

CURRICULUM VITAE - PROFESSOR S DAYA

1. Santylal Daya

EMPLOYMENT HISTORY:

- JANUARY 1977 Principal Technical Officer at School of
TO JUNE 1982 Pharmaceutical Sciences, Rhodes University
Duties: Preparing practical classes for undergraduate students in
Pharmacology and Physiology
- JULY 1982 Lecturer/Senior Lecturer in Pharmacology at Medical University of
TO JUNE 1985 Southern Africa

Duties: Giving Pharmacology lectures to medical students as well
as conducting practicals and tutorials
- JULY 1985 Lecturer/ Senior Lecturer/ Associate Professor in Pharmacology
TO DEC 1998 and Biochemistry at Rhodes University, Grahamstown, South Africa
Postgraduate Research in Neuropharmacology and training of PhD's
- JANUARY 1999 Associate Professor in Pharmacology, Rhodes University
TO DEC 1999 Duties: Teaching Pharmacology and running a research lab with
graduate students, training PhD students, publishing articles, organizing conferences,
administration
- JANUARY 2000 Professor and Head of Pharmacology, Rhodes University
TO MAY 2009 Duties: Teaching Pharmacology to science students and running a
research lab with graduate students, training PhD students,
publishing articles, organizing conferences, administration of the
Department.
Acting Deputy Dean and Acting Dean and Head (Faculty of
Pharmacy, Rhodes University)
Duties: Administration of the Faculty, Leadership in Senior
management of the university

JUNE 2009
TO DEC 2017 Professor of Pharmacology and Biochemistry, Ross University
Duties: Teaching Pharmacology at the Bahamas and Dominica campuses

JANUARY 2017 Head and Dean, Faculty of Pharmacy, Rhodes University, South Africa
TO JANUARY 2019 Duties: Leadership in Senior management of the university, accreditation compliance with the South Africa Pharmacy Council, Budgeting, hiring of staff, student success monitoring, teaching.

FEBRUARY 2019
To December 2020
(Two Year Contract)
Professor: Foundations of Medicine, Ross University School of Medicine, Barbados. Duties: Teaching Medical Biochemistry and Pharmacology to Semester 1-4, Writing USMLE-style questions

JANUARY 2021 PART-TIME CONTRACT AT JINAN UNIVERSITY MEDICAL UNIVERSITY IN CHINA
PART-TIME CONTRACT AT RHODES UNIVERSITY (RESEARCH METHODOLOGY AND BIOCHEMISTRY)
TO JULY 2021

JANUARY 2021 started my own drug discovery company 'Continental Scientific Solutions'

3. PROFESSIONAL TRAINING

BSc (1977) University of Durban Westville

MSc (1982) Rhodes University (With Distinction) Thesis Title: The influence of sex steroids on pineal gland metabolism.

PhD (1985) MEDUNSA (Medical University of South Africa) (Now Renamed Univ of Limpopo) Thesis Title: The effect of Calcium Channel Blockers on Respiratory Smooth Muscle

NRF RATING: B (Expired)

4. HONOURS AND AWARDS

- (1) Senior Fulbright Scholarship (1989), for the Advanced Senior Research Programme, spent at the University of Texas Health Science Centre at San Antonio.
- (2) Bristol Myers-Squibb Award (1990) for outstanding contribution to neuroscience research.
- (3) Senior Research Award (1992), Rhodes University.
- (4) Ron Taylor Award for excellence in performance at Ross University (2013)
- (5) Academy of Pharmaceutical Sciences (2000)
- (6) Vice-Chancellor's Distinguished Teaching Award (2000)
- (7) Favorite Biochemistry –Professor (2015) Ross University

COMMITTEE APPOINTMENTS:

