

CURRICULUM VITAE

NAME (FAMILY NAME) MYINT
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DATE OF BIRTH 29-11-1961
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EDUCATIONAL RECORD

A. Academic Degrees

Degree	Year	Institution	Disciplines
PhD (Doctor of Philosophy in Neuroscience)	2007	Brain & Behaviour Institute University of Maastricht The Netherlands	Neuroscience
M.Med.Sc. (Master of Medical Science)	1994	Institute of Medicine Yangon, Myanmar	Medical Physiology
M.B.,B.S. (Medical Doctor)	1986	Institute of Medicine, Yangon, Myanmar	Medicine, Surgery, Obstetrics & Gynaecology & Paediatrics

B. Research Fellowship Trainings

Title	Place	Period
IAEA Fellowship on Monoclonal Antibody Techniques and Development of Immunoassays	DiaMed Eurogen, Tessengerlo, Belgium	March - December, 2001
IAEA Fellowship on Steroid Receptor Assay and Cancer	Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia	June to September, 1996

POSTS HELD

Title	Institution	Date
Senior Research Scientist	Advanced Practical Diagnostics NV, Belgium (APDia), Belgium www.apdiagroup.com	Jun 2006 to date
Visiting Scientist	Ludwig Maximilian University Munich, Germany http://www.klinikum.uni-muenchen.de/Klinik-und-Poliklinik-fuer-Psychiatrie-und-Psychotherapie/de/forschung/pni/moodinflame.html	March 2007 to date
Ass. Faculty member	Graduate School of Neuroscience/ Munich Neuroscience Centre, Munich, Germany http://www.mcn.lmu.de/	2009 to date
Senior Research Fellow	Bedfordshire Mental Health Research/ Cambridge University, http://www.bcmhr-cu.org/content/members	2009 to date
Research Associate	Otto-von-Guericke University, Integrative Neuroscience Programme, Department of Psychiatry Magdeburg, Germany	Jan. 2010 to date
Honorary Ass. Prof.	Faculty of Health, Medicine University of Maastricht, Netherlands	1 Oct 2012 to date
PhD research fellow	Faculty of Medicine, University of Maastricht, Netherlands	Jan 2002 to Jan 2007
Research Scientist/Head	Department of Medical Research, Nuclear Medicine Division, Yangon, Myanmar	1 July 1999 to Jan. 2002
Senior Research Officer	Department of Medical Research Yangon, Myanmar	1 Oct. 1991 to 30 June 1999
Demonstrator/Tutor	Physiology Department, Institute of Medicine, Mandalay, Myanmar	11 Sept. 1989 to 30 Sept. 1991
Research Officer	Clinical Research Unit, Department of Medical Research Yangon, Myanmar	1 Sept. 1987 to 10 Sept. 1989

RESEARCH EXPERIENCES

Research on Neuroscience and Psychiatry

1. As a 'More Experienced Researcher (MER)' in EU FP7 Marie-Curie Industrial-Academia Partnership Programme (IAPP) Project PSYCH-AIDFP7/286334 'Advanced Immunoendocrine Diagnostics in Psychiatric Disorders' (APDia/LMU/EMC) (2012-2016)
2. As principal investigator in Stanley Foundation, USA granted project (in collaboration with Loyola University) on 'Cyclooxygenase-2-Inhibitor Combination Treatment for Bipolar Depression: Role of Inflammation and Kynurenine Pathway Biomarkers' (2011-2013)
3. As sub-coordinator on tryptophan-kynurenine pathway in mood disorders (biomarker clinical studies and experimental studies) in European Consortium Project between 10 European countries on Early Diagnosis, Treatment and Prevention of Mood Disorders targeting the Inflammatory Response System: MOODINFLAME FP7/222963 www.moodinflame.eu (2008-2013)
4. Research studies on psychoimmunoendocrinology and psycho-pharmacology of depression, bipolar disorders, anxiety disorders, schizophrenia, Alzheimer's Disease, Attention deficit hyperactive disorder (ADHD) (both animal and human/clinical in-vivo, in-vitro and ex-vivo studies involved HPLC analyses, immuno-histochemical techniques, western blot, cell culture, immunoassays and behavioural analyses) (University of Maastricht/University of Antwerp/University of Leuven/LMU Munich/University of Essen/Illinois University, Urbana/Loyola University, Chicago/University of New South Wales, Sidney/Korea University Medical Centre, Seoul/Catholic University of Sacred Heart, Rome) (2002 to date)
5. Research and development of diagnostic markers in depression and related psychiatric disorders (APDia in collaboration with Universities of Antwerp, Leuven, Munich, Muenster and UNSW) (2006 to date)

