeo RA, **Love TM**, Petropoulos H, Sibbitt WL Jr, Brooks WM (2002). Biochemical markers of mood: a proton magnetic resonance spectroscopy study of normal human brain. *Biol Psychiatry*, 51(3), 224-9.

ORAL PRESENTATIONS

Meeting Presentations

International/National

- 2020 **Love T**. Reward Processing in Chronic Pain Varies by Sex and Opioid Use, 59th Annual Meeting of the American College of Neuropsychopharmacology (ACNP).
- 2019 **Love T**. Oxytocin Effects on Stress & Reward: Neuroimaging Findings, 52nd Annual Winter Conference on Brain Research, Aspen, CO
- 2019 **Love T**. Influence of Oxytocin on Social Reward Processing in Alcohol Use Disorder, 42nd Annual Research Society on Alcoholism Scientific Meeting, Minneapolis, MN
- 2016 **Love T**. Impact of Social Support on Psychiatric Symptom Severity is Moderated by Oxytocin Genotype in Alcohol Dependent Patients, Research Society on Alcoholism, New Orleans, LA
- 2014 **Love T**. Neuroimaging Database Implementation. Brainhack Conference, Ann Arbor, MI
- 2010 **Love T**, Zubieta JK. Dopamine-Opioid Interactions in Attachment Style & Impulsivity Traits. Presented on behalf of Dr. Zubieta at the 65th Annual Society of Biological Psychiatry Conference, New Orleans, LA
- 2010 **Love T**. Individual Differences in Dopaminergic Stress Responsiveness in Humans: Impact of Sex and Genetic Variation. 43rd Annual Winter Conference on Brain Research, Breckenridge, CO

Local/Regional

- 2017 **Love T**. Alcohol: Social Support, Genetics, & Applicability to Treatment. Addictions Update, Salt Lake City, UT

Invited/Visiting Professor Presentations

Local/Regional

- 2013 **Love T**. Deciphering the role of oxytocin in social motivation. Cognitive Neuroscience Series, University of Illinois at Chicago, Chicago, IL
- 2012 **Love T**, Heisel E. Neuroimaging Studies in Pain in Borderline Personality Disorder. Center for Forensic Psychiatry, Ann Arbor, MI

Grand Rounds Presentations

- 2016 **Love T**. This is (really) your brain on drugs. University of Utah Community Clinics, Salt Lake City, UT
- 2015 **Love, T**. Translating from Basic Circuitries to Psychopathology: Studies in Attachment, Motivation, and Addiction. University of Utah, Salt Lake City, UT

Campus & Departmental Talks

- 2018 **Love T.** Unlocking the Secrets of Addiction Through Neuroscience, 70th Department of Psychiatry Anniversary Celebration, University of Utah, Salt Lake City, UT
- 2018 **Love T.** Mentorship: Giving and Receiving, Department of Psychiatry Research Faculty Retreat, University of Utah, Salt Lake City, UT
- 2016 **Love T.** The Microbiome in Addiction. Addiction Neuroscience Series, Department of Psychiatry, University of Utah, Salt Lake City, UT
- 2016 **Love T.** Impact of Social Support on Psychiatric Distress. Addiction Neuroscience Series, Department of Psychiatry, University of Utah, Salt Lake City, UT
- 2016 **Love T.** Basics of MRI, fMRI and PET: Application to Addiction. Addiction Neuroscience Series, Department of Psychiatry, University of Utah, Salt Lake City, UT
- 2016 **Love T.** Neurobiology of Addiction: Opioid System. Addiction Neuroscience Series, Department of Psychiatry, University of Utah, Salt Lake City, UT
- 2012 **Love T.** Neuroscience of Free Will, Annual Neuroscience Retreat, University of Michigan, Ann Arbor, MI
- 2009 **Love T.** The Neurochemical Correlates of Risky Personality, Neuroscience Seminar Series, University of Michigan, Ann Arbor, MI
- 2007 **Love T.** Stress, Sex and Dopamine Neurotransmission, Annual Neuroscience Retreat, University of Michigan, Ann Arbor, MI
- 2007 **Love T.** Scanning Susceptibility: The Link between Stress, Risky Personality and Neurotransmission, University of Michigan Substance Abuse Research Center, Ann Arbor, MI
- 2006 **Love T.** Oh so that's what that does: Introduction to Functional Neuroanatomy, University of Michigan Substance Abuse Research Center, Ann Arbor, MI
- 2006 **Love T.** Risky Personality and mu-Opioid Neurotransmission: a Link, Annual Neuroscience Retreat, University of Michigan, Ann Arbor, MI

