

CURRICULUM VITAE

Ao. Univ. Prof. Dr. Matthäus Willeit

Department of Psychiatry and Psychotherapy
Medical University Vienna, Austria
Währinger Gürtel 18-20
A-1090 Vienna, Austria
matthaeus.willeit@meduniwien.ac.at



WORKING EXPERIENCE

- 2001-2018 Leading senior specialist, Dept. of Psychiatry and Psychotherapy, Medical University Vienna
- 2002-2006 Schizophrenia PET Laboratory (Head: S. Kapur) CAMH, Toronto, Canada
- 2001 Specialty in Psychiatry and Neurology, Austrian Medical Board, Section Vienna
- 2000 Dept. of Neurology, (Head: L. Deecke), Vienna, Austria
- 1999-2000 Dept. Emergency Medicine (Head: A. Laggner), Vienna, Austria
- 1995-1999 Department of Psychiatry, (Head: o. Univ. Prof. Dr. S. Kasper), Vienna, Austria; Outpatient clinic for Seasonal Affective Disorder (Head: Dr. N. Praschak-Rieder); Research Unit for Psychiatric Genetics (Head: H.N. Aschauer); Investigator in several GCP-conform clinical trials in affective disorders and schizophrenia
- 1993-1995 Dept. of Psychiatry, Internal Medicine, Traumatology General Hospital Merano / Bressanone, Italy; Dept. of Chemotherapy and Infectious Diseases (Head: W. Graninger), Vienna, Austria

HIGHER EDUCATION

- 1995 United States Medical Licence Examination (USMLE) I
- 1994 Italian Medical Licence Examination, University of Bologna, Italy
- 1993 Medical Graduation ("Doktor der Gesamten Heilkunde"), Vienna University
- 1986-1993 Medicine studies at the Vienna University, Austria
Special Courses in infectious medicine and chemotherapy
- 1986-1993 Violin Studies at the Conservatory of the City of Vienna (Prof. Alexander Arenkov)

MAIN SCIENTIFIC CONTRIBUTIONS

- Over 90 original articles; h-index: 35 (as of 01.2018, Scopus); Number of citations: 3789
- Co-development of and first human studies with the dopamine D_{2/3} receptor agonist radioligand [¹¹C]-(+)-[¹¹C]-(+)-PHNO ; Description of seasonal changes in brain serotonin transporter binding; Peer-reviewer for numerous scientific journals; Peer-reviewer for the Canadian Institutes of Health Research (CIHR); the Medical Research Council (MRC), UK; ATIP – Avenir Program, INSERM, France etc
- Past-president and member of the board, Society for Bright Light Treatment and Biological Rhythms (SLTBR; since 2012)
- Organizer: Annual Meeting of the Society for Bright Light Treatment and Biological Rhythms 2011, (Vienna; Austria); 2012 (Geneva, Suisse); 2013 (Vienna; Austria)
- 2016: Organizer (together with H.H. Sitte): Dopamine 2016, Vienna, Austria

RESEARCH GRANTS AND AWARDS (selection)

WWTF Grant CS15-033: Dopamine and Cognition in Schizophrenia; Austrian Science Funds FWF Grant P23585-B09 Measuring in-vivo brain dopamine release in first episode schizophrenia using the novel D_{2/3} receptor radioligand [¹¹C]-(+)-PHNO; Researcher of the Month, Medical University Vienna (2009); Janssen-Cilag Schizophrenia Research Award of the Austrian Society of Neuropharmacology and Biological Psychiatry 2007: Janssen-Ortho Clinical Research Fellowship, 2003, Research Award „Clinical Psychiatry“ 2002 of the Austrian Society of Neuropharmacology and Biological Psychiatry Research Grant Federal Bank of Austria, June 2001, OENB Grant 9832, CNS-Award of the ÖGPB, 2000; Research Grant Institute of Hygienes Vienna University, January 2000; Research Grant Federal Bank of Austria, 1998, OENB Grant 7114

CURRENT MAIN RESEARCH TOPICS

Positron Emission Tomography studies on First-episode schizophrenia and Ultra-High Risk (UHR) subjects for schizophrenia using D_{2/3} agonist radioligands; Haplotype dependent changes in [¹¹C]-(+)-PHNO binding; d-amphetamine-induced sensitization as a model for schizophrenia (human PET imaging and involvement in animal studies on the influence of CAMK-II and other protein-kinases); clinical and pharmacological studies on monoamine-transporters (e.g. the influence of season and light on the serotonin-transporter regulome); impact of season and sunlight on suicide epidemiology.

RESEARCH SKILLS

Organizing translational research bridging animal and human pharmacology; organizing and leading research-groups; organizing contact and interaction with national and international regulatory boards; In-depth experience with human neuro-receptor PET imaging and image analysis methods, including, but not limited to ligand-receptor interaction, analysis software (PMOD, ALICE, ROMI, SPM etc); fMRI imaging and image analysis; General statistical analysis methods; Theoretical experience with psychosis animal research models (CAR, hyperlocomotion, CPP etc.)



Vienna, June 2019

Matthäus Willeit, M.D.

