

**NAME:** **Sudhakar Selvaraj**, MBBS, DPhil (PhD, Oxon), MRCPsych

**PRESENT TITLE:** Assistant Professor of Psychiatry

**WORK ADDRESS:** Department of Psychiatry & Behavioral Sciences  
The University of Texas Medical School at Houston (now known as  
McGovern Medical School at UTHealth)  
1941, East Road, Suite 3152, Houston, 77054  
Tel: +1 713 486 2837; Fax: +1 713 486 2553  
Email:sudhakar.selvaraj@uth.tmc.edu  
<https://med.uth.edu/psychiatry/faculty/sudhakar-selvaraj/>

**UNDERGRADUATE:**

Medical Degree (MD Equivalent), Bachelor of Medicine and Bachelor of Surgery (M.B.B.S), 1998  
Kilpauk Medical College, The Tamilnadu Dr. M.G.R Medical University, Chennai, India

**GRADUATE EDUCATION:**

Doctor of Philosophy (D.Phil), 2012  
St Catherine's college, University of Oxford, Oxford, United Kingdom (UK)

**POSTGRADUATE TRAINING:**

Psychiatry Residency, 2002 - 2005  
Oxford Deanery Postgraduate Medical Education, Member of Royal College of Psychiatrists, UK

Fellowship, Specialist Registrar in General Adult Psychiatry, 2005 - 2010  
Oxford Deanery Postgraduate Medical Education, Oxford, UK

Clinical Lecturer in Psychiatry, 2010 - 12  
Institute of Psychiatry and South London and Maudsley Foundation NHS trust, London, UK

Certificate of Completion of Training (CCT), General Adult Psychiatry, 2012  
Royal College of Psychiatrists & General Medical Council, London, UK

**ACADEMIC & ADMINISTRATIVE APPOINTMENTS:**

Senior Clinical Research Fellow - Psychiatric Imaging, 2012 - 14  
Institute of clinical sciences, Medical Research Council, Imperial College London, London, UK

Assistant Professor, Department of Psychiatry and Behavioral Sciences, 2014 - Present  
The University of Texas Health Science Center at Houston, Texas, USA

Director of UTHHealth Student Counseling, 2014 - Present  
The University of Texas Health Science Center at Houston, Texas, USA

Assistant Professor (Adjunct), Department of Symptom Research, 2014 - Present  
The University of Texas MD Anderson Cancer Center, Houston, Texas, USA

Assistant Professor (Adjunct), Department of Neurology, 2016 - Present  
Houston Methodist Institute of Academic Medicine, Houston, Texas, USA

#### **HOSPITAL APPOINTMENTS:**

Consultant Psychiatrist (Honorary), 2012 - 14  
Maudsley Hospital, South London and Maudsley Foundation NHS Trust, London, UK

Medical Staff, UT Harris County Psychiatric Center, 2014 - Present  
The University of Texas Medical School at Houston, Houston, TX, USA

#### **LICENSURE:**

Medical Council of India, 2000 - Present  
Medical Council, UK (6029787), Full registration as Psychiatrist, 2012 - Present  
Licensed in the State of Texas, USA (Faculty Temporary License No. 45337), 2014 - Present

#### **CERTIFICATION:**

General Medical Council, UK, 2002  
Royal College of Psychiatrists, London, UK, 2005

#### **PROFESSIONAL ORGANIZATIONS:**

##### **STATE:**

Member, Texas Medical Association, 2016 - Present  
Member, Harris County Medical Society, 2016 - Present  
Member, Houston Academy of Medicine, 2016 - Present  
Member, Texas University and College Counseling Directors Association, 2016 - Present

##### **NATIONAL:**

Member, Royal College of Psychiatrists, London, UK, 2005 - Present

**INTERNATIONAL:**

Associate member, European College of Neuropsychopharmacology, 2007 - 12

Member, British Association of Psychopharmacology, UK, 2010 - 13

Member, International Society for CNS clinical Trials and Methodology (ISCTM), 2015 - Present Member,