ABSTRACTS

1. Ericksen L, Koppelmans V, Zubieta JK, **Love TM** (2019). Impact of Chronic Pain on Neural Responses to Monetary Reward and Loss. 25th Annual Meeting of the Organization for Human Brain Mapping, Rome, Italy.
2. Warthen KG, Jones KG, Boyse-Peacor A, Sanford B, **Love TM**, Mickey BJ (2019). Sex differences in the reward system: Neural, autonomic, and behavioral responses in healthy humans. 74th Society of Biological Psychiatry Meeting, Chicago, IL.
3. **Love TM**, Mickey B, Ericksen LC, Koppelmans V, Ballester J, Zubieta JK (2018). VTA Responses to Reward Altered in Chronic Pain: Effect of Sex. 57th Annual American College of Neuropsychopharmacology, Hollywood, FL.
4. Ballester-Gonzalez J, Koppelmans V, Zubieta JK, **Love T** (2018). Higher amygdala mu-opioid receptor availability in chronic pain patients at risk for opioid misuse. 73rd Annual Society of Biological Psychiatry Meeting, New York, NY.
5. Hsu DT, **Love TM**, Elverman KH, Walker SJ, Mickey BJ, Zubieta JK, Langenecker SA (2017). Suicidal ideation is associated with reduced endogenous opioid release during social rejection and acceptance. 55th Annual American College of Neuropsychopharmacology, Hollywood, FL.