Research on Endocrinology, Cancer and immunoassays development

1. Research and development of fast, user-friendly, practical and cost-effective immunoassay panels (Advanced Practical Diagnostics n.v. in collaboration with Sension GmbH)(2008 to date)
2. Research and development on monoclonal antibody production (Advanced Practical Diagnostics)(2004 to date)
3. Research on thyroid hormone insufficiency and mental retardation (as National Coordinator) (granted by IAEA International Atomic Energy Agency, 1999-2002)
4. Endocrine related cancer research that involved establishment of steroid receptor assays (radioreceptor assay and immunohistochemistry), c-erbB2 oncoprotein (immunohisto-chemistry) and pS2 protein and related tumour markers analysis (radioimmunoassay and immunohistochemistry) in breast cancers and related cancers (as principal investigator) (granted by IAEA International Atomic Energy Agency, 1996-1999)

AWARDS, GRANTS AND PATENTS

Awards

1. Senior Research Fellow - Bedfordshire Mental Health Research, Cambridge University, Cambridge, UK, 2009 to date.
<http://www.bcmhr-cu.org/content/members>
2. PhD certificate of European Graduate School of Neuroscience, Maastricht, 2007. http://www.euronschool.eu/page/5/About_EURON/
3. Travel Grant award at European College of Neuropharmacology 18th Annual Meeting, Amsterdam, The Netherlands, 2005
4. Poster award at Asia-Pacific World Federation of Biological Psychiatry Societies Meeting, Seoul, South Korea, 2004.
5. IAEA research fellowship award (2001, DiaMed, Belgium)
6. IAEA research fellowship award (1996, University of Malaya, Malaysia)

Grants

1. Marie Curie Action, Industrial-Academia Partnership Programme Grant: Advanced Immuno-Neuro-Endocrine Diagnostics in Psychiatry (PSYCH-AID) 2012-2016. Grant No. 286334. As more experienced researcher and group leader. Collaboration between 8 European Centers. (3,649,500 €)
2. Stanley Medical Research Institute Grant on Cyclooxygenase-2-Inhibitor Combination Treatment for Bipolar Depression: Role of Inflammation and Kynurenine Pathway Biomarkers, 2011-2013. As one of the PIs. Collaboration between Loyola, Chicago and LMU Munich. (500,000\$)
3. European Collaborative Research Grant on Early Diagnosis, Treatment and Prevention of Mood Disorders targeting the Inflammatory Response System (MOODINFLAME), 2008-2013. Grant No. 22963. As sub-coordinator. Collaboration between 10 European countries with 19 centers. (10,230,000 €)
4. BMBF Research grant on Biomarkers for depression and Alzheimer's disease, 2008-2010. As one of the PIs. Collaboration between Muenster University and LMU Munich. (200,000 €)

Patents

- (1) Neurodegenerative markers for psychiatric conditions (Depression), European Patent application: Inventors: **Myint AM** et al. *October 12, 2006: Patent publication No: WO2006105907.* (Granted in European Commission, Turkey and Japan)
- (2) Neurodegenerative markers for psychiatric conditions (Alzheimer's Disease), European Patent application: Inventors: **Myint AM** et al. *Jan 2010 EP2146209* (Granted in European Commission, Turkey and Japan)
- (3) KAT III gene polymorphism as a marker for psychiatric conditions (Depression), European Patent application: Inventors: **Myint AM**, Claes S, Rothermundt M. *October 2009 Publication No. WO2011038932.*

