

## APPLICATION FOR FELLOWSHIPS

**Name of Institution:** Douglas Mental Health University Institute

**Type of Fellowship:** Clinical/Research

**Fellowship Program Director:** Dr. Rene Desautels

**Number of Positions:** 2

**Length:** 1 year

Name of Institution : Douglas Mental Health University Institute

Location: 6875 Lasalle Blvd., Verdun, Quebec H4H 1R3

Program Information:

- *Number of fellowship positions requested:* 2 positions
- *Academic affiliation:* McGill University
- *Name of hospitals involved in training:* Douglas Mental Health University Institute
- *Background:* The Douglas Institute has a large program in Geriatric Psychiatry comprising 72 beds of in-patients treatment as well as a Memory Clinic, a Geriatric Psychiatry Outpatient Clinic, a Day center and a possibility of doing consultation work in nursing homes. The Geriatric Psychiatry comprising of 24 beds of acute admission, 30 beds of rehabilitation and a special National Program of 18 beds specialized in the care of dementia with neuropsychiatric symptoms. This special unit is part of the Moe Levin Centre which comprises the Memory Clinic headed by Dr. NVP Nair, the Day Center for the Memory Clinic and The Moe Levin Dementia specialized unit headed by Dr. R. Desautels. We also have access to consultation with Dr. S. Gauthier, neurologist, specialized in the field of dementia. The Geriatric Psychiatry Program is also working jointly with the large department of basic science in the Aging and Alzheimer Disease Research Axis of the Douglas Institute.
- The mission of the Douglas Institute is to provide state-of-the-art clinical care as well as teaching and research in an integrated and multidisciplinary fashion. The Institute aims to give treatment to patients following up-to-date guidelines as well as being at the cutting edge by gleaming clinical tips brought back by our researchers and clinicians attending the national conferences (such as ICAD, VAS-COG, AAGP, CAGP). Also, the Moe Levin Centre is fortunate in having a researcher in residence in the person of Dr. M. Natasha Rajah, specialist in fMRI, who is doing research with people from our Program and also with the Aging and Alzheimer Disease Axis in the Douglas Institute Research Centre. Many post-doctoral students are actively involved in helping our Memory Clinic establish a cognitive remediation program with a researcher-oriented focus. Dr. Rajah also participates and helps our Fellows and post-doctoral students in writing up and preparing research protocols for funding agencies, etc. Dr. Nair, in a long standing and on-going effort in human clinical researches makes it easy to integrate Fellows within a research framework. There are always two to five research protocols going on at the same time in our Memory Clinic. Those protocols always include staff of the Memory Clinic as well as research assistants hired by Dr. Nair to help gather data and patients. A statistician is also part of the team, although being based at the Research Centre. In short, whatever the research experience needed, it is possible to provide here, at the Douglas Institute. We also draw on the expertise of Dr. Judes Poirier, in Biochemistry and Lipid Metabolism and Dr. Serge Gauthier in Imaging and Clinical Neurology.

Also, research involving other hospitals is encouraged. We are presently doing a vaccine protocol for Alzheimer Disease where the actual infusion is done at the Royal Victoria Hospital instead of the Douglas. The patient data analysis and overall management is done at the Douglas and the infusion is done under the supervision of a neurologist and anaesthesiologist at the Royal Victoria Hospital.

- Also, most of our clinicians are at the forefront of their fields. Most of them give invited talks and attend national conferences to make sure that their skills are always up to date. An example of multidisciplinary research is our Cognitive Remediation research protocol with a neuropsychologist and a clinician nurse are establishing a protocol and carrying it through. They work conjointly with Dr. Rajah and Dr. Nair. More precise information, whether clinical or research can be easily obtained through contacting the Medical Director of Geriatric Psychiatry Program at the Douglas Institute.
- *Research activity:* The Memory Clinic of Douglas Institute is member of the Consortium of Canadian Centres for Clinical Cognitive Research (C5R) and as such participates in a number of drug trials and also does its own protocol for our basic science research as well as some epidemiological research (fMRI and protocols, Dr. Maria Natasha Rajah).
- *Publications:* Dr. NPV Nair and Dr. Maria Natasha Rajah list of publications are attached.
- *Outline how intended fellowship will enhance residency training:* The Fellow would choose any of our fellowship program or streams, for example: **1)** Memory Clinic/Dementia/Imaging (mostly with Dr. Nair/Dr. Desautels); **2)** In-patient/out-patient/treatment of geriatric psychiatry patients (mostly with Dr. Di Tomasso/Dr. Desautels); **3)** A mix of the two afore mentioned streams with the possibility of doing basic science research with Dr. Nair and/or any of the researchers from the Aging and Alzheimer Disease Research Axis. He/she would be involved in integrative clinical care and exposed to research, clinical and basic, on an almost daily basis. He/She will be able to become very proficient in the clinical care of acutely sick, non-demented and psychiatric diseased individuals on their admission to the unit while also being able to care for those special patients presenting with dementia and very severe psychiatric problems. Those patients are treated mostly on our Moe Levin Centre Unit, where most of the patients come from other hospitals and nursing homes. Those patients are 3<sup>rd</sup> and 4<sup>th</sup> line and treatment, although integrative in terms of behavioural control, is also state-of-the-art pharmacological control of agitation, etc. The Fellow will also be able to conduct in-depth interviews and be able to recognize different types of dementia from a clinical investigative standpoint (use of FMRI and PET and advanced neuropsychological testing), such as making the difference between frontotemporal dementia, Lewy Body dementia, Parkinson dementia, Alzheimer Disease, Cortical Basal, degeneration, etc. He/She will also be exposed to the ways of the geriatric psychiatry work within nursing homes by going with some of our psychiatrists to nursing homes or participating in our out-patient consultation clinics for nursing homes in other hospitals. The Douglas Institute receives geriatric psychiatry patients from Verdun Hospital, LaSalle Hospital, Lachine Hospital and also provides expertise for the Lakeshore General. In addition, 3<sup>rd</sup> line and 4<sup>th</sup> line services are offered to all hospitals in Quebec. The particularity of our program is also the presence of a geriatrist within our Memory Clinic who is able to explain the finer points of the co-morbidities and suggest better physical approaches with patients.
- *Name of Fellowship Director:* Dr. R. Desautels, geriatric psychiatrist involved specially in the care of patients with dementia with neuropsychiatry symptoms on the Moe Levin Centre Unit, at the Memory Clinic as well as the Geriatric Psychiatry Outpatient Clinic.

- *Names of the Teaching Faculty:*
  - *Summary of clinical practice:* Dr. Nair mostly works in the Memory Clinic and also helps with difficult cases through consultation with other members of the Department. He also leads interview techniques for all residents on Friday mornings and he is a font of knowledge for all things psychiatric and mostly for the biological psychiatry spectrum. Dr. Desautels works mostly on the Moe Levin Centre Unit, at the Memory Clinic and as a consultant in the OPD Geriatric Clinic for CHSLDs. He also conducts legal expertises for competency etc. Dr. Di Tomasso is highly trained and carries always at least 12 patients on the acute in-patient ward caring for very sick psychiatric patients. In addition, part of her practice involves helping her colleagues in teasing out the beginning of organicity in psychiatric patients. As such, she is skilled in identifying cognitive and personality changes often seen in beginning of organic diseases.
  - *Major Strengths:* The psychiatric staff is very cohesive and works well together. In addition, Fellows and Residents can attend bi-weekly rounds in geriatric psychiatry and also participate in the Journal Club conferences from the Research Department (Aging and Alzheimer Disease Axis). The Fellow would be part of an extensive network of professionals that are well integrated and complete clinical teams. For example, our Memory Clinic has trainers, one full-time social worker and a full-time neuropsychologist, as well as a full-time secretary. The number of new cases is over 400 per year and research is going on by the Memory Clinic team in the field of Cognitive Remediation. As well, Dr. Nair in that clinic carries on clinical research with a team of research assistants and project leaders.
- *Academic Facilities:*
  - *Outline facilities for clinical and academic pursuit:* The Douglas is a very large and well appointed site where both basic science and clinical research are going on in its facilities.
  - *Library access, materials relevant to Fellowship training / Multimedia learning materials available / Availability of a skills lab if applicable:* The library is linked with all the other libraries at McGill U. and the staff is very helpful. Also, the many rounds occurring weekly at the Douglas Hospital contribute greatly to the academic atmosphere. There are Grand Rounds, J. Club lectures for residents, J. Club conferences for the Geriatric Psychiatry Program, J. Club conferences in Child Psychiatry and also a specialized J. Club for Research in Aging. We also have access to on-line psychiatric consultations for remote areas of Quebec and audio-visual technicians are available on the premises for the set-up of tele-medicine sessions. Since the Douglas Institute has such a large Brain Bank, Animal Facilities and Basic Science Research Laboratories, there is no end to the possibility of putting one's skills as a researcher to test by joining one of our researcher and trying hands on experiments if one so wishes.
- *Fellow Duties and Responsibilities:*
  - The Fellow is fully expected to give at least one J. Club lecture per six-month period and to participate in all academic activities pertaining to geriatric psychiatry during his stay with us. In addition, he will participate and be helped by a supervisor for critical reviews of articles, attending specialized conferences and hopefully write an article on his own. His clinical duties will be specified by his supervisor and may depend on which supervisor and stream speciality he/she chooses. The Douglas Institute is well appointed with a special

department for education (Teaching & Training Directorate -TTD), is media savvy and offers full clinical teams in all services. Secretaries are available to help residents with articles or electronic searches, etc. Also the Douglas has an expertise in statistics, statisticians are available to help in the design of analysis of data.