6. **Love TM**, Cranford J, Zucker RA, Brower K (2016). The Effect of Social Support on Quality of Life is Moderated by Oxytocin Genotype in Alcohol Use Disorder. 54th Annual American College of Neuropsychopharmacology, Hollywood, FL.
7. Yttredahl AA, Sanford BJ, Hazlett KE, **Love TM**, Mickey BJ, Koeppe RA, Crocker JK, Langenecker SA, Zubieta JK, Hsu DT (2016). Might as well face it, we're addicted to love: Endogenous opioid release in the subgenual cingulate cortex influences emotional responses to social acceptance through the nucleus accumbens. Annual Meeting at the Society for Social Neuroscience, San Diego, CA.
8. Mickey BJ, Heffernan J, Heisel C, Pecina M, Hsu DT, Zubieta JK, **Love TM** (2016). Intranasal Oxytocin Modulates Neural Responses to Incentive Stimuli in Humans. American Society of Clinical Psychopharmacology, Scottsdale, AZ.
9. Yttredahl A, Sanford BJ, McRobert E, Sheler B, Mickey BJ, **Love T**, Welsh RC, Langenecker SA, Zubieta JK, Hsu DT (2016). Social Anhedonia? Happiness Following Social Reward is Mediated by the Nucleus Accumbens in Health, but not Depressed Women. 70th Society of Biological Psychiatry Meeting, Atlanta, GA.
10. Malik MA, Yttredahl AA, Sanford BJ, McRobert E, Sheler B, Mickey BJ, **Love TM**, Welsh RC, Langenecker SA, Zubieta JK, Hsu DT (2016). Gender Differences in Social Rejection and Acceptance: An fMRI Study. 70th Society of Biological Psychiatry Meeting, Atlanta, GA.
11. **Love T**, Heffernan J, Hsu D, Mickey B (2016). Oxytocin influences the time course of reward-related brain activity. 70th Society of Biological Psychiatry Meeting, Atlanta, GA.
12. **Love T**, Heffernan J, Hsu D, Mickey B (2015). Differential Effects of Oxytocin on Social and Monetary Reward Processing. 54th Annual American College of Neuropsychopharmacology Conference, Hollywood, FL.
13. **Love TM**, Heffernan J, Mickey B, Heisel C, Pecina M, Hsu DT, Zubieta JK (2014). Oxytocin administration modulates mesoaccumbal activity in response to non-social reward. 53rd Annual American College of Neuropsychopharmacology Conference, Phoenix, AZ.
14. **Love TM**, Cranford J, Zucker RA, Brower K (2014). Oxytocin genotype moderates the relationship between social support and psychiatry symptom severity. Presented at the 69th Society of Biological Psychiatry Meeting, San Francisco, CA.
15. **Love TM**, Enoch MA, Goldman D, Hodgkinson C, Zubieta JK (2013). OXY genotype predicts anticipatory responses to reward. Presented at the 68th Society of Biological Psychiatry Meeting, San Francisco, CA.
16. Nuechterlein, Martikainen I, **Love TM**, Cummiford CM, Zubieta JK (2013). Differences in endogenous opioid system function in chronic pain patients receiving opioid medication. Presented at the 68th Society of Biological Psychiatry Meeting, San Francisco, CA.
17. **Love TM**, Cummiford C, Mickey B, Heffernan J, Chang E, Zubieta JK (2012). Naltrexone modulates anticipatory responses to reward. Presented at the 51st Annual American College of Neuropsychopharmacology Conference, Hollywood, FL.
18. Cummiford CM, **Love TM**, Koeppe R, Zubieta JK (2012). Regional analysis of naltrexone effects on mu-opioid availability in vivo. Presented at the 51st Annual American College of Neuropsychopharmacology Conference, Hollywood, FL.
19. Weisenbach SL, **Love T**, Fredrickson BL, Stohler CS, Zubieta JK (2012). The role of dopaminergic systems in psychological well being: a multimodal neuroimaging study. Presented at the 67th Society of Biological Psychiatry Meeting, Philadelphia, PA.
20. Mickey BJ, Andrews A, Cummiford C, Guduri S, **Love T**, Silk KR, Zubieta JK (2012). Subgenual cingulate abnormalities in borderline personality disorder: comparison to major depression disorder. Presented at the 67th Society of Biological Psychiatry Meeting, Philadelphia, PA.
21. Cummiford C, Langenecker SA, **Love T**, Silk KR, Zubieta JK (2012). Alterations in impulse control circuitry in borderline personality disorder. Presented at the 67th Society of Biological Psychiatry Meeting, Philadelphia, PA.