Member, Society of Biological Psychiatry, 2015 - Present

American Society of Clinical Psychopharmacology, 2016 - Present

**HONORS AND AWARDS: (Selected)**

2007 - Young Scientist Award, European College of Neuropsychopharmacology

2008 - Young Investigator Award, Neuroreceptor Mapping Conference

2008 - Guarantors of Brain travel grant, Society of Biological Psychiatry

2008 - Patricia-Knapp award, St Catherine's College, University of Oxford

2011 - Finalist, New Research Prize, Royal College of Psychiatrists, General Adult Psychiatry

2012 - Young Scientist Fellowship Award, European College of Neuropsychopharmacology

2012 - Best Research Poster Award, European College of Neuropsychopharmacology

2012 - Post-doctoral bursary award, British Association of Psychopharmacology

2012 - Best Resident Paper, Sir Dennis Hill prize, Institute of Psychiatry, Kings College London

2013 - ACNP Travel Award, American college of Neuropsychopharmacology

2013 - Research Scholarship Travel award, University of New South Wales

2013 - NCDEU New Investigator Award, American Society of Clinical Psychopharmacology

2015 - Fellowship Award, American Society of Clinical Psychopharmacology

2016 - NIDA travel award, International Society of Serotonin Research

2016 - ISCTM New Investigator Award

2016 - Dean's Teaching Excellence Award, UTHealth

**EDITORIAL POSITIONS:**

2013 Present: Review Editor, Frontiers in Psychiatry, Neuropsychiatric Imaging and Stimulation

2015 Present: Editorial Board Member, Journal of Affective Disorders

**SERVICE ON THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON COMMITTEES:**

2014 Present: Member, STOP team (prevention of violence and crisis), UTHSC at Houston

2014 Present: Member, Bystander Intervention and Mental Health Task Force, UTHSC at Houston

2016 Present: Member, CLASE Working Group, UTHSC at Houston, UT system

2015 Member, Task Force on Alcohol and Substance Abuse, UTHSC at Houston

**SERVICE ON THE UNIVERSITY OF TEXAS MEDICAL SCHOOL AT HOUSTON COMMITTEES:**

2015 Present: Member, Faculty Senate, McGovern Medical School at UTHealth

2015 Present: Residency Program Evaluation and Education Policy Committee, Dept of Psychiatry

2015 Present: Faculty recruitment committee, Dept of Psychiatry

#### **SERVICE ON GRADUATE SCHOOL COMMITTEES:**

2014 Present: Faculty, Members of the Neuroscience Research Center (NRC), UTHealth

#### **SERVICE TO THE SCIENTIFIC COMMUNITY:**

##### **Reviewer**

Active scientific reviewer since 2005 for international peer-reviewed journal; Psychopharmacology (Berl), British Journal of Psychiatry, Journal of affective disorders, Synapse, International journal of Neuropsychopharmacology, Bipolar disorders, European Neuropsychopharmacology, Molecular Psychiatry, Biological Psychiatry, Psychological Medicine, Neuropsychopharmacology, American Journal of Psychiatry, Frontiers in Schizophrenia, Psychiatry Research-Neuroimaging, Acta Scandinavia Psychiatrica, Human brain mapping, Translational Psychiatry.

#### **SCIENTIFIC RESEARCH GRANT REVIEWS:**

2016 - National Medical Research Council (NMRC), Ministry of Health, Singapore

2016 - Lawson Health Research Institute (Lawson), London, Ontario, Canada

2017 - The Netherlands Organisation for Health Research and Development

#### **SERVICE TO THE PUBLIC:**

2015 Present: Organizer, World Bipolar Day, UTHealth psychiatry public awareness forum (ongoing)

2015 Present: Summer education program wellbeing lecture for pre-med, pre-dental young scholars

2015 Present: Student wellness lectures, UTHealth

2016 - Scientific Committee Lead, Houston Mood Disorder Conference 2016

#### **CURRENT TEACHING RESPONSIBILITIES:**

2014 - Present: Course Organizer for Advanced Psychopharmacology,

UTHealth Psychiatry Residents PGY3; once every 2 weeks, 12 residents

2014 - Course Tutor for Neuroscience module, UTHealth Psychiatry Residents, two per year, 24 residents

2014 - Course Tutor for UTHealth Graduate School of Biomedical Sciences, the Neurobiology of disease

2015 - Lecturer, UTHealth Neurology Residents and Fellows, once per year, about 30 residents.

