



Curriculum Vitae

NAME: DARAKHSHAN JABEEN HALEEM

(Impact Factor of Scientific Publications about 180)
(Citations from **Scopus** about 650)

PRESENT DESIGNATION:

Dean Faculty of Science
University of Karachi

PROFESSOR,

Neurochemistry and Biochemical
Neuropharmacology Research Laboratory
Department of Biochemistry
University of Karachi

ADDRESS FOR CORRESPONDENCE

Prof. Dr. Darakhshan J. Haleem

Department of Biochemistry
University of Karachi
Karachi, 75270, PAKISTAN

e-mail: djhaleem@uok.edu.pk

e-mail: darakhshan_haleem@yahoo.com

Academic Qualifications

	Degree	Year	University	Subject
1.	M. Sc	1973	Karachi University	Biochemistry
2.	M. Phil	1976	Karachi University	Biochemistry
3.	Ph.D	1988	London University British Post graduate Medical Federation Institute of Neurology	Neurochemistry
4.	D. Sc	1996	Open International University for Complementary medicine (Colombo)	Medicina Alternativa

Activities for the promotion of science & technology

- **Founded Biochemistry Department in the former Urdu Science College**
 - Introduced new fields such as
 - Behavioral Pharmacology,
 - Biochemistry of drug action,
 - Biochemical Neuropharmacology
- and techniques
- HPLC of biogenic amines
 - Behavioral models for Drug Discovery

Experience/Employment History

Administrative experience

- Working as Dean Faculty of Science 1-4-2010 to date
- Working as Coordinator, Natural Science from 24-9-2001 to date
- Worked as Dean, Faculty of Science from 20 Feb 2008 to June 14th 2008
- Worked as Chairperson Dept Biochemistry, University of Karachi, for three years (31 March 2005 to 31 March 2008)

Teaching and research experience

- Working as Professor Dept Biochemistry, University of Karachi from 13 March 1993 to date
- Above 30 years of teaching/research experience.
- Over 250 research publications in international/ national journals of Neurochemistry, Neuropharmacology, Pharmacology, Biochemistry and other life Sciences.
- Written two books
 - "Neurochemistry, Neuropharmacology & Behavior" 2011
 - " Neurochemistry of Drug Action"
- Supervised 26 Ph.D and M.Phil thesis and over 40 M.Sc thesis.
- Established courses like "Biochemistry of Drug Action" "Biochemical Neuropharmacology" and techniques like HPLC-EC, Fluorimetry and many behavioral pharmacology techniques in the Department of Biochemistry.

Research grants:

- Received HEC grant of over Rs twenty lacs for the year 2008 to 2011
- Received HEC grant of over Rs twenty five lacs for the years 2004-to 2007
- Received Pakistan Science Foundation Research Grant for the years 2000-2003.
- Received Karachi University Research Grants (1983-1984) and (1986-2009)

Society Memberships

- Life Member of Pakistan Society of Biochemists.
- Life Member of Pakistan Pharmacological Society.
- Life Member and organizer of ISBBP (International study group for Biochemical and Biophysical Research in Pakistan.
- Life Member IBRO (international brain research organization)

Editorship/ reviewer

- Editor Journal of Pharmacology and Toxicology
- Editor Asian journal of Biochemistry
- Associate Editor of Journal of Medical Sciences (Asian network Journal)
- Editor Journal of Basic and Applied Sciences
- Editor Karachi University Journal of Science
- Invited Reviewer of the editorial board of Behavioral Brain Research (USA)
- Invited reviewer of Nutritional neuroscience (USA)

- **Invited reviewer of the journal Progress in Neuropsychopharmacology and Biol Psychiatry**
Research Guidance

Guided

- **Over 40 MSc Theses**
- **26 PhD and M. Phil Theses**

AWARDS AND SCHOLARSHIPS

- **Secured positions and distinctions in I.Sc, B.Sc and M.Sc**
- **Awarded central Overseas training Scholarship by Pakistan Govt (Jan 1986-Sept 1988)**
- **Given Overseas Research Student (ORS) award in London (June 1986-Sept 1988)**
- **Selected for Young Scientist award to attend seventh meeting of International Study Group for Tryptophan Research (ISTRY) held in Nagoya, Japan during June 1991.**
- **Obtained a Research Award from Karachi University (1995)**
- **Awarded D.Sc degree by The Open International University for Complementary Medicine at Columbo (Dec 1996)**
- **Obtained award of appreciation by Zoroastrian College affiliated to The Open Int. Univ. For Comp. Medicine (Srilanka).**
- **Given gold medal award of 1996 by Pakistan Academy of Sciences.**
- **Obtained Star woman in Science and technology award of 1996 by Star Girls and Women foundation in May 1997.**
- **Awarded Nishan-e Zafar and Nishan-e-Azmat-Danish by KUTS in 1996 and 1997.**
- **Awarded Ezaz-e- Fazeelat (of 1997) in August 1999**
- **Listed and recognized as one of the top scientists of Pakistan.**
- **Acknowledged as a productive scientist of Pakistan**
- **Awarded Life Time Achievement Award Of 2007 by Star women foundation**