MEMBERSHIP

1. Secretary of Section Immunology and Psychiatry, World Psychiatric Association (WPA)
2. Member of International College of Neuropsychopharmacology (CINP)
3. Member of Psycho-Neuro-Immunology Research Society (PNIRS)
4. Member of Federation of European Neuroscience Societies (FENS)
5. Member of International Society of Tryptophan Research (ISTRY)
6. Member of American Society of Pharmacology and Experimental Therapeutic (ASPET)
7. Member of Bedfordshire Mental Health Research/Cambridge University

OTHER SCIENTIFIC ACTIVITIES

1. Reviewer of Journals
 - (1) Brain Behaviour and Immunity
 - (2) Journal of Affective Disorders
 - (3) Psychiatry Research
 - (4) Schizophrenia Research
 - (5) Schizophrenia Bulletin
 - (6) Biological Psychiatry
 - (7) Journal of Psychopharmacology
 - (8) Neuropsychopharmacology
 - (9) Psychoneuroendocrinology
 - (10) International Journal of Tryptophan Research
 - (11) European Archives of Psychiatry
2. Assessor
 - (1) Neuroinflammation group, UNSW, Sydney, Australia (for PhD theses, NHMRC grants, promotions)
 - (2) University Malaya, Kuala Lumpur, Malaysia (for PhD theses)

OTHER NONSCIENTIFIC ACTIVITIES

Poetry & Prose (writing and reading)

LIST OF PUBLICATIONS

Peer reviewed scientific articles

1. Mueller N, **Myint AM**, Schwarz MJ. Inflammation in schizophrenia. *Adv Protein Chem Struct Biol.* 1012; 88: 49-68.
2. Leonard BE, Schwarz M, **Myint AM**. The metabolic syndrome in schizophrenia: is inflammation a contributing cause? *J Psychopharmacol.* 2012 Apr 2. [Epub ahead of print]. Review.
3. **Myint AM**. Kynurenines: from perspective of major psychiatric disorders: *J FEBS.* 2012 Apr; 279(8):1375-1385. Epub 2012 Mar 8. Review.
4. Zunszain PA, Anacker C, Cattaneo A, Choudhury S, Musaelyan K, **Myint AM**, Thuret S, Price J, Pariante CM. Interleukin-1 β : A New Regulator of the Kynurenine Pathway Affecting Human Hippocampal Neurogenesis. *Neuropsychopharmacology.* 2012 Mar;37(4):939-49. doi: 10.1038/npp.2011.277. Epub 2011 Nov 9.
5. Krause DL, Riedel M, Müller N, Weidinger E, Schwarz MJ, **Myint AM**. Effects of antidepressants and cyclooxygenase-2 inhibitor on cytokines and kynurenines in stimulated in vitro blood culture from depressed patients. *Inflammopharmacology.* 2012 Jan 12. [Epub ahead of print]
6. **Myint AM**, Schwarz MJ, Müller N. The role of the kynurenine metabolism in major depression. *J Neural Transm.* 2012 Feb;119(2):245-251. Epub 2011 Dec 3. Review.
7. Steiner J, Walter M, Gos T, Guillemin GJ, Bernstein HG, Sarnyai Z, Mawrin C, Brisch R, Bielau H, Zu Schwabedissen LM, Bogerts B, **Myint AM**. Severe depression is associated with increased microglial quinolinic acid in subregions of the anterior cingulate gyrus: Evidence for an immune-modulated glutamatergic neurotransmission? *J Neuroinflammation.* 2011 Aug 10;8:94.
8. Steiner J, Bogerts B, Sarnyai Z, Walter M, Gos T, Bernstein HG, **Myint AM**. Bridging the gap between the immune and glutamate hypotheses of schizophrenia and major depression: Potential role of glial NMDA receptor modulators and impaired blood-brain barrier integrity. *World J Biol Psychiatry.* 2011 Jun 28. [Epub ahead of print]. Review.
9. **Myint AM**, Schwarz MJ, Verkerk R, Mueller HH, Zach J, Scharpé S, Steinbusch HW, Leonard BE, Kim YK. Reversal of imbalance between kynurenic acid and 3-hydroxykynurenine by antipsychotics in medication-naïve and medication-free schizophrenic patients. *Brain Behav Immun.* 2011 Nov 25(8):1576-81.
10. Claes S, **Myint AM**, Domschke K, Del-Favero J, Entrich K, Engelborghs S, De Deyn P, Mueller N, Baune B, Rothermundt M. The kynurenine pathway in major depression: haplotype analysis of three related functional candidate genes. *Psychiatry Res.* 2011 Aug 15;188(3):355-60. Epub 2011 Apr 13.
11. **Myint AM**, Schwarz MJ, Müller N and Leonard BE. Immune-Tryptophan pathway interaction: possible pathophysiological role in major psychiatric disorders. *Eur. Psychiatric Rev.* 2011; 4(1): 35-40. Review.
12. Müller N, **Myint AM**, Schwarz MJ. Kynurenine Pathway in Schizophrenia: Pathophysiological and Therapeutic Aspects. *Curr Pharm Des.* 2011;17(2):130-136. Epub 2011 Mar 1. Review.