2015 - Lecturer, Translational Psychiatry, UTHelath Graduate, Psychiatry Residents and Fellows

#### **MENTORING ACTIVITIES:**

2015 - Dr. Smita Saraykar, MD., MPH

2016 - Dr. Pritul Patel MD, - MPH student Community Preceptorship  
Department of Psychiatry and Behavioral Sciences, The University of Texas Health Science Center at  
Houston (UTHealth)

### **Supervisor - Visiting Scientist**

Mattia Veronese. 2015 - 2015. Department of Psychiatry and Behavioral Sciences, UTHealth.

### **CURRENT CLINICAL SERVICE RESPONSIBILITIES:**

2014 - Present: UTHealth Student Counseling Center

2014 - Present: Mood Disorders Clinic, Center of Excellence on Mood Disorders, Department of  
Psychiatry and Behavioral Sciences

### **CURRENT GRANT SUPPORT:**

2014 - Faculty Start-up, UTHealth faculty.

### **PAST GRANT SUPPORT:**

2012 - 15

Academy of medical sciences clinical lecturer start-up grant: The role of serotonin in emotion processing:  
applying a novel imaging technique to measure brain serotonin levels in vivo.

The Academy of Medical Sciences, (United Kingdom) – Role: Dr. Sudhakar Selvaraj (PI). 100%.

Budget = GBP 20,280 (equivalent USD 32,800 - 2012/14)

### **PENDING GRANTS:**

2016 - CCTS Pilot grant, UTHealth, PI

2017 - Hogg Grant - Improving Academic Achievements Through Mental Health, Co-I

### **PUBLICATIONS:**

#### **Refereed Original Articles in Journals;**

ORCID: [orcid.org/0000-0002-9494-172X](http://orcid.org/0000-0002-9494-172X),

Scopus: Author ID:23009994600; Researcher ID: J-4295-2014.

1. **Selvaraj S**, Wylezinska M, Evans J, Jezzard P, Matthews PM, Cowen PJ. Tryptophan depletion does not lower brain GABA levels in healthy volunteers. **Psychopharmacology (Berl)**. 2006 Jul;187(1):131-2. PMID: 16767423.
2. Rhodes RA, Murthy NV, Dresner MA, **Selvaraj S**, Babar S, Cowen PJ, Grasby PM. Human 5-HT transporter availability predicts amygdala reactivity in vivo. **J Neurosci**. 2007 Aug 22;27(34):9233-7. PMID: 17715358.
3. Miskowiak K, Inkster B, **Selvaraj S**, Goodwin G, Harmer C. Erythropoietin has no effect on hippocampal