Research Project Grants Received by Prof Dr Darakhshan Jabeen Haleem as Principle Investigator

S. NO	TITLE	DONOR AGENCY	AMOUNT (RS)	DURATION	
				From	To (Status)
1	Extrapyramidal and monoaminergic effects of neuroleptics: modulation by l-tryptophan and l-valine	Pakistan Science Foundation	439997	1-6-2000	31-5-2003 (Completed)
2	Suppression and Treatment of Tardive dyskinesia	Higher Education Commission	2576520	Dec 2004	Dec 2007 (Completed)
3	Neurochemical and Pharmacological Studies on the role of stress and dietary regulations on the parameters of obesity	Higher Education Commission	2041752	April 2009	(On going)
4	Effect of buspirone on apomorphine-induced addiction	Dean's Research Project	100,000	Sept 2009	Feb 2011 Completed
5	Effects of Rice bran oil in a rat model of tardive dyskinesia	Dean's Research Project	60,000	5 th Oct 2007	8 th Oct 2008 Completed
6	Effects of buspirone on a rat model of tardive dyskinesia	Dean's Research Project	55,000	12 th April 2006	17 th April 2007 Completed
	Effects of m-CPP in a rat model of tardive dyskinesia	Dean's Research Project	50,000	2005	2006 Completed

Current research Interest (Prof Dr Darakhshan Jabeen Haleem)

Previous work from our laboratory addressed role of serotonin in adaptation to stress, regulation of appetite, modulation of motor activity and management of anxiety. Currently we are more interested in an interaction of serotonin and dopamine that may be useful in extension of therapeutics in the treatment of schizophrenia, appetite disorders, depression and addiction.

1. Serotonergic drugs in the treatment of psycho stimulant-induced addiction:

All drugs that produce addiction are known to increase dopamine function via nucleus accumbens. Psycho stimulants are the drugs that increase arousal level, enhance performance and elicit antidepressant like effect. Apomorphine, a dopamine D1/D2 agonist, is also a psycho stimulant. The drug is largely used for the treatment of Parkinson's disease. Like other psycho stimulants, long term use of this drug produces addictive. In view of a role of serotonin in the modulation of dopamine function, this project aims to develop strategies for the long term use of apomorphine and/or other psycho stimulants where co use of a serotonergic compound can attenuate or reverse psycho stimulant -induced addiction.

2. Preclinical studies on the use of tryptophan for the treatment of Anorexia Nervosa

Increasing serotonin functions in the brain is anorexigenic and tends to decrease appetite. Starvation increases brain serotonin metabolism to elicit an acute suppressant effect on

appetite. Conversely, in studies from our laboratory it has been shown that long term starvation and dieting that decreased body weight 20% below normal elicited symptoms similar to Anorexia Nervosa. Brain serotonin metabolism decreased in rat model of diet restriction-induced Anorexia Nervosa. Because tryptophan the precursor of serotonin is an essential amino acid its source is dietary. The aim of this research proposal is to administer tryptophan to the rat model of Diet restriction-induced Anorexia Nervosa and to monitor a possible reversal of symptoms of Anorexia Nervosa in the rat model.

3. Role of corticosteroids in learning and memory

Exposure to an uncontrollable stressor produces behavioral deficits comparable to rat model of learned helplessness that may be regarded as a model of anxiety/depression because it responds to both anxiolytic as well as antidepressant. An uncontrollable stressor when administered repeatedly produces adaptation to stress as stress-induced behavioral deficits do not occur and animals learn to live with the stress. Exposure to a stress-inducing situation also stimulates hypothalamo-pituitary adrenocortical axis to increase circulating levels of glucocorticoids. A role of glucocorticoids in serotonin responses to stress is well established. It is often suggested that mild to moderate increase in circulating glucocorticoids is adaptive while higher circulating levels of glucocorticoids are maladaptive and impair adaptation to lead to depression. The aim of this research proposal is to explore the mechanism of glucocorticoid-serotonin interaction that may be adaptive or otherwise maladaptive.

4. To delineate anxiety, sedation and anxiety pathways of the brain
5. To develop herbal remedies for brain disorders.

6. Neurochemical & Pharmacological studies on brain aging
7. Leptin Serotonin interaction in the regulation of obesity
8. Leptin Serotonin interaction in adaptation to stress
9. Drug development for enhancing memory
10. Research strategies for the treatment of addiction

Publications in (In refereed International Abstracts or Impact Factor Journals)

S#	Year of publication	Title of the paper	Complete name of the Journal and address	Vol No issue No & Page No
1.	2011	Behavioral deficits and exaggerated feedback control over raphe-hippocampal serotonin neurotransmission in restrained rats	Pharmacological Reports (Polish Academy of Science)	63 (4) in Press
2.	2011	Attenuation of Apomorphine-Induced Sensitization by Buspirone	Pharmacology Biochemistry & Behavior (Elsevier)	Accepted
3.	2011	Raphe-Hippocampal Serotonin Neurotransmission In The Sex Related Differences Of Adaptation To Stress: Focus on Serotonin-1A Receptor	Current Neuropharmacology Bentham open journals	9 (in press)
4.	2011	Reversal of haloperidol-induced motor deficits by mianserin and mesulergine in rats	Pakistan Journal of Pharmaceutical Sciences	24(1): 7-12
5.	2010	Protective effects of aqueous fruit extract from sea buckthorn on haloperidol-induced orofacial dyskinesia an neuronal	Medical science monitor: international medical journal of experimental and	16(8) 285-292

