### Stephen Sammut

Professor of Psychology Franciscan University of Steubenville 1235 University Blvd. Steubenville, OH 43952 (740) 283-6963 ssammut@franciscan.edu

### **Education**

University of Malta, 1995-1999

Msida, Malta

Ph.D. in Neuroscience

Pharmacy College, Monash University Parkville, VIC, Australia B.Pharm. 1990-1993

March 2018 - present

2015

April 2014 – March 2018

August 2010 – April 2014

## **Academic Positions**

### A. Teaching positions

Professor of Psychology
Associate Professor of Psychology
Assistant Professor of Psychology
Conferral of Tenure
Franciscan University of Steubenville, OH

Responsible for teaching:

- Research Statistics (using statistical program *R*)
- Experimental Psychology (including lab)
- Biological Psychology

### Prior Courses taught:

 Motivation & Emotion, Multivariate Statistics, Qualitative Nursing Research (graduatelevel), Quantitative Nursing Research (graduate level), Counseling Research & Evaluation (graduate level), Psychopharmachology (graduate level)

Contributions to teaching & research at Franciscan University of Steubenville:

- i) Designing and Establishing biological resource facility, with behavioral and surgical laboratory
- ii) Acquisition of laboratory equipment and other donations to support research
- iii) Management of the laboratory & animal facility
- iv) Mentoring and guiding undergraduate students in research projects and internships
- v) Assisting students in publishing & presenting research

Adjunct Assistant Professor, Department of Neuroscience, Carthage College, Kenosha, WI

2009-2010

Responsibilities: Teaching of 4 credits per class

- Neuroscience II: Electrical & Chemical properties (09/2009-12/2009)
- Introduction to Psychology (02/2010 05/2010)
- (invited to teach both classes in both Fall 2010 & Spring 2011 semesters offer turned down to accept position at FUS)

#### B. Research positions

Principal Investigator and Behavioral Neuroscience Lab Manager

March, 2015 - current

Franciscan University of Steubenville, OH

Responsibilities include but are not limited to:

- i) Design, coordination and execution of experiments (behavioral, biochemical, surgical etc).
- ii) Evaluation and analysis of acquired data and its relevance to the direction of the project.
- iii) Publishing of findings
- iv) Reviewing of scientific paper
- v) Guiding, training and mentoring students in research techniques, statistical analysis and interpretation.

Biological Resource Facility Manager

March, 2015 - current

Responsibilities include but are not limited to:

- i) Coordination of operations and resources of facilities to support multi-disciplinary animal research
- ii) Coordination of the development, modification, and implementation of programs for the use and care of animals with the IACUC; insures animal care programs comply with guidelines, federal regulations and accreditation requirements
- iii) Development of budgets and monitoring of expenditures and acquisition of funds,
- iv) Hiring, training, and evaluation of performance of Student Workers & Research Assistant.

Research Associate & Lab Manager

June 2004 – August 2010

Department of Neuroscience (Lab PI: Dr. AR. West)

Rosalind Franklin University of Medicine and Science

North Chicago, IL 60064

Responsibilities:

- i) in vivo experiments Nitric oxide electrochemistry; electrophysiology (local field potentials, single unit) or combined; reverse microdialysis (combined with electrophysiology/electrochemistry)
- ii) Evaluation and analysis of acquired data and its relevance to the direction of the project.
- iii) Publishing of findings
- iv) Reviewing of scientific paper
- v) Guiding, training and mentoring students, post-docs and other trainees in research methods, including the electrophysiological, electrochemical, histology, statistical analysis and interpretation.
- vi) Daily running of the laboratory in the capacity of lab manager including the overseeing of the budget and laboratory spending.

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Postdoctoral Fellow 01/2002-05/2004

Albany Medical College,

Center for Neuropharmacology and Neuroscience (MC136),

47 New Scotland Ave, Albany NY 12208

Research scientist 09/1995-12/2001

Senior Research Scientist (as of 01/1996) University of Malta, Msida, Malta, Europe

Contributions to neuroscience research at the University of Malta:

- i) Establishing of a voltammetry & confocal microscopy laboratory.
- ii) Establishing of two Behavioral laboratories (locomotor activity and drinkometers).

## **Duties & Accomplishments**:

- i) Full management of the laboratories including ordering, laboratory and equipment maintenance and other associated paper work and equipment set-up.
- ii) Management of animal facility
- iii) Laboratory modification (including woodwork, plumbing and some basic electrical modifications)
- iv) Mentoring and guiding undergraduate students.