Publications in peer-reviewed journals

1. Weidenauer A, Sauerzopf U, Bartova L, Bauer M, Praschak-Rieder N, Kasper S, **Willeit M.** Sensitization to amphetamines: Relevance for schizophrenia and addiction research. *Journal fur Neurologie, Neurochirurgie und Psychiatrie*. 2018;19(2):66-71.
2. Sauerzopf U, Weidenauer A, Praschak-Rieder N, Kasper S, Sitte H, **Willeit M.** Reprogrammed cells: Future of psychiatric research? *Journal fur Neurologie, Neurochirurgie und Psychiatrie*. 2018;19(2):60-64.
3. Kraus C, Vanicek T, Weidenauer A, Khanaqa T, Stamenkovic M, Lanzenberger R, **Willeit M.**, Kasper S. DiGeorge syndrome: Relevance of psychiatric symptoms in undiagnosed adult patients. *Wiener Klinische Wochenschrift*. 2018;130(7-8):283-287.
4. Winkler D, Pjrek E, Spies M, **Willeit M.**, Dorffner G, Lanzenberger R, Kasper S. Has the existence of seasonal affective disorder been disproven? *Journal of Affective Disorders*. 2017;208:54-55.
5. Weidenauer A, Bauer M, Sauerzopf U, Bartova L, Praschak-Rieder N, Sitte HH, Kasper S, **Willeit M.** Making sense of: Sensitization in Schizophrenia. *International Journal of Neuropsychopharmacology*. 2017;20(1).
6. Sitte H, **Willeit M.** Introduction to the Special Issue on dopamine celebrating the 90th birthday of Oleh Hornykiewicz. *European Journal of Neuroscience*. 2017;45(1):1.
7. Sauerzopf U, Sacco R, Novarino G, Niello M, Weidenauer A, Praschak-Rieder N, Sitte H, **Willeit M.** Are reprogrammed cells a useful tool for studying dopamine dysfunction in psychotic disorders? A review of the current evidence. *European Journal of Neuroscience*. 2017;45(1):45-57.
8. Kraus C, Rabl U, Vanicek T, Carlberg L, Popovic A, Spies M, Bartova L, Gryglewski G, Papageorgiou K, Lanzenberger R, **Willeit M.**, Winkler D, Rybakowski JK, Kasper S. Administration of ketamine for unipolar and bipolar depression. *International Journal of Psychiatry in Clinical Practice*. 2017;21(1):2-12.
9. Bartova L, Weidenauer A, Dold M, Naderi-Heiden A, Kasper S, **Willeit M.**, Praschak-Rieder N. Robust antidepressant effect following alternating intravenous racemic ketamine and electroconvulsive therapy in treatment-resistant depression. *Journal of ECT*. 2017;33(3):e31-e32.
10. Baldinger-Melich P, Weidenauer A, Linder C, Hienert M, Kasper S, Stamenkovic M, **Willeit M.** Case report ECT in a patient with primary parkinsonian syndrome and schizophrenia. *Journal of ECT*. 2017;33(1):e2-e3.
11. Akkaya-Kalayci T, Vyssoki B, Winkler D, **Willeit M.**, Kapusta ND, Dorffner G, Özlü-Erkilic Z. The effect of seasonal changes and climatic factors on suicide attempts of young people. *BMC Psychiatry*. 2017;17(1).
12. **Willeit M.**, Popovic A, Bartova L, Sauerzopf U, Bauer M, Praschak-Rieder N. In vivo imaging of dopamine metabolism and dopamine transporter function in the human brain. *Neuromethods*. Vol 118; 2016:203-220.
13. Hienert M, Weidenauer A, Kraus C, **Willeit M.**, Kasper S, Stamenkovic M. Pregabalin in Tourette's syndrome: A case series. *American Journal of Psychiatry*. 2016;173(12):1242-1243.
14. Bartova L, Vogl SE, Stamenkovic M, Praschak-Rieder N, Naderi-Heiden A, Kasper S, **Willeit M.** Combination of intravenous S-ketamine and oral tranylcypromine in treatment-resistant depression: A report of two cases. *European Neuropsychopharmacology*. 2015;25(11):2183-2184.

15. Willeit M, Kasper S, Praschak-Rieder N. The impact of genetic polymorphisms on neuroreceptor imaging. *PET and SPECT of Neurobiological Systems*; 2014:149-178.
16. Vyssoki B, Kapusta ND, Praschak-Rieder N, Dorffner G, Willeit M. Direct effect of sunshine on suicide. *JAMA Psychiatry*. 2014;71(11):1231-1237.
17. Steinkellner T, Mus L, Eisenrauch B, Constantinescu A, Leo D, Konrad L, Rickhag M, Sørensen G, Efimova EV, Kong E, Willeit M, Sotnikova TD, Kudlacek O, Gether U, Freissmuth M, Pollak DD, Gainetdinov RR, Sitte HH. In vivo amphetamine action is contingent on α CaMKII. *Neuropsychopharmacology*. 2014;39(11):2681-2693.
18. Spindelegger C, Willeit M, Praschak-Rieder N, Lanzenberger R, Kasper S. Neuroimaging in seasons and winter depression. *PET and SPECT in Psychiatry*; 2014:209-222.
19. Scharinger C, Rabl U, Kasess CH, Meyer BM, Hofmaier T, Diers K, Bartova L, Pail G, Huf W, Uzelac Z, Hartinger B, Kalcher K, Perkmann T, Haslacher H, Meyer-Lindenberg A, Kasper S, Freissmuth M, Windischberger C, Willeit M, Lanzenberger R, Esterbauer H, Brocke B, Moser E, Sitte HH, Pezawas L. Platelet serotonin transporter function predicts default-mode network activity. *PLoS ONE*. 2014;9(3).
20. Rami-Mark C, Ungersboeck J, Haeusler D, Nics L, Philippe C, Mitterhauser M, Willeit M, Lanzenberger R, Karanikas G, Wadsak W. Reliable set-up for in-loop ^{11}C -carboxylations using Grignard reactions for the preparation of [carbonyl- ^{11}C]WAY-100635 and [^{11}C]-(+)-PHNO. *Applied Radiation and Isotopes*. 2013;82:75-80.
21. Vyssoki B, Praschak-Rieder N, Sonneck G, Blüml V, Willeit M, Kasper S, Kapusta ND. Effects of sunshine on suicide rates. *Comprehensive Psychiatry*. 2012;53(5):535-539.
22. Spindelegger C, Stein P, Wadsak W, Fink M, Mitterhauser M, Moser U, Savli M, Mien LK, Akimova E, Hahn A, Willeit M, Kletter K, Kasper S, Lanzenberger R. Light-dependent alteration of serotonin-1A receptor binding in cortical and subcortical limbic regions in the human brain. *World Journal of Biological Psychiatry*. 2012;13(6):413-422.
23. Praschak-Rieder N, Willeit M. Imaging of seasonal affective disorder and seasonality effects on serotonin and dopamine function in the human brain. *Current Topics in Behavioral Neurosciences*. Vol 11; 2012:149-167.
24. Bauer M, Praschak-Rieder N, Kasper S, Willeit M. Is dopamine neurotransmission altered in prodromal schizophrenia? A review of the evidence. *Current Pharmaceutical Design*. 2012;18(12):1568-1579.
25. Vyssoki B, Willeit M, Blüml V, Höfer P, Erfurth A, Psota G, Lesch OM, Kapusta ND. Inpatient treatment of major depression in Austria between 1989 and 2009: Impact of downsizing of psychiatric hospitals on admissions, suicide rates and outpatient psychiatric services. *Journal of Affective Disorders*. 2011;133(1-2):93-96.
26. Pail G, Huf W, Pjrek E, Winkler D, Willeit M, Praschak-Rieder N, Kasper S. Bright-light therapy in the treatment of mood disorders. *Neuropsychobiology*. 2011;64(3):152-162.
27. Kapusta ND, Mossaheb N, Etzersdorfer E, Hlavin G, Thau K, Willeit M, Praschak-Rieder N, Sonneck G, Leithner-Dziubas K. Lithium in drinking water and suicide mortality. *British Journal of Psychiatry*. 2011;198(5):346-350.
28. Diaconescu AO, Jensen J, Wang H, Willeit M, Menon M, Kapur S, McIntosh AR. Aberrant effective connectivity in schizophrenia patients during appetitive conditioning. *Frontiers in Human Neuroscience*. 2011(JANUARY):1-14.
29. Willeit M, Praschak-Rieder N. Imaging the effects of genetic polymorphisms on radioligand binding in the living human brain: A review on genetic neuroreceptor imaging of monoaminergic systems in psychiatry. *NeuroImage*. 2010;53(3):878-892.