#### Published Refereed Papers

1. **Rajah, M. N.**, Bastianetto, S., Cools, R., D'Esposito, M., Grady, C. L., Poirier, J., Quirion, R., Raz, N., Rogava, E., Song, W., and Pruessner, J. (2009). Biological changes associated with healthy versus pathological aging: A symposium review. Ageing Research Reviews, 8, 140-146.
2. **Rajah, M. N.** and McIntosh, A. R. (2008). Age-related differences in brain activity during recency memory. Brain Research. 1199, 111-125.
3. **Rajah, M. N.**, Ames, B. and D'Esposito, M. (2008). Prefrontal contributions to domain-general executive control processes during temporal context retrieval. Neuropsychologia, 46, 1088-1103.
4. **Rajah, M.N.** and McIntosh, A. R. (2006). Dissociating prefrontal contributions during a recency memory task. Neuropsychologia, 44(3):350-64.
5. **Rajah, M. N.**, and D'Esposito, M. (2005). Region specific changes in prefrontal function with age: a review of PET and fMRI aging studies on working memory and episodic memory. Brain, 128:1964-83.
6. **Rajah, M. N.** and McIntosh, A. R. (2005). Overlap in the functional neural systems involved in semantic and episodic memory retrieval. Journal of Cognitive Neuroscience, 17 (3), 470-483.
7. McIntosh, A.R., **Rajah, M. N.**, and Lobaugh, N. J. (2003). Functional Connectivity of Medial Temporal Lobe Relates to Learning and Awareness. Journal of Neuroscience, 23(26), 6520-6528.
8. Grady, C. L., McIntosh, A. R., **Rajah, M. N.**, Beig, S. and Craik F. I. M. (1999). The effects of age on the neural correlates of episodic encoding. Cerebral Cortex, 9, 805-814.
9. McIntosh, A. R., **Rajah, M. N.**, and Lobaugh, N. J. (1999). Interactions of prefrontal cortex in relation to awareness in sensory learning. Science, 284, 1531-1533.
10. McIntosh, A. R., Sekuler, A. B., Penpeci, C., **Rajah, M. N.**, Grady, C. L., Sekuler, R., and Bennett, P. J. (1999). Recruitment of unique neural systems to support visual memory in normal aging. Current Biology, 9, 1275-1278.
11. **Rajah, M. N.**, McIntosh, A. R., and C. L. Grady (1999). Frontotemporal interactions in face encoding and recognition. Cognitive Brain Research, 8, 259-269.
12. **Rajah, M. N.**, Hussey, D., McIntosh, A. R., Kapur, S., and Houle, S. (1998). Task-independent effect of time on rCBF. Neuroimage, 7, 314-325.
13. Grady, C. L., McIntosh, A. R., **Rajah, M. N.**, and Craik, F. I. M. (1998). Neural correlates of the picture superiority effect in memory. Proceedings of the National Academy of Sciences USA, 95, 2703-2708.

### Published contributions to a collective work and book chapters

1. Stuss, D. T., Alexander, M.P., Floden, D., Binns, M.A., Levine, B., McIntosh, A. R., **Rajah, M.N.** and Hevenor, S.J (2002). Fractionation and localization of distinct frontal lobe processes: Evidence from focal lesions in humans. In Principles of Frontal Lobe Function, D. T. Stuss and R. T. Knight (Eds.). Oxford: Oxford University Press, 392-407.

### **PUBLICATIONS – Dr. Neekelanta Vasavan NAIR**

1. Fleminger, J.J., Dehorne, J., Nair, N.P.V., Nott, P.N. (1970). Memory and unilateral ECT. *Amer. J. Psychiat.* 127(4), 430-436.
2. Nair, N.P.V. (1971). Clinical pharmacological study of MAO inhibitors in chronic anergic schizophrenics. Proc. Psychiat. Res. Conf., Univ. Saskatchewan, A.A. Boulton (ed), 1-10.
3. Marjerrison, G., Keogh, R.P., Nair, N.P.V. (1971). Pimozide: EEG effects related to clinical response. *Can. Psychiat. Ass. J.* 16, 437-439,.
4. Fakruddin, A.K.M., Manjooran, A., Nair, N.P.V., Neufeldt, A. (1972): A five year outcome of discharged chronic psychiatric patients. *Can. Psychiat. Ass. J.* 17, 433-435,.
5. Nair, N.P.V., Hontela, S., Ban, T.A. (1973). Trazodone in the treatment of organic brain syndrome in geriatric patients. *Curr. Ther. Res.* 15, 10S, 769-775, Suppl.
6. Galvan, L., Nair, N.P.V., Kussin, D. (1973). Trazodone in the treatment of schizophrenias. *Curr. Therap. Res.* 15, 10S, 776-780, Suppl.
7. Ananth, J.V., Nair, N.P.V. (1973). Megavitamin therapy in schizophrenia. A review. *Indian J. Psychiat.* 15, 329-340,
8. Ban, T.A., Lehmann, H.E., Amin, M.M., Galvan, L., Nair, N.P.V., Vergara, L.E. and Zoch, C. (1973). Comprehensive clinical studies with trazodone. *Curr. Therap. Res.* 15, 540-551,
9. Ban, T.A., Amin, M.M., Nair, N.P.V. and Engelsmann, F. (1974). Comprehensive clinical studies with trazodone in Canada, *Modern Problems of Pharmacopsychiatry* 9: S. Karger, 110-126.
10. Ban, T.A., Lehmann, H.E., Amin, M., Bronheim, L.A., Klingner, A., Nair, N.P.V., Galvan, L., Vergara, L. and Zoch, C. (1974). Differential effects of trazodone in depressed, schizophrenic and geriatric patients. *Int. J. Clin. Pharmacol.*, 9, 23-27.
11. Ban, T.A., Lehmann, H.E., Amin, M.M., Galvan, L., Nair, N.P.V., Vergara, L.E. and Zoch, C. (1974). Systematic clinical studies with trazodone. *Psychopharmacol. Bull.*, 10, 18-19.
12. Ananth, J., Nair, N.P.V. (1974). Symposium in Depression, Proceedings of a Symposium held at St-Mary's Hospital, Montreal. Published by Ciba-Geigy Scientific Service.
13. Nair, N.P.V., Deutsch, M., Derkevorkian, K.S., Ucha Udabe, R., Ban, T.A., Lehmann, H.E. (1976). Doxepin and Diazepam in the treatment of hospitalized geriatric patients. *Psychiatric J. of the Univ. of Ottawa*, 1, 35-39.
14. Ettigi, P., Nair, N.P.V., Lal, S., Cervantes, P. and Guyda, H. (1976). Effect of apomorphine on growth hormone and prolactin secretion in schizophrenic patients with or without oral dyskinesia - withdrawn from chronic neuroleptic therapy. *J. Neurology, Neurosurgery and Psychiatry*, 39, 870-876.

15. Deutsch, M., Nair, N.P.V., Saarma, J., Ban, T.A., Lehmann, H.E., Clark, R.F. and Schwartz, G. (1976). Penfluridol in the treatment of schizophrenia: Clinical and psychometric findings. *Psychopharmacology Bull.* 12, 34-37.
16. Imaz, F., Ban, T.A., Lehmann, H.E., Nair, N.P.V. and Clark, R.F. (1976). Butaclamol in the treatment of schizophrenia - A comparison of two treatment methods. *Psychopharmacology Bull.* 12, 31-34.
17. Lehmann, H.E., Ban, T.A., Hontela, S., Nair, N.P.V. and Stewart, J.A. (1976). New research on the use of trazodone in old age: An uncontrolled clinical trial carried out in Verdun, Quebec, Canada. *Psychopharmacol. Bull.* 12 (April) 42-44.
18. Pecknold, J.C., Ban, T.A., Lehmann, H.E., Nair, N.P.V. and Orback, L. (1976). Thyrotropin releasing hormone in depression: Clinical and endocrinological findings. *Psychopharm. Bull.* 12, 44-48.
19. Ruiz-Navarro, J.F., Vergara, L., Deutsch, M., Ban, T.A., Lehmann, H.E., Kachanoff, R., Nair, N.P.V. and Clark, R.F. (1976). A comparative study of thiothixene and chlorpromazine in chronic schizophrenic patients: Application of a special psychometric test battery. *Psychopharmacol. Bull.* 12, 38-39.
20. Nair, N.P.V. (1976). Prediction of response to MAO inhibitors in depressions. In: Depression prognosis and prediction of responses. Proc. of McGill Symposium, held at St-Mary's Hospital, Published by Poulenc., 127-157.
21. Nair, N.P.V., Decker, B.L. and Schwartz, G. (1976). Loxapine succinate in the treatment of chronic schizophrenia. *Curr. Therap. Res.* 20, 802-809.
22. Hontela, S., Nair, N.P.V. (1977). Trazodone in geriatric patients with organic brain syndrome. Therapy in Psychosomatic Medicine. Ferruccio Antonelli (Ed.), Vol.3: 119-124, *Pharmacotherapeutic Tribune - Roma*.
23. Nair, N.P.V. (1977). Drug therapy of schizophrenia in the community. *J. Orthomol. Psychiatry*, 6, 348-353.
24. Nair, N.P.V., Zicherman, V., Schwartz, G. (1977). Dopamine and schizophrenia - A reappraisal in the light of clinical studies with clozapine. *Can. Psychiat. Ass.* 22, 285-293.
25. Nair, N.P.V., Granich, A., Davis, R.C., Schwartz, G. (1977). Loxapine succinate in the treatment of acute schizophrenia. *Curr. Therap. Res.* 22 (5): 628-634.
26. Nair, N.P.V. (1977): Biology of aging. Proceedings - The 4th Congress of the International College of Psychosomatic Medicine, Kyoto, Japan.
27. Lal, S., Nair, N.P.V. and Guyda, H. (1978). Effect of lithium on hypothalamic pituitary dopaminergic function. *Acta Psychiat. Scand.*, 57, 91-96.
28. Hontela, S., Nair, N.P.V., Rosenberg, G., Schwartz, G., Guyda, H. (1978). The effect of acute bromocriptine administration on serum prolactin and human growth hormone in hospitalized psychogeriatric patients. *J. Amer. Ger. Soc.*, 26, 49-52.
29. Yassa, R. and Nair, N.P.V. (1978). The Klein Levine Syndrome - A variant. *J. Clin. Psychiatry*. 39, 254-259.
30. Nair, N.P.V., Schwartz, G. (1978). Triazolam in insomnia: A standard controlled trial. *Curr. Therap. Res.* 23, 388-392.
31. Yassa, R., Nair, N.P.V., Schwartz, G. (1978). Treatment of leukopenia with lithium carbonate: a preliminary report. *Amer. J. Psychiat.*, 135 (11), 1423-1424.
32. Yassa, R., Nair, N.P.V., Parenteau, P. (1978). Treatment of the Kleine-Levine syndrome: A critical review. *Psychiat. J. Univ. Ottawa* 111, 262-264.