- (1) Appointed by the Medical Research Council of South Africa as a member of the evaluation panel for pharmacology and anaesthetics 1993 to 1995
- (2) Reviewer for the International Science Foundation (USA) (Ad Hoc)
- (3) Editor-in-chief: African Journal of Neuroscience (1993 to 1995)
- (4) MRC Grants Committee (1994-1995)
- (5) Councillor: S.A. Neuroscience Society (1992-1996)
- (6) FRD Advisory Committee on Biological and Medical Sciences (1995)
- (7) S.A. representative on the Governing Council of the International Brain Research Organisation (1995 -2000).
- (8) Secretary: S.A. Neuroscience Society (1996-1999)
- (9) Executive member of the South African National Committee for the International Brain Research Organisation (1994-2000)
- (10) SONA representative on the Governing Council of IBRO (1997-2000)
- (11) Member of the FRD evaluation committee for Medical and Biological Sciences (1997-2000)
- (12) Elected to Council of AFRET (African Education and Training) in Basic Medical Sciences
- (13) Elected to President of the Southern African Neuroscience Society (1999)
- (14) Expert Reviewer in Neuroscience for the European Commission
- (15) Executive Member (co-opted): Academy of Pharmaceutical Sciences (2000)
- (16) Editor: Metabolic Brain Disease (2000-Present)
- (17) Appointed to the Rhodes University Student Disciplinary Panel
- (18) Reviewer for the National Research Foundation (2000)
- (19) Chairman of the Rhodes University Ethical Standards Committee (2001 –2007)
- (20) Appointed to the IBRO Schools Board (2001- 2006)
- (22) Appointed by the Sacoor medical Group in the UK as a key Opinion Leader in Alzheimer's disease for the Africa Region(2008)

(23) Research Committee member- Ross University (2015-)

(24) Faculty advisor -Ross University Academic Research Society

5. RESEARCH EXPERIENCE

TITLE OF PROJECTS:

- (a) Calcium antagonists and respiratory smooth muscle
- (b) Neuropharmacology of melatonin
- (c) Neuroprotection in aging

Funding sources: South African Medical Research Council

South African national research Foundation

Council for Scientific and Industrial Research

6. PAPERS PUBLISHED IN REFEREED JOURNALS IN FULL

1. Joubert, P. Daya, S. and Lowings, A. "Potentiation of relaxant effect of theophylline by nifedipine in isolated guineapig tracheal preparations. *IRCS Medical Science*, 11, 760 (1983).
2. Daya, S. and Joubert, P.H. "Inhibition of the isoprenalineinduced increase in cyclic AMP by nifedipine in bronchial smooth muscle. *IRCS Medical Science*, 12, 637 (1984).
3. Daya, S. and Potgieter, B. The effect castration, testosterone and estradiol on ¹⁴Cserotonin metabolism by organ cultures of male rat pineal glands. *Experientia*, 41, 275276 (1985).
4. Daya, S. and Joubert, P.H. Glucocorticoid reversal of cyclic AMP down regulation in the rat pineal gland. *IRCS Medical Science*, 12, 1057 (1984).
5. Joubert, P.H. and Daya, S. Calcium channel blockers: Effects and Clinical applications. *Thai J. Pharmacol.*, 7, 2938 (1985).
6. Daya, S. and Joubert, P.H. The interaction between nifedipine and isoprenaline on guinea pig tracheal muscle precontracted with methacholine. *Arch. Int. Pharmacodyn. Ther.*, 280, 5357 (1986).
7. Daya, S. and Joubert, P.H. The interaction between verapamil and isoprenaline on isolated guinea pig tracheal muscle. *IRCS Medical Science*, 14, 519520 (1986).
8. Venter, C.P., Daya, S., Joubert, P.H., and Strydom, W.J. Ethnic differences in human lymphocytic cAMP production after isoprenaline stimulation and propranolol blockade. *Br. J. Clin. Pharm.*, 19, 187190 (1985).
9. Daya, S. and Fata, M. A 24 hour profile of serotonin metabolism by organ cultures of rat pineal glands. *IRCS Med. Sci.*, 14, 11531154 (1986).
10. Banoo, S., Brown, C., Daya, S. and Potgieter, B. A 24 hour profile of the effect of isoprenaline on ¹⁴Cserotonin metabolism by organ cultures of rat pineal glands. *Med. Sci. Res.*, 15, 14771478 (1987).
11. Fassihi, R., Dowse, R. and Daya, S. Influence of adjuvants of polyethylene glycol suppositories on drug bioavailability in rabbits. *Drug Dev. and Ind. Pharm.*, 15, 235251 (1989).
12. Olivieri, G., and Daya, S. Modulation of rat cardiac adrenergic receptors by

