

Curriculum Vitae

INFORMAZIONI PERSONALI

Nome ANNA
Cognome BRANCATO
Recapiti Dipartimento di Promozione della Salute, Materno Infantile, Medicina Interna e Specialistica di Eccellenza - PROMISE
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FORMAZIONE TITOLI

CAJAL Advanced Neuroscience training programme. Connectomics: from Micro- to Meso- and Macro-Scales | Neurocentre Magendie, Bordeaux, France. Organizers: Andreas Frick; Laurent Petit; Olaf Sporns. Hands-on training in Optogenetics of Neural Circuits of Anxiety. 2017

Dottorato di Ricerca in Biomedicina e Neuroscienze - Neuroscienze e Disturbi del Comportamento - ciclo XXVI, Università degli Studi di Palermo - Tesi dal titolo "Gender-specific vulnerability to alcohol and depression. Focus on glutamatergic synapses in the nucleus accumbens", 08.03.2016

Diploma di Specializzazione della Scuola Nazionale sulle Dipendenze. Corso avanzato di durata annuale - Programma Formativo Multidisciplinare su strumenti di prevenzione, diagnosi, cura e riabilitazione delle dipendenze patologiche. Dipartimento Politiche Antidroga e Scuola Nazionale dell'Amministrazione, Presidenza del Consiglio dei Ministri, Roma, 25.03.2015

Diploma di Specializzazione della Scuola Nazionale sulle Dipendenze - Corso base di durata annuale - Programma Formativo Multidisciplinare su strumenti di prevenzione, diagnosi, cura e riabilitazione delle dipendenze patologiche. Dipartimento Politiche Antidroga e Scuola Nazionale dell'Amministrazione, Presidenza del Consiglio dei Ministri - Roma, 30.01.2014

Laurea Specialistica in Farmacia, Università degli Studi di Palermo - Tesi sperimentale dal titolo "Acetaldeide e trasmissione peptidergica. Ruolo del Neuropeptide Y" - summa cum laude, 31.10.2012

ATTIVITA' DIDATTICA

dal 2021- Docente del Modulo di Farmacologia I - insegnamento di FARMACOLOGIA -C.I. 03143 - a.a. 2022/2023 (4 CFU) SSD BIO/14 - SC 05G1 - in italiano, Corso di Laurea Magistrale a ciclo unico in Medicina e Chirurgia- Canale Chirone, Università degli Studi di Palermo

dal 2022 - Docente del Modulo di Farmacologia - insegnamento di MEDICINA INTERNA, GASTROENTEROLOGIA E FARMACOLOGIA C.I. 21846- a.a. 2022/2023 - (30 ore -3 CFU) - SSD BIO/14 - SC 05G1 - in italiano, Corso di Laurea Triennale in Infermieristica, Università degli Studi di Palermo

dal 2020 - Docente del Modulo di Farmacologia - insegnamento di DIETETICA, NUTRACEUTICA E ONCOLOGIA C.I 18944- a.a. 2022/2023 - (30 ore -3 CFU) - SSD BIO/14 - SC 05G1 -in italiano, Corso di Laurea Triennale in Dietistica, Università degli Studi di Palermo

2022/2023: Organizzatore del corso "The brain on food: neuroepigenetics of nutrition", tenuto dalla dr.ssa O. Engmann, PhD (8 ore, Ottobre 2023), per CdL in Dietistica, Università degli Studi di Palermo

2021/2022: Organizzatore del corso in Neuroepigenetics, tenuto dalla dr. O. Engmann (8 ore, March 2022), per l'International Master's degree in Neuroscience, University of Palermo

RICERCHE FINANZIATE

INCARICHI / CONSULENZE

2023: Membro farmacologo del Comitato Etico Locale "Palermo 2" - AO Ospedali Riuniti Villa Sofia Cervello, Palermo

ASSOCIAZIONI SCIENTIFICHE

from 2017 - Associate Member of the European College of Neuropsychopharmacology (ECNP)

from 2014 - Member of the Mediterranean Neuroscience Society (MNS)

from 2013 - Member of the Italian Society of Pharmacology (SIF) - Working group Pathological dependences

from 2013 - Member of the International Drug Abuse Research Society (IDARS)

PUBBLICAZIONE

Castelli V, Lavanco G, D'Amico C, Feo S, Tringali G, Kuchar M, Cannizzaro C, **Brancato A**. CBD enhances the cognitive score of adolescent rats prenatally exposed to THC and fine-tunes relevant effectors of hippocampal plasticity. **Front Pharmacol.** **2023**;14:1237485. doi: 10.3389/fphar.2023.1237485.