33. Nair, N.P.V., Yassa, R., Ruiz-Navarro, J. and Schwartz, G. (1978). Baclofen in the treatment of tardive dyskinesia. *Amer. J. Psychiat.* 135 (12), 1562-1563.
34. Yassa, R., Nair, N.P.V. (1978). Hypomagnesia in a chronic schizophrenic patient. *Psychiat. J. of Univ. Ottawa* 3, 12-13.
35. Yassa, R., Nair, N.P.V., Parenteau, P. (1978). Treatment of the Kleine-Levine syndrome: A critical review. *Psychiat. J. Univ. Ottawa* 3(4), 262-264.
36. Nair, N.P.V., Ruiz-Navarro, J.F., Schwartz, G. and Samy, P. (1978). Naloxone in schizophrenia. Canadian College of Neuropsychopharmacology, Proceedings of the Founding Meeting held at St-Mary's Hospital, Montreal (April) D.J. McClure (Ed.), 198-201.
37. Nair, N.P.V., Lal, S., Cervantes, P., Yassa, R. and Guyda, H. (1979). Effect of clozapine on apomorphine-induced growth hormone secretion and serum prolactin concentrations in schizophrenia. *Neuropsychobiology*, 5, 136-142.
38. Yassa, R., Nair, N.P.V. and Schwartz, G. (1979): Plasma magnesium in chronic schizophrenia. A preliminary report. *Int. Pharmacopsychiat.* 14:57-64.
39. Nair, N.P.V. and Schwartz, G. (1979). Comparaison de l'activité hypnotique du triazolam et du flurazépam. *Union Médicale J.* 108 (2), 1-4.
40. Nair, N.P.V., Hontela, S. and Schwartz, G. (1979). Lack of effect of trazodone on serum prolactin levels in depression. *IRCS Medical Science: Clin. Pharmacol. Therap.* 7, 166.
41. Lal, S., Nair, N.P.V., Cervantes, P., Pulman, J. and Guyda, H. (1979). Effect of naloxone or levallorphan on serum prolactin concentrations and apomorphine-induced growth hormone secretion. *Acta Psychiat. Scand.* 59, 173-179.
42. Lal, S. and Nair, N.P.V. (1979). Hypothalamic-pituitary dopaminergic function - clinical studies. *Catecholamines: Basic and clinical frontiers*, 1290-1292.
43. Lal, S. and Nair, N.P.V. (1979). Growth hormone and prolactin responses in neuropsychiatric research. In: *Neuroendocrine Correlates in Neurology and Psychiatry*. E.E. Muller and A. Agnoli (Eds), Elsevier/North Holland Biomedical Press., pp.179-194.
44. Nair, N.P.V., Muller, H.F., Gutbrodt, E., Buffet, L., Schwartz, G. (1979). Neurotropic activity of lithium: Relationship to lithium levels in plasma and red blood cells. *Res. Comm. Psychol. PsychiatBehav.* 4 (2), 169-180,
45. Lehmann, H.E., Nair, N.P.V. and Kline, N.S. (1979).  $\beta$ -endorphine and naloxone in psychiatric patients: clinical and biological effects. *Amer. J. Psychiatry* 136, 762-766.
46. Lehmann, H.E., Cooper, T.H., Nair, N.P.V. and Kline, N.S. (1979). Beta-endorphins and naloxone in psychiatric patients: Clinical and biological effects. In: *Neuropsychopharmacology (Proceedings of the 11th Congress of the Collegium Internationale Neuropsychopharmacologium,, Vienna, 1978)*. B. Saletu, P. Berner and L. Hollister (Eds.). New York, Pergamon Press, 535-539.
47. Espinosa-Meléndex, E., Lal, S., Nair, N.P.V. and Chang, T.M.S. (1979). Plasma  $\beta$ -endorphin levels in chronic schizophrenic patients and normal controls. *J. Artificial Organs*, 3, 375-377.
48. Muller, H.F., Achim, A., Nair, N.P.V. (1979): Effect of frequency band width and of relaxation on EEG energy variability. *IRCS Medical Science*, 7:289,
49. Muller, H.F., Achim, A., Mendis, T. and Nair, N.P.V. (1979). Multichannel EEG energy variability differences between schizophrenics and normals. *IRCS Medical Science* 7, 411.

50. Nair, N.P.V., Lal, S., Schwartz, G. and Thavundayil, J.X. (1980). Effect of sodium valproate and baclofen in tardive dyskinesia: Clinical and neuroendocrine studies. In: Long-Term Effects of Neuroleptics (Adv. *Biochem. Psychopharmacol.*, 24, F. Cattabeni, G. Racagni, P.F. Spano and E. Costa (Eds.), Raven Press, N.Y., 437-441.
51. Rastogi, R.B., Lapierre, Y.D., Singhal, R.L. and Nair, N.P.V. (1980). Evidence for involvement of dopamine in the action of diazepam: Potentiation of haloperidol and chlorpromazine action in the brain. In: Long Term Effects of Neuroleptics (Adv. *Biochem. Psychopharmacol.*, Vol. 24), F. Cattabeni, G. Racagni, P.F. Spano and E. Costa (Eds.), Raven Press, 283-289.
52. Lal, S. and Nair, N.P.V.(1980). Effect of neuroleptics on prolactin and growth hormone secretion in man. *Neuroactive Drugs in Endocrinology*, E.E. Muller (Ed.), Elsevier/North-Holland Biomedical Press, 223-241.
53. Muller, H.F., Achim, A., Mendis, T. and Nair, N.P.V.(1980) Topographic properties of EEG energy variability. *Electroenceph. Clin. Neurophysiol.* 49,86.
54. Lal, S., Nair, N.P.V., Cervantes, P. and Guyda, H. (1980). Use of drug-induced growth hormone and prolactin responses in psychiatric research, *Progress Psychoneuroendocrinology*. F. Brambilla, G. Racagni and D. de Wied (Eds.), Elsevier/North Holland Biomedical Press, 295-307.
55. Nair, N.P.V., Lal, S. and Guyda, H. (1980). Effects of GABA-ergic drugs on nigrostriatal and hypothalamic-pituitary dopaminergic systems. *Brain Res. Bull.* 5:427-431.
56. Lal, S., Thavundayil, J., Nair, N.P.V., Etienne, P., Rastogi, R., Schwartz, G., Pulman, J. and Guyda, H.(1981). Effect of sleep deprivation on dopamine receptor function in normal subjects. *J. Neural Transm.* 50, 39-45.
57. Lal, S., Etienne, P., Thavundayil, J., Nair, N.P.V., Collier, B., Rastogi, R., Guyda, H. and Schwartz, G.(1981): Effect of choline on central dopaminergic function in normal subjects. *J. Neural Transm.* 50,29-37.
58. Nair, N.P.V., Schwartz, G.(1981). Fluspirilene: A long-acting neuroleptic in acute schizophrenia. *Curr. Therap. Res.* 29:345-350.
59. Lal, S., Oravec, M., Aronoff, A., Kiely, M.E., Guyda, H., Solomon, S. and Nair, N.P.V. (1982). Hypothalamic pituitary dopaminergic function in hepatic failure in man. *J. Neural Trans.* 53:7-21.
60. Ananth, J., Nair, N.P.V., Rastogi, R. (1982). Opiate receptors and opiate antagonists in psychiatric and related research: a review, *Endorphins and opiate antagonists in psychiatric Research: Clinical Implications*. Chapter 9, N.S. Shah and A.G. Donald (Eds), Plenum Publishing Corporation, New York.
61. Nair, N.P.V., Singh, A.N., Lapierre, Y., Saxena, B.M., Nestoros, J.N. and Schwartz, G.: Ketazolam in the treatment of anxiety: A standard and placebo-controlled study. *Curr. Ther. Res.*,31,679-691.

62. Nair, N.P.V., Schwartz, G. (1982): Viloxazine in the treatment of endogenous depression. *Curr. Ther. Res.* 31, 969-975.
63. Wood, P.L., Etienne, P., Lal, S., Gauthier, S., Cajal, S. and Nair, N.P.V. (1982): Reduced Lumbar C.S.F. Somatostatin in Alzheimer's disease. *Life Sciences* 31 (19), 2073-2079.
64. Lal, S., Nair, N.P.V., Iskandar, H.I., Etienne, P., Wood, P.L., Schwartz, G. and Guyda, H. (1982): Effect of domperidone on apomorphine-induced growth hormone secretion in normal men. *J. Neural. Trans.* 54:75-84.
65. Nair, N.P.V., Lal, S., Iskandar, H.I., Etienne, P., Wood, P.L. and Guyda, H. (1982). Effect of sulphiride an atypical neuroleptic, on apomorphine-induced growth hormone secretion. *Brain Res. Bull.* 8:587-591.
66. Nair, N.P.V., Schwartz, G. and Suranyi-Cadotte, B. (1982). A comparison of halazepam and oxazepam in the treatment of moderate to severe anxiety. *Curr. Therap. Res.* 32:885-894.
67. Wood, P.L., Nair, N.P.V. and Boxarth, M. (1982). Striatal 3-methoxytyramine as an index of dopamine release: effects of electrical stimulation. *Neuroscience Letters*, 32, 291-194.
68. Wood, P.L., Richard, J.W., Pilapil, C. and Nair, N.P.V.(1982). Antagonists of excitatory amino acids and cyclic guanosine monophosphate in cerebellum. *Neuropharmacology* 21, 1235-1238.
69. Suranyi-Cadotte, B.E., Wood, P.L., Nair, N.P.V. and Schwartz, G.(1982). Normalization of platelet <sup>3</sup>H-imipramine binding in depressed patients during remission. *Eur. J. Pharmacol.* 85, 357-358.
70. Lal, S., Nair, N.P.V., Iskander, I., Thavundayil, J.X., Etienne, P., Wood, P.L. and Guyda, H. (1982). Drug-induced growth hormone and prolactin responses in schizophrenia research. *Prog. Neuro-Psychopharmacol and Biol. Psychiat.*, 6, 631-637.
71. Robitaille, Y., Wood, P.L., Etienne, P., Lal, S., Finlayson, M.H., Gauthier, S. and Nair, N.P.V. (1982). Reduced corticals choline acetyltransferase activity in Gerstmann-Straussler Syndrome. *Prog. Neuro-Psychopharmacol & Biol. Psychiat.*, 6, 529-531.
72. Wood, P.L., Etienne, P., Lal, S. and Nair, N.P.V. (1982). GABAergic regulation of nigrostriatal neurons: coupling of benzodiazepine and gaba receptors. *Prog. Neuro-Psychopharmacol & Biol. Psychiat.*, 6, 471-474.
73. Nestoros, J.N., Suranyi-Cadotte, B.E., Spees, R.C., Schwartz, G. and Nair, N.P.V. (1982). Diazepam in high doses is effective in schizophrenia. *Prog. Neuro-Psychopharmacol & Biol. Psychiat.* 6, 513-516.
74. Nair, N.P.V., Bloom, D.M. and Nestoros, J.N. (1982): Cholecystokinin appears to have antipsychotic properties. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat.* 6, 509-512.
75. Nair, N.P.V., Bloom, D.M., Nestoros, J.N. and Schwartz, G.: Therapeutic efficacy of cholecystokinin in neuroleptic-resistant schizophrenic subjects. *Psychopharmacol. Bull.* 19:134-136, 1983.