- carbachol. *Med. Sci. Res.*, 16, 12171218 (1988).
13. Brown, C., Daya, S. and Potgieter, B. The effect of organic calcium channel blockers on ¹⁴Cserotonin metabolism by organ cultures of rat pineal glands. *Med. Sci. Res.*, 17, 8789 (1989).
 14. Brown, C., Daya, S. and Potgieter, B. The effect of organic calcium channel blockers on rat pineal cAMP and cAMP phosphodiesterase. *Med. Sci. Res.*, 17, 253254 (1989).
 15. Daya, S., Pangerl, B., Pangerl, A., Troiani, M. and Reiter, R.J. The effect of 6Methoxybenzoxazolinone on the activities of rat pineal Nacetyltransferase and hydroxyindoleomethyltransferase and on melatonin production. *J. Pin. Res.*, 8, 5766 (1990).
 16. Daya, S., Nonaka, K.O. Buzzell, G.R., and Reiter, R.J. The heme precursor 5aminolevulinic acid alters brain tryptophan and serotonin levels without changing pineal serotonin and melatonin concentrations. *J. Neurosci. Res.*, 23, 304309 (1989).
 17. Khan, R., Burton, S., Morley, S., Daya, S. and Potgieter, B. A dose dependent reversal of stressinduced gastric ulceration in rats by melatonin. *Experientia*, 46, 8889 (1990).
 18. Welman, A.D., and Daya, S. The pineal gland as a model to elucidate the primary mode of action of alphamethyl dopa. *J. Neurosci. Res.*, 26, 115119 (1990).
 19. Kapp, E.A., Daya, S. and Whiteley, C.G. Nitrosamines act as agonists on the nicotinic receptors. *Med. Sci. Res.*, 18, 917919 (1990).
 20. Daya, S. An approach to understanding the role of the pineal gland. *S.A. J. Sci.*, 85, 622 (1989).
 21. Daya, S., Nonaka, K.O. and Reiter, R.J. The effect of melatonin on the 5ALAinduced alteration of brain indoleamines. *Neurosci. Lett.*, 114, 113116 (1990).
 22. Khan, R., Morley, S., Daya, S. and Potgieter, B. The evaluation of melatonin as a possible antistress hormone : in "Amino Acids : Chemistry, Biology and Medicine" Eds Lubec G and Rosenthal G, pp 962969 (1989).
 23. Olivieri, G., and Daya, S. Comparison of tryptophan and serotonin metabolism by organ cultures of rat pineal glands. *Med. Sci. Res.*, 18, 99100 (1990).
 24. Khan, R., Daya, S. and Potgieter, B. Evidence for a modulation of the stress response by the pineal gland. *Experientia*, 46, 860863 (1990).
 25. Welman, A. and Daya, S. A 16h profile of the effect of noradrenaline on rat pineal gland synthesis of melatonin and Nacetylserotonin from ¹⁴Cserotonin in organ culture. *Med. Sci. Res.*, 18, 449450 (1990).
 26. Daya, S., Kapp, E.A. and Whiteley, C.G. Protein ligand interactions : Interaction of nitrosamines with nicotinic acetylcholine receptor. *Biochem. Biophys. Res. Comm.*, 167, 13831392 (1990).
 27. Van Wyk, E.J., Daya, S. and Briceland, F. Pentobarbitone reduces rat forebrain serotonin concentrations without altering pineal serotonin concentrations. *Med. Sci. Res.*, 19, 159 (1991).
 28. Van Wyk, E.J. and Daya, S. Melatonin does not alter tryptophan uptake by rat brain cortical synaptosomes. *Med. Sci. Res.*, 19, 247248 (1991).
 29. Burton, S., Daya, S. and Potgieter, B. Melatonin modulates apomorphine induced