Tringali G, Lavanco G, Castelli V, Pizzolanti G, Kuchar M, Currò D, Cannizzaro C, **Brancato A**. Cannabidiol tempers alcohol intake and neuroendocrine and behavioural correlates in alcohol binge drinking adolescent rats. Focus on calcitonin gene-related peptide's brain levels. **Phytother Res.** **2023**. doi: 10.1002/ptr.7972.

Castelli V, Lavanco G, Feo S, D'Amico C, Micale V, Kuchar M, Plescia F, **Brancato A**, Cannizzaro C. Prenatal Exposure to 9-Tetrahydrocannabinol Affects Hippocampus-Related Cognitive Functions in the Adolescent Rat Offspring: Focus on Specific Markers of Neuroplasticity. **Pharmaceutics.** **2023**; 15(2):692.

Brancato, A., Castelli, V., Cannizzaro, C., Tringali, G. Adolescent binge-like alcohol exposure dysregulates NPY and CGRP in rats: Behavioural and immunochemical evidence. **Prog Neuropsychopharmacol Biol Psychiatry.** **2022**; 123:110699. doi: 10.1016/j.pnpbp.2022.110699. Epub ahead of print.

Cubillos S, Engmann O, **Brancato A**. BDNF as a Mediator of Antidepressant Response: Recent Advances and Lifestyle Interactions. **Int J Mol Sci.** **2022**;23(22):14445. doi: 10.3390/ijms232214445.

Castelli V, Plescia F, Maniaci G, Lavanco G, Pizzolanti G, **Brancato A*** and Cannizzaro C*. Alcohol Binge Drinking in adolescence and Psychological profile: can the preclinical model crack the Chicken-Or-Egg question? **Frontiers in Psychiatry** . **2022**; <https://doi.org/10.3389/fpsyt.2022.996965>

Brancato, A., Castelli, V., Lavanco, G., D'Amico, C., Feo, S., Pizzolanti, G., Kuchar, M. and Cannizzaro, C. Social stress under binge-like alcohol withdrawal in adolescence: Evidence of cannabidiol effect on maladaptive plasticity in rats. **Psychological Medicine.** **2022**; 1-13. doi:10.1017/S0033291722002744

Clementi ME, Pizzoferrato M, Bianchetti G, **Brancato A**, Sampaolese B, Maulucci G, Tringali G. Cytoprotective Effect of Idebenone through Modulation of the Intrinsic Mitochondrial Pathway of Apoptosis in Human Retinal Pigment Epithelial Cells Exposed to Oxidative Stress Induced by Hydrogen Peroxide. **Biomedicines.** **2022**;10(2):503. <https://doi.org/10.3390/>

Takahashi A, Aleyasin H, Stavarache M A, Li L, Cathomas F, Parise LF, Lin H, Burnett J, Flanigan ME, **Brancato A**, Menard C, Pfau LM, Kana V, Wang J, Hodes GE, Sasaki T, Kaplitt MG, Ogawa S, McEwen BS, and Russo SJ. Neuromodulatory effect of interleukin 1 in the dorsal raphe nucleus on individual differences in aggression. **Molecular Psychiatry**. 2021; 27, 2563–2579 <https://doi.org/10.1038/s41380-021-01110-4>

Brancato A, Castelli V, Lavanco G, Tringali G, Micale V, Kuchar M, D'Amico C, Pizzolanti G, Feo S, Cannizzaro C. Binge-like Alcohol Exposure in Adolescence: Behavioural, Neuroendocrine and Molecular Evidence of Abnormal Neuroplasticity... and Return. **Biomedicines** 2021;9(9):1161. <https://doi.org/10.3390/biomedicines909116>

Brancato A, Lo Russo SLM, Liberati AS, Carbone C, Zelli S, Laviola G, Cannizzaro C, Adriani W. Social Interactions of Dat-Het Epi-Genotypes Differing for Maternal Origins: The Development of a New Preclinical Model of Socio-Sexual Apathy. **Biomedicines**. 2021;9(7):778. doi: 10.3390/biomedicines9070778

Casarrubea M, Palacino M, **Brancato A**, Lavanco G, Cannizzaro C, Crescimanno G. Detection of a temporal structure in the rat behavioural response to an aversive stimulation in the emotional object recognition (EOR) task. **Physiology and Behavior** 2021; 238:113481. doi: 10.1016/j.physbeh.2021.113481.