76. Lal, S., Nair, N.P.V., Iskandar, H.I., Wood, P.L., Etienne, P. and Guyda, H.(1983). Clinical studies on the dopamine receptor mediating apomorphine-induced growth hormone secretion. *Neuropeptides, Neurotransmitters and regulation of Endocrine Processes*. Eds: Endroxi et al., 431-442, Publishing House of the Hungarian Academy of Sciences.
77. Nair, N.P.V., Lal, S., Lizondo, E., Eugenio, H. and Guyda, H. (1983). Effect of CCK-33 on prolactin and apomorphine-induced growth hormone secretion in man. *Horm. Metabol. Res.* 15:357-359,
78. Suranyi-Cadotte, B.E., Wood, P.L., Schwartz, G. and Nair, N.P.V. (1983). Altered platelet <sup>3</sup>H-imipramine binding in schizo-affective and depressive disorders. *Biol. Psychiat.* 18:923-927.
79. Bloom, D.M., Nair, N.P.V. and Schwartz, G. (1983). CCK-8 in the treatment of chronic schizophrenia. *Psychopharmacol. Bull.* 19:361-362.
80. Nestoros, J.N., Nair, N.P.V., Pulman, J.R., Schwartz, G. and Bloom, D. (1983) High doses of diazepam improve neuroleptic-resistant chronic schizophrenic patients. *Psychopharmacology* 81:42-47.
81. Chang, T.M.s., Espinoza-Melendez, E., Lal, S., Nair, N.P.V. and Lister, C.(1983). B-endorphin and other middle molecules in chronic schizophrenia and removal by absorbent hemoperfusion. *Detoxikationsverfahren bei neuropsychiatrischen Erkrankungen*, Eds. Klaus Ernst and Karl Seidel. Veb Verlag Volk Und Gesundheit Berlin, pp.69-77.
82. Lal, S., Nair, N.P.V., Thavundayil, J., Monks, R.C., Guyda, H. (1983) Clonidine-induced growth hormone secretion in chronic schizophrenia. *Acta Psychiat. Scand.* 68:82-88.
83. Wood, P.L., Nair, N.P.V., Lal, S. and Etienne, P.: Buspirone (1983) A potential atypical neuroleptic. *Life Sciences*, 33:269-273.
84. Wood, P.L., Suranyi-Cadotte, B.E., Nair, N.P.V., Lafaille, F. and Schwartz, G. (1983). Lack of association between <sup>3</sup>H-imipramine binding sites and uptake of serotonin in control, depressed and schizophrenic patients. *Neuropharmacology* 22:1211-1214.
85. Wood, P.L., McQuade, P.S., Etienne, P., Lal, S. and Nair, N.P.V. (1983) Differential actions of classical and atypical neuroleptics on mouse nigrostriatal neurons. *Progress in Neuro-psychopharmacology & Biological Psychiatry* 7:765-768.
86. Alan A. Boulton, Francoise Garcin, William G. Dewhurst, N.P.V. Nair, Rosalee James, S.S. Chawla. (1983). Perspectives in Canadian Neuro-Psychopharmacology. / Proceedings of the 6th Annual Meeting of the Canadian College of Neuro-Psychopharmacology. *Progress in Neuro-Psychopharmacology & Biological Psychiatry* 7:(4-6);387-844. Pergamon Press, Oxford, England.
87. Wood, P.L., Nair, N.P.V., Etienne, P., Lal, S., Gauthier, S., Robitaille, Y., Bird, E.D., Palo, J., Haltia, M. and Paetau, A. (1983). Lack of cholinergic deficit in the neocortex in Pick's disease. *Prog. Neuro-Psychopharmacol & Biol. Psychiat.* 7:725-727.
88. Lal, S., Nair, N.P.V., Eugenio, H., Thavundayil, J., Lizondo, E., Wood, P.L., Etienne, P. and Guyda, H. (1983). Neuroendocrine evaluation of CCK-peptides on dopaminergic function in man. *Prog. Neuro-Psychopharmacol & Biol. Psychiat.* 7:537-544.

89. Wood, P.L., McQuade, P. and Nair, N.P.V. (1983). Actions of classical and atypical neuroleptics on dopamine metabolism and release *in vivo*. *Neuroscience* 1:298.
90. Wood, P.L., Etienne, P., Lal, S., Nair, N.P.V., Finlayson, M.H., Gauthier, S., Palo, J., Haltia, M., Paetau, A. and Bird, E.D. (1983). A post-mortem comparison of the cortical cholinergic system in Alzheimer's disease and Pick's disease. *J. Neurol. Sci.* 62:211-217.
91. Wood, P.L., Suranyi-Cadotte, B., Schwartz, G. and Nair, N.P.V. (1983). Platelet <sup>3</sup>H-imipramine binding and red blood cell choline in affective disorders: Indications of heterogeneous pathogenesis. *Biological Psychiatry*, 18:715-719.
92. Wood, P.L., Pilapil, C., Lafaille, F., Nair, N.P.V. and Glennon, R.A. (1984). Unique <sup>3</sup>H-tryptamine binding sites in rat brain: distribution and pharmacology. *Arch. Int. Pharmacodyn* 268:194-201.
93. Yassa, R., Nair, N.P.V., Schwartz, G. (1984). Tardive dyskinesia and the primary psychiatric diagnosis. *Psychosomatics* 25:135-138.
94. Nair, N.P.V., Lal, S., Thavundayil, J.X., Wood, P.L., Etienne, P. and Guyda, H. (1984) CCK-33 antagonizes apomorphine-induced growth hormone secretion and increases basal prolactin levels in man. *Neuropeptides* 4:281-291.
95. Nair, N.P.V., Hariharasubramanian, N. and Pilapil, C. (1984) Circadian rhythm of plasma melatonin and cortisol in endogenous depression. *J. Steroid Biochem.* 20:1460.
96. Nair, N.P.V., Hariharasubramanian, N. and Pilapil, C. (1984) Effect of lithium circadian rhythm of plasma melatonin in normal men. *IRCS. Med. Sci.* 12(9):854-855.
97. Lal, S., Wood, P.L., Kiely, M.E., Etienne, P., Gauthier, S., Stratford, J., Ford, R.M., Dastoor, D., Nair, N.P.V. (1984). CSF Acetylcholinesterase in dementia and in sequential samples of lumbar CSF. *Neurobiol. Aging* 5:269-274.
98. Lal, S. and Nair, N.P.V. (1984) Neuroendocrine evaluation of catecholaminergic function in man: application to research in psychiatry and neurology. *Psychoneuroendocrine dysfunction in psychiatric and neurological illnesses: influence of psychopharmacological agents*, N.S. Shah and A.G. Donald, Eds., Plenum Publishing Corporation, New York, pp.485-501.
99. Wood, P.L., Etienne, P., Lal, S. and Nair, N.P.V. (1984) Benzodiazepines and GABAergic regulation of nigrostriatal neurons: Lack of tolerance. *Prog. Neuropsychopharmacol. & Biol. Psychiat.* 8:779-783.
100. Nair, N.P.V., Hariharasubramanian, N. (1984). Circadian rhythm of plasma melatonin in endogenous depression. *Prog. Neuropsychopharmacol. Biol. Psychiat.* 8:715-718.
101. Nair, N.P.V., Hariharasubramanian, N. (1984). Circadian rhythms and psychiatry (Correspondence). *Brit. J. Psychiat.* 145:557-558.
102. Nair, N.P.V., Bloom, D.M., Debonnel, G., Schwartz, G. and Mosticyan, S. (1984) Cholecystokinin-octapeptide in chronic schizophrenia: A double-blind placebo-controlled study. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat.* 8:711-714.

103. Hariharasubramanian, N., Nair, N.P.V., Pilapil, C. (1985) Circadian rhythm of plasma melatonin during menstrual cycle. In: Brown, G.M. and Wainwright, S.D. (Eds). *The Pineal Gland and its Endocrine Role*, Pergamon, Oxford. Chap.5, pp.31-36.
104. Nair, N.P.V., Hariharasubramanian, N., Pilapil, C. (1985). Circadian rhythm of plasma melatonin and cortisol in endogenous depression. In: Brown, G.M. and Wainwright, S.D. (Eds). *The Pineal Gland and its Endocrine Role*, Pergamon, Oxford, Chap.49, pp.339-346.
105. Suranyi-Cadotte, B.E., Quirion, R., Nair, N.P.V., Lafaille, F. and Schwartz, G. (1985). Imipramine treatment differentially affects platelet <sup>3</sup>H-imipramine binding and serotonin uptake in depressed patients. *Life Sci.* 36:795-799.
106. Suranyi-Cadotte, B.E., Nestoros, J.N., Nair, N.P.V., Lal, S. and Gauthier, S. (1985) Parkinsonism Induced by High Doses of Diazepam. *Biol. Psychiat.* 20:451-460.
107. Lal, S., Nair, N.P.V., Kiely, M.E., Suranyi-Cadotte, B.E., Wood, P.L., Stratford, J., Ford, R.M., Guyda, H. (1985). Other neurotransmitters or neuromodulators in Psychiatry. *Brain Neurotransmitters in Psychiatry*. ASTRA Pharmaceuticals Canada Ltd., A. Villeneuve (Ed.) pp. 62-69.
108. Quirion, R., Csonka, C., Etienne, P., Nair, N.P.V., Robitaille, Y. and Gaudreau, P. (1985) Autoradiographic localization of cholecystokinin (CCK) Receptors in human brain. *Ann. N.Y. Acad. Sci.* 448:624-626.
109. Nair, N.P.V., Bloom, D., Lal, S., Debonnel, G., Schwartz, G. and Mosticyan, S. (1985). Clinical and neuroendocrine studies with cholecystokinin peptides. *Ann. N.Y. Acad. Sci.* 448:535-541.
110. Lal, S., Barriga, C., Wood, P.L., Suranyi-Cadotte, B., Nair, N.P.V., and Aronoff, A. (1985) Red cell choline in Korsakoff's psychosis. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat.* 9:629-632.
111. Nair, N.P.V., Lal, S., Thavundayil, J.X., Isaac, I., Eugenio, H., Achim, A., Schwartz, G. and Guyda, H. (1985) Effect of normal aging on the prolactin response to graded doses of sulpiride and to arginine. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat.* 9:633-637.
112. Nair, N.P.V., Lal, S. and Bloom, D.M. (1985). Cholecystokinin peptides, dopamine and schizophrenia a review. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat.* 9:515-524.
113. Quirion, R., Lal, S., Nair, N.P.V., Stratford, J.G., Ford, R.M. and Olivier, A. (1985) Comparative autoradiographic distribution of calcium channel antagonist binding sites for 1,4-dihydropyridine and phenylalkylamine in rat, guinea pig and human brain. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat.* 9:643-649.
114. McQuade, P.S., Etienne, P., Robitaille, Y., Wood, P.L. and Nair, N.P.V. Choline acetyltransferase activities and amino acid concentrations in the temporal cortex, caudate nucleus and nucleus basalis of Meynert in Alzheimer's disease and controls. In: *Clinical and Pharmacological Studies in Psychiatric Disorders*. G.D. Burrows, T.R. Norman, L. Dennerstein (Eds), Biological Psychiatry - New Prospects: 5. John Libbey, London-Paris, 1985. pp. 306-315.
115. Quirion, R., Lafaille, F., Nair, N.P.V. (1985). Comparative potencies of calcium channel antagonists and antischizophrenic drugs on central and peripheral calcium channel binding sites. *J. Pharm. Pharmacol.* 37:437-440.