30. Diaconescu AO, Jensen J, Wang H, **Willeit M**, Menon M, Kapur S, McIntosh AR. Aberrant effective connectivity in schizophrenia patients during appetitive conditioning. *Frontiers in Human Neuroscience*. 2010;4.
31. Pjrek E, Konstantinidis A, Assem-Hilger E, Praschak-Rieder N, **Willeit M**, Kasper S, Winkler D. Therapeutic effects of escitalopram and reboxetine in seasonal affective disorder: A pooled analysis. *Journal of Psychiatric Research*. 2009;43(8):792-797.
32. **Willeit M**, Sitte HH, Thierry N, Michalek K, Praschak-Rieder N, Zill P, Winkler D, Brannath W, Fischer MB, Bondy B, Kasper S, Singer EA. Enhanced serotonin transporter function during depression in seasonal affective disorder. *Neuropsychopharmacology*. 2008;33(7):1503-1513.
33. **Willeit M**, Ginovart N, Graff A, Rusjan P, Vitcu I, Houle S, Seeman P, Wilson AA, Kapur S. First human evidence of d-amphetamine induced displacement of a D_{2/3}-agonist radioligand: A [11C]-(+)-PHNO positron emission tomography study. *Neuropsychopharmacology*. 2008;33(2):279-289.
34. Praschak-Rieder N, **Willeit M**, Wilson AA, Houle S, Meyer JH. Seasonal variation in human brain serotonin transporter binding. *Archives of General Psychiatry*. 2008;65(9):1072-1078.
35. Pjrek E, **Willeit M**, Praschak-Rieder N, Konstantinidis A, Semlitsch HV, Kasper S, Winkler D. Treatment of seasonal affective disorder with duloxetine: An open-label study. *Pharmacopsychiatry*. 2008;41(3):100-105.
36. Jensen J, **Willeit M**, Zipursky RB, Savina I, Smith AJ, Menon M, Crawley AP, Kapur S. The formation of abnormal associations in schizophrenia: Neural and behavioral evidence. *Neuropsychopharmacology*. 2008;33(3):473-479.
37. Graff-Guerrero A, **Willeit M**, Ginovart N, Mamo D, Mizrahi R, Rusjan P, Vitcu I, Seeman P, Wilson AA, Kapur S. Brain region binding of the D_{2/3}-agonist [11C]-(+)-PHNO and the D_{2/3}-antagonist [11C]raclopride in healthy humans. *Human Brain Mapping*. 2008;29(4):400-410.
38. Praschak-Rieder N, Kennedy J, Wilson AA, Hussey D, Boovariwala A, **Willeit M**, Ginovart N, Tharmalingam S, Masellis M, Houle S, Meyer JH. Novel 5-HTTLPR Allele Associates with Higher Serotonin Transporter Binding in Putamen: A [11C] DASB Positron Emission Tomography Study. *Biological Psychiatry*. 2007;62(4):327-331.
39. Pjrek E, Winkler D, Praschak-Rieder N, **Willeit M**, Stastny J, Konstantinidis A, Kasper S. Season of birth in siblings of patients with seasonal affective disorder: A test of the parental conception habits hypothesis. *European Archives of Psychiatry and Clinical Neuroscience*. 2007;257(7):378-382.
40. Pjrek E, Winkler D, Konstantinidis A, **Willeit M**, Praschak-Rieder N, Kasper S. Agomelatine in the treatment of seasonal affective disorder. *Psychopharmacology*. 2007;190(4):575-579.
41. Pjrek E, Winkler D, Abramson DW, Konstantinidis A, Stastny J, **Willeit M**, Praschak-Rieder N, Kasper S. Serum lipid levels in seasonal affective disorder. *European Archives of Psychiatry and Clinical Neuroscience*. 2007;257(4):197-202.
42. Jensen J, Smith AJ, **Willeit M**, Crawley AP, Mikulis DJ, Vitcu I, Kapur S. Separate brain regions code for salience vs. valence during reward prediction in humans. *Human Brain Mapping*. 2007;28(4):294-302.
43. Ginovart N, **Willeit M**, Rusjan P, Graff A, Bloomfield PM, Houle S, Kapur S, Wilson AA. Positron emission tomography quantification of [11C]-(+)-PHNO binding in the human brain. *Journal of Cerebral Blood Flow and Metabolism*. 2007;27(4):857-871.
44. Winkler D, Pjrek E, Konstantinidis A, Praschak-Rieder N, **Willeit M**, Stastny J, Kasper S. Anger attacks in seasonal affective disorder. *International Journal of Neuropsychopharmacology*. 2006;9(2):215-219.