- response during memory retrieval 3 days post-administration. **Psychopharmacology (Berl)**. 2007 Dec;195(3):451-3. PMID: 17694387.
4. Bhagwagar Z, Murthy N, **Selvaraj S**, Hinz R, Hinz R, Taylor M, Fancy S, Grasby P, Cowen P. 5-HTT binding in recovered depressed patients and healthy volunteers: a positron emission tomography study with [11C]DASB. **Am J Psychiatry**. 2007 Dec;164(12):1858-65. PMID: 18056241.
  5. Miskowiak K, Inkster B, O'Sullivan U, **Selvaraj S**, Goodwin GM, Harmer CJ. Differential effects of erythropoietin on neural and cognitive measures of executive function 3 and 7 days post-administration. **Exp Brain Res**. 2008 Jan;184(3):313-21. PMID: 17828390
  6. Miskowiak K, Inkster B, **Selvaraj S**, Wise R, Goodwin GM, Harmer CJ. Erythropoietin improves mood and modulates the cognitive and neural processing of emotion 3 days post administration. **Neuropsychopharmacology**. 2008 Feb;33(3):611-8. PMID: 17473836.
  7. Taylor M, Murphy SE, **Selvaraj S**, Wylezinska M, Jezzard P, Cowen PJ, Evans J. Differential effects of citalopram and reboxetine on cortical Glx measured with proton MR spectroscopy. **J Psychopharmacol**. 2008 Jul;22(5):473-6. PMID: 18208909.
  8. Hinz R, **Selvaraj S**, Murthy NV, Bhagwagar Z, Taylor M, Cowen PJ, Grasby PM. Effects of citalopram infusion on the serotonin transporter binding of [11C]DASB in healthy controls. **J Cereb Blood Flow Metab**. 2008 Aug;28(8):1478-90. PMID: 18478022.
  9. **Selvaraj S**, Hoshi R, Bhagwagar Z, Hinz R, Cowen P, Curran HV, Grasby P. Brain serotonin transporter binding in former users of MDMA ('ecstasy'). **Br J Psychiatry**. 2009 Apr;194(4):355-9. PMID: 19336788.
  10. Norbury R, Taylor MJ, **Selvaraj S**, Murphy SE, Harmer CJ, Cowen PJ. Short-term antidepressant treatment modulates amygdala response to happy faces. **Psychopharmacology (Berl)**. 2009 Jul 8. PMID: 19585106.
  11. Norbury R, **Selvaraj S**, Taylor MJ, Harmer C, Cowen PJ. Increased neural response to fear in patients recovered from depression: a 3T functional magnetic resonance imaging study. **Psychol Med**. 2009 Jul 23;1-8. PMID: 19627640.
  12. Bose SK, Mackinnon T, Mehta MA, Turkheimer FE, Howes OD, **Selvaraj S**, Kempton MJ, Grasby PM. The effect of ageing on grey and white matter reductions in schizophrenia. **Schizophr Res**. 2009 Jul;112(1-3):7-13. PMID: 19450953.
  13. Taylor MJ, **Selvaraj S**, Norbury R, Jezzard P, Cowen PJ. Normal glutamate but elevated myo-inositol in anterior cingulate cortex in recovered depressed patients. **J Affect Disord**. 2009 Dec;119(1-3):186-9. PMID: 19324421.
  14. Murthy NV\*, **Selvaraj S\***, Cowen PJ, Bhagwagar Z, Riedel WJ, Peers P, Kennedy JL, Sahakian BJ, Laruelle MA, Rabiner EA, Grasby PM. Serotonin transporter polymorphisms SLC6A4 insertion/deletion and rs25531) do not affect the availability of 5-HTT to [11C] DASB binding in the living human brain. **Neuroimage**. 2010 Aug 1;52(1):50-4. \*Joint 1st authors.
  15. Campbell-Meiklejohn D, Wakeley J, Herbert V, Cook J, Scollo P, Ray MK, **Selvaraj S**, Passingham RE, Cowen P, Rogers RD. Serotonin and Dopamine Play Complementary Roles in Gambling to Recover Losses. **Neuropsychopharmacology** (2011) 36, 402–410.