22. **Love T**, Cummiford C, Heisel E, Silk K, Zubieta JK (2012). Increased endogenous opioid system responses to pain in borderline personality disorder. Presented at the 67th Society of Biological Psychiatry Meeting, Philadelphia, PA.
23. Mickey BJ, Sanford BJ, **Love T**, Shen PH, Hodgkinson C, Stohler CS, Goldman D, Zubieta JK (2012). Genetic variation of the 5HT2C receptor modulates human striatal dopaminergic activation to stress. MICHR Annual Research Education Symposium: Ann Arbor, MI.
24. **Love T**, Scott D, Goldman D, Hodgkinson C, Enoch MA, Zubieta JK (2012). Neural responses to reward associated with oxytocin (OXT) gene polymorphisms. MICHR Annual Research Education Symposium: Ann Arbor, MI.
25. Hsu DT, **Love TM**, Sanford BJ, Wang H, Meyers KK, Hazlett KE, Ni L, Walker SJ, Korycinski ST, Koeppe RA, Crocker JK, Langenecker SA, Zubieta JK (2011). Social rejection activates endogenous opioid systems. Presented at the 50th Annual American College of Neuropsychopharmacology Conference, Waikoloa, Hawaii.
26. Mickey BJ, Andrews A, Cummiford C, Guduri S, **Love T**, Silk KR, Zubieta JK (2011). Subgenual cingulate abnormalities in borderline personality disorder: Comparison to major depressive disorder. Presented at the 50th Annual American College of Neuropsychopharmacology Conference, Waikoloa, Hawaii.
27. Hsu DT, Mickey BJ, Langenecker SA, Heitzeg MM, **Love TM**, Wang H, Kennedy SE, Pecina M, Shafir T, Hodgkinson CA, Enoch MA, Goldman MA, Goldman D, Zubieta JK (2011). Variations in the corticotropin-releasing hormone receptor gene (rs110402) influence BOLD signal responses during emotional stimulus processing. Presented at the 41st Annual Society for Neuroscience Conference.
28. **Love T**, Cummiford C, Silk K, Zubieta JK (2011). Exaggerated neural responses to reward anticipation in borderline personality disorder. Presented at the 17th Annual Human Brain Mapping Conference, Quebec, Canada.
29. Zubieta JK, **Love T**, Peciña M, Stohler CS (2011). Endogenous opioid system modulation of motivation circuitry. Presented at 73rd Annual College on Problems of Drug Dependence Meeting, Hollywood, FL.
30. Mickey BJ, Cummiford CM, Guduri S, **Love T**, Silk K, and Zubieta JK (2011). Cortical emotion processing and depression in women with borderline personality disorder. Presented at the 66th Society of Biological Psychiatry Meeting, San Francisco, California.
31. Smith YR, Reame N, Persad C, Berent A, Wang H, Frey KA, Koeppe RA, Bowen L, **Love T**, Zubieta JK (2011). Early initiated menopausal hormone therapy linked to increased cholinergic activity. Presented at the 58th Annual Meeting for the Society for Gynecologic Investigation, Miami, FL.
32. **Love T**, Stohler CS, Zubieta JK (2011). Nucleus accumbens anticipatory responses to reward are associated with stress-induced dopaminergic activity. Presented at the 49th Annual American College of Neuropsychopharmacology Conference, Miami, FL.
33. Pecina M, Mickey B, Wang H, **Love T**, Hong PS, Langenecker S, Hsu D, Shafir T, Villafuerte S, Wright S, Goldman D, Zubieta JK (2010). Dopamine D2 receptor polymorphism modulates prefrontal function and connectivity during reward and emotion processing. Presented at the 49th Annual American College of Neuropsychopharmacology Conference, Miami, FL.
34. Wright S, **Love T**, Fredrickson B, Stohler C, Zubieta JK (2010). Psychological well-being and life satisfaction predict dopamine release during a stressor and the activation of motivational networks during expectation of punishment in healthy males. Presented at the 49th Annual American College of Neuropsychopharmacology Conference, Miami, FL.
35. Hsu DT, Mickey BJ, Langenecker SA, Heitzeg MM, **Love TM**, Wang H, Kennedy SE, Peciña M, Tal Shafir T, Hodgkinson CA, Enoch MA, Goldman D, Zubieta JK (2010). Blood-oxygenation-level dependent signal responses to emotional stimuli depend on variations in rs110402 within the corticotropin-releasing hormone receptor gene. Presented at the 49th Annual American College of Neuropsychopharmacology Conference, Miami, FL.