		alterations in the striatum	clinical research (Medical Science International Ltd)	
6.	2009	Exaggerated feedback control decreases brain serotonin concentration and elicits hyperactivity in a rat model of diet-restriction-induced anorexia nervosa.	Appetite (Elsevier)	52(1):44-50.
7.	2009	Oral supplementation of Sea Buckthorn (<i>Hippophae rhamnoides</i> L. spp. <i>Turkestanica</i>) fruit extract modifies haloperidol induced behavioral deficits and increases brain serotonin metabolism	Journal of Food and Drug Analysis (Taiwan)	17(4): 257-263
8.	2009	Possible anxiolytic profile of aqueous fruit extracts of a medicinal plant sea buckthorn (<i>Hippophae Rhamnoides</i> L. spp. <i>Turkestanica</i>) in experimental models	Pakistan Journal of Botany (Pakistan)	41 (6), 2791-2800
9.	2009	Behavioral and neurochemical profile of m-CPP following exposure to single restraint stress in rat.	Acta neurologica Belgica (Belgium)	109(1):24-31.
10.	2009	Attenuation of somatodendritic responses to 8-hydroxy-2-di-npropylamino tetralin following long-term dietary sugar consumption in rats.	Journal of the College of Physicians and Surgeons Pakistan.	19(7):401-5.
11.	2009	Repeated administration of <i>Nigella sativa</i> decreases 5-HT turnover and produces anxiolytic effects in rats.	Pakistan journal of pharmaceutical sciences. Pakistan	22(2):139-44.
12.	2009	Dietary supplementations of amino acids: evidence for enhanced serotonergic functions following haloperidol withdrawal in rat medial prefrontal cortex.	Journal of the College of Physicians and Surgeons Pakistan.	19(3):139-45.

13	2008	Repeated administration of fresh garlic increases memory retention in rats.	Journal of medicinal food. (Korean Society of food science and nutrition)	11(4):675-9.
14	2008	Long-term consumption of sugar-rich diet decreases the effectiveness of somatodendritic serotonin-1A receptors.	Nutritional neuroscience. (Maney Publishing)	11(6):277-82.
15	2008	Responsiveness of 5-HT _{2C} receptors in repeatedly diazepam-injected rats: a behavioral and neurochemical study.	Pharmacological reports. (Polish Acad Sciences Institute of pharmacology)	60(5):716-24.
16	2008	Serotonin and dopamine metabolism in the dorsal and ventral striatum of haloperidol-induced tardive dyskinesia model in rats.	Journal of Chemical Society Pakistan.	30 (3): 410-416
17	2008	Neurochemical profile of 8-hydroxy-2-(di-n-propylamino) tetralin (8-OH-DPAT) induced hyperphagia in sugar rich diet treated rats.	Journal of Chemical Society Pakistan. 2008;	30 (3): 431-435.
18	2008	Serotonin(1A) receptor agonism in the expression of behavioral dopaminergic supersensitivity in subchronic haloperidol treated rats.	Pakistan journal of pharmaceutical sciences. Pakistan	21(4):411-20.
19	2008	Desensitization of pre and post synaptic 5-HT-1A receptor responses following long term consumption of sugar rich diet: implications for sugar-induced obesity.	Pakistan journal of pharmaceutical sciences. Pakistan	21(4):327-32.
20	2008	Behavioral effects of 1-(m-chlorophenyl)piperazine (m-CPP) in a rat model of tardive dyskinesia.	Pakistan journal of pharmaceutical sciences.	21(3):262-8.
21	2008	m-CPP induced hypolocomotion does not interfere in the assessment of memory functions in rats.	Pakistan journal of pharmaceutical sciences. Pakistan	21(2):139-43.

22	2008	Subchronic treatment with mercuric chloride suppresses immune response, elicits behavioral deficits and increases brain serotonin and dopamine metabolism in rats.	Pakistan journal of pharmaceutical sciences. Pakistan	21(1):7-11.
23	2007	Reversal of haloperidol-induced tardive vacuous chewing movements and supersensitive somatodendritic serotonergic response by buspirone in rats.	Pharmacology, biochemistry, and behavior. (Elsevier)	87(1):115-21.
24	2007	Neurochemical and behavioral effects of 8-OH-DPAT following exposure to restraint stress in rats.	Pharmacological reports. (Polish Acad Sciences Institute of pharmacology)	59(2):173-80.
25	2007	Reversal of haloperidol-induced extrapyramidal symptoms by buspirone: a time-related study.	Behavioral pharmacology. (European behavioral pharmacology Society)	18(2):147-53.
26	2007	Attenuation of restraint-induced behavioral deficits and serotonergic responses by stabilized rice bran in rats.	Nutritional neuroscience. (Informa Healthcare)	10(1-2):11-6.
27	2007	Role of serotonin-1A receptors in restraint-induced behavioral deficits and adaptation to repeated restraint stress in rats.	The International journal of neuroscience. (Informa Healthcare)	117(2):243-57.
28	2007	Enhanced serotonergic neurotransmission in the hippocampus following tryptophan administration improves learning acquisition and memory consolidation in rats.	Pharmacological reports. (Polish Acad Sciences Institute of pharmacology)	59(1):53-7.
29	2007	Tolerance in the anxiolytic profile following repeated administration of diazepam but not buspirone is associated with a decrease in the responsiveness of postsynaptic 5-HT-1A receptors.	Acta Biologica Hungarica (Akademiai Kiado)	58 (4):345-357
30	2007	Increase in the effectiveness of somatodendritic 5-HT-1A receptors in a rat model of tardive dyskinesia.	Acta neurobiologiae experimentalis (Nencki Institute of Experimental Biology,	67(4):389-97.