- rotational behaviour, *Experientia*, 47, 466-469 (1991).
30. Walsh, H. and Daya, S. Chronic administration of the heme precursor 5-amino-levulinic acid increases rat forebrain serotonin concentrations with a concomitant rise in liver tryptophan pyrrolase activity. *Med. Sci. Res.*, 19, 695-696 (1991).
 31. Walsh, H. and Daya, S. Melatonin displaces L-tryptophan from bovine serum albumin *in vitro*. *Med. Sci. Res.*, 19, 745-746 (1991).
 32. Olivieri, G. and Daya, S. Adenosine 5'-monophosphate enhances the dark and isoproterenol-induced rise in rat pineal N-acetyltransferase activity. *J. Pineal Res.*, 12, 535-537 (1992).
 33. Walsh, H., Daya, S. and Whiteley, C. Inhibition of rat liver tryptophan pyrrolase by melatonin *in vitro*. *Med. Sci. Res.*, 19, 849-850 (1991).
 34. Daya, S., Mia, R.B. and Whiteley, C.G. Isolation and purification of mitochondrial monoamine oxidase B from bovine liver by chromatofocussing. *Biochem. Int.*, 27, 321-333 (1992).
 35. Olivieri, G. and Daya, S. The effect of calcium on rat pineal N-acetyltransferase activity in pineal homogenates. *Med. Sci. Res.*, 20, 303-304 (1992).
 36. Eason, J., Whiteley, C.G. and Daya, S. Acetylcholinesterase activity in the pineal gland undergoes a diurnal rhythm. *Med. Sci. Res.*, 20, 323-324 (1992).
 37. van Wyk, E.J. and Daya, S. Hydrocortisone increases pineal melatonin synthesis by organ cultures of rat pineal glands. *Med. Sci. Res.*, 20, 785-786 (1992).
 38. Tandt, H. and Daya, S. 6-Methoxybenzoxazolinone stimulates rat pineal melatonin synthesis with a concomitant rise in pineal cyclic AMP. *Med. Sci. Res.*, 21, 317 (1993).
 39. Lee Sun, M., Daya, S., Knauer, J. and Potgieter B. Fenfluramine increases pineal melatonin synthesis by organ cultures of rat pineal glands. *Med. Sci. Res.*, 21, 385-386 (1993).
 40. Olivieri, G. and Daya, S. An investigation into the relationship between rat pineal N-acetyltransferase activity and pineal adenosine nucleotides. *Med. Sci. Res.*, 21, 519-520 (1993).
 41. Daya, S. and van Wyk, E. Hydrocortisone sensitises the rat pineal gland to α -adrenergic challenge. *Med. Sci. Res.*, 22, 447-448 (1994).
 42. van Wyk, E. and Daya, S. Glutamate inhibits the isoprenaline-induced rise in melatonin synthesis by organ cultures of rat pineal glands. *Med. Sci. Res.* (In Press).
 43. Walsh, H.A., Daya, S. and Whiteley, C.G. Mode of inhibition of rat liver tryptophan 2,3-dioxygenase by melatonin. *J. Pineal Res.*, 16, 188-192 (1994).
 44. Daya, S. Melatonin: a neuropsychiatric profile. *Specialist Med.*, 16, 58-64 (1994).
 45. Awah, E., Daya, S. and Senzani, F. Gonadal sex steroids stimulate L-¹⁴C-tryptophan uptake by rat cortical synaptosomes. *Med. Sci. Res.*
 46. Whiteley, C.G. and Daya, S. Protein ligand interactions. Part 5. Isoquinoline alkaloids as inhibitors of acetylcholinesterase from *Electrophorus electricus*. *J. Enz. Inhibition*, 9, 285-294 (1995).
 47. Daya, S., Kaye, P.T. and Mphahlele, M.J. Benzodiazepine analogues. Part 12. An investigation of substituent and ring atom effects on receptor binding affinities. *Med. Sci. Res.*, 24, 137-142 (1996).