13. Maes M, Leonard BE, **Myint AM**, Kubera M, Verkerk R. The new '5-HT' hypothesis of depression: Cell-mediated immune activation induces indoleamine 2,3-dioxygenase, which leads to lower plasma tryptophan and an increased synthesis of detrimental tryptophan catabolites (TRYCATs), both of which contribute to the onset of depression. *Prog Neuropsychopharmacol Biol Psychiatry*. 2011 Apr 29;35(3):702-21. Epub 2010 Dec 23. Review.
14. Lee BH, **Myint AM**, Kim YK. Psychotropic drugs on in vitro brain-derived neurotrophic factor production in whole blood cell cultures from healthy subjects. *J Clin Psychopharmacol*. 2010 Oct;30(5):623-7.
15. Müller N, **Myint AM**, Schwarz MJ. Inflammatory Biomarkers and Depression. *Neurotox Res*. 2011 Feb;19(2):308-18. Epub 2010 Jul 24. Review.
16. Majoie HJ, Rijkers K, Berfelo MW, Hulsman JA, **Myint A**, Schwarz M, Vles JS. Vagus Nerve Stimulation in Refractory Epilepsy: Effects on Pro- and Anti-Inflammatory Cytokines in Peripheral Blood. *Neuroimmunomodulation*. 2010 Jul 17;18(1):52-56.
17. Oades RD, **Myint AM**, Dauvermann MR, Schimmelmann BG, Schwarz MJ. Attention-deficit hyperactivity disorder (ADHD) and glial integrity: an exploration of associations of cytokines and kynurenine metabolites with symptoms and attention. *Behav Brain Funct*. 2010 Jun 9;6:32.
18. Oades RD, Dauvermann MR, Schimmelmann BG, Schwarz MJ, **Myint AM**. Attention-deficit hyperactivity disorder (ADHD) and glial integrity: S100B, cytokines and kynurenine metabolism--effects of medication. *Behav Brain Funct*. 2010 May 28;6:29.
19. Steiner J, Jacobs R, Panteli B, Brauner M, Schiltz K, Bahn S, Herberth M, Westphal S, Gos T, Walter M, Bernstein HG, **Myint AM**, Bogerts B. Acute schizophrenia is accompanied by reduced T cell and increased B cell immunity. *Eur Arch Psychiatry Clin Neurosci*. 2010 Oct;260(7):509-18. Epub 2010 Jan 27.
20. Steiner J, **Myint AM**, Schiltz K, Westphal S, Bernstein HG, Walter M, Schroeter ML, Schwarz MJ, Bogerts B. S100B Serum Levels in Schizophrenia Are Presumably Related to Visceral Obesity and Insulin Resistance. *Cardiovasc Psychiatry Neurol*. 2010;2010:480707. Epub 2010 Jun 10.
21. Steiner J, Walter M, Guest P, **Myint AM**, Schiltz K, Panteli B, Brauner M, Bernstein HG, Gos T, Herberth M, Schroeter ML, Schwarz MJ, Westphal S, Bahn S, Bogerts B. Elevated S100B levels in schizophrenia are associated with insulin resistance. *Mol Psychiatry*. 2010 Jan;15(1):3-4.
22. Koopmans GC, Deumens R, Buss A, Geoghegan L, **Myint AM**, Honig WH, Kern N, Joosten EA, Noth J, Brook GA. Acute rolipram/thalidomide treatment improves tissue sparing and locomotion after experimental spinal cord injury. *Exp Neurol*. 2009 Apr;216(2):490-8.
23. Leonard BE, **Myint A**. The psychoneuroimmunology of depression. *Hum Psychopharmacol*. 2009 Apr;24(3):165-75. Review.
24. **Myint AM**, Schwarz MJ, Steinbusch HW, Leonard BE. Neuropsychiatric disorders related to interferon and interleukins treatment. *Metab Brain Dis*. 2009 Mar;24(1):55-68. Epub 2008 Dec 10. Review.