36. Wright S, Mickey B, **Love T**, Wang H, Langenecker S, Zubieta JK (2010). Reward anticipation activation is associated with activation during emotion processing. Presented at the 16th Annual Human Brain Mapping Conference, Barcelona, Spain.
37. **Love T**, Heitzeg M, Stohler CS, Zubieta JK (2009). Associations between elements of recent life stress and dopaminergic system activity: a [11C] raclopride study. Presented at the 15th Annual Human Brain Mapping Conference, San Francisco, CA.
38. Mickey B, Zhou Z, **Love T**, Hodgkinson C, Goldman D, Zubieta JK (2009). NPY genotype predicts affective response to a pain stressor. Presented at the 47th Annual American College of Neuropsychopharmacology Conference, Hollywood, FL.
39. Smith YR, **Love T**, Persad CC, Tkaczyk A, Zubieta JK (2009). Neuroactivation of emotional response circuitry by short-term hormone treatment in postmenopausal women. Presented at the 56th Annual Meeting for the Society for Gynecologic Investigation, Glasgow, Scotland.
40. Burghardt PR, **Love T**, Britton SL, Gerard-Koch L, Watson SJ, Zubieta JK, Akil H (2009). Overlapping neural systems regulate mood and metabolism. Presented at the 47th Annual American College of Neuropsychopharmacology Conference, Hollywood, FL.
41. Prossin A, Silk K, **Love T**, Zubieta JK (2008). Dysregulation of emotion processing in Borderline Personality Disorder: The role of the endogenous opioid system. Presented at the 47th Annual American College of Neuropsychopharmacology Conference, Scottsdale, AZ.
42. Evans C, **Love T**, Ducci F, Goldman D, Stohler C, Zubieta JK (2007). MAO-A gene polymorphism effects on an fMRI Go-NoGo task and relationship with personality traits associated with drug abuse vulnerability. Presented at the 13th Annual Human Brain Mapping Conference Chicago, IL.
43. **Love T**, Scott D, Stohler C, Zubieta JK (2007). Sex differences in striatal dopamine release in response to pain: a [11C] raclopride study. Presented at the 13th Annual Human Brain Mapping Conference Chicago, IL.
44. **Love T**, Venkataraman G, Stohler C, Zubieta JK (2007). Recent life stress modulates [11C] raclopride binding in healthy men. Presented at the 62nd Annual Society of Biological Psychiatry Conference, San Diego, CA.
45. Mickey, BJ, Kennedy SE, **Love TM**, Zubieta JK (2007). Serotonin 1A receptor availability in Major Depression: Relation to episode severity, chronicity of illness, comorbid anxiety and response to medication. Presented at the 62nd Annual Society of Biological Psychiatry Conference, San Diego, CA.
46. Smith YR, **Love T**, Persad CC, Tkaczyk A, Nichols, T, Zubieta JK (2006). Functional MRI study of postmenopausal hormone therapy: Effects on visuospatial working memory. Presented at American Society for Reproductive Medicine Meeting, New Orleans, LA.
47. Kennedy SE, **Love TM**, Stohler CS, Zubieta JK (2005). Personality Trait Impulsiveness is associated with the stress-induced activation of μ -opioid receptor mediated neurotransmission. Presented at the 35th Annual Society for Neuroscience Conference, Washington, DC.
48. Kennedy SE, **Love TM**, Murphy-Weinberg V, Koeppe RA, Kilbourn MR, Young EA, Zubieta JK (2005). Reduced 5-HT_{1A} receptor binding in unmedicated major depression and modulation following citalopram treatment. Presented at the 60th Annual Society of Biological Psychiatry Meeting, Atlanta, GA.
49. Kennedy SE, **Love TM**, Ribeiro S, Murphy-Weinberg V, Koeppe RA, Kilbourn MR, Young EA, Zubieta, JK (2005). Reduced 5-HT_{1A} receptor binding in unmedicated major depression and modulation following SSRI treatment. Presented at the 11th Annual Meeting of the Organization for Human Brain Mapping, Toronto, Canada.
50. **Love TM**, Bueller JA, Kennedy SE, Stohler CS, Zubieta JK (2005). Stress-induced activation of the μ -opioid system and trait impulsiveness: a positive relationship. Presented at the 11th Annual Meeting of the Organization for Human Brain Mapping, Toronto, Canada.
51. Jung RE, **Love T**, Yeo RA, Chiulli SJ, Sibbitt WL, & Brooks WM (2001). Mood, biochemistry, and cognition: A proton MR spectroscopy study of normal human brain. Presented at the 29th Annual International Neuropsychological Society Conference, Chicago, IL.

52. Jung RE, Love T, Zamora LL, Petropoulos H, Yeo RA, Chiulli SJ & Brooks WM (2000). Biochemical Markers of Mood: A proton MR spectroscopy study of normal brain. Presented at the 10th Annual Rotman Research Institute Conference: The Frontal Lobes, Toronto, Canada.