48. Daya, S., Gelebe, A.C. and Kaye, P.T. Benzodiazepine analogues. Part 16. An investigation of the receptor binding affinities of benzodioxepine and benzoxapine derivatives. *Med. Sci. Res.*, 24, 589-592 (1996).
49. Whiteley, C.G. and S Daya Protein-ligand interactions. 6. Nicotinic acetylcholine receptor agonist activity of isoquinoline alkaloids. *Bioorg. Med. Chem. Lett.* 6, 2801- 2806 (1996).
50. Walsh H A and Daya S. Influence of the antidepressants Desmethylimipramine and Fluoxetine on Tryptophan 2,3 dioxygenase in the presence of exogenous melatonin. *Life Sci*, 62(26), 2417-2423 (1998).
51. Walsh H A and Daya S. Inhibition of Tryptophan 2,3 dioxygenase and superior potency of serotonin over melatonin. *J.Pineal Res.*, 23, 20-23 (1997)
52. Limson J, Daya S and Nyokong T. The interaction of melatonin and its precursors with aluminium, cadmium, copper, iron, lead and zinc: An adsorptive voltammetric study. *J Pineal Res.*, 24, 15-21 (1998).
53. Southgate G and Daya S. Melatonin protects against quinolinic acid-induced damage of hippocampal neurons. *Eur J Chem Neuroanat.* 14, 151-156 (1998)
54. Daya S. The role of melatonin as a neuroprotectant in Alzheimer's disease. *Specialist Medicine.* XX1(8), 528-532 (1999)
55. Southgate G and Daya S. Melatonin reduces quinolinic acid induced lipid peroxidation in rat brain homogenate. *Metabolic Brain Disease.* 14(3), 165-171 (1999).
56. Daya S and Anoopkumar-Dukie S. Acetaminophen inhibits liver tryptophan 2,3-dioxygenase activity with a concomitant rise in brain serotonin levels and a reduction in urinary 5-hydroxyindole acetic acid. *Life Sciences.* 67 (3) 235-240 (2000).
57. Anoopkumar-Dukie S, Glass BD, Walker RB and Daya S. Melatonin alters photodegradation of acetaminophen. *Pharmacy and Pharmacology Communications.* 6, 125-127 (2000).
58. Matlaba P, Daya S and Nyokong T. Interaction of the neurotransmitter acetylcholine with aluminium, calcium and sodium. *Pharmacy and Pharmacology Communications.* 6, 1-6 (2000).
59. Lack B, Daya S and Nyokong T. Interaction of serotonin and melatonin with sodium, potassium, calcium, lithium and aluminium. *J. Pineal Res*, 31, 102-108 (2001)
60. Daya S, Walker RB, Anoopkumar-Dukie S. Cyanide-induced free radical production and lipid peroxidation in rat brain homogenate is reduced by aspirin. *Met. Brain Dis.* 15, 203-210 (2000).
61. Heron P and Daya S. 17-B estradiol protects against quinolinic acid-induced lipid peroxidation in the rat brain. *Met Brain Disease*, 15, 267-274, 2000
62. Daniels WMU, Pietersen CY, Carstens ME and Daya S. Overcrowding induces anxiety in rats. *Met Brain Disease*, 15, 287-296, 2000
63. Lambat Z, Conrad N, Anoopkumar-Dukie, Walker R B and Daya S. An investigation into the neuroprotective properties of Ibuprofen. *Met Brain Disease* 15, 249-256, 2000.
64. Daya S, Anoopkumar-Dukie S, Walker RB and Glass BD. The effect of pH and

- temperature on stability of melatonin in aqueous solution. *J Pineal Res*, 31, 2001.
65. Heron P, Cousins K, Boyd C and Daya S. Paradoxical effects of copper and manganese on brain mitochondrial function. *Life Sciences*, 68(14), 1575-1584 (2001)
 66. Anoopkumar-Dukie, S., Walker, R. B., and Daya, S. A sensitive and reliable method for the detection of lipid peroxidation in biological tissues. *Journal of Pharmacy and Pharmacology*. *J. Pharmacy and Pharmacology*, 53(2), 263-266 (2001).
 67. Anoopkumar-Dukie S and Daya S. The effect of acute acetaminophen administration on pineal indole metabolism. *Biogenic Amines*, 16, 295-301 (2001)
 68. BD Glass, ME Brown, S Daya and MS Worthington. Influence of Cyclodextrins on the Photostability of selected drug molecules in solution and the solid state. *Int J Photoenergy*, 3: 1-7, 2001.
 69. Heron P and Daya S. 17β -Estradiol Attenuates Quinolinic Acid Insult in the Rat Hippocampus. *Metabolic Brain Disease* 16(3): 187-198; Dec 2001
 70. Daya S. Web-based teaching in Pharmacology. *Pharm J*, 68, 15, 2001
 71. Daya S. Stress and the Brain. (Electronic publication) *Science In Africa*, June 2001.
 72. DS Maharaj, Glass BD and S Daya. Exposure of rat skin homogenate to UV light in the presence of melatonin reduces superoxide anion generation lipid peroxidation. *Biogenic Amines* 16 (6) 2001.
 73. Daya S. Stress and the Brain. *Pharm. J* 68(7), 39 (2001)
 74. Parmar P, Daya S. The Effect of Copper on (3H)Tryptophan Metabolism in Organ Cultures of Rat Pineal Glands. *Metabolic Brain Disease* 16(3):199-205; Dec 2001
 75. DS Maharaj, BD Glass and Daya S. The photostability of Ibuprofen under ICH conditions in solution and in the gel formulation is dependent on the packaging. *South African Pharmacy Journal*, 69(2), 29-31 2002.
 76. DS Maharaj, S Anoopkumar-Dukie, BD Glass, EM Antunes, B Lack, RB Walker and Daya S. The identification of the UV degradants of melatonin and their ability to scavenge free radicals. *J Pineal Res* 32 (4), 257-261 (2002).
 77. Lambat Z, Limson J and Daya S. Cimetidine acts as a free radical scavenger by binding to transition metals. *J Pharmacy and Pharmacology*, 54, 1681-1686 (2002)
 78. Parmar P, Limson J, Nyokong T and Daya S. Melatonin protects against copper-mediated free radical damage. *J Pineal Res*. 32(4), 237 - 242 (2002).
 79. S. Dukie, B. Lack, K. McPhail, T. Nyokong, Z. Lambat, D. Maharaj, and S. Daya. Indomethacin reduces lipid peroxidation in rat brain homogenates by binding Fe(II). *Met Brain Dis* (2002).
 80. R. Pillay, D. Maharaj, S. Daniel, and S. Daya. Acetylcholine reduces cyanide induced superoxide anion generation and lipid peroxidation in rat brain homogenates. *Progress in Neuropsychopharmacology and Biological Psychiatry*, 27, 61-64, 2003.
 81. Maharaj D, Limson J and Daya S. 6-Hydroxymelatonin converts Fe (III) to Fe (II) and reduces iron-induced lipid peroxidation. *Life Sciences* 72, 1367-1375 (2003)