			Poland)	
31	2007	Dose related effects of buspirone on serum electrolyte balance, plasma osmolality and systolic blood pressure (SBP) in rats.	Pakistan journal of pharmaceutical sciences.	20(4):295-9.
32	2007	Neurochemical and behavioral effects of m-CPP in a rat model of tardive dyskinesia.	Pakistan journal of pharmaceutical sciences	20(3):188-95.
33	2007	Serotonin-1A receptor responsiveness in stress and following adaptation to stress.	Pakistan journal of pharmaceutical sciences Pakistan	20(2):115-9.
34	2007	Comparative effects of single dose and repeated oral tryptophan administration on indoleamine synthesis and memory functions in rats.	Pakistan journal of pharmaceutical sciences. Pakistan	20(1):71-6.
35	2007	Effects of repeated restraint stress on serum electrolytes in ethanol-treated and water-treated rats.	Pakistan journal of pharmaceutical sciences Pakistan	20(1):51-5.
36	2006	Long-term tryptophan administration enhances cognitive performance and increases 5HT metabolism in the hippocampus of female rats.	Amino acids (Springer)	31(4):421-5.
37	2006	Inhibition of restraint-induced neuroendocrine and serotonergic responses by buspirone in rats.	Pharmacological reports (Polish Acad Sciences Institute of pharmacology)	58(5):636-42.
38	2006	Attenuation of stress-induced behavioral deficits by <i>Azadirachta indica</i> (Neem) role of serotonin.	Pakistan Journal of Botany (Pakistan)	38(1): 131-138
39	2006	Oral administration of <i>Phytolacca Baccis</i> extract increases brain serotonin metabolism and decreases food intake in rats.	Pakistan Journal of Botany	38 (3): 745-750
40	2006	Neurochemical profile of m-CPP in the straitum of a rat model of tardive dyskinesia.	Journal of the Chemical Society of Pakistan	28 (6): 605-610
41	2006	5-HT-1A receptor responsiveness following	Pakistan journal of pharmaceutical	19(4):333-7.

		subchronic administration of buspirone.	sciences.	
42	2006	Serotonergic modulation of dopamine neurotransmission: a mechanism for enhancing therapeutics in schizophrenia.	Journal of the College of Physicians and Surgeons--Pakistan : JCPSP	16(8):556-62.
43	2006	Increased serotonergic functions following administration of 1-(1-naphthyl) piperazine in propranolol injected rats.	Pakistan journal of pharmaceutical sciences Pakistan	19(3):194-199
44	2006	Intraerythrocyte and serum electrolytes in diabetic patients with hypertension.	Journal of the College of Physicians and Surgeons--Pakistan : JCPSP	16(7):445-9.
45	2006	Effects of long term consumption of sugar as part of meal on serotonin 1-A receptor dependent responses.	Pakistan journal of pharmaceutical sciences Pakistan	19(2):94-8.
46	2006	Relationship of brain tryptophan and serotonin in improving cognitive performance in rats.	Pakistan journal of pharmaceutical sciences Pakistan	19(1):11-5.
47	2005	Repeated administration of lead decreases brain 5-HT metabolism and produces memory deficits in rats.	Cellular & molecular biology letters (Springer)	10(4):669-76.
48	2005	Attenuation of restraint induced behavioral deficits by buspirone and propranolol in rats.	Journal of the College of Physicians and Surgeons--Pakistan : JCPSP	15(12):795-8.
49	2005	Motor effects of buspirone: Relationship with dopamine and serotonin in the striatum.	Journal of the College of Physicians and Surgeons--Pakistan : JCPSP	15(12):753-6.
50	2005	Dopamine and serotonin neurotransmission in the reinforcing effects of alcohol and apomorphine.	Journal of the College of Physicians and Surgeons--Pakistan : JCPSP 2005;	15(8):458-62.
51	2005	Neurochemical estimations of some new quaternary phenacyl-bromopiperidinium compounds.	Pakistan journal of pharmaceutical sciences Pakistan	18(2):52-4.