16. Bose SK, Mehta MA, **Selvaraj S**, Howes OD, Hinz R, Rabiner EA, Grasby PM, Turkheimer FE, Murthy V. Presynaptic 5-HT<sub>1A</sub> is related to 5-HTT receptor density in the human brain. **Neuropsychopharmacology** (2011) 36, 2258–2265.
17. **Selvaraj S\***, Murthy NV\*, Bhagwagar Z, Bose SK, Hinz R, Grasby PM, Cowen PJ. Diminished brain 5-HT transporter binding in major depression: a positron emission tomography study with [(11)C]DASB. **Psychopharmacology (Berl)**. 2011 Feb;213(2-3):555-62. PMID: 19756523. \*Joint 1st authors.
18. **Selvaraj S**, Godlewska BR, Norbury R, Bose S, Turkheimer F, Stokes P, Rhodes R, Howes O, Cowen PJ. Decreased regional gray matter volume in S' allele carriers of the 5-HTTLPR triallelic polymorphism. **Mol Psychiatry**. 2011 May;16(5):471.
19. McGuire P, Selvaraj S, Howes O. Is clinical intervention in the ultra high risk phase effective?. *Rev Bras Psiquiatr*. 2011 Oct;33 Suppl 2:s161-74.
20. Turkheimer FE, **Selvaraj S**, Hinz R, Murthy V, Bhagwagar Z, Grasby P, Howes O, Rosso L, Bose SK. Quantification of ligand PET studies using a reference region with a displaceable fraction: application to occupancy studies with [(11)C]-DASB as an example. **J Cereb Blood Flow Metab**. (2012) 32, 70–80.
21. Howes OD, Fusar-Poli P, Bloomfield M, **Selvaraj S**, McGuire P. From the prodrome to chronic schizophrenia: the neurobiology underlying psychotic symptoms and cognitive impairments. **Curr Pharm Des**. 2012;18(4):459-65.
22. Taylor MJ, Godlewska BR, Norbury R, **Selvaraj S**, Near J, Cowen PJ. Early increase in marker of neuronal integrity with antidepressant treatment of major depression: 1H-magnetic resonance spectroscopy of N-acetyl-aspartate. **Int J Neuropsychopharmacol**. 2012 Mar 26:1-6. PMID:22449253.
23. **Selvaraj S**, Arnone D, Job D, Stanfield A, Farrow TF, Nugent AC, Scherk H, Gruber O, Chen X, Sachdev PS, Dickstein DP, Malhi GS, Ha TH, Ha K, Phillips ML, McIntosh AM. Grey matter differences in bipolar disorder: a meta-analysis of voxel-based morphometry studies. **Bipolar Disord**. 2012 Mar;14(2):135-145.PMID: 22420589.
24. **Sudhakar Selvaraj**, Federico Turkheimer, Faulkner P, Mouchlianitis E, Roiser JP, Philip J. Cowen, Oliver Howes. Detecting endogenous changes in serotonergic neurotransmission in humans: a [11C]CUMI-101 PET and citalopram challenge study. **Mol Psychiatry** (2012) Jun 5. doi: 10.1038/mp.2012.78. PMID: 22665264.
25. B. R. Godlewska, R. Norbury, **S. Selvaraj**, P. J. Cowen and C. J. Harmer. Short-term SSRI treatment normalises amygdala hyperactivity in depressed patients. **Psychol Med**. 2012 Dec; 42(12): 2609–2617. doi: 10.1017/S0033291712000591.
26. Faulkner P, **Selvaraj S**, Pine A, Howes OD, Roiser JP. The relationship between reward and punishment processing and the 5-HT<sub>1A</sub> receptor as shown by PET. **Psychopharmacology (Berl)**. 2014 Jul;231(13):2579-86. doi: 10.1007/s00213-013-3426-9.
27. Rizzo G, Veronese M, Heckemann RA, **Selvaraj S**, Howes OD, Hammers A, Turkheimer FE, Bertoldo A. The predictive power of brain mRNA mappings for in vivo protein density: a positron emission tomography correlation study. **J Cereb Blood Flow Metab**. 2014 Feb 5. doi: 10.1038/jcbfm.2014.21.
28. **Selvaraj S**, Turkheimer F, Howes O. Dopamine transporter imaging: nonindependence of regional measures.