82. Maharaj D, Walker R, Glass BD and Daya S. 6-Hydroxymelatonin protects against cyanide induced free radical attack in rat brain homogenates J Chem Neuroanat. 26, 103-107 (2003).
83. Daniel S, Limson J, Dairam A, Watkins G and Daya S. Through metal binding, curcumin protects against lead- and cadmium induced lipid peroxidation in rat brain homogenates and against lead-induced tissue damage in rat brain. J Inorg Biochem. 2004 Feb;98(2):266-75.
84. Maharaj H, Maharaj, DS, Saravanan KS, Mohanakumar KP and Daya S. Aspirin curtails the acetaminophen-induced rise in brain norepinephrine levels. Metabolic Brain Disease. 19, 1-2, 71-77 (2004).
85. Maharaj DS, Saravanan KS, Maharaj H, Mohanakumar KP and Daya S. Acetaminophen and aspirin inhibit superoxide anion generation and lipid peroxidation, and protect against 1-methyl-4-phenyl pyridinium-induced dopaminergic neurotoxicity in rats. Neurochemistry International. 44, 355-360 (2004).
86. Vine NG, Leukes WD, Kaiser H, Daya S, Baxter J and Hecht T. Competition for attachment of aquaculture candidate probiotic and pathogenic bacteria on fish intestinal mucus. Journal of Fish Diseases. 27, 319-326 (2004).
87. Maharaj DS, Antunes E, DM Maree, Nyokong T, BD Glass and Daya S. 6-Hydroxymelatonin protects against quinolinic acid induced oxidative neurotoxicity and quenches singlet oxygen. (In Press)
88. Hu F, Hepburn HR, Xuan H, Chen M, Daya S and Radloff S. Effects of propolis on blood glucose, blood lipid and free radicals in rats with diabetes mellitus. Pharmacological Research 51, 147-152 (2005)
94. H.E. Badenhorst, D.S. Maharaj, S.F. Malan, S. Daya and S. van Dyk. Histamine H3 receptor antagonists reduce superoxide anion generation and lipid peroxidation in rat brain homogenates. Journal of Pharmacy and Pharmacology (2005), 57(6), 781-785
95. E V Kryukova, D Yu Mordvintsev, S Daya, Yu N Utkin and V I Tsetlin. Polyclonal antibodies against native weak toxin Naja kaouthia discriminate native weak toxins and some other three-fingered toxins against their denatured forms. Toxicon : official journal of the International Society on Toxinology (2005), 46(1), 24-30
96. Muller, A. C.; Maharaj, H.; Maharaj, D. S.; Daya, S.. **Aciclovir protects against quinolinic-acid-induced oxidative neurotoxicity.** Journal of Pharmacy and Pharmacology (2005), 57(7), 883-888
97. Maharaj, D. S.; Maharaj, H.; Antunes, E. M.; Maree, D. M.; Nyokong, T.; Glass, B. D.; Daya, S.. 6-hydroxymelatonin protects against quinolinic-acid-induced oxidative neurotoxicity in the rat hippocampus. Journal of Pharmacy and Pharmacology (2005), 57(7), 877-881
98. Maharaj, D. S.; Molell, H.; Antunes, E. M.; Maharaj, H.; Maree, D. M.; Nyokong, T.; Glass, B. D.; Daya, S.. Melatonin generates singlet oxygen on laser irradiation but acts as a quencher when irradiated by lamp photolysis. Journal of Pineal Research (2005), 38(3), 153-156.