116. Suranyi-Cadotte, B.E., Lafaille, F., Schwartz, G., Nair, N.P.V., Quirion, R.(1985). Unchanged platelet <sup>3</sup>H-imipramine binding in normal subjects after imitramine administration. *Biol. Psychiat.* 20, 1237-1240.
117. Suranyi-Cadotte, B.E., Gauthier, S., Lafaille, F., DeFlores, S., Dam, T.V., Nair, N.P.V., Quirion, R. (1985). Platelet <sup>3</sup>H-imipramine binding distinguishes depression from Alzheimer dementia. *Life Sci.* 37, 2305-2311.
118. Suranyi-Cadotte, B.E., Quirion, R., Nair, N.P.V., Lafaille, F., Schwartz, G., Mosticyan, S. and Wood, P.L. (1985). Platelet <sup>3</sup>H-imipramine binding: a state-dependent marker in depression. *Prog. Neuropsychopharmacol. Biol. Psychiat.* 8:737-742.
119. Chouinard, G., McClure, D., Nair, N.P.V., Grof, P., Max, P., Merskey, H., Westin, J.A.(1985). A Canadian multi-centre clinical trial of zimelidine and amitriptyline in the treatment of patients with major depressive disorder. Selected papers from the 14th CINP Congress, Florence, Italy, 1984. In: *Clinical and Pharmacological Studies in Psychiatric Disorders. Biological Psychiatry - New Prospects*, Vol. 5. Burrows, G.D., Norman, T.R., Dennerstein, L. (Eds). John Libbey & Company Ltd., London, England, pp.66-71.
120. Nair, N.P.V., Hariharasubramanian, N., Pilapil, C., Isaac, I. and Thavundayil, J.X. (1986). Plasma Melatonin - An index of brain aging in humans? *Biol. Psychiatry*, 21:141-150.
121. Nair, N.P.V., Lal, S., Eugenio, H., Lizondo, E., Thavundayil, J.X., Wood, P.L., Etienne, P. and Guyda, H. (1986). CCK-8 Antagonizes apomorphine-induced growth hormone secretion in normal subjects. *Horm. Metab. Res.* 18:53-55.
122. Hariharasubramanian, N., Nair, N.P.V., Pilapil, C., Isaac, I., Quirion, R.(1986) Effect of imipramine on the circadian rhythm of plasma melatonin in unipolar depression. *Chronobiology Intern.* 3:65-69.
123. Hariharasubramanian, N., Nair, N.P.V., Pilapil, C., Thavundayil, J.X., Quirion, R.(1986). Plasma melatonin levels during menstrual cycle: Changes with age. *The Pineal Gland During Development from Fetus to Adult*. Gupta, D., Reiter, R.J. (Eds.). Croom Helm-London and Sydney, pp.166-173.
124. Etienne, P., Robitaille, Y., Gauthier, S., Nair, N.P.V. (1986). Nucleus basalis neuronal loss and neuritic plaques in advanced Alzheimer's disease. *Can. J. Physiol. and Pharmacol.*, 64(3):318-324.
125. Yassa, R., Nair, V., Dimitry, R. (1986). Prevalence of tardive dystonia. *Acta Psychiatr. Scand.* 73:629-633.
126. Nair, N.P.V., Lal, S. and Bloom, D.M. (1986) Cholecystokinin and Schizophrenia. *Progress in Brain Research*, J.M. van Ree and S. Matthysse (Eds.), Vol. 65. Elsevier Science Publishers B.V., Amsterdam (Biomedical Division), pp.237-258.
127. Quirion, R., Etienne, P., Nair, N.P.V., Pelletier, G., Gaudreau, P. (1986). Neuropeptide receptors in human forebrain: an autoradiographic study. *Ann. N.Y. Acad. Sci.* 463:128-130.
128. Yassa, R., Nair, V. and Schwartz, G. (1986) Early versus late onset psychosis and tardive dyskinesia. *Biol. Psychiatry* 21:1291-1297.

129. Quirion, R., Martel, J.C., Robitaille, Y., Etienne, P., Wood, P.L., Nair, N.P.V. and Gauthier, S. (1986). Neurotransmitter and receptor deficits in senile dementia of the Alzheimer type. *Can. J. Neurol. Sci.* 13:503-510.
130. Moroni, F., Lonbardi, G., Carlà, V., Lal, S., Etienne, P. and Nair, N.P.V. (1986). Increase in the content of quinolinic acid in cerebrospinal fluid and frontal cortex of patients with hepatic failure. *J. Neurochem.* 47:1667-1671.
131. Suranyi-Cadotte, B.E., Lal, S., Nair, N.P.V. and Quirion, R. (1986) Parkinsonism induced by diazepam. *Biol. Psychiat.* 21:1232-1233.
132. Nair, N.P.V., Suranyi-Cadotte, B.E., Schwartz, G., Thavundayil, J.X., Achim, A., Lizondo, E. and Nayak, R. (1986). A clinical trial comparing intramuscular haloperidol decanoate and oral haloperidol in chronic schizophrenic patients: Efficacy, safety and dosage equivalence. *J. Clin. Psychopharm.* 6, 30S-37S.
133. Etienne, P., Robitaille, Y., Wood, P., Gauthier, S., Nair, N.P.V. and Quirion, R. (1987). Nucleus basalis neuronal loss, neuritic plaques and choline acetyltransferase activity in advanced Alzheimer's Disease. *Neuroscience* 19:1279-1291.
134. Yassa, R. and Nair, N.P.V. (1987) The effect of tardive dyskinesia on body weight. *Acta Psychiatr. Scand.* 75:209-211.
135. Nayak, R.K., Doose, D.R., Nair, N.P.V. (1987). The bioavailability and pharmacokinetics of oral and depot intramuscular haloperidol in schizophrenic patients. *J. Clin. Pharmacol.* 27(2):144-150.
136. Lal, S., Laryea, E., Thavundayil, J.X., Nair, N.P.V., Negrete, J., Ackman, D., Blundell, P. and Gardiner, R.J. (1987) Apomorphine-induced penile tumescence in impotent patients - preliminary findings. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat.* 11:235-242.
137. Lal, S., Quirion, R., Lafaille, F., Nair, N.P.V., Loo, P., Braunwalder, A., Wood, P., and Williams, M. (1987) Muscarinic, benzodiazepine, gaba, chloride channel and other binding sites in frontal cortex in hepatic coma in man. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat.* 11:243-250.
138. Suranyi-Cadotte, B., Lal, S., Nair, N.P.V., Lafaille, F. and Quirion, R. (1987) Coexistence of central and peripheral benzodiazepine binding sites in the human pineal gland. *Life Sciences*, 40:1537-1543.
139. Bloom, D.M., Tourjman, V. and Nair, N.P.V. (1987) Verapamil in refractory schizophrenia: a case report. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat.* 11:185-188.
140. Tourjman, S.V., Bloom, D.M. and Nair, N.P.V. (1987) Verapamil in the treatment of chronic schizophrenia. *Psychopharmacology Bulletin* 23:227-230.
141. Pecknold, J.C., Chang, H., Fleury, D., Koszycki, D., Quirion, R., Nair, N.P.V. and Suranyi-Cadotte, B.E. (1987). Platelet imipramine binding in patients with panic disorder and major familial depression. *J. Psychiat. Res.* 21:319-326.
142. Lal, S., Isaac, I., Pilapil, C., Nair, N.P.V., Hariharasubramanian, N., Guyda, H. and Quirion, R. (1987). Effect of apomorphine on melatonin secretion in normal subjects. *Prog. Neuro-psychopharmacol. & Biol. Psychiat.* 11:229-233.