Zelli S*, **Brancato A***, Mattioli F, Pepe M, Alleva E, Carbone C, Cannizzaro C, Adriani W. A new "sudden fright paradigm" to explore the role of (epi)genetic modulations of the DAT gene in fear-induced avoidance behavior. **Genes Brain and Behavior** 2021; 20(4):e12709. doi: 10.1111/gbb.12709.

Brancato A, Castelli V, Lavanco G, Cannizzaro C. Environmental Enrichment During Adolescence Mitigates Cognitive Deficits and Alcohol Vulnerability due to Continuous and Intermittent Perinatal Alcohol Exposure in Adult Rats. **Frontiers in Behavioral Neuroscience** 2020; 14:583122.

Piccoli T, Maniaci G, Collura G, Gagliardo C, **Brancato A**, La Tona G, Gangitano M, La Cascia C, Picone F, Marrale M, Cannizzaro C. Increased functional connectivity in gambling disorder correlates with behavioural and emotional dysregulation: Evidence of a role for the cerebellum. **Behavioural Brain Research** 2020; 390:112668. doi: 10.1016/j.bbr.2020.112668.

Brancato A, Castelli V, Lavanco G, Marino RAM, Cannizzaro C. In utero 9-tetrahydrocannabinol exposure confers vulnerability towards cognitive impairments and alcohol drinking in the adolescent offspring: Is there a role for neuropeptide Y? **Journal of Psychopharmacology** 2020; 34(6):663-679. doi: 10.1177/0269881120916135.

Carbone C*, **Brancato A***, Adinolfi A, Lo Russo SLM, Alleva E, Cannizzaro C, Adriani W. Motor Transitions' Peculiarity of Heterozygous DAT Rats When Offspring of an Unconventional KOxWT Mating. **Neuroscience**. 2020; 433:108-120. doi: 10.1016/j.neuroscience.2020.03.005.

Castelli V, Lavanco G, **Brancato A** and Plescia F. Targeting the Stress System During Gestation: Is Early Handling a Protective Strategy for the Offspring? **Frontiers in Behavioral Neuroscience**, 2020;14:9. doi: 10.3389/fnbeh.2020.00009

Clementi ME, Lazzarino G, Sampaiolese B, **Brancato A**, Tringali G. DHA protects PC12 cells against oxidative stress and apoptotic signals through the activation of the NFE2L2/HO-1 axis. **International Journal of Molecular Medicine** 2019; 43(6): 2523-2531. doi: 10.3892/ijmm.2019.4170

Cannizzaro C*, Talani G*, **Brancato A**, Mulas G, Spiga S, Antonietta De Luca M, Sanna A, Anna Maria Marino R, Biggio G, Sanna E, Diana M. Dopamine restores limbic memory loss, dendritic spine structure and NMDAR-dependent LTD in the nucleus accumbens of alcohol-withdrawn rats. **Journal of Neuroscience** 2019; 39(5):929-943. doi:10.1523/JNEUROSCI.1377-18.2018.

Plescia F, Plescia F, Raffa D, Cavallaro A, Lavanco G, Maggio B, Raimondi MV, Daidone G, **Brancato A**, Cannizzaro C. The

role of (E)-6-chloro-3-(3-methyl-1-phenyl-1Hpyrazol-5-yl)-2-styrylquinazolin-4(3H)-one in the modulation of cannabinoidergic system. A pilot study. **Pharmacological Reports** **2018**; 70(6):1124-1132. doi: 10.1016/j.pharep.2018.06.004.

Lavanco G, Castelli V, **Brancato A**, Tringali G, Plescia F and Cannizzaro C. The endocannabinoid-alcohol crosstalk: recent advances on a bi-faceted target. **Clinical and Experimental Pharmacology and Physiology** **2018**; 45(9):889-896. doi: 10.1111/1440-1681.12967

Brancato A, Castelli V, Cavallaro A, Lavanco G, Plescia F and Cannizzaro C. Preconceptional and Peri-Gestational Maternal Binge Alcohol Drinking Produces Inheritance of Mood Disturbances and Alcohol Vulnerability in the Adolescent Offspring. **Frontiers in Psychiatry** **2018**; 9:150. doi: 10.3389/fpsy.2018.0015

Zhang S, Zhang H, Ku SM, Juarez B, Morel C, Tzavaras N, Montgomery S, Hodes GE, **Brancato A**, Russo SJ, Cao JL, Han MH. Sex Differences in the Neuroadaptations of Reward-related Circuits in Response to Subchronic Variable Stress. **Neuroscience**. **2018**; 376:108-116. doi: 10.1016/j.neuroscience.2018.02.021.