52	2005	Effects of tryptophan and valine administration on behavioral pharmacology of haloperidol.	Pakistan journal of pharmaceutical sciences Pakistan	18(2):23-8.
53	2004	Somatodendritic and postsynaptic serotonin-1A receptors in the attenuation of haloperidol-induced catalepsy.	Progress in neuro-psychopharmacology & biological psychiatry (Elsevier)	28(8):1323-9.
54	2004	Is anorexia in thioacetamide-induced cirrhosis related to an altered brain serotonin concentration?	Polish journal of pharmacology (Polish Acad Sciences Institute of pharmacology)	56(1):73-8.
55	2004	Lack of restraint-induced increases of brain serotonin metabolism in rats treated with spiperone: relationship with restraint-induced behavioral deficits.	Pakistan journal of pharmaceutical sciences Pakistan	17(2):57-65.
56	2003	Enhancement of serotonin-1A receptor dependent responses following withdrawal of haloperidol in rats.	Progress in neuro-psychopharmacology & biological psychiatry	27(4):645-51.
57	2003	Decrease of ethanol intake following repeated injection of serotonin-1A agonist in rats: relationship with receptor responsiveness.	Journal of the College of Physicians and Surgeons-Pakistan : JCPSP 2003;	13(6):305-8.
58	2003	Injected tryptophan increases brain but not plasma tryptophan levels more in restrained rats.	Pakistan journal of pharmaceutical sciences Pakistan	16(1):51-7.
59	2003	Effects of 2 hrs. restraint stress on brain serotonin metabolism and memory in rats.	Pakistan journal of pharmaceutical sciences Pakistan	16(1):27-33.
60	2003	Effect of co administration of haloperidol and large neutral amino acids (tryptophan and valine) on rats striatal dopamine, serotonin and their metabolism.	Pakistan journal of pharmaceutical sciences Pakistan	16(1):13-25.
61	2002	Differences in the effects of haloperidol and clozapine on	Medical science monitor: international	8(9):BR354-61.

		brain serotonin and dopamine metabolism and on tests related to extrapyramidal functions in rats.	medical journal of experimental and clinical research (Medical Science International Ltd)	
62	2002	Serotonin and serotonin 1-A receptors in the failure of ethanol-treated rats to adapt to a repeated stress schedule	Journal of studies on alcohol (Center of Alcohol studies, Rutgers, The State University of New Jersey)	63(4):389-96.
63	2002	Pre- and postsynaptic responses to 1-(1-naphthylpiperazine) following adaptation to stress in rats.	Progress in neuro-psychopharmacology & biological psychiatry Elsevier	26(1):149-56.
64	2002	Dopamine/Serotonin metabolite ratio and extrapyramidal effects of clozapine in rats.	Journal of the College of Physicians and Surgeons Pakistan	12 (10):588-592
65	2002	Neurochemical effects of 8-hydroxy-2-di-n-propylamino tetralin in rats treated with haloperidol.	Pakistan journal of pharmaceutical sciences Pakistan	15(1):71-82.
66	2001	Neurochemical and behavioral profiles of 1-(1-naphthyl) piperazine in rats.	Journal of the College of Physicians and Surgeons Pakistan	11(1): 50-56
67	2001	Behavioral effects of 8-OH-DPAT in single and repeated haloperidol injected rats.	Pakistan journal of pharmaceutical sciences Pakistan	14(2):9-17.
68	2000	Decreases of brain serotonin following a food restriction schedule of 4 weeks in male and female rats	Medical science monitor : international medical journal of experimental and clinical research (Medical Science International Ltd)	6(6):1061-1067.
69	2000	Hyperphagia and Decreases of Brain Serotonin in Rats Fed Freely on Sugar Rich Diet for Three Weeks.	Nutritional Neuroscience	3(6):399-405
70	2000	Neurochemical and extra pyramidal effects of atypical neuroleptic clozapine in rats.	Pakistan journal of pharmaceutical sciences Pakistan	13(1):47-55.
71	1999	Attenuation of 8-OH-DPAT-	Stress (Amsterdam,	3(2):123-9.

		induced decreases in 5-Ht synthesis in brain regions of rats adapted to a repeated stress schedule.	Netherlands) (Informa Healthcare)	
72	1999	Serotonergic mechanism of antidepressant action and adaptation to stress.	Journal of the College of Physicians and Surgeons Pakistan	9(3):139-146
73	1999	Serotonin and anxiety: A review of current research and clinical implications	Journal of the College of Physicians and Surgeons Pakistan	9(8):384-393
74	1999	A study on the effects of some new derivatives of piperidine on neurotransmitters	Pakistan journal of pharmaceutical sciences Pakistan	12(1):43-7.
75	1999	Increased precursor availability did not increase food intake and 5-HT turnover rate in the hypothalamus of diazepam injected rats.	Pakistan journal of pharmaceutical sciences Pakistan	12(1):21-6
76	1998	Inhibition of restraint-induced anorexia by injected tryptophan.	Life sciences (Elsevier)	63(14):PL205-212.
77	1998	Neurochemical and behavioural effects of long term intake of tea.	Pakistan journal of pharmaceutical sciences Pakistan	11(2):55-60.
78	1998	Effect of chlorpromazine on brain biogenic amines in normal and hyperglycemic state.	Pakistan journal of pharmaceutical sciences Pakistan	11(2):23-29.
79	1998	The neurochemical profile of long term oral administration of moclobemide	Pakistan journal of pharmaceutical sciences Pakistan	11(1):9-14.
80	1997	Effects of diazepam and cinchocaine on biogenic amines	Pakistan journal of pharmaceutical sciences Pakistan	10(2):36-9.
81	1997	Effects of cinchocaine cocaine analogs on brain mono amines and their metabolites in male mice.	Pakistan journal of pharmaceutical sciences Pakistan	10(1):47-52.
82	1997	Neurochemical and behavioural effects of diazepam: evidences from animal models.	Pakistan journal of pharmaceutical sciences Pakistan	10(1):1-8.