- 45.** Willeit M, Ginovart N, Kapur S, Houle S, Hussey D, Seeman P, Wilson AA. High-affinity states of human brain dopamine D_{2/3} receptors imaged by the agonist [11C]-(+)-PHNO. *Biological Psychiatry*. 2006;59(5):389-394.
- 46.** Ginovart N, Galineau L, **Willeit M**, Mizrahi R, Bloomfield PM, Seeman P, Houle S, Kapur S, Wilson AA. Binding characteristics and sensitivity to endogenous dopamine of [11C]-(+)-PHNO, a new agonist radiotracer for imaging the high-affinity state of D₂ receptors in vivo using positron emission tomography. *Journal of Neurochemistry*. 2006;97(4):1089-1103.
- 47.** Winkler D, Pjrek E, Praschak-Rieder N, **Willeit M**, Pezawas L, Konstantinidis A, Stastny J, Kasper S. Actigraphy in patients with seasonal affective disorder and healthy control subjects treated with light therapy. *Biological Psychiatry*. 2005;58(4):331-336.
- 48.** Wilson AA, McCormick P, Kapur S, **Willeit M**, Garcia A, Hussey D, Houle S, Seeman P, Ginovart N. Radiosynthesis and evaluation of [11C]-(+)-4-propyl-3,4,4a,5,6, 10b-hexahydro-2H-naphtho[1,2-b][1,4]oxazin-9-ol as a potential radiotracer for in vivo imaging of the dopamine D₂ high-affinity state with positron emission tomography. *Journal of Medicinal Chemistry*. 2005;48(12):4153-4160.
- 49.** Seeman P, Ko F, **Willeit M**, McCormick P, Ginovart N. Antiparkinson concentrations of pramipexole and PHNO occupy dopamine D_{2High} and D_{3High} receptors. *Synapse*. 2005;58(2):122-128.
- 50.** Praschak-Rieder N, **Willeit M**, Zill P, Winkler D, Thierry N, Konstantinidis A, Masellis M, Basile VS, Bondy B, Ackenheil M, Neumeister A, Kaplan AS, Kennedy JL, Kasper S, Levitan R. A Cys23-Ser23 substitution in the 5-HT_{2C} receptor gene influences body weight regulation in females with seasonal affective disorder: An Austrian-Canadian collaborative study. *Journal of Psychiatric Research*. 2005;39(6):561-567.
- 51.** Thierry N, **Willeit M**, Praschak-Rieder N, Zill P, Hornik K, Neumeister A, Lenzinger E, Stastny J, Hilger E, Konstantinidis A, Aschauer H, Ackenheil M, Bondy B, Kasper S. Serotonin transporter promoter gene polymorphic region (5-HTTLPR) and personality in female patients with seasonal affective disorder and in healthy controls. *European Neuropsychopharmacology*. 2004;14(1):53-58.
- 52.** Praschak-Rieder N, Hussey D, Wilson AA, Carella A, Lee M, Dunn E, **Willeit M**, Bagby RM, Houle S, Meyer JH. Tryptophan depletion and serotonin loss in selective serotonin reuptake inhibitor-treated depression: An [18F] MPPF positron emission tomography study. *Biological Psychiatry*. 2004;56(8):587-591.
- 53.** Pjrek E, Winkler D, **Willeit M**, Konstantinidis A, Thierry N, Kasper S. Menstrual disturbances - A rare side-effect of bright-light therapy. *International Journal of Neuropsychopharmacology*. 2004;7(2):239-240.
- 54.** Pjrek E, Winkler D, Heiden A, Praschak-Rieder N, **Willeit M**, Konstantinidis A, Stastny J, Kasper S. Seasonality of birth in seasonal affective disorder. *Journal of Clinical Psychiatry*. 2004;65(10):1389-1393.
- 55.** Johansson C, **Willeit M**, Aron L, Smedh C, Ekholm J, Paunio T, Kieseppä T, Lichtermann D, Praschak-Rieder N, Neumeister A, Kasper S, Peltonen L, Adolfsson R, Partonen T, Schalling M. Seasonal affective disorder and the G-protein β-3-subunit C825T polymorphism. *Biological Psychiatry*. 2004;55(3):317-319.
- 56.** Gamper G, **Willeit M**, Sterz F, Herkner H, Zoufaly A, Hornik K, Havel C, Laggner AN. Life after death: Posttraumatic stress disorder in survivors of cardiac arrest - Prevalence, associated factors, and the influence of sedation and analgesia. *Critical Care Medicine*. 2004;32(2):378-383.
- 57.** Winkler D, **Willeit M**, Wolf R, Stamenkovic M, Tauscher J, Pjrek E, Konstantinidis A, Schindler S, Barnas C, Kasper S. Clonazepam in the long-term treatment of patients with unipolar