- Mol Psychiatry**. 2014 Mar 4. doi: 10.1038/mp.2014.15.
29. Bloomfield MA, Pepper F, Egerton A, Tomasi G, Mouchlianitis E, Maximen L, Veronese M, Turkheimer F, **Selvaraj S**, Howes OD. Dopamine Function in Cigarette Smokers: an [18F]-DOPA PET Study. **Neuropsychopharmacology**. 2014 Apr 10. doi: 10.1038/npp.2014.87.
30. **Sudhakar Selvaraj**, Elias Mouchlianitis, Paul Faulkner, Federico Turkheimer, Philip J. Cowen, Jonathan P Roiser, Oliver Howes. Presynaptic Serotonergic Regulation of Emotional Processing: A Multimodal Brain Imaging Study. **Biological Psychiatry** (2014). 2014 May 1. doi: 10.1016/j.biopsych.2014.04.011.
31. **Sudhakar Selvaraj**, Danilo Arnone, Alessandra Cappai, Oliver Howes. Alterations in the serotonin system in schizophrenia: a systematic review and meta-analysis of post-mortem and molecular imaging studies. **Neuroscience and Biobehavioral Reviews** (2014). DOI: 10.1016/j.neubiorev.2014.06.005.
32. Katherine Beck, Robert McCutcheon, Michael A.P. Bloomfield, Fiona Gaughran, Tiago Reis Marques, James MacCabe, **Sudhakar Selvaraj**, David Taylor, Oliver D. Howes. The practical management of refractory schizophrenia - the Maudsley TREAT service approach. **Acta Psychiatr Scand**. 2014 Dec;130(6):427-38. doi: 10.1111/acps.12327.
33. Gálvez JF, Keser Z, Mwangi B, Ghouse AA, Fenoy AJ, Schulz PE, Sanches M, Quevedo J, **Selvaraj S**, Gajwani P, Zunta-Soares G, Hasan KM, Soares JC. The medial forebrain bundle as a deep brain stimulation target for treatment resistant depression: A review of published data. **Prog Neuropsychopharmacol Biol Psychiatry**. 2015 Apr 3;58:59-70. doi: 10.1016/j.pnpbp.2014.12.003.
34. Mon-Ju Wu, Hanjing Emily Wu, Benson Mwangi, Marsal Sanches, **Sudhakar Selvaraj**, Giovana B. Zunta-Soares, Jair C. Soares. Prediction of pediatric unipolar depression using multiple neuromorphometric measurements: A pattern classification approach. **J Psychiatr Res**. 2015 Mar;62:84-91. doi: 10.1016/j.jpsychires.2015.01.015.
35. Cao B, Mwangi B, Hasan KM, **Selvaraj S**, Zeni CP, Zunta-Soares GB, Soares JC. Development and validation of a brain maturation index using longitudinal neuroanatomical scans. **Neuroimage**. 2015 Aug 15;117:311-8. doi: 10.1016/j.neuroimage.2015.05.071.
36. Peter S Bloomfield\*, **Sudhakar Selvaraj\***, Mattia Veronese, Gaia Rizzo, Alessandra Bertoldo, David R Owen, Michael AP Bloomfield, Ilaria Bonoldi, Nicola Kalk, Federico Turkheimer, Philip McGuire, Vincenzo de Paola, Oliver D Howes. Microglial activity in people at ultra high risk of psychosis and in schizophrenia; an [11C]PBR28 PET brain imaging study. **Am J Psychiatry** 2015 Oct 16:appiajp201514101358. \* Joint 1st authors.
37. Elias Mouchlianitis, Michael A. P. Bloomfield, Vincent Law, Katherine Beck, **Sudhakar Selvaraj**, Naresh Rasquinha, Adam Waldman, Federico E. Turkheimer, Alice Egerton, James Stone and Oliver D. Howes. Treatment-Resistant Schizophrenia Patients Show Elevated Anterior Cingulate Cortex Glutamate Compared to Treatment-Responsive. **Schizophr Bull**. 2015 Dec 17. pii: sbv151.
38. Calcia MA\*; Bonsall DR\*; Bloomfield P, **Selvaraj S**, Barichello T, Howes O. Stress and neuroinflammation: a systematic review on the effects of stress on microglia and the implications for mental illness. **Psychopharmacology (Berl)** 2016 Feb 5. PMID: 2684704.