83	1996	Adaptation to repeated restraint stress in rats: failure of ethanol-treated rats to adapt in the stress schedule	Alcohol and alcoholism (Medical council on alcohol Oxford journals)	31(5):471-7.
84	1996	Food restriction decreases serotonin and its synthesis rate in the hypothalamus.	NeuroReport (Lippincott Williams & Wilkins)	7(6):1153-6.
85	1996	Regionally specific effects of diazepam on brain serotonin metabolism in rats: sustained effects following repeated administration.	Life sciences (Elsevier)	59(15):PL239-46.
86	1996	Stress and hypertension: role of serum, red cell and tissue electrolytes.	Life sciences (Elsevier)	58(18):1587-90.
87	1995	24h withdrawal following repeated administration of caffeine attenuates brain serotonin but not tryptophan in rat brain: implications for caffeine-induced depression.	Life sciences (Elsevier)	57(19):PL285-92.
88	1994	Brain regional serotonin synthesis following adaptation to repeated restraint.	NeuroReport (Lippincott Williams & Wilkins)	5(14):1785-8.
89	1994	Tolerance to diacetyl morphine antinociception: effects on brain serotonin	NeuroReport (Lippincott Williams & Wilkins)	5(7):781-4.
90	1994	Enhancement of hepatic tryptophan pyrrolase activity and decreases of open field locomotion following single and repeated administration of high doses of caffeine in rats.	Life sciences (Elsevier)	54(17):PL297-304.
91	1994	Decreases of plasma tryptophan concentrations following restricted feeding do not decrease serotonin and its metabolite in rat brain.	Die Nahrung New name Molecular Nutrition & Food Research (Wiley-VCH)	38(6):606-11
92	1993	Function specific supersensitivity of m-chlorophenyl piperazine-induced serotonergic neurotransmission in female compared to male rats.	Life sciences (Elsevier)	52(2):PL279-84.
93	1993	Serotonergic regulation of appetite: a receptor approach.	Pak. J. Pharmaceutical Sciences.	6, 89-96

			Pakistan	
94	1992	Sex differences in neurochemical and behavioural effects of 8-hydroxy-2-(DI-n-propylamino) tetralin.	Life Sciences. (Elsevier)	50(2):PL22-PL226
95	1992	Repeated corticosterone treatment attenuates behavioural and neuroendocrine responses to 8-hydroxy-2-(di-n-propylamino) tetralin in rats.	Life sciences (Elsevier)	51(23):PL225-30.
96	1990	Injected tryptophan increases brain but not plasma tryptophan levels more in ethanol treated rats.	Life sciences (Elsevier)	47(11):971-9.
97	1990	Hippocampal 5-HT synthesis is greater in females than in males and is more decreased by 5-HT-1A agonist 8-OH-DPAT.	Journal of Neural Transmission (Springerlink)	79, 93-101
98	1989	8-OH-DPAT increases plasma corticosterone but not other 5-HT-1A receptor dependent responses more in females	European Journal Pharmacology (Elsevier)	164, 435-443
99	1988	Adaptation of female rats to stress: shift to male pattern by inhibition of corticosterone synthesis	Brain Research (Elsevier)	458, 339-347

B. Publications in refereed Journals not listed in ISI

S.No	Names of Authors/Title of publication	Journal volume and issue
100	Saleem Darakhshan M; Haider Saida; Khan Moona M; Shamsi Tahir; Haleem Darakhshan J. Role of tryptophan in the pathogenesis of hepatic encephalopathy.	JPMA. The Journal of the Pakistan Medical Association. 2008;58(2):68-70.
101	Darakhshan J. Haleem, T. Parveen and m. A. Haleem Regionally specific effects of repeated corticosterone treatment on rat brain 5-	Pak. J. Scie. Ind. Res. 1991;34, 442-445

	hydroxytryptamine metabolism	
102	Tahira Parveen, M. A. Haleem and Darakhshan J. Haleem, Effects of adrenaline and noradrenaline on brain serotonin.	Pak. J. Pharmacol. 1991;9, 75-83
103	Darakhshan J. Haleem Greater enhancement of central serotonin metabolism by tryptophan load in ethanol injected rats.	Pak. J. Pharmacol. 1990;7, 59-69
104	Darakhshan J. Haleem, The central serotonin types and mediated behavioral responses.	Pak. J. Pharmacol. 1989;6 (1-2) 89-97

C. Publications in Proceedings of International and National Conferences

105 Darakhshan J. Haleem, (1997)

Plenary Lecture:

Serotonin: Antidepressant or anxiogenic

Proc. ISBBP Symp. Biochem. Biophys 2, 1-4

106 Darakhshan J. Haleem, (1997)

Plenary Lecture:

Neuropharmacological approaches to serotonergic control of appetite: past, present and future.