Brancato A, Cavallaro A, Lavanco G, Plescia F, Cannizzaro C. Reward-related limbic memory and stimulation of the cannabinoid system: An upgrade in value attribution? **Journal of Psychopharmacology** **2018**; 32(2):204-214. doi: 10.1177/0269881117725683.

Brancato A and Cannizzaro C. Mothering under the influence: how perinatal drugs of abuse alter mother-infant interactions. **Reviews in the Neurosciences** **2018**; 29(3):283-294. doi: 10.1515/revneuro-2017-0052

Castelli V, **Brancato A**, Cavallaro A, Lavanco G, Cannizzaro C. Homer2 and alcohol: a mutual interaction. **Frontiers in Psychiatry**. **2017**; 8:268. doi: 10.3389/fpsy.2017.00268.

Hodes G., Pfau M., **Brancato A**, Ahn F, Russo SJ, Epigenetic regulation of sex differences in susceptibility to stress. Abstracts of the 30th ECNP Congress in **European Neuropsychopharmacology** **2017**; 27:S550 doi:10.1016/S0924-977X(17)31052-0

Brancato A, Bregman D, Ahn F, Pfau M, Menard C, Cannizzaro C, Russo SJ, Hodes G. Sub-chronic variable stress induces sex-specific effects on glutamatergic synapses in the nucleus accumbens. **Neuroscience** **2017**;350:180-189. doi: 10.1016/j.neuroscience.2017.03.014.

Lavanco G, Cavallaro A, Cannizzaro E, Giammanco M, Di Majo D and **Brancato A**. Pharmacological manipulation of serotonin receptors during brain embryogenesis favours stress resiliency in female rats. **Journal of Biological Research** **2017**; 90(2): 116-119 <https://doi.org/10.4081/jbr.2017.678>

Brancato A, Lavanco G, Cavallaro A, Plescia F, Cannizzaro C. Acetaldehyde, Motivation and Stress: Behavioral Evidence of an Addictive ménage à trois. **Frontiers in Behavioral Neuroscience** **2017**; 11:23. doi: 10.3389/fnbeh.2017.00023

Brancato A, Lavanco G, Cavallaro A, Plescia F, Cannizzaro C. The use of the Emotional - Object Recognition as an assay to assess learning and memory associated to an aversive stimulus in rodents. **Journal of Neuroscience Methods** **2016**; 274:106-115 doi: 10.1016/j.jneumeth.2016.09.010

Bolloni C, Panella R, Pedetti M, Frascella AG, Gambelunghe C, Piccoli T, Maniaci G, **Brancato A**, Cannizzaro C, Diana M. Bilateral Transcranial Magnetic Stimulation of the Prefrontal Cortex Reduces Cocaine Intake: A Pilot Study. **Frontiers in Psychiatry** **2016**; 7:133. doi: 10.3389/fpsy.2016.00133.

Brancato A, Plescia F, Lavanco G, Cavallaro A, Cannizzaro C. Continuous and Intermittent Alcohol Free-Choice from Pre-gestational Time to Lactation: Focus on Drinking Trajectories and Maternal Behavior. **Frontiers in Behavioral Neuroscience** **2016**; 10:31. doi: 10.3389/fnbeh.2016.00031.

Cavallaro A, Lavanco G, Cannizzaro C, **Brancato A**, Di Majo D, Giammanco M, Martines F, Miccichè I, Plescia F. Acetaldehyde as the first hit of addictive behaviour. *Journal of Biological Research* 2016; 89(2):61-64 <https://doi.org/10.4081/jbr.2016.6206>

Cavallaro, A, Martines, F, Cannizzaro, C, Lavanco, G, **Brancato, A**, Carollo, G, Plescia, F, Salvago, P, Cannizzaro, E, Mucia, M, Rizzo, S, Martini, A, Plescia, F. Role of cannabinoids in the treatment of tinnitus. *Acta Medica Mediterranea* 2016; 32: 463-469 DOI:10.19193/0393-63842016410