99. H. Maharaj, D. Maharaj and S. Daya. Acetylsalicylic acid and acetaminophen protect against oxidative neurotoxicity. *Metabolic Brain Disease* (2006) 21, 189-199
100. D.S. Maharaj, H. Maharaj, S. Daya. Melatonin and 6-Hydroxymelatonin protect against iron- induced neurotoxicity. *Journal of Neurochemistry* 96, 78-81 (2006)
101. H. Maharaj, D. Maharaj and S. Daya. Acetylsalicylic acid and acetaminophen protect against MPP⁺-induced mitochondrial damage and superoxide anion generation. *Life Sciences*. 78, 2438-2443 (2006)
102. H. Maharaj, D.S. Maharaj, M. Scheepers, R. Mokokong, S. Daya. L-Dopa administration enhances 6-hydroxydopamine generation. *Brain Research* 1063 (2005) 180-186 (2006)
103. Dairam A, Chetty P and Daya S. Non-steroidal anti-inflammatory agents, tolmetin and sulindac, attenuate oxidative stress in rat brain homogenate and reduce quinolinic acid-induced neurodegeneration in rat hippocampal neurons. *Metabolic Brain Disease* (2006) 21, 221-233
104. Cassim L¹, Maharaj DS, Maharaj H, Daya S. Melatonin counters the 5-fluorouracil-induced decrease in brain serotonin and dopamine levels. *Annals of Neuroscience* (2006), 13(2), 27-30
105. A. Dairam, E.M. Antunes¹, K.S. Saravanan and S. Daya. Non-steroidal anti-inflammatory agents, tolmetin and sulindac, inhibit liver tryptophan 2,3-dioxygenase activity and alter brain neurotransmitter levels. *Life Sciences* (2006) 79 (24) 2269-2274
106. Fuliang Hu, H R Hepburn, Yinghua Li, M Chen, S E Radloff, S Daya. Effects of ethanol and water extracts of propolis (bee glue) on acute inflammatory animal models. *Ethnopharmacol.* 2005 Sep 14;100:276-83
107. Muller A , Dairam A, Limson J and Daya, S. Mechanisms by which acyclovir reduces the oxidative neurotoxicity and biosynthesis of quinolinic acid. *Life Sciences*. 80, 918-925 (2007)
108. Curcuminoids, curcumin and demethoxycurcumin reduce lead (Pb)-induced memory deficits in male Wistar rats. (2007) Amichand Dairam, Janice, L. Limson, Gareth, M. Watkins, Edith Antunes and Santy Daya. *Journal of Agricultural and Food Chemistry*. 55: 1039-1044
109. Non-steroidal anti-inflammatory agents, tolmetin and sulindac, attenuate quinolinic acid (QA)-induced oxidative stress in primary hippocampal neurons and reduce QA- induced spatial memory deficits in male Wistar rats. Amichand Dairam, Adrienne Muller and Santy Daya. *Life Sciences*. 80(10): 818-925 2007
110. Maharaj DS, Glass, BD and Daya S. Melatonin: New Places in Therapy. *Bioscience Reports_Biosci Rep.* 2007 Sep 7
111. Southgate S, Schubert M and Daya S. Melatonin protects against glutamate receptor agonists in neuronal cultures. *Annals of Neurosciences*, 15, 1-5 (2008)
112. Muller A and Daya S. Acyclovir inhibits rat liver tryptophan-2,3-dioxygenase enzyme and induces a concomitant rise in serotonin and 5-hydroxyindole acetic acid levels in the brain, *Metabolic Brain Disease* 23(3) 351-360 (2008)

113. Dairam A, Fogel R, Daya S, and Limson J. The antioxidant and iron binding properties of curcumin, capsaicin and s-allylcysteine reduces oxidative stress in rat brain homogenate. *Journal of Agricultural and Food Chemistry* (2008), 56(9), 3350-3356
114. Maharaj, Deepa S.; Glass, Beverley D.; Daya, Santy. Melatonin: New places in therapy. *Bioscience Reports* (2007), 27(6), 299-320.