- depression, bipolar and schizoaffective disorder. *European Neuropsychopharmacology*. 2003;13(2):129-134.
58. **Willeit M**, Praschak-Rieder N, Zill P, Neumeister A, Ackenheil M, Kasper S, Bondy B. C825T polymorphism in the G protein $\beta 3$ -subunit gene is associated with seasonal affective disorder. *Biological Psychiatry*. 2003;54(7):682-686.
 59. **Willeit M**, Praschak-Rieder N, Neumeister A, Zill P, Leisch F, Stastny J, Hilger E, Thierry N, Konstantinidis A, Winkler D, Fuchs K, Sieghart W, Aschauer H, Ackenheil M, Bondy B, Kasper S. A polymorphism (5-HTTLPR) in the serotonin transporter promoter gene is associated with DSM-IV depression subtypes in seasonal affective disorder. *Molecular Psychiatry*. 2003;8(11):942-946.
 60. **Willeit M**, Praschak-Rieder N, Kasper S. Electroconvulsive therapy as continuation and maintenance therapy in psychiatric disorders and Parkinson's disease. *Wiener Klinische Wochenschrift*. 2003;115(9):281-290.
 61. Praschak-Rieder N, **Willeit M**. Treatment of seasonal affective disorders. *Dialogues in Clinical Neuroscience*. 2003;5(4):389-398.
 62. Leitner I, Praschak-Rieder N, **Willeit M**, Kasper S. Quetiapine in a delusional depressed elderly patient: No EPS and a favourable outcome. *International Journal of Neuropsychopharmacology*. 2003;6(2):199-200.
 63. Johansson C, **Willeit M**, Smedh C, Ekholm J, Paunio T, Kieseppä T, Lichtermann D, Praschak-Rieder N, Neumeister A, Nilsson LG, Kasper S, Peltonen L, Adolfsson R, Schalling M, Partonen T. Circadian clock-related polymorphisms in seasonal affective disorder and their relevance to diurnal preference. *Neuropsychopharmacology*. 2003;28(4):734-739.
 64. Johansson C, **Willeit M**, Levitan R, Partonen T, Smedh C, Del Favero J, Bel Kacem S, Praschak-Rieder N, Neumeister A, Masellis M, Basile V, Zill P, Bondy B, Paunio T, Kasper S, Van Broeckhoven C, Nilsson LG, Lam R, Schalling M, Adolfsson R. The serotonin transporter promoter repeat length polymorphism, seasonal affective disorder and seasonality. *Psychological Medicine*. 2003;33(5):785-792.
 65. Winkler D, **Willeit M**, Praschak-Rieder N, Lucht MJ, Hilger E, Konstantinidis A, Stastny J, Thierry N, Pjrek E, Neumeister A, Möller HJ, Kasper S. Changes of clinical pattern in seasonal affective disorder (SAD) over time in a German-speaking sample. *European Archives of Psychiatry and Clinical Neuroscience*. 2002;252(2):54-62.
 66. Winkler D, Praschak-Rieder N, **Willeit M**, Lucht MJ, Hilger E, Konstantinidis A, Stastny J, Thierry N, Pjrek E, Neumeister A, Möller HJ, Kasper S. Seasonal affective disorder in two German-speaking university centers: Clinical and demographic characteristics. *Nervenarzt*. 2002;73(7):637-643.
 67. Schwarz MJ, Offenbaecher M, Neumeister A, Ewert T, **Willeit M**, Praschak-Rieder N, Zach J, Zacherl M, Lossau K, Weisser R, Stucki G, Ackenheil M. Evidence for an altered tryptophan metabolism in fibromyalgia. *Neurobiology of Disease*. 2002;11(3):434-442.
 68. Praschak-Rieder N, **Willeit M**, Winkler D, Neumeister A, Hilger E, Zill P, Hornik K, Stastny J, Thierry N, Ackenheil M, Bondy B, Kasper S. Role of family history and 5-HTTLPR polymorphism in female seasonal affective disorder patients with and without premenstrual dysphoric disorder. *European Neuropsychopharmacology*. 2002;12(2):129-134.
 69. Neumeister A, Konstantinidis A, Stastny J, Schwarz MJ, Vitouch O, **Willeit M**, Praschak-Rieder N, Zach J, De Zwaan M, Bondy B, Ackenheil M, Kasper S. Association between serotonin transporter gene promoter polymorphism (5HTTLPR) and behavioral responses to tryptophan depletion in healthy women with and without family history of depression. *Archives of General Psychiatry*. 2002;59(7):613-620.
 70. Kasper S, Tauscher J, **Willeit M**, Stamenkovic M, Neumeister A, Küfferle B, Barnas C, Stastny J, Praschak-Rieder N, Pezawas L, De Zwaan M, Quiner S, Pirker W, Asenbaum S, Podreka I,

- Brücke T. Receptor and transporter imaging studies in schizophrenia, depression, bulimia and Tourette's disorder - Implications for psychopharmacology. *World Journal of Biological Psychiatry*. 2002;3(3):133-146.
71. Hilger E, Praschak-Rieder N, **Willeit M**, Stastny J, Konstandinidis A, Neumeister A, Kasper S. Pharmacotherapy of seasonal affective disorder. *Nervenarzt*. 2002;73(1):22-31.
 72. **Willeit M**, Stastny J, Pirker W, Praschak-Rieder N, Neumeister A, Asenbaum S, Tauscher J, Fuchs K, Sieghart W, Hornik K, Aschauer HN, Brücke T, Kasper S. No evidence for in vivo regulation of midbrain serotonin transporter availability by serotonin transporter promoter gene polymorphism. *Biological Psychiatry*. 2001;50(1):8-12.
 73. **Willeit M**, Praschak-Rieder N, Hilger E, Neumeister A, Kasper S. Reboxetine in a patient with seasonal bulimia resistant to SSRIs and light therapy. *International Journal of Psychiatry in Clinical Practice*. 2001;5(3):207-209.
 74. Tauscher J, Pirker W, **Willeit M**, De Zwaan M, Bailer U, Neumeister A, Asenbaum S, Lennkh C, Praschak-Rieder N, Brücke T, Kasper S. [123I] β -CIT and single photon emission computed tomography reveal reduced brain serotonin transporter availability in bulimia nervosa. *Biological Psychiatry*. 2001;49(4):326-332.
 75. Stamenkovic M, Schindler SD, Asenbaum S, Neumeister A, **Willeit M**, Willinger U, De Zwaan M, Riederer F, Aschauer HN, Kasper S. No change in striatal dopamine re-uptake site density in psychotropic drug naive and in currently treated Tourette's disorder patients: A [123I]- β -CIT SPECT-study. *European Neuropsychopharmacology*. 2001;11(1):69-74.
 76. Scharfetter J, **Willeit M**, Praschak-Rieder N, Neumeister A, Fuchs K, Aschauer HN, Kasper S. Association of a serotonin transporter gene promoter region polymorphism (5-HTTLPR) with depression subtypes in seasonal affective disorder. *American Journal of Medical Genetics - Neuropsychiatric Genetics*. 2001;105(7):577.
 77. Praschak-Rieder N, **Willeit M**, Neumeister A, Hilger E, Stastny J, Thierry N, Lenzinger E, Kasper S. Prevalence of premenstrual dysphoric disorder in female patients with seasonal affective disorder. *Journal of Affective Disorders*. 2001;63(1-3):239-242.
 78. Neumeister A, **Willeit M**, Praschak-Rieder N, Asenbaum S, Stastny J, Hilger E, Pirker W, Konstantinidis A, Kasper S. Dopamine transporter availability in symptomatic depressed patients with seasonal affective disorder and healthy controls. *Psychological Medicine*. 2001;31(8):1467-1473.
 79. Neumeister A, Konstantinidis A, Praschak-Rieder N, **Willeit M**, Hilger E, Stastny J, Kasper S. Monoaminergic function in the pathogenesis of seasonal affective disorder. *International Journal of Neuropsychopharmacology*. 2001;4(4):409-420.
 80. Kasper S, Quiner S, Barnas C, Fabisch H, Haushofer M, Sackel C, König P, Lingg A, Platz T, Rittmannsberger H, Stuppäck C, **Willeit M**, Zapotoczky HG. Zotepine in the treatment of acute hospitalized schizophrenic episodes. *International Clinical Psychopharmacology*. 2001;16(3):163-168.
 81. Hilger E, **Willeit M**, Praschak-Rieder N, Stastny J, Neumeister A, Kasper S. Reboxetine in seasonal affective disorder: An open trial. *European Neuropsychopharmacology*. 2001;11(1):1-5.
 82. Graf A, Wallner C, Schubert V, **Willeit M**, Wlk W, Fischer P, Kasper S, Neumeister A. The effects of light therapy on mini-mental state examination scores in demented patients. *Biological Psychiatry*. 2001;50(9):725-727.
 83. Barnas C, Quiner S, Tauscher J, Hilger E, **Willeit M**, Küfferle B, Asenbaum S, Brücke T, Rao ML, Kasper S. In vivo123I IBZM SPECT imaging of striatal dopamine 2 receptor occupancy in schizophrenic patients. *Psychopharmacology*. 2001;157(3):236-242.