FUNDING

Active Grants

- 08/15/20 - 07/31/23 R44 MH113520
Automating and Obtaining FDA Approval for a Digital Intervention for Depression
Principal Investigator(s): Ellen Frank
Total Costs: \$974,672
National Institute of Mental Health (NIMH)
Role: Co-Investigator, Site Principal Investigator
- 05/30/20 – 05/29/21 Neural Mechanisms and Predictors of Treatment Response in Opioid Misuse
Principal Investigator(s): Tiffany Love
Total Costs: \$30,000
One U for Utah Initiative (1U4U)
Role: Principal Investigator
- 05/30/20 – 05/29/21 Optimizing Mindfulness-Based Treatment of Opioid Misuse with Neurofeedback
Principal Investigator(s): Eric Garland
Total Costs: \$30,000
One U for Utah Initiative (1U4U)
Role: Co-Investigator
- 12/01/19 – 11/30/21 Neuroimaging Predictors of Risk for Future Opioid Misuse
Principal Investigator(s): Tiffany Love
Total Costs: \$80,000
Ben B. and Iris M. Margolis Foundation
Role: Principal Investigator
- 12/01/19 – 05/31/22 R44 AA028164
Smartphone-Based Intervention for Sleep Disturbance in Individuals Recovering from Alcohol Use Disorder
Principal Investigator(s): Ellen Frank
Total Costs: \$844,191
National Institute on Alcohol Abuse and Alcoholism (NIAAA)
Role: Co-Investigator, Site Principal Investigator
- 07/01/15 - 06/30/21 K01 AA024167 (no cost extension through 6/30/21)
Defining and manipulating social neural systems in alcohol use disorder
Principal Investigator(s): Tiffany Love
Total Costs: \$605,969
National Institute on Alcohol Abuse and Alcoholism (NIAAA)
Role: Principal Investigator

Past Grants

- 01/15/18 - 01/14/20 NARSAD Young Investigator Award
Sex Hormones, Social Motivation, and the Impact of Alcohol
Principal Investigator(s): Tiffany Love

Brain & Behavior Research Foundation
 Role: Principal Investigator

06/01/15 - 05/31/17 Investigating the Gut Microbiome in Opioid Dependence
 Principal Investigator(s): Tiffany Love; Amy Bohnert
 University of Michigan
 Role: Principal Investigator

01/01/14 - 07/01/15 R21/R33 DA020677
 Development and Use of rtfMRI for Self-Control of Nicotine Craving
 Principal Investigator(s): Jon-Kar Zubieta
 National Institute on Drug Abuse
 Role: Co-Investigator

07/01/11 - 07/01/13 UL1RR024986
 Postdoctoral Translational Scholars Program
 Michigan Institute for Clinical and Health Research
 Principal Investigator(s): Tiffany Love
 National Center for Research Resources
 Role: Principal Investigator

01/01/10 - 07/01/15 R01 DA027494
 Interaction of Smoking and Chronic Pain in Neurochemical and Phenotypic Levels
 Principal Investigator(s): Jon-Kar Zubieta
 National Institute on Drug Abuse
 Role: Co-Investigator

07/01/06 - 07/01/08 T32 DA007267-12
 Interdisciplinary Training Grant in Substance Abuse
 Neurobiology of Vulnerability for Substance Abuse in Clinical Pain Patients
 National Institute on Drug Abuse
 Role: Doctoral Trainee

TEACHING

Courses Directed

Undergraduate

Praxis: Addictions (4.5 credit hours)

Honors College, University of Utah
 (Fall 2018, Spring 2019)

Psychology Field Experience: Neuroimaging & Behavioral Testing in Clinical Research (3 credit hours)

Department of Psychology, University of Utah
 (Spring 2017)

Neuroscience Field Experience: Fundamentals of fMRI (3 credit hours)

College of Social & Behavioral Science, University of Utah
 (Fall 2016, Spring 2017, Fall 2018, Spring 2018, Spring 2019, Fall 2019, Spring 2020)

Chemistry Field Experience: Pharmaco-fMRI (3 credit hours)

Department of Chemistry, University of Utah
 (Fall 2017)

Cognitive Psychology (3 credit hours)

Department of Psychology, Graduate Student Instructor, University of Michigan
(Fall 2005)

Graduate

Neuroscience Field Experience, Topic: Fundamentals of Positron Emission Tomography (3 credit hours)
College of Social Work, University of Utah
(Fall 2017, Spring 2018, Fall 2018)