2nd Int conf on Pharmaceutical Sciences, Karachi, Pakistan pp28

107 Darakhshan J. Haleem, (1997)

Invited Lecture: published in proceedings

Neurochemical and Neuropharmacological studies on serotonergic regulation of appetite: implications for anorexia nervosa.

4th Annual National Symposium on Role of Neurosciences in Health Education and Research

AKU, Karachi, Pakistan pp4

108 Invited Lecture (2004)

Role of Serotonin in adaptation to stress

Hamdard University Symposium

109 Invited lecture (2005)

Serotonergic modulation of neuroleptic action: a mechanism for enhancing therapeutics in schizophrenia

3rd Biennial conf on Pharmacology and therapeutics .

- 110 Asma Khan and Darakhshan J. Haleem (2006)
Tolerance in anxiolytic profile following subchronic administration of diazepam but not buspirone is associated with a decrease in the responsiveness of postsynaptic 5-HT-1a receptor
Int workshop on Natural Products Abstract pp 19
- 111 Asma Khan and Darakhshan J. Haleem (2005)
5-HT-1A receptor responsiveness following subchronic administration of buspirone
Int Conf on Environmental Horizons, Dept of Chemistry and ICCS Univ Karachi
Abstract pp18
- 112 Bushra Jabeen and Darakhshan J. Haleem (2005)
Attenuation of restraint-induced behavioral deficits following dietary manipulations in rats
Int Conf on Environmental Horizons, Dept of Chemistry and ICCS Univ Karachi
Abstract pp19
- 113 Farhat Batool and Darakhshan J. Haleem (2005)
Extrapyramidal and serotonergic effects of atypical antipsychotics in the treatment of schizophrenia.
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PLENARY/ INVITED LECTURES

22. **Darakhshan Jabeen Haleem (2011)**
Women Scientists of Pakistan in Leadership role:
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Hotel Avari Towers Karachi 6-7th June 2011
23. **Darakhshan Jabeen Haleem (2011)**
Behavioral models in drug Discovery
International Symposium cum workshop on "Tools in Biomedical Research" 1-3rd
March 2011 organized by the department of Biochemistry, University of Karachi
24. **Darakhshan Jabeen Haleem (2011)**
Invited lecture: Serotonin neurotransmission in Anorexia nervosa
International conference of chemistry and its role in science Jan 3-5 2011
Jinnah Women University Karachi
25. **Darakhshan Jabeen Haleem (2011)**
Invited lecture: Molecular Neuropharmacology of anxiety
3rd International Symposium cum -Training course on Molecular medicine And
drug Reasearch. Panjwani Centre of Molecular medicine and drug Research 3-5
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26. **Darakhshan Jabeen Haleem (2010)**
Molecular Neuropharmacology of Anxiety
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27. **Darakhshan Jabeen Haleem (2010)**
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2. **Darakhshan J. Haleem, (1994)**

Neurochemistry of Drug Action
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List of PhD and M.Phil students supervised by Prof Dr Darakhshan Jabeen Haleem

S.N O.	Name of Student	TITLE	University	Duration
1	TAHIRA PERVEEN	Neurochemical and Pharmacological Studies in Rats following Single and Repeated restraint Stresses,	University of Karachi	PhD Started 1992 awarded 1997
2	SAIDA HAIDER	Neurochemical and Pharmacological Studies in Rats following Starvation and Feeding	University of Karachi	PhD Started 1997 awarded 2002

3	NOREEN SAMAD	Neurochemical and Behavioral studies on the effects of some potential drugs on adaptation to single and repeated restraint stress in rats.	University of Karachi	PhD Started 2003 awarded 2007
4	BUSHRA JABEEN	Neurochemical and Pharmacological studies following dietary Manipulations and Adaptations to stress in rats.	University of Karachi	PhD Started 2004 awarded 2008
5	ASMA KHAN	Neurochemical and Pharmacological studies in rats following tolerance in the sedative and therapeutic profile of Diazepam and other serotonergic anxiolytics.	University of Karachi	PhD Started 2004 awarded 2008
6	ERUM SHIREEN	Modulation of extrapyramidal effects of haloperidol by drugs acting at serotonergic receptors: Neurochemical and pharmacological studies in rats.	University of Karachi	PhD Started 2004 awarded 2009
7	HAJRA NAZ	Neurochemical and behavioral effects of corticosterone with and without some potential adjuvants in a rat model of autoimmune disease	University of Karachi	PhD awarded 2010
8	FARHAT BATOOL	Extrapyramidal and monoamiergic effects of neuroleptics: modulation by serotonergic and antiserotonergic compounds.	University of Karachi	PhD Awarded 2010
9	AMBREEN HASNAT	Neurochemical and Pharmacological studies in rats on Reinforcing effects of drugs acting directly or indirectly via Dopaminergic mechanism	University of Karachi	PhD Started 2005 Expected to submit 2011
10	SHOEB AHMED	Serotonergic mechanism in CNS stimulant-induced sensitization	University of Karachi	PhD Started 2008
11	TAFHEEM	Effects of plant extracts with antioxidant	University	PhD