25. Müller N, **Myint AM**, Schwarz MJ. The impact of neuroimmune dysregulation on neuroprotection and neurotoxicity in psychiatric disorders--relation to drug treatment. *Dialogues Clin Neurosci*. 2009;11(3):319-32. Review.
26. Kim YK, **Myint AM**, Verkerk R, Scharpe S, Steinbusch H, Leonard B. Cytokine changes and tryptophan metabolites in medication-naïve and medication-free schizophrenic patients. *Neuropsychobiology*. 2009;59(2):123-9. Epub 2009 Apr 22.
27. Steiner J, Bernstein HG, Biela H, Farkas N, Winter J, Dobrowolny H, Brisch R, Gos T, Mawrin C, **Myint AM**, Bogerts B. S100B-immunopositive glia is elevated in paranoid as compared to residual schizophrenia: a morphometric study. *J Psychiatr Res*. 2008 Aug;42(10):868-76.
28. Van den Hove DL, Blanco CE, Scheepens A, Desbonnet L, **Myint AM**, Leonard BE, Prickaerts J, Steinbusch HW. Prenatal maternal paroxetine treatment and neonatal mortality in the rat: a preliminary study. *Neonatology*. 2008;93(1):52-5.
29. Kim YK, Jung HG, **Myint AM**, Kim H, Park SH. Imbalance between pro-inflammatory and anti-inflammatory cytokines in bipolar disorder. *J Affect Disord*. 2007 Dec;104(1-3):91-5.
30. **Myint AM**, O'Mahony S, Kubera M, Kim YK, Kenny C, Kaim-Basta A, Steinbusch HW, Leonard BE. Role of paroxetine in interferon-alpha-induced immune and behavioural changes in male Wistar rats. *J Psychopharmacol*. 2007 Nov;21(8):843-50.
31. **Myint AM**, Kim YK, Verkerk R, Park SH, Scharpé S, Steinbusch HW, Leonard BE. Tryptophan breakdown pathway in bipolar mania. *J Affect Disord*. 2007 Sep;102(1-3):65-72.
32. **Myint AM**, Kim YK, Verkerk R, Scharpé S, Steinbusch H, Leonard B. Kynurenine pathway in major depression: evidence of impaired neuroprotection. *J Affect Disord*. 2007 Feb;98(1-2):143-51.
33. **Myint AM**, Steinbusch HW, Goeghegan L, Luchtman D, Kim YK, Leonard BE. Effect of the COX-2 inhibitor celecoxib on behavioural and immune changes in an olfactory bulbectomised rat model of depression. *Neuroimmunomodulation*. 2007;14(2):65-71.
34. Leonard BE, **Myint A**. Inflammation and depression: is there a causal connection with dementia? *Neurotox Res*. 2006 Oct;10(2):149-60. Review.
35. Leonard BE, **Myint A**. Changes in the immune system in depression and dementia: causal or coincidental effects? *Dialogues Clin Neurosci*. 2006;8(2):163-74. Review.
36. O'Mahony SM, **Myint AM**, van den Hove D, Desbonnet L, Steinbusch H, Leonard BE. Gestational stress leads to depressive-like behavioural and immunological changes in the rat. *Neuroimmunomodulation*. 2006;13(2):82-8.
37. **Myint AM**, Leonard BE, Steinbusch HW, Kim YK. Th1, Th2, and Th3 cytokine alterations in major depression. *J Affect Disord*. 2005 Oct;88(2):167-73.
38. Tetich M, Dziedzicka-Wasylewska M, Kuśmider M, Kutner A, Leśkiewicz M, Jaworska-Feil L, Budziszewska B, Kubera M, **Myint AM**, Basta-Kaim A, Skowroński M, Lasoń W. Effects of PRI-2191--a low-calcemic analog of 1,25-dihydroxyvitamin D3 on the seizure-induced changes in brain gene expression and immune system activity in the rat. *Brain Res*. 2005 Mar 28;1039(1-2):1-13.