Clinical Teaching

Neuropharmacology of Addiction. Addiction Medicine & Psychiatry Fellows.
Department of Psychiatry, University of Utah
(Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2020)

Neuroscience Case Conference. PGY2/PGY3/PGY4 Residents.
Department of Psychiatry, University of Utah
(Spring/Fall 2016, Spring/Fall 2017, Spring/Fall 2018, Spring/Fall 2019, Fall 2020)

Brain and Behavior - Psychiatry: Substances of Abuse. Medical Students (MS2).
School of Medicine, University of Utah
(Spring 2017, Spring 2018, Spring 2019)

Neurobiology of Addiction. Project ECHO (Extension for Community Healthcare Outcomes). CE Course
Department of Psychiatry, University of Utah.
(Fall 2018)

Invited Course Lecturer

Substance Use Disorders Practice I: Evidence-based Principles and Therapeutic Alliance.
College of Social Work, University of Utah
(Spring 2019, Spring 2020)

Neurobiology for Practice.
College of Social Work, University of Utah
(Spring 2020)

Alcohol and Other Behavior Disorders in Community Settings.
Department of Psychiatry, University of Michigan
(Spring 2015)

Sex Differences in Brain, Behavior and Disease.
Department of Psychology, University of Michigan
(Summer 2014, Summer 2015)

Neuropharmacology: Opioids.
Neuroscience Graduate Program, University of Michigan
(Spring 2014).

Neural Basis of Orofacial Pain and Function.
School of Dentistry, University of Michigan
(Spring 2010, Spring 2011, Spring 2012, Spring 2013, Spring 2014)

Graduate Student Committees

2019 - 2020 Member, Anne Baker, University of Utah, Utah, College of Social Work

2017 - 2019 Member, Ashley Ytterdahl, Stony Brook University, New York, Department of Psychology

Trainee Supervision

Graduate

2017 - 2020 Anne Baker, University of Utah
2015 Navya Varshney (Pharmacy)*, University of Michigan
2013 Helen Zhang (MS2)* , University of Michigan
2010 - 2011 Hamdan Azhar (Masters) , University of Michigan
2010 - 2011 JJ Ubowan Saeung (Dental School Student) , University of Michigan

Undergraduate

2020 Tanner Goodman, University of Utah
2020 Zo Kronberg, University of Utah
2020 Morgan Rohner, University of Utah
2019 Valerie Yukhimova, University of Utah
2017 - 2020 Lauren Cardon*, University of Utah
2017 - 2018 Marisa Asadian, University of Utah
2017 - 2020 Sophie McQuinn*, University of Utah
2017 Brayden Jensen, University of Utah
2017 - 2018 Gus Erickson*, University of Utah
2017 Hannah Samowitz, University of Utah
2016 - 2017 Melissa Price, University of Utah
2016 - 2017 Allison Astill, University of Utah
2016 - 2017 Katleen Nieto, University of Utah
2014 – 2015 Curtis Heisel, University of Michigan
2013 – 2015 Erica Heisel, University of Michigan
2012 Philippe de Juniac, University of Michigan
2011-2015 Chelsea Cummiford, University of Michigan
2011-2012 Jonathan Alverio, University of Michigan
2009-2010 Kristen Schohl, University of Michigan

High School

2015 Caleb Weissman
2011 Matthew Fligel
2011 Jeffrey Xu

* Received Funding For Their Research

ADMINISTRATIVE EXPERIENCE

Professional Organization & Scientific Activities

- 2020 - Present Task Force Member, American College of Neuropsychopharmacology, ACNP Diversity and Inclusion Committee
- 2019 - Present Committee Member, Organization for Human Brain Mapping, Organization for Human Brain Mapping Education Committee
- 2019 - Present Member, Society of Biological Psychiatry, Travel Award Committee Member
- 2017 Mentor, Organization for Human Brain Mapping, OHBM Mentoring Program
- 2016 Mentor, Society of Biological Psychiatry, SOBP Mentor / Mentee Program
- 2016 Ad Hoc Task Force Member, American College of Neuropsychopharmacology, ACNP Education and Training Committee
- 2015 Committee Member, Society for Social Neuroscience, (S4SN) Early Career Awards Committee