#### **Research Interests**

My general area of interest lies in human psychopathology. As a behavioral neuroscientist, I see a two-pronged approach to this investigation, within my area of expertise. One is through the use **animal models of disease**, which remain crucial as a tool in science, helping us understand the mechanisms behind various human diseases by attempting to imitate to the best of our ability the pathologies of interest. In psychology (and related sciences), such models of disease are utilized to investigate the physiological mechanisms involved in psychiatric disorders. The second is through various investigations of **human behavior**, including through the use of survey research. It is my goal to utilize both methodologies to gain a better understanding of human psychopathology and the potential neurobiological mechanisms underlying such behavior.

## **Technique Experience**

Voltammetry/Amperometry: Fast Cyclic voltammetry (Millar Voltammeter, EI400, Invilog);

simultaneous extracellular and voltammetric at the same carbon fiber electrode or using adjacent electrodes. Amperometry (Apollo

4000, (WPI))

**Electrophysiology:** Field potential, Multi-unit and single unit recordings using glass,

carbon or tungsten microelectrodes – alone or in combination with

voltammetry

Behavioral experiments: Locomotor activity monitors, Drinkometers. Forced Swim Test

Behavioral models: Drug-induced Abortion (First-trimester human equivalent) –

Mifepristone & Misoprostol

Parkinson's disease – 6-OHDA, partial & full lesion

**Schizophrenia** – Neonatal model of neuronal Nitric Oxide Synthase inhibition

**Depression** – utilizing Interferon-alpha or mild stress and monitoring sucrose consumption

**Drug Abuse** – using behavioral sensitization – escalating behavioral responses to repeated exposure to psychostimulant drugs/drugs of abuse associated

Other techniques include:

Confocal Laser Scanning Microscopy; Spectrophotometry, Histology

# **Grants & Awards**

### A. Grants

Date	Granting organization	Amount
2020 (Multiple)	Private Donor grant	\$11,666.63
March, 2020	Private Donor grant	\$3000
March, 2020	Watson Bowes Research Institute grant	\$24,091.79
2019 (Multiple)	Private Donor grant	\$3334
October, 2019	Private Donor grant	\$10,000
August, 2019	Private Donor Grant - Multiple Donations	\$1,288
August, 2019	Private Donor Grant - Multiple Donations	\$2,462
June, 2019	Private Donor grant	\$4,000
May, 2019	Private Donor grant	\$5,000
May, 2019	Watson Bowes Research Institute grant	\$64,017
March, 2019	Private Donor grant	\$35,000
February, 2019	Private Donor grant	\$10,000
December, 2018	Private Donor ,grant	\$1,250
April, 2018	Private Donor grant	\$1,000
December, 2017	Private Donor grant	\$1,000
October 11 <sup>th</sup> , 2017	Watson Bowes Research Institute grant	\$50,000
February, 2017	Private donor grant for purchase of	\$5,000
	Spectrophotometer	
December, 2016	Private Donor grant	<b>\$1,25</b> 0
February, 2016	AAPLOG – Grants and donations	\$1000 – Student life;
	acquired to assist students in attending	\$1000 – Academic Affairs;
	conference	\$3175 – Private donations
October 15th, 2015	Watson Bowes Research Institute grant	\$16,640 for Abortion Study
February, 2015	AAPLOG - Grant to assist students in	\$5452
	attending conference	
February, 2014	AAPLOG – Grant to assist students in	\$1700
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	attending conference	
June, 2013	Donation acquired from TSE Systems,	\$50,263 Lab behavioral
	Inc. in Chesterfield, MO	equipment – 4 cage extension
June, 2012	Private donor grant	\$20,000 for Abortion Study
October, 2011	Donation acquired from TSE Systems,	\$62,000 lab behavioral
	Inc. in Chesterfield, MO	equipment (4 cage system)

#### B. Other Awards

Date	Award
February, 17 <sup>th</sup> 2017	Excellence in Scholarship Award 2015-16
September 29 <sup>th</sup> 2011	FEC Grant to attend Society for Neuroscience Conference, Washington DC.

## Ad Hoc Review of Scientific Manuscripts

Anatomical Record; BMC Psychiatry; Brain, Behavioral Pharmacology, Behavior and Immunity; Brain Research, CNS Neuroscience & Therapeutics; European Journal of Dental Education; European Journal of Neuroscience; International Journal of Physical Medicine & Rehabilitation; Journal of Alzheimers Disease & Parkinsonism; Journal of American College Health; Journal of Drug Issues; Journal of Psychology & Psychotherapy; Journal of Pharmacological Sciences; Journal of Neuroscience Research; Journal of Neurochemistry; Journal of Psychology & Psychotherapy; Mitochondrion; Molecular and Cellular Biochemistry; Neuropharmacology; Neuropsychiatric Disease and Treatment; Neuropsychopharmacology; Neuroscience Letters; Psychological Reports; Psychoneuroendocrinology; Psychiatry Research; Religions; Studies in Higher Education; Sultan Qaboos University Medical Journal, Synapse, The Journal of Addiction, Recovery, & Aftercare; The Spanish Journal of Psychology.