- 84.** Pirker W, Asenbaum S, Hauk M, Kandlhofer S, Tauscher J, **Willeit M**, Neumeister A, Praschak-Rieder N, Angelberger P, Brücke T. Imaging serotonin and dopamine transporters with ^{123}I - β -CIT SPECT: Binding kinetics and effects of normal aging. *Journal of Nuclear Medicine*. 2000;41(1):36-44.
- 85.** Neumeister A, Praschak-Rieder N, **Willeit M**, Stastny J, Kasper S. Monoamine depletion in non-pharmacological treatments for depression. *Advances in Experimental Medicine and Biology*. Vol 467; 2000:29-33.
- 86.** Neumeister A, Pirker W, **Willeit M**, Praschak-Rieder N, Asenbaum S, Brücke T, Kasper S. Seasonal variation of availability of serotonin transporter binding sites in healthy female subjects as measured by $[^{123}\text{I}]\text{-2}\beta\text{-carbomethoxy-3}\beta\text{-}(4\text{-iodophenyl)tropoane}$ and single photon emission computed tomography. *Biological Psychiatry*. 2000;47(2):158-160.
- 87.** Itzlinger U, Heiden A, Schüssler P, Leisch F, Scharfetter J, Gebhardt C, Fuchs K, **Willeit M**, Nilsson L, Miller-Reiter E, Stompe T, Meszaros K, Sieghart W, Hornik K, Kasper S, Aschauer HN. Bipolar disorder: Candidate genes involved in serotonin and dopamine neurotransmission. *American Journal of Medical Genetics - Neuropsychiatric Genetics*. 2000;96(4):491-492.
- 88.** Heiden A, Schüssler P, Itzlinger U, Leisch F, Scharfetter J, Gebhardt C, Fuchs K, **Willeit M**, Nilsson L, Miller-Reiter E, Stompe T, Meszaros K, Sieghart W, Hornik K, Kasper S, Aschauer HN. Association studies of candidate genes in bipolar disorders. *Neuropsychobiology*. 2000;42(SUPPL. 1):18-21.
- 89.** **Willeit M**, Praschak-Rieder N, Neumeister A, Pirker W, Asenbaum S, Vitouch O, Tauscher J, Hilger E, Stastny J, Brücke T, Kasper S. $[^{123}\text{I}]\text{-}\beta\text{-CIT}$ SPECT imaging shows reduced brain serotonin transporter availability in drug-free depressed patients with seasonal affective disorder. *Biological Psychiatry*. 1999;47(6):482-489.
- 90.** Rich CL, Praschak-Rieder N, **Willeit M**, Neumeister A, Kasper S. Relationship between antidepressant treatment and suicide [5] (multiple letters). *Journal of Clinical Psychiatry*. 1999;60(5):340.
- 91.** Praschak-Rieder N, **Willeit M**, Neumeister A, Hilger E, Kasper S. Sleep deprivation and bright light therapy. *Wiener Medizinische Wochenschrift*. 1999;149(18):520-524.
- 92.** Neumeister A, Habeler A, Praschak-Rieder N, **Willeit M**, Kasper S. Tryptophan depletion: A predictor of future depressive episodes in seasonal affective disorder? *International Clinical Psychopharmacology*. 1999;14(5):313-315.
- 93.** Lenzinger E, Neumeister A, Praschak-Rieder N, Fuchs K, Gerhard E, **Willeit M**, Sieghart W, Kasper SF, Hornik K, N. Aschauer H. Behavioral effects of tryptophan depletion in seasonal affective disorder associated with the serotonin transporter gene? *Psychiatry Research*. 1999;85(3):241-246.
- 94.** Kasper S, Quiner S, Barnas C, Fabisch H, Haushofer M, Sackel C, König P, Lingg A, Platz T, Rittmannsberger H, Stuppäck C, **Willeit M**, Zapotoczky HG. Zotepine in the treatment of acute hospitalised schizophrenic episodes. *Psychopharmakotherapie*. 1999;6(3):96-99.
- 95.** Hesselmann B, Habeler A, Praschak-Rieder N, **Willeit M**, Neumeister A, Kasper S. Mirtazapine in seasonal affective disorder (SAD): A preliminary report. *Human Psychopharmacology*. 1999;14(1):59-62.
- 96.** Praschak-Rieder N, Neumeister A, Hesselmann B, **Willeit M**, Barnas C, Kasper S. Suicidal tendencies as a complication of light therapy for seasonal affective disorder: A report of three cases. *Journal of Clinical Psychiatry*. 1997;58(9):389-392.