BOOK CHAPTER:

Daya, S., Banoo, S., Brown, C., and Potgieter, B. Profiles of ¹⁴Cserotonin metabolism by organ cultures of rat pineal glands in the presence and absence of isoprenaline : in "Advances in pineal research" Eds R.J. Reiter and S.F. Pang, John Libbey Co. (London) pp 103106 (1989).

7. PRESENTATIONS, CONFERENCES AND WORKSHOPS

Invited Oral Presentations:

- (a) Mumbai College of Pharmacy (December 2018)
- (b) University of Jenin, Guangzhou, China (June 2018)
- (c) Institute of Chemical Technology, Mumbai (December 2018)
- (d) University of Illinois (October 2010)

I gave numerous oral presentations on my research at conferences in South Africa, Europe and the USA

I organized two neuroscience schools for the African Continent funded by the International Brain Research organization (IBRO)

I gave numerous workshops on the following:

Scientific Writing
 Research Methodology
 Grant Writing
 Thesis Writing

POSTGRADUATE STUDENTS SUPERVISED BY ME

Honours (Pharmacology)	:	2
Honours (Biochemistry)	:	21
MSc	:	18
PhD	:	12

8. ORGANISATION OF SCIENTIFIC MEETINGS AND WORKSHOPS

1. Chief organiser of the first Eastern Cape Biochemical Society Meeting (1987).

2. Chief organiser of the third Eastern Cape Biochemical Society Meeting (1989).
3. Physiological control of heart and skeletal muscle. GEC EXPO for young scientists, Rhodes School Science Festival, 1990-1993.
4. Convenor of Neuroscience Lecture Course (1996) sponsored by USNC/IBRO.
5. Committee member and symposium organiser of the SONA 1997 Meeting.
6. Chief Organiser of the symposium of the Eastern Cape Division of the SASBMB, November 1997, Grahamstown.
7. Convener of the Academy of Pharmaceutical Sciences 21st Annual Congress, September 10-13, 2000, Grahamstown
8. Convener of the 5th International Conference on Lifelong Learning in Pharmacy, 24-27 June 2002, Rhodes University, Grahamstown.
9. Convener of the Pharmacology and Neuroscience Congress, Grahamstown 5-8 October 2008

OUTREACH DUTIES:

- (1) Appointed by the Medical Research Council of South Africa as a member of the evaluation panel for pharmacology and anaesthetics 1993-1995
- (2) Reviewer for the International Science Foundation (USA) (Ad Hoc)
- (3) Editor-in-chief: African Journal of Neuroscience (1993)
- (4) MRC Grants Committee (1994-1995)
- (5) Councillor: S.A. Neuroscience Society (1992-1996)
- (6) FRD Advisory Committee on Biological and Medical Sciences (1995)
- (7) S.A. representative on the Governing Council of the International Brain Research Organisation (1995 - present).
- (8) Secretary: S.A. Neuroscience Society (1996-1999)
- (9) Executive member of the South African National Committee for the International Brain Research Organisation (1994-)
- (10) SONA representative on the Governing Council of IBRO (1997-)
- (11) Member of the FRD evaluation committee for Medical and Biological Sciences

(1997-

- (12) Elected to Council of AFRET (African Education and Training) in Basic Medical Sciences
- (13) Elected to President of the Southern African Neuroscience Society (1999)
- (14) Expert Reviewer in Neuroscience for the European Commission
 - (15) Executive Member (co-opted): Academy of Pharmaceutical Sciences (2000)
 - (16) Editor: Metabolic Brain Disease (2000-)
 - (17) Appointed to the Rhodes University Student Disciplinary Panel
 - (18) Reviewer for the National Research Foundation (2000)
- (19) Chairman of the Rhodes University Ethical Standards Committee (2001 –2007)
- (20) Appointed to the IBRO Schools Board (2001- 2006)
- (22) Appointed by the Sacoor medical Group in the UK as a key Opinion Leader in Alzheimer's disease for the Africa Region(2008)