Other: Editorial Board Member of the scientific journal *Heliyon* published by Elsevier (4/2016 - 7/2019).

# **Professional Society Memberships**

Research associate of the Veritas Center for Ethics in Public Life

Associate Member of the American Association of Pro-Life Obstetricians and Gynecologists (AAPLOG)

World Expert Consortium for Abortion Research and Education (WECARE) Society of Catholic Scientists

### **Peer Reviewed Publications**

- 1. Camilleri, C., Perry, J.T., and <u>Sammut, S</u>. (2021). Compulsive Internet Pornography Use and Mental Health: A Cross-Sectional Study in a Sample of University Students in the United States. *Frontiers in Psychology* 11(3870). doi: 10.3389/fpsyg.2020.613244.
- 2. Camilleri, C., Buskmiller, C., and <u>Sammut, S</u>. (2021). Pregnancy-induced long-term uterine vascular remodeling in the rat. *Reproductive Biology* 21(1). doi: 10.1016/j.repbio.2020.100466.
- 3. Williams, P.D., Hunter, W.M., Seyer, E., <u>Sammut, S.</u>, and Breuninger, M.M. (2019). Religious/spiritual struggles and perceived parenting style in a religious college-aged sample. *Mental Health Religion & Culture* 22(5), 500-516. doi: 10.1080/13674676.2019.1629402.
- 4. Camilleri, C., Beiter, R.M., Puentes, L., Aracena-Sherck, P., and <u>Sammut, S</u>. (2019). Biological, Behavioral and Physiological Consequences of Drug-Induced Pregnancy Termination at First-Trimester Human Equivalent in an Animal Model. *Front Neurosci* 13(544), 544. doi: 10.3389/fnins.2019.00544.
- 5. Porada, K., <u>Sammut</u>, <u>S</u>., and Milburn, M. (2017). Empirical Investigation of the Relationships Between Irrationality, Self-Acceptance, and Dispositional Forgiveness. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*. doi: 10.1007/s10942-017-0284-0.
- Hoque, K.E., Blume, S.R., <u>Sammut, S.</u>, and West, A.R. (2017). Electrical stimulation of the hippocampal fimbria facilitates neuronal nitric oxide synthase activity in the medial shell of the rat nucleus accumbens: Modulation by dopamine D1 and D2 receptor activation. *Neuropharmacology* 126, 151-157. doi: 10.1016/j.neuropharm.2017.09.005.
- 7. Padovan-Neto, F.E., <u>Sammut, S.</u>, Chakroborty, S., Dec, A.M., Threlfell, S., Campbell, P.W., Mudrakola, V., Harms, J., Schmidt, C., and West, A.R. (2015). Facilitation of corticostriatal transmission following pharmacological inhibition of striatal phosphodiesterase 10A: role of nitric oxide-soluble guanylyl cyclase-cGMP signaling pathways. *J Neurosci* 35(14), 5781-5791. doi: 10.1523/JNEUROSCI.1238-14.2015.
- 8. Beiter, R., Nash, R., McCrady, M., Rhoades, D., Linscomb, M., Clarahan, M., and <u>Sammut, S</u>. (2015). The prevalence and correlates of depression, anxiety, and stress in a sample of college students. *J Affect Disord* 173(0), 90-96. doi: 10.1016/j.jad.2014.10.054.
- 9. Tseng, K.Y., Caballero, A., Dec, A., Cass, D.K., Simak, N., Sunu, E., Park, M.J., Blume, S.R., Sammut, S., Park, D.J., and West, A.R. (2011). Inhibition of striatal soluble guanylyl cyclase-cGMP signaling reverses basal ganglia dysfunction and akinesia in experimental parkinsonism. *PLoS One* 6(11), e27187. doi: 10.1371/journal.pone.0027187.
- 10. <u>Sammut, S.</u>, Threlfell, S., and West, A.R. (2010). Nitric oxide-soluble guanylyl cyclase signaling regulates corticostriatal transmission and short-term synaptic plasticity of striatal projection neurons recorded in vivo. *Neuropharmacology* 58(3), 624-631. doi: 10.1016/j.neuropharm.2009.11.011.
- 11. Hoque, K.E., Indorkar, R.P., <u>Sammut, S.</u>, and West, A.R. (2010). Impact of dopamine-glutamate interactions on striatal neuronal nitric oxide synthase activity. *Psychopharmacology (Berl)* 207(4), 571-581. doi: 10.1007/s00213-009-1687-0.