International and national cooperation activities (past and present)

Ana Carneiro, Vanderbilt University, Nashville, TN, U.S.A.: Serotonin transporter regulome, since 2012

Nestor Kapusta, Univ. Klinik für Psychotherapie und Psychoanalyse, Medical University of Vienna: suicide research; since 2010

Martin Bauer, Markus Müller, Markus Zeitlinger, Univ. Clinic for Clinical Pharmacology, Medical University of Vienna: Positron emission tomography of the dopamine system; since 2010

Wolfgang Wadsak, Markus Mitterhauser, Marcus Hacker, Univ. Clinic of Nuclear Medicine, Medical University of Vienna: Positron emission tomography; since 2009

Alan A Wilson, Pablo Rusjan, Romina Mizrahi, University of Toronto, Centre for Addiction and Mental Health, Schizophrenia Research Unit: Positron emission tomography, Schizophrenia; since 2003

Jeffrey Meyer, Anahita Boovariwala, Sylvain Houle University of Toronto, Centre for Addiction and Mental Health, Mood and Anxiety Disorders Programme, Positron emission tomography, affective disorders; since 2005

Philip Seeman, University of Toronto, Department of Pharmacology: Dopamine pharmacology; since 2004

Jimmy Jensen, Department of Psychiatry, Ullevål University Hospital, Oslo: fMRI of conditioned learning; since 2005

Harald Sitte, Ernst Singer, Michael Freissmuth, Institute of Pharmacology, Medical University of Vienna: Transmembrane transporters; since 2000

Nathalie Ginovart, Service de Neuropsychiatrie, Unité de Neuroimagerie, Universität Genf, Topic: translational dopamine imaging; since 2015

Pierre Trifilieff, INRA, Bordeaux University, NutriNeuro lab: Dopamine-lipid interactions; since 2015

Daniela Pollak, Department of Neurophysiology and Neuropharmacology, Medical University of Vienna: Clock-gene expression and dopamine function

Scientific talks (selection)

Willeit M. Schizophrenie im höheren Lebensalter. Seminar der ÖGPB-Akademie, Tagungszentrum der Medizin-Medien GmbH, Wien, 9.10.2013

Willeit M. The Chronobiology of Brain Monoamine Systems. 25th Annual Meeting of the Society for Bright Light Treatment and Biological Rhythms, Geneva, June 21-24 2013

Willeit M. Erste Erfahrungen mit [¹¹C]-(+)-PHNO in Wien. Seminar für Biologische Psychiatrie, Oberlech, Vorarlberg, 9.3.-13.3.2013

Willeit M. Neue Untersuchungen zum dopaminerigen System bei Schizophrenie Update XVI in Psychiatrie, Wien, 13.-14.6.2013

Willeit M. Schizophrenia. SFB 35 Teaching Days, Vienna Biocenter, August 24.08.2012

Willeit M. [¹¹C]-(+)-PHNO PET in Schizophrenia. SFB 35 Retreat, Straß, Österreich, 24.04.2012

Willeit M. [¹¹C]-(+)-PHNO PET Imaging as an Addiction Research Tool. European Society for Biological Research in Alcohol Vienna, 06.05.2011

Willeit M. Bedeutung des Serotonintransporters in Pathogenese und Behandlung Depressiver Erkrankungen. Fortbildung der Universitätsklinik für Klinische Pharmakologie, Medical University of Vienna, 12.04.2011

Willeit M, Praschak-Rieder N: Grundlagen der Psychopharmakatherapie, die Monoaminhypothese, Serotonin, Dopamin. Seminar der ÖGPB-Akademie, SMZ Otto Wagner Spital, Wien, 8.9.2010

Willeit M: Treatment Resistant Depression. 2nd Brixia International Conference - Brescia, 13/15 March 2008

Willeit M: Die vielen Facetten des Serotonintransporters: Bedeutung für die Praxis. Update XIII in Psychiatrie, Wien, 14.-15.6.2007

Willeit M. Neuroimaging in der Psychiatrie. Verein HPE, Hilfe für Angehörige von psychisch Erkrankten, Wien, 24.5.2007

Willeit M: Seasonal Affective Disorder: Biology and treatment. INNOPSY, Mailand, 9.-11.5.2007

Willeit M. Phencyclidin Psychosen: Die Mythen was die Literatur dazu sagt. Vortrag: Winterseminar „Biologische Psychiatrie“, Oberlech, 12.-16.3.2007

Willeit M: In-vivo Competition of Endogenous Dopamine with the new D2/3 Agonist Radioligand [11C]-(+)-PHNO in Humans. Vortrag: 61st Annual Meeting of the Society of Biological Psychiatry (SOBP), Toronto, 18.-20.5.2006

Willeit M: Darstellung des High-Affinity Zustandes der Dopamin D2/D3 Rezeptoren mit dem Agonist- Radioliganden [11C]-(+)-PHNO. Vortrag: Winterseminar „Biologische Psychiatrie“, Oberlech, 19.-24.3.2006

Willeit M, Ginovart N, Graff A, Rusjan P, Bloomfield P, Vitcu I, Houle S, Wilson AA, Kapur S: In-vivo Competition of Endogenous Dopamine with the new D2/3 Agonist Radioligand [11C]-(+)-PHNO in Humans. Vortrag: NeuroReceptor Mapping, Kopenhagen, Dänemark, 6.-8.7.2006

Willeit M: Neue Ergebnisse zur Bildgebung bei schizophrenen Patienten. Wissenschaftsseminar, Klinische Abteilung für Allgemeine Psychiatrie, WS2006/07, Medical University of Vienna

Willeit M: High-affinity states of human brain dopamine D2/3 receptors imaged by the agonist [11C]-(+)-PHNO. Centre of Addiction and Mental Health, Schizophrenia Department, 29. Juni 2005

Willeit M: Agonising over [11C]PHNO. Centre of Addiction and Mental Health, PET Centre, 3.12.2005