39. Arnone D\*, Job D\*, **Selvaraj S**, Abe O, Amico F, Cheng YQ, Colloby S, O'Brien J, Frodl T, Gotlib IH, Ham BJ, Kim MJ, Koolschijn PC, Perico C A-M, Salvatore G, Thomas A, Van Tol MJ, Wagner G, McIntosh AM. Computational Meta-Analysis of Statistical Parametric Maps In Major Depression. **Hum Brain Mapp**. 2016 Feb 8. PMID: 26854015. \* Joint 1st authors.
40. Lavagnino L, Mwangi B, Bauer IE, Cao B, **Selvaraj S**, Prossin A, Soares JC. Reduced Inhibitory Control Mediates the Relationship between Cortical Thickness in the Right Superior Frontal Gyrus and Body Mass Index. **Neuropsychopharmacology**. 2016 Feb 18. PMID: 26888057.
41. Bloomfield PS, Howes OD, Turkheimer F, **Selvaraj S**, Veronese M. Response to Narendran and Frankle: The Interpretation of PET Microglial Imaging in Schizophrenia. **Am J Psychiatry**. 2016 May 1;173(5):537-8. PMID: 27133411.
42. Wise T, Radua J, Via E, Cardoner N, Abe O, Adams TM, Amico F, Cheng Y, Cole JH, de Azevedo Marques Périco C, Dickstein DP, Farrow TF, Frodl T, Wagner G, Gotlib IH, Gruber O, Ham BJ, Job DE, Kempton MJ, Kim MJ, Koolschijn PC, Malhi GS, Mataix-Cols D, McIntosh AM, Nugent AC, O'Brien JT, Pezzoli S, Phillips ML, Sachdev PS, Salvatore G, **Selvaraj S**, Stanfield AC, Thomas AJ, van Tol MJ, van der Wee NJ, Veltman DJ, Young AH, Fu CH, Cleare AJ, Arnone D. Common and distinct patterns of grey-matter volume alteration in major depression and bipolar disorder: evidence from voxel-based meta-analysis. **Mol Psychiatry**. 2016 May 24. PMID: 27217146.
43. Albert J. Fenoy, Paul Schulz, **Sudhakar Selvaraj**, Christina Burrows, Danielle Spiker, Bo Cao, Giovanna Zunta-Soares, Prashant Gajwani, Joao Quevedo, Jair Soares. Deep brain stimulation of the medial forebrain bundle: Distinctive responses in resistant depression. **Journal of Affective Disorders**, Volume 203, October 2016, Pages 143–151. PMID: 27288959.
44. Cao, B., Stanley, J.A., **Selvaraj, S**, Mwangi, B, Passos, Cavalcante, I, Zunta-Soares, G.B, Soares, J.C. Evidence of altered membrane phospholipid metabolism in the anterior cingulate cortex and striatum of patients with bipolar disorder I: A multi-voxel 1H MRS study. **J. Psychiatr. Res.** 2016 Jun 21;81:48-55. PMID: 27376506.
45. Luca Lavagnino, Danilo Arnone, Bo Cao, Jair Soares, **Sudhakar Selvaraj**. Inhibitory Control in Obesity and Binge Eating Disorder: a Systematic Review and Meta-analysis of Neurocognitive and Neuroimaging Studies. **Neuroscience and Biobehavioral Reviews** (2016) Sep;68:714-26. PMID: 27381956.
46. Cao B, Stanley JA, Passos IC, Mwangi B, **Selvaraj S**, Zunta-Soares GB, Soares JC. Elevated Choline-Containing Compound Levels in Rapid Cycling Bipolar Disorder. **Neuropsychopharmacology**. 2017 Feb 21. PMID: 28220797.

### Abstracts (Selected)

1. Effect of Tryptophan Depletion on Occipital Cortex GABA level using <sup>1</sup>H MRS. Selvaraj S, Bhagwagar Z, Evans J, Matthews PM, Cowen PJ (2005). ISMRM Workshop on MR Spectroscopy for Neuropsychiatric Disorders, Banff, Canada.
2. Rainer Hinz, V Murthy, S Selvaraj, M Taylor, PJ Cowen, Z Bhagwagar, PM Grasby. Changes of [<sup>11</sup>C] DASB binding in human brain after citalopram infusion. Neuroimage, 2006. Neuroreceptor meeting 2006.