- 12. Threlfell, S., <u>Sammut, S.</u>, Menniti, F.S., Schmidt, C.J., and West, A.R. (2009). Inhibition of Phosphodiesterase 10A Increases the Responsiveness of Striatal Projection Neurons to Cortical Stimulation. *J Pharmacol Exp Ther* 328(3), 785-795. doi: 10.1124/jpet.108.146332.
- 13. <u>Sammut, S.</u>, and West, A.R. (2008). Acute cocaine administration increases NO efflux in the rat prefrontal cortex via a neuronal NOS-dependent mechanism. *Synapse* 62(9), 710-713. doi: 10.1002/syn.20537.
- 14. Ondracek, J.M., Dec, A., Hoque, K.E., Lim, S.A., Rasouli, G., Indorkar, R.P., Linardakis, J., Klika, B., Mukherji, S., Burnazi, M., Threlfell, S., **Sammut, S.**, and West, A.R. (2008). Feed-forward excitation of striatal neuron activity by frontal cortical activation of nitric oxide signaling in vivo. *Eur J Neurosci* 27(7), 1739-1754. doi: 10.1111/j.1460-9568.2008.06157.x.
- 15. <u>Sammut, S.</u>, Park, D.J., and West, A.R. (2007). Frontal cortical afferents facilitate striatal nitric oxide transmission in vivo via a NMDA receptor and neuronal NOS-dependent mechanism. *J Neurochem* 103(3), 1145-1156. doi: 10.1111/j.1471-4159.2007.04811.x.
- Sammut, S., Bray, K.E., and West, A.R. (2007). Dopamine D2 receptor-dependent modulation of striatal NO synthase activity. *Psychopharmacology (Berl)* 191(3), 793-803. doi: 10.1007/s00213-006-0681-z.
- 17. <u>Sammut, S.</u>, Dec, A., Mitchell, D., Linardakis, J., Ortiguela, M., and West, A.R. (2006). Phasic dopaminergic transmission increases NO efflux in the rat dorsal striatum via a neuronal NOS and a dopamine D(1/5) receptor-dependent mechanism. *Neuropsychopharmacology* 31(3), 493-505. doi: 10.1038/sj.npp.1300826.
- 18. **Sammut, S.**, Bethus, I., Goodall, G., and Muscat, R. (2002). Antidepressant reversal of interferon-α-induced anhedonia. *Physiology & Behavior* 75(5), 765-772. doi: 10.1016/s0031-9384(02)00677-7.
- 19. <u>Sammut, S.</u>, Goodall, G., and Muscat, R. (2001). Acute interferon-alpha administration modulates sucrose consumption in the rat. *Psychoneuroendocrinology* 26(3), 261-272. doi: 10.1016/s0306-4530(00)00051-2.

# **Book Chapters**

- 1. Sammut, S., Chakroborty, S., Padovan-Neto, F. E., Rosenkranz, J. A., & West, A. R. (2017). Neurophysiological Approaches for In Vivo Neuropharmacology. In A. Phillipu (Ed.), *In Vivo Neuropharmacology and Neurophysiology* (Vol. 121, pp. 253-292). ISBN 978-1-4939-6488-8, 1st ed. 2016, V, 443 p. 141 illus., 68 illus. in color. With online files/update. Format: Hardcover
- **2.** Schaefer, DJ., Pathakamuri, J., <u>Sammut, S.</u>, Karan, K. Emotional arousal and Bollywood: assessing cortical activation for violent, sexual, and romantic content in popular Hindi cinema. In: *Bollywood and globalization: the global power of popular Hindi cinema*. (Editors Schaefer, D. J. and K. Karan) New York: Routledge. pp 167-180, 2013.
- **3.** West AR., <u>Sammut S.</u>, Ariano MA. Striatal Nitric Oxide–cGMP Signaling in an Animal Model of Parkinson's Disease. In: *Cortico-Subcortical Dynamics in Parkinson's Disease* (Editor Tseng, KY) Humana Press, New York. Chapter 11. pp 171-184, 2009.

- **4.** Liu D., <u>Sammut S.</u>, West AR. Nitric oxide signaling modulates the responsiveness of striatal medium spiny neurons to electrical stimulation of the substantia nigra: Striatal nitrergic signaling. In: *The Basal Ganglia VIII* (Editors: Bolam, JP.; Ingham, CA. and Magill, PJ.) Springer Science and Business Media, New York. pp 503-512, 2005.
- **5.** Muscat R., Goodall G., <u>Sammut S.</u> Attenuation of Interferon-alpha induced reduction of dopamine release in the nucleus accumbens core following behavioural sensitisation to amphetamine: an ex-vivo voltammetric study. In *Monitoring Molecules in Neuroscience: Proceedings of the 9<sup>th</sup> International Conference on In Vivo Methods.* (Editors: O'Connor, W.T.; Lowry J.P.; O'Connor, J.J.; O'Neill, R.D.) University College Dublin. pp 412-413, 2001.
- **6.** <u>Sammut S.</u>, Goodall G., Muscat R. Recombinant Human Interferon-alpha modulates evoked dopamine release in the nucleus accumbens. In *Monitoring Molecules in Neuroscience: Proceedings of the 9<sup>th</sup> International Conference on In Vivo Methods.* (Editors: O'Connor, W.T.; Lowry J.P.; O'Connor, J.J.; O'Neill, R.D.) University College Dublin. pp 414-415, 2001.