	MALIK	properties on haloperidol-induced EPS and brain monoamine metabolism in rats	of Karachi	Started 2008
12	HUMA IKRAM	Effects of stress and serotonergic drugs in the reinforcing effects of alcohol and apomorphine.	University of Karachi	PhD Started 2008 Expected to submit 2011
14	Zaiba Haq	Leptin serotonin interaction in stress-induced obesity of working men and women	University of Karachi	PhD Started 2007 Expected to submit in 2011
15	Aliya Zafar	Effects of Caffeine on rat brain Serotonin metabolism	University of Karachi	M.Phil Started 1991 Awarded 1994
16	Anila Yasmeen	Effects of Diacetylmophine on rat brain Serotonin	University of Karachi	M.Phil Started 1991 awarded 1994
17	Farhat Batool	Neurochemical and pharmacological Studies in rats following repeated diazepam administration 5.	University of Karachi	M. Phil Started 1994 Awarded 1998
18	BUSHRA JABEEN	Neurochemical and Pharmacological studies in rats following repeated tryptophan administration	University of Karachi	M. Phil Started 1994 Awarded 1998
19	Hajra Naz	Serotonergic functions in rat brain following repeated ethanol administration and stress	University of Karachi	M. Phil Started 1995 Awarded 2000
20	Foqia Mushtaq	Effects of serotonin antagonists on adaptation to repeated restraint stress in rats	University of Karachi	M. Phil Started 1997 Completed 2002

21	Darakhshan Khan	Serum tryptophan and other biochemical parameters in in patients with hepatic encephalopathy: effects of drug treatment.	University of Karachi	M. Phil Started 1999 Awarded 2003
22	Sonia Siddiqui	Neurochemical and behavioural effects of 1(1-Nnaphthyl piperazine)	University of Karachi	M. Phil Started 2003 Awarded 2009
23	Obaid Ali	Effects of tryptophan and valine on neurochemistry and behavioural pharmacology of haloperidol.	University of Karachi	M. Phil Started 1999 Awarded 2002
24	Noor Kamil	Neurochemical and behavioural effects of antianxiety and antipsychotics: a comparison.	University of Karachi	M. Phil Started 1999 Awarded 2003
25	Qurrat-ul-Ain Inam	Neurochemical and behavioral effects of hyperphagic and hypophagic serotonin agonists following log term sucrose intake in rats.	University of Karachi	M. Phil Started 2001 Awarded 2006
26	Shahana Jahan	Monoamine functions in rats following long term administration of antidepressants.	University of Karachi	M. Phil Started 2001 Awarded 2006

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Anila Yasmeen, 1990
2. Effects of tryptophan load on ethanol-induced changes of serotonin metabolism in male rats. Asmat Saleem 1991
3. Effects of tryptophan load on ethanol-induced changes of serotonin metabolism in female rats. Riffat Haleem 1991
4. Effects of immobilization stress on liver tryptophan pyrrolase activity
Shabana Usman 1991
5. Effects of stress on plasma and brain tryptophan metabolism.
Ghazala Ashraf 1991
6. Effects of starvation and satiety on liver T-Pyrrolase activity
Mussarat Fatima 1992
7. Effects of starvation and Satiety on the metabolism of serotonin in the hypothalamus of rat brain
Asma Yousuf Zai 1992

8. Effects of starvation and satiety on the levels of tryptophan in the brain and liver of rats
Huma Razi 1992
9. Effects of starvation and satiety on plasma total and free tryptophan in rats
Samia Jameel 1992
10. Effects of single and repeated administration of sodium salicylate on hepatic apotryptophan pyrrolase activity
Syma Malik 1993
11. Effects of single and repeated administration of sodium salicylate on plasma total and free tryptophan concentration
Hajra Naz 1993
12. Effects of single and repeated administration of sodium salicylate on hepatic Holotryptophan pyrrolase activity
Bushra Jabeen 1993
13. Effects of single and repeated administration of sodium salicylate on brain serotonin metabolism
Salma Siraj 1993
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15. Neurochemical effects of similar and dissimilar stresses in rats
Uroosa naz 1994
16. Effects of chlorpromazine administration on glucose, cholesterol and total tryptophan levels in rat plasma
Nasreen mansoor 1995
17. Effects of repeated stress and tryptophan load on the availability of tryptophan to the brain Uzma Jabeen 1995
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Tahira Hamid Raza 1995
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Irum Nizami 1996
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Sonia Siddiqui 1996
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Durdana A. Qadir 1996
23. Effect of food restriction on the metabolism of 5-HT in rat hypothalamus
Shamaila Andleeb 1996
24. Effects of moclobemide pretreatment on restraint induced changes of motor activity.
Tahira Sultana 1998
25. Effects of moclobemide pretreatment on restrain stress-induced changes of food and water intake.
Sadia Nausheen 1998

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Uzma Qamar 1998
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Zehra Hashim 1999
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Qurrat-ul-aen Inam 1999
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Sadia Ishaque 1999
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Asfa Khan 1999
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Munazza Sadia 1999
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Uzma Rafique 2000
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Shahida Rehman 2000
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Samree Zehra 2000
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