143. Kiely, M.E., Lal, S. and Nair, N.P.V. (1987). Effect of ascorbic acid on brain amphetamine concentrations in the rat. *Prog. Neuropsychopharmacol. & Biol. Psychiat.* 11(2/3):287-290.
144. Ghadirian, A.M., Gianoulakis, C. and Nair, N.P.V. (1988) The effect of electroconvulsive therapy on endorphins in depression. *Biol. Psychiatry*, 23:459-464.
145. Singh, A.N., Nair, N.P.V., Suranyi-Cadotte, B., Schwartz, G. and Lizondo, E. (1988) A double blind comparison of alprazolam and amitriptyline hydrochloride in the treatment of nonpsychotic depression. *Can. J. Psychiatry*, 33:218-222.
146. Pecknold, J.C., Suranyi-Cadotte, B., Chang, H. and Nair, N.P.V.(1988) Serotonin uptake in panic disorder and agoraphobia. *Neuropsychopharmacology* 1:173-177.
147. Yassa, R., Nair, N.P.V. and Iskandar, H. (1988) Late-onset bipolar disorder. *Psychiatric Clinics of North America*, 11:117-132.
148. Quirion, R., Lal, S., Olivier, A., Robitaille, Y., Nair, N.P.V., Ford, R.M. and Stratford, J.G. and R.M. and Stratford, J.G. (1988). Calcium channel antagonist binding sites in human brain. *Ann. N.Y. Acad. Sci.* 522:203-206.
149. Yassa, R., Nair, V., Nastase, C., Camille, Y. and Belzile, L. (1988). Prevalence of bipolar disorder in a psychogeriatric population. *J. Affective Disorders*, 14:197-201.
150. Quirion, R., Araujo, D., Nair, N.P.V., Chabot, J.G. (1988). Visualization of growth factor receptor sites in rat forebrain. *Synapse*, 2:212-218.
151. Suranyi-Cadotte, B., Gauthier, S., Lafaille, F., De Flores, S., Dam, T.V., Nair, N.P.V., Quirion, R.(1988). Platelet <sup>3</sup>H-imipramine binding differentiates major depression from Alzheimer's disease in elderly. *New Concepts in Depression*. M. Briley (ed). Pierre Fabre Publ. Paris. Vol. 2, pp.137-143.
152. Lal, S., Nair, N.P.V., Isaac, I., Guyda, H. and Quirion, R. (1988). Effect of hydrocortisone on basal and apomorphine-induced growth hormone secretion in normal subjects. *Clin. Investigative Med.*, 11:218-223, 1988.
153. Nair, N.P.V., Sharma, M., Iskander, H. and Suranyi-Cadotte, B.E. (1988) Side effects of depot neuroleptics. *Depot Neuroleptics - A consensus*. T.R.E. Barnes (Ed.), Antwerp, pp.67-74.
154. Yassa, R. and Nair, N.P.V. (1988) The association of tardive dyskinesia and pseudoparkinsonism. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat.* 12:909-914.
155. Quirion, R., Bloom, D., Nair, N.P.V. (1988) Interaction between certain antipsychotic drugs and dihydropyridine receptor sites. *The Calcium Channel: Structure, Function and Implications*. Morad, M., Nayler, W., Kazda, S., Schramm, M. (Eds). Springer-Verlag Berlin Heidelberg, pp. 520-527.
156. Andreasen, N.C., Carson, R., Diksic, M., Evans, A., Farde, L., Gjedde, A., Hakim, A., Lal, S., Nair, N., Sedvall, G., Tune, L. and Wong, D. (1988) Workshop on Schizophrenia, PET, and Dopamine D<sub>2</sub> receptors in the human neostriatum. / Proceedings of a workshop held at the Montreal Neurological Institute, August 18, 1987. *Schizophrenia Bulletin*, National Institute of Mental Health Vol. 14, No. 3, pp. 471-484.

157. Sharma, M., Palacios-Bois, J., Schwartz, G., Iskandar, H., Thakur, M., Quirion, R., Nair, N.P.V. (1989) Circadian rhythms of melatonin and cortisol in aging. *Biol. Psychiatry*. 25:305-319.
158. Ghadirian, A.M., Nair, N.P.V. and Schwartz, G. (1989). Effect of lithium and neuroleptic combination on lithium transport blood pressure and weight in bipolar patients. *Biol. Psychiatry* 26:139-144.
159. Nair, N.P.V. and Sharma, M. (1989) Neurochemical and receptor theories of depression. *Psychiatr J. Univ Ottawa*, 14:328-341.
160. Ghadirian, A.M., Nair, N.P.V. and Schwartz, G.(1989) Transmembrane lithium distribution and hypertension in manic depressive patients. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat* 13:525-530.
161. Lal, S., Nair, N.P.V., Thavundayil, J.X., Tawar, V., Tesfaye, Y., Dastoor, D., Gauthier, S. and Guyda, H. (1989). Growth hormone response to apomorphine, a dopamine receptor agonist, in normal aging and in dementia of the Alzheimer type. *Neurobiology of Aging*, 10:227-231.
162. Lal, S., Tesfaye, Y., Thavundayil, J.X., Thompson, T.R., Kiely, M.E., Nair, N.P.V., Grassino, A. and Dubrovsky, B. (1989) Apomorphine: clinical studies on erectile impotence and yawning. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat* 13:329-339.
163. Yassa, R., Nair, V., Iskandar, H. (1989) A comparison of severe tardive dystonia and severe tardive dyskinesia. *Acta Psychiatr. Scand.* 80:155-159.
164. Gauthier, S., Bouchard, R., Bacher, Y., Bailey, P., Bergman, H., Carrier, L., Charbonneau, R., Clarfield, M., Collier, B., Dastoor, D., Gauthier, L., Germain, M., Kissel, M., Krieger, M., Kushnir, S., Lamontagne, A., Morin, J., Nair, N.P.V., Neirinck, L., Ratner, J., St-Martin, M., Suissa, S. and Tesfaye, Y. (1989) Progress report on the Canadian multicentre trial of tetrahydroaminoacridine with lecithin in Alzheimer's disease. *J. Canadien des Sciences Neurol.* 16(Suppl.):543-546.
165. Araujo, D.M., Lapchak, P.A., Chabot, J-G., Nair, N.P.V. and Quirion, R. (1989) Characterization and possible role of growth factor and lymphokine receptors in the regulation of cholinergic function in the mammalian brain. *Proceeding of the First International Comp. Alzheimer's Disease and Related Disorders.* Alan R. Liss, Inc. pp.423-436.
166. Yassa, R., Nair, V. (1989) Mild tardive dyskinesia: an 8-year follow-up study. *Acta Psychiatr Scand* 81:139-140.
167. Quirion, R., Nair, N.P.V. (1989) Dihydropyridine and phenylalkylamine binding sites in Alzheimer's disease and other neurological disorders. In: *Nimodipine and Central Nervous System Function: New Vistas.* International Workshop, Cologne, FRG, April 12-14 / J. Traber, W.H. Gispen (Eds). Schattauer, Stuttgart- New York, pp. 257-265.
168. Lal, S., Nair, N.P.V., Isaac, I., Thavundayil, J. and Guyda, H. (1990). Effect of some peptides on dopaminergic function in man. *J. Neural Transm.* [Suppl] 29:173-181.
169. Nair, N.P.V., Schwartz, G., Dimitri, R., Le Morvan, P. and Thavundayil, J.X. (1990) A dose-range finding study of zopiclone in insomniac patients. *Intern. Clin. Psychopharm.* [Suppl.2] 5:1-11.

170. Gauthier, S., Bouchard, R., Lamontagne, A., Bailey, P., Bergman, H., Ratner, J., Tesfaye, Y., Saint-Martin, M., Bacher, Y., Carrier, L., Charbonneau, R., Clarfield, A.M., Collier, B., Dastoor, D., Gauthier, L., Germain, M., Kissel, C., Krieger, M., Kushnir, S., Masson, H., Morin, J., Nair, N.P.V., Neirinck, L., Suissa, S. (1990) Tetrahydroaminoacridine-lecithin combination treatment in patients with intermediate-stage Alzheimer's disease. *The New Engl. J. Med.* 322:1272-1276.
171. Lapierre, Y.D., Nair, N.P.V., Chouinard, G., Awad, A.G., Saxena, B., Jones, B., McClure, D.J., Bakish, D., Max, P., Manchanda, R., Beaudry, P., Bloom, D., Rotstein, E., Ancill, R., Sandor, P., Sladen-Dew, N., Durand, C., Chandrasena, R., Horn, E., Elliot, D., Das, M., Ravindran, A., Matsos, G. (1990). A controlled dose-ranging study of remoxipride and haloperidol in schizophrenia - a Canadian multicentre trial. *Acta Psychiatr. Scand.* [Suppl.358] 82:72-76.
172. Yassa, R., Nair, N.P.V., Iskandar, H. and Schwartz, G. (1990). Factors in the development of severe forms of tardive dyskinesia. *The Amer. J. Psychiat.* 147:1156-1163.
173. Lal, S., Gauthier, S., Wood, P.L., Kiely, M.E., Wasserman, J. and Nair, N.P.V. (1990). Red cell choline in spasmodic torticollis and in a monozygotic twin pair with Tourette's syndrome. *Prog. Neuro-Psychopharmacol. & Biol. Psychiat.* 14:785-789.
174. Lal, S., Nair, N.P.V., Thavundayil, J.X., Tawar, V., Guyda, H. and Ayotte, C. (1991). The effect of methyltestosterone on the growth hormone response to the dopamine receptor agonist, apomorphine. *Prog. Neuro-Psychopharmacol & Biol. Psychiat.* 15:263-268.
175. Lal, S., Nair, N.P.V., Vasavan, Thavundayil, J.X., Tawar, V., Quirion, R. and H. Guyda (1991). Stereospecificity of the dopamine receptor mediating in the growth hormone response to apomorphine in man. *J. Neural Transm [GenSect]* 85:157-164.
- Nair, N.P.V., Vasavan, Ahmed, Syed K. (1991) What are the underlying causes of depression? *Can. J. Diag.* 8[12]:54-78.
177. Nair, N.P.V. (1991). Depression in the elderly. *Geriatrics* Nov/Dec.
178. Nair, N.P.V., Ahmed, S.K., Ng Ying Kin, N.M.K., Quirion, R., Bloom, D. and Lal, S. (1992). Pharmacology of Clozapine. *Proceedings of a Satellite Symposium to the 41st Annual Meeting of the Canadian Psychiatric Association on Clozapine in treatment-resistant schizophrenia: A scientific update*, Saskatoon, Royal Society of Medicine Services Limited, pp. 23-37.
179. Lal, S., Nair, N.P.V. (1992). Is levomepromazine a useful drug in treatment-resistant schizophrenia? *Acta Psychiatr. Scand.* 85:243-245.
180. Yassa, R., Nair, N.P.V. (1992). A 10-year follow-up study of tardive dyskinesia. *Acta Psychiatr. Scand.* 86:262-266.
181. Nair, N.P.V., Amin, M., Schwartz, G., Dastoor, D., Thavundayil, J.X., Mirmiran, M., MacDonald, C. and Phillips, R. (1993). A comparison of the cardiac safety and therapeutic efficacy of trimipramine versus doxepin in geriatric depressed patients. *J. Amer. Geriat. Soc.* 41:863-867.