### Published Abstracts, Posters & Presentations

- 1. Camilleri C., Beiter R., Puentes L., Aracena, P., <u>Sammut S</u> (Copresented with C. Camilleri). Behavioral, Biological and Physiological Consequences of Mid-Term Drug-Induced Pregnancy Termination in an Animal Model. April 7, 2019. Marian University Medical School, Indianapolis, IN. *Matthew Bulfin Educational Conference: Joint Conference with the American College of Pediatricians and AAPLOG*.
- **2.** Camilleri C., Buskmiller C., <u>Sammut S.</u> Developing a Surgical Technique for Embryo/Fetal Transfer in Ectopic Pregnancy in an animal Model: A Preliminary Investigation. April 5-7, 2019. Marian University Medical School, Indianapolis, IN. *Matthew Bulfin Educational Conference: Joint Conference with the American College of Pediatricians and AAPLOG.*
- **3.** Camilleri C., Beiter R., Puentes L., Aracena, P., <u>Sammut S</u>. Behavioral and physiological consequences of mid-term drug-induced pregnancy termination in an animal model. Presentation No. 775.02. 2018 Neuroscience Meeting Planner. San Diego, CA: *Society for Neuroscience*, 2018. Online.
- **4.** Camilleri C., Beiter R., Puentes L., Aracena, P., <u>Sammut S</u> (Copresented with C. Camilleri). Chemically-Induced Pregnancy Termination: An Animal Model. October 1, 2017. Center for Bioethics and Human Dignity, Trinity International University, Deerfield IL. *Matthew Bulfin Educational Conference: Joint Conference with the American College of Pediatricians and AAPLOG*.
- **5.** Camilleri C., <u>Sammut S</u>. The Behavioral Consequences of Pregnancy Termination in an Animal Model. 29 April 2017. *2017 Ohio Undergraduate Psychology Research Conference*. John Carroll University.
- **6.** <u>Sammut S.</u> Loizzo J. Neurobehavioral Effects of Pornography Use Implications for Interventions. Workshop No. 20120824. *NACSW Convention 2016* Cincinnati, Ohio, November 17th November 20th, 2016.
- **7.** Camilleri C, <u>Sammut S</u>. Burnout and mental health in a sample of university students. Presentation No. 69.07. 2016 Neuroscience Meeting Planner. San Diego, CA: *Society for Neuroscience*, 2016. Online.

- **8.** Beiter R, Nash R, McCrady M, Rhoades D, Linscomb M, Clarahan M, <u>Sammut S.</u> (2015) The Prevalence and Correlates of Depression, Anxiety, and Stress. Program No. VIII-109. May 21-24, 2015, New York, NY. *Association for Psychological Science's Annual 27th Annual Convention*. Online
- **9.** Beiter R, Nash R, McCrady M, Rhoades D, Linscomb M, Clarahan M, <u>Sammut S.</u> (2015) The Prevalence and Correlates of Depression, Anxiety, and Stress in a sample of College Students. *Program No. 2A1.April 18th, 2015, John Carroll University. The 29th Annual Ohio Undergraduate Psychology Research Conference*
- **10.** Sammut S, Schmidt C J, West AR. Facilitation of corticostriatal transmission following pharmacological inhibition of striatal phosphodiesterase 10A: Role of soluble guanylyl cyclase-cGMP signaling pathways. Program No. 591.3. 2010 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010. Online.
- **11.** West AR, Park DJ, <u>Sammut S</u>, Sunu EK, Park MJ, Blume-Rice S, Tseng KY. Pharmacological disruption of striatal soluble guanylyl cyclase-cyclic GMP signaling reverses electrophysiological, metabolic, and behavioral abnormalities associated with experimental parkinsonism. Program No. 857.1. 2010 Neuroscience Meeting Planner. San Diego, CA: *Society for Neuroscience*, 2010. Online.
- **12.** Park D, <u>Sammut S</u>, Sunu E, Park, M, Sobhani R, Blume S, Tseng K, West AR. Inhibition of soluble guanylyl cyclase reverses electrophysiological and behavioral abnormalities associated with experimental parkinsonism. Program No. 532.26. 2009 Neuroscience Meeting Planner. Chicago, IL: *Society for Neuroscience*, 2009. Online.
- **13.** Hoque KE, <u>Sammut S</u>, West AR. Dopamine D2 receptor-dependent modulation of nitric oxide synthase activity in the rat striatal complex. Program No. 566.1. 2009 Neuroscience Meeting Planner. Chicago, IL: *Society for Neuroscience*, 2009. Online.
- **14.** Hoque KE, Indorkar RP, <u>Sammut S</u>, West AR. Dopaminergic modulation of nitric oxide synthase activity in the nucleus accumbens: Histochemical analysis of regional subdivisions. Program No: 273.2. Washington DC: *Society for Neurosci Abstr*; Online, 2008.
- **15.** Park DJ, <u>Sammut S</u>, Hoque KE, West AR. Impact of striatal NMDA and dopamine D1 receptor interactions on neuronal NOS activity: Studies combining in vivo amperometry and reverse microdialysis. Program No: 273.6. Washington DC. *Society for Neurosci Abstr*; Online, 2008.
- **16.** Perez MF, Gabach L, Cancela LM, <u>Sammut S</u>, West AR, HU X-T, Nasif FJ. Inhibition of nitric oxide synthase prevents behavioral sensitization and associated alterations in neuronal excitability in the rat mPFC after repeated cocaine administration Program No: 359.6. Washington DC: *Society for Neurosci Abstr*; Online, 2008.
- **17.** West AR, Threlfell S, <u>Sammut S</u>, Lim SAO, Menniti FS, Schmidt CJ. Differential regulation of cortically-evoked activity in striatal projection neuron subpopulations following pharmacological inhibition of phosphodiesterase 10A. Program No: 578.4. Washington DC: *Society for Neurosci Abstr*; *Online*, 2008.
- **18.** <u>Sammut S</u> and West AR. Acute cocaine administration increases NO efflux in the rat prefrontal cortex and dorsal striatum in vivo. Program No: 561.15. Washington DC: *Society for Neurosci Abstr*; Online, 2008.