39. O'Mahony SM, **Myint AM**, Steinbusch H, Leonard BE. Efavirenz induces depressive-like behaviour, increased stress response and changes in the immune response in rats. *Neuroimmunomodulation*. 2005;12(5):293-8.
40. Kim YK, **Myint AM**, Lee BH, Han CS, Lee SW, Leonard BE, Steinbusch HW. T-helper types 1, 2, and 3 cytokine interactions in symptomatic manic patients. *Psychiatry Res*. 2004 Dec 30;129(3):267-72.
41. Kim YK, **Myint AM**, Lee BH, Han CS, Lee HJ, Kim DJ, Leonard BE. Th1, Th2 and Th3 cytokine alteration in schizophrenia. *Prog Neuropsychopharmacol Biol Psychiatry*. 2004 Nov;28(7):1129-34.
42. Kim YK, **Myint AM**. Clinical application of low serum cholesterol as an indicator for suicide risk in major depression. *J Affect Disord*. 2004 Aug;81(2):161-6.
43. **Myint AM**, Kim YK. Cytokine-serotonin interaction through IDO: a neurodegeneration hypothesis of depression. *Med Hypotheses*. 2003 Nov-Dec;61(5-6):519-25. Hypothesis.
44. Myint-Lwin, Tin-Nu-Swe, **Myint-Aye-Mu**, Than-Than, Thein-Than, Tun-Pe. Heparin therapy in Russell's viper bite victims with impending DIC (a controlled trial). *Southeast Asian J Trop Med Public Health*. 1989 Jun;20(2):271-7.

Book Chapters

45. **Aye Mu Myint** (2012). Inflammation, Neurotoxins and Psychiatric Disorders, *Modern Trends in Pharmacopsychiatry Vol 28*, Leonard BE and Halaris A (Ed.). DOI:10.1159/000343968, Karger
46. **Aye Mu Myint** and Markus J Schwarz (2011). Interaction Between Inflammatory State and Neurochemical Changes in Major Psychiatric Disorders, *Psychiatric Disorders - Worldwide Advances*, Toru Uehara (Ed.), ISBN: 978-953-307-833-5, InTech, Available from: <http://www.intechopen.com/articles/show/title/interaction-between-inflammatory-state-and-neurochemical-changes-in-major-psychiatric-disorders>
47. Markus Schwarz and **Aye Mu Myint** (2011). Astrocytes in Major Depressive Disorder and Schizophrenia Pathophysiological and Therapeutic Aspects, *Astrocytes: Wiring the Brain, Frontiers in Neuroscience Series*. Eliana Scemes and David C. Spray (Ed.). ISBN: 9781439825846, ISBN 10: 143982584X 357-384, CRC Press- Taylor & Francis group.

Thesis/monograph

48. **Aye Mu Myint** (2007). Neurochemistry Immune Systems Interaction in Depression. (PhD Thesis). ISBN: 978-90-5278-7. Maastricht University Press. Pp-138.