182. Lal, S., Nair, N.P.V., Cécyre, D., Quirion, R.(1993). Levomepromazine receptor binding profile in human brain - implications for treatment-resistant schizophrenia. *Acta Psychiatr. Scand.* 87:380-383.
183. Chouinard, G., Saxena, B.M., Nair, N.P.V., Kutcher, S.P., Bakish, D., Bradwejn, J., D'Souza, J. (1993). Brofaromine in depression: A Canadian multicenter placebo trial and a review of standard drug comparative studies. *Clinical Neuropharmacology*, 16:(2), p.S51-S54.
184. Seckl, J.R., French, K.L., O'Donnell, D., Meaney, M.J., Nair, N.P.V., Yates, C.M., and Fink, G. (1993). Glucocorticoid receptor gene expression is unaltered in hippocampal neurons in Alzheimer's disease. *Molecular Brain Research*, 18:239-245.
185. Lupien, S., Roch Lecours, A., Lussier, I., Schwartz, G., Nair, N.P.V. and Meaney, M. (1993). Basal cortisol levels and cognitive deficits in human aging. *J. Neurosci.*, 14(5):2893-2903.
186. Nair, N.P.V., Ahmed, S.K., Ng Ying Kin, N.M.K. (1994) Biochemistry and pharmacology of reversible inhibitors of MAO-A agents: focus on moclobemide. *J. Psychiatr Neurosci* 18(5):214-225.
187. Iny, L.J., Pecknold, J., Suranyi-Cadotte, B.E., Bernier, B., Luthe, L., Nair, N.P.V., Meaney, M.J. (1994). Studies of a neurochemical link between depression, anxiety and stress from [<sup>3</sup>H] imipramine and [<sup>3</sup>H] paroxetine binding on human platelets. *Biol. Psychiat.* 36:281-291.
188. Annable, L., Jones, B., Nair, V. (1994). A National Strategy for Research on Schizophrenia. Panel: Psychopharmacology. *J. Psychiat. and Neurosc.* (Suppl. 1), 19:29-33.
189. Nair, N.P.V., Amin, M., Holm, P., Katona, C., Klitgaard, N., Ng Ying Kin, N.M.K., Kragh-Sorensen, P., Kuhn, H., Leek, C.A., Stage, K.B. (1995). Moclobemide and nortriptyline in elderly depressed patients: a randomized, multicentre trial against placebo. *J. Affective Disorders.* 333:1-9.
190. Nair, N.P.V. (1995) Antidepressants in the elderly. Recent Clinical Developments with RIMAs, Canadian Psychiatric Association, *Symposia Highlights*, 1994 Annual Meeting, September 20-24, pp. 5-8.
191. Ng Ying Kin, N.M.K., Pan, L.H., Louvaris, J.H., Robitaille, Y. and Nair, N.P.V. (1995) Differential changes in regional brain ganglioside and neutral glycosphingolipid contents in Alzheimer's disease. *Adv. Exp. Med. Biol.* 363:57-64.
- Gendron, A., Sirois, G., Nair, N.P.V., Bloom, D., Movin-Osswald, G., Uppfeldt, G. 1995). An open study of tolerability and pharmacokinetics of raclopride extended release capsules in psychiatric patients: A Canadian study. *J. Psychiat. Neurosci*, 20(4):287-296.
- N.P.V. Nair et al., (1995). "Reversible and selective, inhibitors of monoamine oxidase A in the treatment of depressed elderly patients". *ACTA Psychiatric Scand*, 92(suppl 386): p. 28-35.
- Meaney, M.J., O'Donnell, D., Rowe, W., Tannenbaum, B., Walker, M., Nair, N.P.V., Lupien, S. (1995) Individual differences in hippocampal activity in later life and hippocampal aging. *J. Experimental Gerontology.* 30:229-251.

- Lupien, S., Lecours, A.R., Schwartz, G., Sharma, S., Hauger, R.L., Meaney, M.J., Nair, N.P.V. (1996). Longitudinal study of basal cortisol levels in healthy elderly subjects: Evidence for sub- groups. *Neurobiology of Aging*, 17(1):95-105.
- Leyton, M., Bélanger, C., Martial, J., Corin, E., Pecknold, J., Ng Ying Kin, N.M.K., Meaney, M., Thavundayil, J., Larue, S., and Nair, N.P.V. (1996) Cardiovascular, Neuroendocrine and monoaminergic responses to psychological stressors: Possible differences between remitted panic disorder patients and healthy control. *Biol. Psychiatry*, 40:353-360.
- Ng Ying Kin, N.M.K., Klitgaard, N., Nair, N.P.V., Amin, M., Kragj-Sorensen, P., Schwartz, G., Ahmed, S.K., Holm, P., Katona, C. And Stage, K. (1996) Clinical relevance of serum nortriptyline and 10-hydroxy-nortriptyline measurements in the depressed elderly: A multicenter pharmacokinetic and pharmacodynamic study. *Neuropsychopharmacology*, 15(1):1-7.
- Lal, S., Thavundayil, J.X., Krishnan, B., Nair, N.P.V., Schwartz, G., Guyda, H. (1996). The effect of yohimbine, an alpha-2 adrenergic receptor antagonist, on the growth hormone response to apomorphine in normal subjects. *J. Psychiat. Neuroscience*, 21(2):96-100.
- Gauthier, S., Montplaisir, J., Pewtit, D., Joannette, Y., Feldman, H., Mohr, E., Nair, N.P.V., and Poirier, J. (1996) *Alzheimer Disease and Associated Disorders*, 10 (Suppl 1): 19-22.
- Nair, N.P.V., Bakish, D., Saxena, B., Amin, M., Schwartz, G., and West, T.E.G. (1996) Comparison of fluvoxamine, imipramine, and placebo in the treatment of outpatients with panic disorder. *Anxiety* 2:192-198.
- Nair, N.P.V., Amin, M.: Mood disorders. (1996). Images in Psychiatry. Rae-Grant Quentin, (Ed.). Section III: Research. *American Psychiatric Press, Inc.*, Chap. 29, pp. 2205-2213.
- Lupien, S.J., DeLeon, M., DeSanti, S., Convit, A., Nair, N.P.V., McEwen, B.S., Hauger, R.L., and Meaney, M.J.: Longitudinal increase in cortisol levels during human aging predicts hippocampal atrophy and memory deficits. *Neuroscience abstracts*, 22:1889, 1996.
- Müller, H.F., Engelsmann, F., Nair, N.P.V., Robitaille, Y. (1997). Psychogeriatric clinical, electroencephalographic and autopsy findings. *Neuropsychobiology*. 35:101.
- Martial J, Paris J, Leyton M, Zweig-Frank H, Schwartz G, Teboul E, Thavundayil J, Larue S, Ng Ying- Kin NMK, Nair NPV (1997). Neuroendocrine study of serotonergic sensitivity in female borderline personality disorder patients. *Biol Psychiatry* 42: 737-739.
- Ramzy Yassa, Nair, N.P.V., Jeste Dilip V. (1997). *Neuroleptic Induced Movement Disorders*. (Eds) Cambridge University Press, U.S., 494 pages.
- Yassa, Ramzy and Nair, N.P.V., Jeste Dilip V. (1997) Anticholinergic drugs as factors in the development of tardive schizizophrenia. *Neuroleptic Induced Movement Disorders. Part II Clinical aspects of tardive dyskinesia*. Cambridge University Press, U.S., Chap. 10, pp. 117-129.
- Nair, N.P.V., and West, T.E.G. (1997) Neurochemistry of the basal ganglia. *Neuroleptic Induced Movement Disorders. Part III: Mechanisms underlying tardive dyskinesia*. Cambridge University Press, U.S., Chap. 11, pp. 129-141.
- Lal, S., Thavundayil, J.X., Krishnan, B., Nair, N.P.V., Schwartz, G., Kiely, M.E., and Guyda, H. (1997) Effect of sleep deprivation on the growth hormone response to the Alpha-2 adrenergic receptor agonist, clonidine, in normal subjects. *J. Neural Transm*. 104: 291-298.

- Lupien, S.J., Gaudreau, S., Tchitey, B.M., Sharma, S., Nair, N.P.V., Hauger, R.L., McEwen, B.S. and Meaney, M.J. (1997) Stress-induced declarative memory impairment in healthy elderly subjects: Relationship to cortisol reactivity. *J. Clin Endocrinol. and Metabol*, 82: pp.2070-2075.
- Ng Ying Kin, N.M.K., Nair, N.P.V., Amin, M., Schwartz, G., Ahmed, S.K., Holm, P., Katona, C., Kragh-Sorensen, P., Klitgaard, N., Song, W-Y., West, T.E.G., and Stage, K. (1997) The dexamethasone suppression test and treatment outcome in elderly depressed patients participating in a placebo-controlled multicentre trial involving moclobemide and nortriptyline. *Biological Psychiatry*, 42:925-931.
- Lupien, S., Thakur, M., McEwen, B.S., Nair, N.P.V., Meaney, M.J.: Preliminary evidence for a wave-cycle of cortisol secretion in later life (1997) Relationship with explicit and implicit memory function. *Psychoneuroendocrinology*. Society for Neuroscience Abstracts, 23:1658.
- McLaughlin R., Ng Ying Kin N.M.K., Moy Fong Chen, Nair NPV, and Chan Eddie CS (1999). Alzheimer's disease may not be a spirochetosis. *NeuroReport* 10: 1489-1491.
- Nair, N.P.V., George Schwartz, N.M.K. Ng Ying Kin, Mira Thakur and Joseph Thavundayil (1998) Melatonin and Cortisol circadian rhythms in Alzheimer's Disease patients and normal elderly subjects. *Biological Clocks, Mechanisms and Applications*. Yvan Touitou, editor, pp. 357-360.
- Sonia J. Lupien, Mony de Leon, Susan de Santi, Antonio Convit, Chaim Tarshish, N.P.V. Nair, Mira Thakur, Bruce S. McEwen, Richard L. Hauger and Michael J. Meaney (1998) Cortisol levels during human aging predict hippocampal atrophy and memory deficits. *Nature Neuroscience*, Volume 1, No. 1 – pp. 69-73.
- N.P.V. Nair and The Risperidone Study Group (1998) Therapeutic Equivalence of Risperidone Given Once Daily and Twice Daily in Patients with Schizophrenia. *Journal of Clinical Psychopharmacology* Vol. 18, No. 2, pp. 103-109.
216. K.B. Stage, P. Bech, P. Kragh-Sorensen, N.P.V. Nair, C. Katona and Danish University Antidepressant Group (2001) Differences in *symptomatology and diagnostic profile in younger and elderly depressed inpatients*. *Journal of Affective Disorders* 2001; 64: 239-48.
217. T.Kojima, E. Matsushima, K. Ohta, M. Toru, Yong-Hua Han, Yu-Cun Shen, D. Moussaoui, I. David, K. Sato, I. Yamashita, N. Kathmann, H. Hippus, J. X. Thavundayil, S. Lal, N. P. Vasavan Nair, S.G. otkin, L. Prilipko. (2001) Stability of exploratory eye movements as a marker of schizophrenia – a WHO multi-center study. *Elsevier, Schizophrenia Research* 52: 203-213.
- Pablo Cervantes, MD; Stephen Gelber, MSc; François N.K. Ng Ying Kin, PhD; N.P.Vasavan Nair, D; George Schwartz, MSc. (2001) Circadian Secretion of Cortisol in Bipolar Disorder. *J Psychiatry Neurosci.*, 26 (5): 411-6.
- Sonia J. Lupien, Charles W. Wilkinson, Sophie Brière, Catherine Ménard, N.M.K. Ng Yin Kin, N.P.Vasavan Nair. (2002) The Modulatory Effects of Corticosteroids on Cognition: Studies in Young Human Populations. *Psychoneuroendocrinology* 27: 401-416.
- Lupien, S.J., Wilkinson, C.W., Brière, S., Ng Ying Kin, N.M.K., Meaney, M., Nair, NPV. (2002) Acute modulation of aged human memory by pharmacological manipulation of glucocorticoids. *J. Clin. Endocrinology and metabolism* 87 (8): 3798-3807.