- **19.** Park DJ, <u>Sammut S</u>, Ariano MA and West AR. Inhibition of Phosphodiesterase 10A activity increases the membrane excitability and up state duration of striatal medium spiny neurons recorded in vivo. Program No: 516.5. San Diego, CA: *Society for Neurosci Abstr*; Online, 2007.
- **20.** <u>Sammut S</u>, Park DJ and West AR. Frontal cortical facilitation of nitric oxide transmission modulates local field potential activity in the striatum. No: 514.10. San Diego, CA: *Society for Neurosci Abstr;* Online, 2007.
- **21.** Anthony R. West, Alexander Dec, Diana Park, Janie Ondracek, Kristina Hoque, Migena Burnazi, Sarah Threlfell, and **Stephen Sammut**. Activation of striatal nitric oxide signaling by dopaminergic and glutamatergic transmission: Differential modulation of striatal neuron activity in vivo. *IBAGS IX 2007, Egmond aan Zee, the Netherlands*.
- **22.** <u>Sammut S</u>, West AR. Dopamine D<sub>2</sub> receptor-dependent modulation of striatal nitric oxide synthesis in vivo. Program No: 56.16. Atlanta, GA: *Society for Neurosci Abstr*; Online, 2006.
- **23.** Ondracek JM, <u>Sammut S</u>, Dec A, Park D, Mukherji SJ, Klika B, Chakroborty S, Linardakis J, Burnazi M, West AR. Role of nitric oxide signaling in corticostriatal feed-forward modulation of neuron activity in vivo. Program No: 352.17. Atlanta, GA: *Society for Neurosci Abstr*; Online, 2006.
- **24.** Dec AM, Park D, Burnazi M, Chakroborty S, <u>Sammut S</u>, West AR. Facilitation of striatal nitric oxide signaling by dopamine D<sub>1/5</sub> activation inhibits subsequent corticostriatal activation of single-unit activity in vivoProgram No: 556.20. Atlanta, GA: *Society for Neurosci Abstr*; Online, 2006.
- **25.** <u>Sammut S.</u> Dec A, Linardakis J, West AR. Stimulation of the substantia nigra increases striatal nitric oxide efflux via a D<sub>1/5</sub>-mediated mechanism. *Program No: 988.6. Soc Neurosci Abstr;Online*, 2005, Washington DC.
- **26.** Grissell AE, <u>Sammut S</u>, West AR, Ariano MA. Striatal cGMP signaling in a model of early Parkinson's Disease. *Soc Neurosci Abstr* 2005, Washington DC
- **27.** <u>Sammut S</u>, Liu D, Dec A, Mitchell D, Linardakis J, Ortiguela M, West AR. Nitric oxide signaling modulates the responsiveness of striatal medium spiny neurons to nigrostriatal inputs. *Soc Neurosci Abstr* 2004, San Diego. Poster No: 45.1
- **28.** <u>Sammut S</u>, O'Donnell P. Simultaneous *in vivo* local field potential and electrochemical recordings in the nucleus accumbens. *Soc Neurosci Abstr* 2003, New Orleans. Poster No: 461.6
- **29.** Muscat R., <u>Sammut S.</u> Naltrexone attenuation of amphetamine-induced sensitised locomotor behaviour. Abstracts of a Workshop on New Advances in the Understanding and Treatment of Addiction, September 19-21, 2002, University of Sussex, Brighton, UK. *Behavioural Pharmacology* 13(5):495-496.
- **30.** <u>Sammut S.</u>, Goodall G., Muscat R. Attenuation of Interferon-alpha-induced reduction of dopamine release in the nucleus accumbens core following behavioural sensitisation to Amphetamine. Abstracts of the First Joint Meeting of the EBBS-EBPS September 8-12 2001, Marseille, France. *Behavioural Pharmacology* 12 Suppl 1:S88.