Cannizzaro C, Malta G, Argo A, **Brancato A**, Roda G, Casagni E, Fumagalli L, Valoti E, Froidi R, Procaccianti P, Gambaro V. Behavioural and pharmacological characterization of a novel cannabinomimetic adamantane-derived indole, APICA, and considerations on the possible misuse as a psychotropic spice abuse, in C57bl/6J mice. *Forensic Science International* 2016 ; 265:6-12. doi: 10.1016/j.forsciint.2015.12.035

Hodes G.E, Pfau ML, Purushothaman I, Ahn HF, Golden SA, Christoffel DJ, Magida J, **Brancato A**, Takahashi A, Flanigan ME, Menard C, Aleyasin H, Koo JW, Lorsch ZS, Feng J, Heshmati M, Wang M, Turecki G, Neve R, Zhang B, Shen L, Nestler EJ, and Russo SJ. Sex Differences in Nucleus Accumbens Transcriptome Profiles Associated with Susceptibility versus Resilience to Subchronic Variable Stress. *Journal of Neuroscience* 2015;35 (50):16362-16376 doi: 10.1523/JNEUROSCI.1392-15.2015.

Maniaci, G., Picone, F., Dimarco, T., Lipari, A., **Brancato, A.**, Cannizzaro, C. Psychodiagnostic Assessment of Pathological Gamblers: A Focus on Personality Disorders, Clinical Syndromes and Alexithymia. *International Journal of Mental Health and Addiction* 2015; 13: 728-739 <https://doi.org/10.1007/s11469-015-9550-5>

Mucia, M., Salvago, P., **Brancato, A.**, Cannizzaro, C., Cannizzaro, E., Gallina, S., Ferrara, S., La Mattina, E., Mulè, A., Plescia, F., Sireci, F., Rizzo, S., Martines, F. Upper respiratory tract infections in children: From case history to management. *Acta Medica Mediterranea* 2015; 31 (2): 419-424. oai:iris.unipa.it:10447/129213

Plescia, F., Cannizzaro, E., **Brancato, A.**, Martines, F., Di Naro, A., Mucia, M., Plescia, F., Vita, C., Salvago, P., Mulè, A., Rizzo, S., Sireci, F., Cannizzaro, C. Acetaldehyde effects in the brain. *Acta Medica Mediterranea* 2015; 31 (4): 813-817. oai:iris.unipa.it:10447/146224

Cannizzaro C, **Brancato A**, Plescia F. Acetaldehyde endocannabinoids and dopamine: is this -just- "a menage a trois"? *Alcohol and Alcoholism* 2015; 50(suppl 1) DOI10.1093/alcalc/agn076.106

Plescia, F., **Brancato, A.**, Venniro, M., Maniaci, G., Cannizzaro, E., Sutera, F.M., De Caro, V., Giannola, L.I., Cannizzaro, C. Acetaldehyde self-administration by a two-bottle choice paradigm: Consequences on emotional reactivity, spatial learning, and memory. *Alcohol* 2015;49(2):139-48. doi: 10.1016/j.alcohol.2015.01.002

Marino, R.A.M., Plescia, F., **Brancato, A.**, Gambino, G., Cannizzaro, C. Brief maternal separation procedures occurring early in life affect learning and memory in adult Wistar rats: Sex-related differences in cognitive behaviour. *Journal of Biological Research (Italy)* 2015; 88(1): 98-99 ISSN: 2284-0230,

Gambino, G., Plescia, F., **Brancato, A.**, Marino, R.A.M., Cannizzaro, C. Impact of a single, intense prenatal stress on ethanol drinking behaviour and cognition in adult male rats. *Journal of Biological Research (Italy)* 2015; 88(1):71-2 ISSN: 2284-0230,

Brancato, A., Plescia, F., Marino, R.A.M., Maniaci, G., Navarra, M., Cannizzaro, C. Involvement of dopamine D2 Receptors in addictive-like behaviour for acetaldehyde. *PLoS ONE* 2014; 9(6):e99454 doi: 10.1371/journal.pone.0099454.