- Ng Ying Kin, N.M.K., Nair, N.P.V., Schwartz, G., Thavundayil, J.X. and Annable L (2004). Secretion of melatonin in healthy elderly subjects: a longitudinal study. *Proc. N.Y. Acad. Sci.* 1019, 326-329.
- Paris J., Zweig,H., Ng Ying Kin, NMK., Schwartz, G. Steigher, H., Nair, NPV. (2004). Neurobiological correlates of diagnosis and underlying traits in patients with borderline personality disorder compared with normal controls. *Psychiatry Research*, 121(3) 239-252.
223. Sonia, J.Lupien, Georges Schartz, Ying Kin Ng, NMK, Alexandra Fiocco, Nathalie Wan, Jens C. Prussner, Michael J. Meaney, N.P.Vasavan Nair. (2005). The Douglas Hospital Longitudinal Study of Normal and Pathological Aging: summary of findings. *Journal of Psychiatry Neuroscience*, 328-334.
- Ng Ying Kin, NMK., Paris, J., Schwartz, G., Zweig-Frank, H., Steiger, H., Nair, NPV. (2005). Impaired platelet [3] paroxetine binding in female patients with Borderline Personality Disorder. *Psychopharmacology (Berl)*1-5.
- Zweig-Frank, H., Paris, J., Ng Ying Kin, NMK., Schwartz, G., Steiger, H. Nair, NPV. (2006). Childhood sexual abuse in relation to neurobiological challenge tests in patients with borderline personality disorder and normal control. *Psychiatry Research*, (141) 337-341.
- Lal, Samarthji; Thavundayil, Joseph X.; Nair, N.P.V; Annable, Lawrence; Ng Ying Kin,N.M.K.; Gabriel, Antoine; Schwartz, George. (2006). Levomepromazine versus chlorpromazine in treatment-resistant schizophrenia: a double-blind randomized trial. *Journal of Psychiatry & Neuroscience* 31 (4), 271-279.
- N.M.K. Ng Ying Kin, N.P.V. Nair, G. Schwartz, J. X. Thvundayil. Longitudinal Measurements of Melatonin Secretion in the Elderly: Implications for Alzheimer's Disease (2006), *Melatonin: From Molecules to Therapy*. S.R. Pandi-Perumal and D.P. Cardinali, Editors. Chapter XV.
- Fiocco AJ, Poirier J, Joobor R, Nair NP, Lupien SJ. (2008). Acute and long-term associations between ApoE genetic polymorphism, cortisol levels, and declarative memory performance in older adults. *Psychoneuroendocrinology* 33(5):625-33.
- Manouilidou, C., Almeida, R.G., Schwartz, G., Nair, NPV. (2008) Thematic roles in Alzheimer's disease: Hierarchy violations in psychological predicates. *Journal of Neurolinguistics* [ available online 6 December 2008 - article in Press ]

## **PUBLISHED ABSTRACTS AND PRESENTATIONS AT SCIENTIFIC MEETINGS**

1. Ban, T.A., Lehmann, H.E., Amin, M., Bronheim, L.A., Klingner, A., Nair, N.P.V., Galvan, L., Vergara, L. and Zoch, C.: Differential effects of trazodone in depressed, schizophrenic and geriatric patients. Presented at the Ninth Annual Meeting of the Canadian Society of Clin. Pharmac. and Chemotherapy. Toronto, Canada, May 3-4, 1973.
2. Nair, N.P.V., Ruiz-Navarro, J., Lehmann, H.E.: Clozapine in the treatment of schizophrenia. Presented at the 1st World Congress of Biological Psychiatry. Buenos Aires, Argentina, Sept. 24-28, 1974.

3. Nair, N.P.V., Lehmann, H.E., Ban, T.A., Schwartz, G., Steward, J.: Trazodone in the treatment of schizophrenia - a comprehensive evaluation. Presented at the 24th Annual Meeting of the Canadian Psychiatric Association. Ottawa, Canada, Oct. 1-4, 1974.
4. Ban, T.A., Lehmann, H.E., Nair, N.P.V., Pecknold, J.C. and Orbach, L.: Clinical Studies with T.R.H. Presented at the 17th National Meeting of Alpha Academy of Pharmaceutical Science. New Orleans, Nov. 10-14, 1974.
5. Lal, S., Ettigi, P., Nair, N.P.V. and Guyda, H.: Effect of neuroleptic withdrawal, methysergide, and pimozide on apomorphine-induced growth hormone secretion. Presented at the 26th Canadian Psychiatric Association Meeting. Quebec City, Sept. 28 - Oct. 2, 1976.
6. Nair, N.P.V.: Biology of aging. Presented at the 4th Congress of the International College of Psychosomatic Medicine. Kyoto, Japan, Sept. 4-9, 1977.
7. Nair, N.P.V.: Treatment of tardive dyskinesia - a review. Presented at the Canadian Psychiatric Association Annual Meeting. Saskatoon, Sept. 28-30, 1977.
8. Nair, N.P.V., Muller, H.F., Gutbrodt, E., Buffet, L. and Schwartz, G.: Neurotropic effects of lithium: Relationship to lithium levels in the serum and red blood cells. Presented at the Canadian Psychiatric Association Annual Meeting. Saskatoon, Sept. 28-30, 1977.
9. Lal, S., Nair, N.P.V., Guyda, H., Yassa, R.: Effect of lithium and clozapine on central dopaminergic function. Presented at the Canadian Psychiatric Association Annual Meeting., Saskatoon, Sept. 28-30, 1977.
10. Lehmann, H.E., Cooper, Th., Nair, N.P.V., Kline, N.: Beta-endorphins and naloxone in psychiatric patients: clinical and biological effects. Presented at the 31st Annual Meeting of the American Psychiatric Association. Atlanta, Georgia, May 8-12, 1978.
11. Nair, N.P.V., Yassa, R., Ruiz-Navarro, J. and Schwartz, G.: Baclofen in the treatment of tardive dyskinesia. Presented at the Canadian Psychiatric Association Annual Meeting. Halifax, Oct. 16-21, 1978.
12. Lal, S., Nair, N.P.V., Cervantes, P., Pulman, J. and Guyda, H.: Effect of naloxone or levallorphan on serum prolactin concentrations and apomorphine-induced growth hormone secretion. Presented at the Canadian Psychiatric Association Annual Meeting. Halifax, Oct. 16-21, 1978.
13. Pulman, J., Nair, N.P.V., Delvin, E.: Lithium and the parathyroids. Presented at the Canadian Psychiatric Association Annual Meeting. Halifax, Oct. 16-21, 1978.
14. Nair, N.P.V., Yassa, R., Ruiz-Navarro, J.F. and Schwartz, G.: Therapeutic approaches to tardive dyskinesia: The role of GABA-ergic drugs, presented at the Canadian Psychiatric Association Annual Meeting. Halifax, Oct. 16-21, 1978.
15. Nair, N.P.V., Yassa, R., Ruiz-Navarro, J.F. and Schwartz, G.: Effect of GABA-ergic drugs in tardive dyskinesia-clinical and neuroendocrine studies. *Annals of the Royal College of Physicians and Surgeons of Canada*. p.68, January 1979, Abstract.
16. Nair, N.P.V., Lal, S., Schwartz, G. and Thavundayil, J.X.: Effect of sodium valproate and baclofen in tardive dyskinesia: Clinical and neuroendocrine studies. Presented at the International Symposium. Monte-Carlo, March 19-22, 1979.

17. Nair, N.P.V., Yassa, R., Ruiz-Navarro, J.F., Schwartz, G.: Effect of GABA-ergic drugs in tardive dyskinesia clinical and neuroendocrine studies. Presented at the 1979 Annual Meeting of the Royal College of Physicians and Surgeons of Canada. Montreal, Canada.
18. Nair, N.P.V.: Diagnosis and classification of schizophrenia. Presented at the McGill University and Douglas Hospital Centre Symposium on "Recent trends in the diagnosis and classification of mental disorders". Montreal, Que. Canada, Sept. 14, 1979.
19. Nair, N.P.V., Lal, S., Schwartz, G. and Thavundayil, J.: Effect of sodium valproate in tardive dyskinesia: clinical and neuroendocrine studies. Presented at the Canadian Psychiatric Association Annual Meeting. Vancouver, Sept. 26-28, 1979.
20. Nair, N.P.V., Lal, S., Thavundayil, J.: Differential effects of GABA-ergic drugs on nigrostriatal and hypothalamic pituitary dopaminergic systems. Presented at the Canadian Psychiatric Association Annual Meeting. Vancouver, Sept. 26-28, 1979.