- **31.** <u>Sammut S.</u>, Bethus I., Muscat R., Goodall G. A central-peripheral interaction in the neurochemical and behavioural effects of IFN-alpha. Abstracts of the First Joint Meeting of the EBBS-EBPS September 8-12 2001, Marseille, France. *Behavioural Pharmacology* 12 Suppl 1:S88.
- **32.** Bethus I., <u>Sammut S.</u>, Muscat R., Goodall G. Antidepressants block IFN-alpha-induced anhedonia in the rat. Abstracts of the First Joint Meeting of the EBBS-EBPS September 8-12 2001, Marseille, France. *Behavioural Pharmacology* 12 Suppl 1:S7.
- **33.** <u>Sammut S.</u>, Muscat R. Baclofen and muscimol induce dopamine antagonist-like effects on the sucrose concentration-intake curve. DOPAMINE '98, Strasbourg, France July 22-25 1998.
- **34.** Sammut S., Gooijer S., Muscat R. MK-801 and raclopride induce similar effects on the sucrose concentration-intake curve. Joint Meeting between the British Association for Psychopharmacology and the Canadian College for Neuropsychopharmacology. Cambridge 13 17 July 1997.

## Non-Peer reviewed articles

- **1.** Sammut, S. (2020, November 18). The Fall of a Nation. *One Peter Five*. https://onepeterfive.com/the-fall-of-a-nation/
- **2.** Sammut, S. (2018, December 4). Political misuse of scientific facts. *Herald-Star*. https://www.heraldstaronline.com/opinion/letters-to-the-editor/2018/10/political-misuse-of-scientific-facts/
- **3.** Sammut, S. (2018, February 11). Compassion or control? *Herald-Star*. https://www.heraldstaronline.com/opinion/letters-to-the-editor/2018/02/compassion-or-control/
- **4.** Hendershott, A. & Sammut, S. (2016, March 31). Universities are complicit in the fetal-tissue scandal *The Catholic World Report*. http://www.catholicworldreport.com/Blog/4679/universities\_are\_complicit\_in\_the\_fetaltissue\_scandal.aspx
- **5.** Sammut, S. (2016, March 11). Setting the Record Straight About Zika and Contraception. *The National Catholic Register*. http://www.ncregister.com/daily-news/setting-the-record-straight-about-zika-and-contraception
- **6.** Hendershott, A., & Sammut, S. (2015, September 16). On Ignoring Consent Rules on Fetal Tissue Donations Crisis Magazine. http://www.crisismagazine.com/2015/on-ignoring-consent-rules-on-fetal-tissue-donations

#### **Invited Lectures**

- 1. Utilizing Animal Models in the Investigation of Pregnancy-related Scenarios. The LIFETECH 2020 Virtual Conference. Saturday, October 24th, 2020. https://www.youtube.com/watch?v=8leCe6XTYtk. Held online due to COVID-19.
- 2. Developing a Surgical Technique for Embryo/Fetal Transfer in Ectopic Pregnancy in an Animal Model: A Preliminary Investigation. Joint Conference with the American College of Pediatricians and AAPLOG. March 27-29, 2020; Presented Online due to COVID-19.
- 3. Drug-Induced Pregnancy Termination at First-Trimester Human Equivalent in an Animal Model. Respect Life Conference. Co-presented with Christina Camilleri. October 5<sup>th</sup>, 2019; St. Vincent de Paul Catholic Church, Charlotte, NC.