Willeit M: [11C]-(+)-PHNO – A new dopamine D2 receptor agonist radioligand. Centre of Addiction and Mental Health, PET Centre, 3.11.2005

Willeit M: [11C]-(+)-PHNO – A new dopamine D2 agonist radioligand for D2high. Centre of Addiction and Mental Health , 12.Mai 2005

Willeit M: PCP psychosis. The Myth – and what the Syndrome tells us. Centre of Addiction and Mental Health, 30.3.2005

Willeit M, Sitte H, Praschak-Rieder N, Thierry N, Michalek K, Zill P, Winkler D, Bondy B, Kasper S, Singer E. Platelet serotonin transporter turnover-rate is altered during winter depression and shows greater seasonal changes in patients with seasonal affective disorder (SAD). Vortrag: Annual Conference of the Society for Light Treatment and Biological Rhythms, Toronto, May 28-May 30 2004

Willeit M: “Agonizing over PHNO” Presentation at the bi-weekly CAMH PET Centre Scientific Seminars, CAMH, Toronto, 03.12.2004

Willeit M: “PCP Psychosis. The Myth - and what the literature tells us.” Presentation at the weekly Schizophrenia Research Seminar, Schizophrenia Division, CAMH, Toronto, 22.04.2004

Willeit M, Praschak-Rieder N, Tauscher J, Pirker W, Asenbaum S, Kasper S: In-vivo Darstellung des Serotonin Transporters durch [123I]-b-CIT Spect bei affektiven Erkrankungen. Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde (DGPPN), Berlin, 22.11.2001

Willeit M, Praschak-Rieder N, Neumeister A, Zill P, Stastny J, Hilger E, Thierry N, Bondy B, Fuchs K, Lenzinger E, Sieghart W, Winkler D, Ackenheil M, Kasper S: 5-HTTLPR and seasonal affective disorder (SAD): Association with depression subtypes. 7th World Congress of Biological Psychiatry. Berlin, Deutschland, 3.7.2001

Willeit M: Serotonintransporter-Funktion bei saisonal abhängiger Depression. Winterseminar für Biologische Psychiatrie, Oberlech, 17.-23.3.2001

Willeit M: Serotonin transporter promoter gene region in seasonal affective disorder. Young researcher symposium: "Genetics of affective disorders", World Congress of Biological Psychiatry, Berlin, Germany, 1.-7.7.2001

Willeit M: Serotonergic candidate genes in the genetics of seasonal affective disorder. Annual meeting of the "Society of light treatment and biological rhythms (SLTBR), Stockholm, 28.6.-1.7.2001

Willeit M: Monoaminergic mechanisms in the pathogenesis of seasonal affective disorder. Young researcher symposium "Monoamines in the pathogenesis of affective disorders", World Congress of Biological Psychiatry, Berlin, Germany, 1.- 6.7.2001

Willeit M: Genetik des Serotonintransporters. 3. Tagung der Österreichischen Gesellschaft für Neuropsychopharmakologie und Biologische Psychiatrie (ÖGBP), Wien, 16.-17.11.2001

Willeit M: Chatecholamines in the pathogenesis of seasonal affective disorder and the mechanisms of action of bright light therapy. Annual meeting of the "Society of light treatment and biological rhythms (SLTBR), Stockholm, 28.6.-1.7. 2001

Willeit M, Praschak-Rieder N, Tauscher J, Pirker W, Asenbaum S, Kasper S: In-vivo Darstellung des Serotonin Transporters durch [123I]-b-CIT Spect bei affektiven Erkrankungen. Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde (DGPPN), Berlin, 22.11.2001

Willeit M, Praschak-Rieder N, Neumeister A, Zill P, Stastny J, Hilger E, Thierry N, Bondy B, Fuchs K, Lenzinger E, Sieghart W, Winkler D, Ackenheil M, Kasper S: 5-HTTLPR and seasonal affective disorder (SAD): Association with depression subtypes. 7th World Congress of Biological Psychiatry. Berlin, Deutschland, 3.7.2001

Willeit M, Praschak-Rieder N, Neumeister A, Stastny J, Hilger E, Fuchs K, Vitouch O, Aschauer HN, Sieghart W, Bondy B, Ackenheil M, Kasper: Serotonintransporter-funktion bei SAD. Seminar für Biologische Psychiatrie, Oberlech, Vorarlberg, 25.3.-1.4.2000

Willeit M, Praschak-Rieder N, Neumeister A, Pirker W, Asenbaum S, Vitouch O, Tauscher J, Hilger E, Stastny J, Brücke T, Kasper S: Reduzierte zentrale Serotonin-transporter-Verfügbarkeit bei medikationsfreien depressiven PatientInnen mit saisonal abhängiger Depression. 26. Wissenschaftliche Tagung der Österreichischen Gesellschaft für Neurologie und Psychiatrie (ÖGNP), Gmunden, Oberösterreich, 3.5.2000

Willeit M, Pirker W, Praschak-Rieder N, Neumeister A, Hilger E, Stastny J, Asenbaum S, Aschauer H, Fuchs K, Sieghart W, Brücke T, Kasper S: Serotonin transporter pro-moter-gene polymorphism and central serotonin transporter availability measured with (123I)-b-CIT SPECT. 5. Drei-Länder-Symposium für Biologische Psychiatrie, Wien, 5.-8.10.2000

Willeit M: β -CIT bei SAD: neue Ergebnisse. Winterseminar "Biologische Psychiatrie", Oberlech, 16.3.1998

Willeit M, Neumeister A, Praschak-Rieder N, Podreka I, Vitouch O, Asenbaum S, Pezawas L, Kasper S: HMPAO-SPECT bei SAD-Patienten vor und nach Lichttherapie. 25. Wissenschaftliche Tagung der Österreichischen Gesellschaft für Neurologie und Psychiatrie, Gmunden, 23. 04. 1998

Willeit M: Neurochemie der Designerdrogen. Internationales Symposium "Puer, Musica et Medicina III", Meran, 7.-9.3.1997

Willeit M: β -CIT SPECT bei SAD-Patienten. Winterseminar Biologische Psychiatrie, Oberlech, Vorarlberg, 13.3.1997