3. Serotonin transporter is not altered in recovered depressed patients: a [11C] DASB PET study (2006). Bhagwagar Z, Murthy NV, Selvaraj S, Hinz R, Taylor M, Fancy S, Cowen PJ, Grasby PM. Collegium Internationale Neuro-Psychopharmacologicum (CINP) congress, Chicago, USA.
4. Differential effect of Citalopram and Reboxetine on cortical glutamate as measured by 1H MRS. Sudhakar Selvaraj, Matthew Taylor, Susannah E Murphy, Marzena Wylezinska, John Evans, Philip J Cowen. ECNP Workshop on Neuropsychopharmacology for Young Scientists, France, 2007.
5. Lower Serotonin transporter binding potential in unipolar depressed patients: a [11C] DASB PET (2008). Selvaraj S, Murthy NV, Bhagwagar Z, Bose SK, Grasby PM, Cowen PJ (2008). Society of Biological Psychiatry 63rd Annual Scientific Convention & Meeting, Washington, DC, USA.
6. Lower brain serotonin transporter binding potential in unipolar acutely depressed patients - A preliminary [11C]DASB PET study. Selvaraj S, Murthy NV, Bhagwagar Z, Bose SK, Grasby PM, Cowen PJ (2008). The Seventh International Symposium on Functional Neuroreceptor Mapping of Living Brain. Pittsburgh, 2008.
7. How do antidepressants work?: A PET-fMRI study of brain serotonin levels and affect regulation. Sudhakar Selvaraj, Paul Faulkner, Federico Turkheimer, Lula Rosso, Philip J Cowen, Jonathan P Roiser, Oliver Howes (2011). New research prize, RCPsych GA meeting, Newcastle, UK 2011.
8. Detecting Endogenous Changes In Serotonergic Neurotransmission In Humans: A [11C]CUMI-101 PET Challenge Study. Sudhakar Selvaraj, Paul Faulkner, Elias Mouchlianitis, Federico Turkheimer, Lula Rosso, Philip J Cowen, Jonathan P Roiser, Oliver Howes (2012). Society of Biological Psychiatry 63rd Annual Scientific Convention & Meeting, Washington, DC, USA.
9. Detecting endogenous changes in serotonin neurotransmission in Humans: A [11C]CUMI-101 and Citalopram Challenge Study. Sudhakar Selvaraj, Federico Turkheimer, Paul Faulkner, Elias Mouchlianitis, Lula Rosso, Jonathan P Roiser, Philip J Cowen, Oliver Howes (2012). British Association of Psychopharmacology.
10. Brain serotonin neurotransmission and affect regulation in humans: a positron emission tomography study. Sudhakar Selvaraj, Paul Faulkner, Elias Mouchlianitis, Federico Turkheimer, Lula Rosso, Philip J Cowen, Jonathan P Roiser, Oliver Howes (2012). ECNP conference, Vienna. \*Won best poster award.
11. Effect of serotonergic antidepressant on endogenous brain serotonin in major depressive disorder and treatment response. Sudhakar Selvaraj (2013). 53rd Annual NCDEU Meeting, Hollywood, Florida, 2013.
12. Presynaptic Serotonergic Regulation of Emotional Processing: A Multimodal Brain Imaging Study. Sudhakar Selvaraj\*, Elias Mouchlianitis\*, Paul Faulkner, Federico Turkheimer, Philip J. Cowen, Jonathan P Roiser, Oliver Howes. American College of Neuropsychopharmacology, Hollywood, Florida, 2013.
13. Serotonin and Affect Regulation in Humans: A Combined 5-HT1A [11C]CUMI-101 PET and FMRI Study. Sudhakar Selvaraj, Elias Mouchlianitis, Danilo Arnone, Philip J. Cowen, Jon Roiser, Oliver Howes. American College of Neuropsychopharmacology, Phoenix, AZ, 2014.
14. Imaging translocator protein (TSPO) in people at high risk of psychosis and in schizophrenia: an [11C] PBR28 PET brain imaging study. American College of Neuropsychopharmacology, Hollywood, FL, 2015.
15. Imaging translocator protein (TSPO) in people at high risk of psychosis and in schizophrenia:

an [11C] PBR28 PET brain imaging study. International Society for CNS clinical Trials and Methodology (ISCTM), Washington DC, 2016.

16. Serotonin and Affect Regulation in Humans: A Combined 5-HT1A [11C]CUMI-101 PET and Functional MRI Study. International Society of Serotonin Research (Serotonin Club), Seattle, 2016.

## PRESENTATIONS

- 2009            5-HT transporters in depression  
University of Manchester, UK
- 2012            Recent advances in 5-HT imaging  
Institute of Psychiatry, London
- 2013            Imaging markers in Major depressive disorder  
University of Texas Health Science centre at Houston
- 2013            Serotonin and Emotion processing in Major depressive disorder  
Black Dog Institute, University of New South Wales, Sydney.
- 2015            Imaging brain inflammation in mood and psychotic disorders  
UTHealth Psychiatry Department Grand Rounds 2015-16
- 2015            Microglial activation in psychosis using PET Imaging  
The First Annual Immunopsychiatry Symposium, Houston
- 2015            Microglial Activity in People at Ultra High Risk of Psychosis and in Schizophrenia  
Society of Biological Psychiatry, Toronto.
- 2015            Symposium Speaker, Clinical staging: A New Approach to Bipolar Disorder.  
American Society of Clinical Psychopharmacology, Miami
- 2015            Symposium Speaker, Disentangling glutamatergic and immune pathways in schizophrenia  
International Congress On Schizophrenia Research, Colorado Springs
- 2016            NIDA Travel Award Winner  
International Society of Serotonin Research (Serotonin Club), Seattle
- 2016            Depression Treatment & Relapse Prevention, Trends in Clinical Management of Depression  
Houston Mood Disorders Conference 2016
- 2016            Advances in Neuroimaging, Markers and Personalized Medicine in Depression  
Houston Mood Disorders Conference 2016.