- 4. Behavioral and physiological consequences of mid-term drug-induced pregnancy termination in an animal model. Joint Conference with the American College of Pediatricians and AAPLOG. Co-presented with Christina Camilleri; April 5-7, 2019; Marian University, Indianapolis, IN.
- 5. Chemically-induced Pregnancy Termination: An Animal Model. Joint Conference with the American College of Pediatricians and AAPLOG. Co-presented with Christina Camilleri; September 29, 30, & October 1, 2017; The Center for Bioethics and Human Dignity, Trinity International University Campus, Deerfield, IL.
- 6. *Neuroscience and Faith.* Science and Faith Conference, Fall 2015 (9/11/15 9/12/15). Talk: <a href="http://www.faithandreason.com/2015/11/dr-stephen-sammut-neuroscience-and-faith/">http://www.faithandreason.com/2015/11/dr-stephen-sammut-neuroscience-and-faith/</a>.
- 7. Rat Models of Depression and application for Experimental Models of Post-Abortion Syndrome. AAPLOG (American Association of Pro-Life Obstetricians & Gynecologists Annual Research & Strategy Conference; February 21, 2014; Washington DC.
- 8. Human Behavior: a Neurobiological Perspective. Distinguished Speakers Series Response to Mark Regnerus "What Contemporary Sexual Behavior Patterns Reveal About the Mating Market and Catholic Thought." November 7, 2013. Franciscan University of Steubenville.
- 9. The traumatized synapse: How Neurons react to what the body feels. 38th Annual Fall Institute; October 8 2004; Albany, NY.
- 10. Neurophysiology of Psychiatric disorders. Sidney Albert Training and Research Institute (SATRI); April 23 2004; Albany, NY.
- 11. The role of interferon-alpha in the mesolimbic DA system. July 2001; Center for Neuropharmacology & Neuroscience, Albany Medical College, Albany, NY, USA
- 12. The role of interferon-alpha in the mesolimbic DA system. July 2001; Dept of Neuroscience, University of Pittsburgh, Pittsburgh, PA, USA
- 13. The role of interferon-alpha in the mesolimbic DA system. Institut François Magendie; 1999 October 18; Bordeaux, France
- 14. Recombinant human IFN-alpha-A modulates dopamine release in the nucleus accumbens. The Fourth Maltese Medical School Conference. 1999 March 10; Malta.
- 15. Naltrexone Attenuates amphetamine-induced sensitised locomotor behaviour. ICAA 42nd International Institute on the Prevention and Treatment of Dependencies; 1998 August 30 September 4; Malta.

# Research Projects

Below are the past and current/ongoing projects that I am involved in with students. Past research projects are currently being prepared for publication. The goals of these research projects are: to expose students to true research, that is pertinent to the university, and is publishable; to facilitate their growth and prepare them for graduate school.

COVID-19 and Mental Health in College Students	Fall 2020
Pornography and Mental Health among College Students	Fall 2019
Mental Health Knowledge among Faculty and Staff	Fall 2018
Spirituality and Mental Health	Spring 2018
Destructive behavior, Depression and Isolation	Fall 2017
Scrupulosity, Attachment to God, Religiousness, Depression, Anxiety & Stress. (conducted in collaboration with Dr. Matthew Breuninger) —	Spring 2017
published in <i>Mental Health, Religion &amp; Culture (2019).</i> Gambling, Attitude to Gambling (conducted in collaboration with United Prevention Partnership; presented as a report)	Spring 2017
Destructive Behavior and spirituality	Fall 2016
Counseling Center efficacy	Fall 2016
Destructive behavior	Spring 2016
Mental Health	Spring 2016
Burnout across different Majors	Fall 2015
Rational Beliefs, Disposition to Forgive & Self-Acceptance (conducted in collaboration with Dr. Milo Milburn, Graduate Counseling Program) — published in <b>Journal of Rational-Emotive &amp; Cognitive-Behavior</b>	Fall 2015
Therapy (2017).  CORE Drug & Alcohol Survey with a focus on Austria Gaming Campus	Fall 2015
Mental Health Awareness on Campus	Spring 2015
Pornography prevalence & use	Spring 2015
Depression, anxiety & Stress, spirituality, Social Media and Social support	Fall 2014
ActivPrayer – an investigation of the role of altruistic, prosocial activity in psychological well-being (Experimental I Class) - (currently being analyzed & prepared for Publication)	Spring 2014 - Spring 2016
CORE Drug & Alcohol Survey (Experimental I Class)	Spring 2014
Modesty & Self-esteem (Experimental I Class)	Fall 2013
Depression, Anxiety and Stress & their potential causes in FUS students (Experimental I Class) – published in <i>Journal of Affective Disorders (2014)</i> .	Fall 2013
The Effect of Atonal Versus Tonal Music Upon One's Emotional State	Summer 2013
Drug-induced Pregnancy Termination: An Animal Model (in collaboration with <i>Univ. San Sebastián, Concepción, Chile</i> ). – <b>published</b> in <i>Frontiers in Neuroscience (2019).</i>	Summer 2013
Reward and motivation in a rat model	Spring 2013 - ongoing

Religiosity and Personal Behavior (Experimental I Class)	Spring 2013
Use of social media and social ability (Experimental I Class)	Spring 2013
Influence of Impulsivity and Living Environment on Destructive	Fall 2012
Behaviors Among College Students. (Experimental I Class)	
Childhood Family Security and Anxiety and Dependence in Adult	Fall 2012
Relationship Attachment (Experimental I Class)	
CORE Drug and Alcohol Survey	Spring 2012