Grant Review Committee/Study Section

- 2017 Grant Reviewer, Wellcome Trust, London England, United Kingdom
- 2017 - 2018 Grant Reviewer, Research Incentive Seed Grant Program, Salt Lake City, Utah, USA
- 2016 Grant Reviewer, KCALSI Patton Trust Research Grant Program, Kansas City, MO, United States
- 2014 Grant Reviewer, Biotechnology and Biological Sciences Research Council (BBSRC), Swindon, England, United Kingdom

Symposium/Meeting Chair

- 2012 Chair, Workshop on the Preprocessing of Neuroimaging Data, University of Michigan, Molecular & Behavioral Neuroscience Institute, Ann Arbor, MI

UNIVERSITY SERVICE

College Level

- 2019 Member, School of Medicine, LCME Reaccreditation Sub-Committee
- 2018 - Present Member, School of Medicine, Education Technology Sub-Committee
- 2017 - 2018 Evaluator, School of Medicine Admissions Committee, Multiple Mini Interview (MMI) Committee
- 2017 - Present Member, School of Medicine, Curriculum Evaluation Sub-Committee

Department Level

- 2017 - 2019 Committee Member, Psychiatry, Addictions Update Conference Planning Committee
- 2016 - Present Committee Member, Psychiatry, Grand Rounds Committee
- 2016 Organizing Committee Member, Psychiatry, Psychiatry Clinical and Cognitive Measures Workgroup
- 2015 - Present Advisory Committee Member, Psychiatry, Department Advisory Committee
- 2011 - 2015 Member, University of Michigan Substance Abuse Research Center, Ann Arbor, MI.

CURRENT MEMBERSHIPS IN PROFESSIONAL SOCIETIES

American College of Neuropsychopharmacology
Organization for Human Brain Mapping
Research Society on Alcoholism
Society for Neuroscience
Society of Biological Psychiatry

REVIEWER

Addiction
Biological Psychiatry
Genes, Brain and Behavior
JAMA Psychiatry
Journal of Psychiatry and Neuroscience
Neuropsychopharmacology
Psychoneuroendocrinology
Schizophrenia Bulletin

OTHER SCHOLARLY ACTIVITIES

Additional Research/Scholarship Contributions

2012 - Present Investigational New Drug Application Held: FDA-IND-115812,
 Intranasal Oxytocin

TECHNICAL SKILLS

Programming Languages

Familiar with: C/C++, R, Matlab, Unix shell scripting (bash, csh), SQL, Visual Basic, Javascript

MRI Technologist

3+ years of experience operating 3.0 T GE Signa scanner. Familiar with Philips Ingenia, Siemens Prisma operation.

OUTREACH

2018 Poster Judge, Undergraduate Research Opportunities Program, Undergraduate Research Symposium (URS), University of Utah, Salt Lake City, UT.
2017 - 2018 Judge, Center for Medical Innovation, Bench-2-Bedside Competition, Salt Lake City, UT.
2016 Oxytocin and Social Behavior: A New Treatment Option for Substance Dependence? Summit County Mental Health Awareness Campaign, Park City, UT.
2015 Demonstration Leader, University of Michigan, Brains Rule! Neuroscience Exposition for Middle School Students.

- 2013 Presenter, Nerd Nite Ann Arbor, Cupid wasn't aiming for your heart: the neuroscience of love, Ann Arbor, MI.
- 2013 Presenter, Neurobiology of Addiction, Psychiatry Medical Student Interest Group (PsychSIGN), University of Michigan, Ann Arbor, MI.
- 2009 Volunteer, Neuroscience Program Recruitment, University of Michigan, Ann Arbor, MI.
- 2008 - 2012 Volunteer, M-Heal/World Medical Relief, Detroit, MI
- 2006 Demonstration Leader, University of Michigan, Neuroscience Program Outreach for Elementary School Students, Ann Arbor, MI.