Plescia, F., **Brancato, A.**, Marino, R.A.M., Vita, C., Navarra, M., Cannizzaro, C. Effect of acetaldehyde intoxication and withdrawal on NPY expression: Focus on endocannabinoidergic system involvement. *Frontiers in Psychiatry* 2014; 5:138 <https://doi.org/10.3389/fpsy.2014.0013>

Plescia, F., Sardo, P., Rizzo, V., Cacace, S., Marino, R.A.M., **Brancato, A.**, Ferraro, G., Carletti, F., Cannizzaro, C. Pregnenolone sulphate enhances spatial orientation and object discrimination in adult male rats: Evidence from a behavioural and electrophysiological study. **Behavioural Brain Research** **2014**; 258:193-201. doi: 10.1016/j.bbr.2013.10.026

Plescia, F., Marino, R.A.M., Navarra, M., Gambino, G., **Brancato, A.**, Sardo, P., Cannizzaro, C. Early handling effect on female rat spatial and non-spatial learning and memory. **Behavioural Processes** **2014**; 103:9-16. doi: 10.1016/j.beproc.2013.10.011.

CANNIZZARO, Carla, **BRANCATO, Anna** (2014). Acetaldehyde as a drug of abuse: Involvement of endocannabinoid- and dopamine neurotransmission. *ALCOHOL*, Elsevier Health Sciences, ISSN: 0741-8329, doi: <http://dx.doi.org/10.1016/j.alcohol.2014.01.002>

Plescia, F., Marino, R.A.M., Cannizzaro, E., **Brancato, A.**, Cannizzaro, C. The role of pregnenolone sulphate in spatial orientation-acquisition and retention: An interplay between cognitive potentiation and mood regulation **Behavioural Processes** **2013**; 99:130-137 <https://doi.org/10.1016/j.beproc.2013.07.001>

Plescia, F., **Brancato, A.**, Marino, R.A.M., Cannizzaro, C. Acetaldehyde as a drug of abuse: Insight into AM281 administration on operant-conflict paradigm in rats. **Frontiers in Behavioral Neuroscience** **2013**; 7:64. doi: 10.3389/fnbeh.2013.00064.

ATTIVITA' SCIENTIFICHE

2022 - 2025: **Assistant Professor in Pharmacology** (RTD-B) Dept. of Health Promotion, Mother and Child Care, Internal Medicine and Medical Specialities "G. D'Alessandro" University of Palermo, Palermo, Italy

2019- 2022: Lecturer / Researcher in Pharmacology (RTD-A) Dept. of Health Promotion, Mother and Child Care, Internal Medicine and Medical Specialities "G. D'Alessandro" University of Palermo, Palermo, Italy

09/2021: IBRO -PERC Short stay @Laboratory of Neuroepigenetics | Olivia Engmann, PhD, Institute of Human Genetics - Universitat Klinikum Jena, Germany

2019: Post-doctoral research fellow | Zardi Gori Foundation for Addiction Research | Dept. of Sciences for Health Promotion and Mother and Child Care, University of Palermo, Italy. Research theme: Looking beyond the booze fun - Behavioural and neurobiological correlates of vulnerability and resilience to social stress in alcohol binge-drinking adolescent rats

2019: Post-doctoral research fellow Dept. of Sciences for Health Promotion and Mother and Child Care | University of Palermo, Italy. Research theme: Binging on alcohol and social stress in adolescence: a translational research in Sicily

2019: European College of Neuropsychopharmacology Research Internship | Neurobiology Research Unit, Rigshospitalet, Copenhagen, Denmark Supervisor: Gitte Moos Knudsen, MD. Research theme: Markers of vulnerability to postpartum depression; Psychedelics as antidepressants

2017 - 2018: Post-doctoral research fellow, Italian Society of Pharmacology and MSD Italy | Dept. of Sciences for Health Promotion and Mother and Child Care, University of Palermo, Italy. Supervisor: Carla Cannizzaro, MD; in collaboration with T. Ueda, University of Michigan, USA. Research theme: Vesicular Glutamate Transporters as innovative circuit-based pharmacotherapy for depression

2015: Visiting PhD student | Icahn School of Medicine at Mount Sinai Hospital | New York City, NY, USA PI: Scott J. Russo, PhD Behavioural neuroscience. Chronic social defeat model of depression. Gender differences in stress susceptibility and resilience. Neurobiology of aggressive behavior. Immunofluorescence. Confocal microscopy. Gene expression. Optogenetics. <http://neuroscience.mssm.edu/russo/russoteam.html>

2013: Visiting PhD student, Pharmacology Institute | Catholic University of the Sacred Heart, Rome, Italy PI: G. Tringali - M.

Martire Neuropeptide release from brain explants and synaptosomes