



***International Center for Chemical & Biological Sciences (ICCBS)***  
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***CURRICULUM VITAE***

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**ACADEMIC CAREER**

DEGREE	YEAR	DEPARTMENT / UNIVERSITY
B. Sc (Hons)	1991	Biochemistry (major), Microbiology, Physiology / University of Karachi, Pakistan
M. Sc	1992	Biochemistry / University of Karachi, Pakistan
MS	1997	Medical Laboratory Sciences, College of Health / Florida International University, Miami, USA
PhD	2001	Neuroscience, School of Biological Sciences / University of Manchester, UK

## **RESEARCH EXPERIENCES**

**PhD.** Thesis entitled “*Amino Acid Neurotransmitters in the Development of Chronic Pain in Rats*”, under the guidance of Dr. Barbara J. Pleuvry, Department of Neuroscience, University of Manchester, UK.

**MS.** Thesis entitled "*Secretion of Tumor Necrosis Factor by Human Leukocytes Stimulated with Shark Cartilage*", under the supervision of Dr. Sylvia L. Smith, Department of Medical Laboratory Sciences, College of Health, Florida International University, Miami, USA.

**M.Sc.** Thesis entitled "*Effect of Immobilization Stress on Liver Tryptophan Pyrrolase Activity*", under the supervision of Dr. M. A. Haleem, Department of Biochemistry, University of Karachi, Pakistan.

## **PROFESSIONAL POSITIONS**

### **Assistant Professor (January 2004 – Present)**

Pharmacology, H.E.J. Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan.

### **Visiting Professor (December 2004-February 2005)**

Transfusion Medicine Unit, St. Michael’s Hospital, Toronto, Canada

### **Visiting Scholar (January 2005-February 2005)**

Programme in Integrative Biology, The Hospital for Sick Children Research Institute, Toronto, Canada

### **Visiting Faculty (June 2003- July 2003, Summer Course on Bioinformatics),**

FAST Institute of Computer Science, National University of Emerging Sciences, Karachi, Pakistan.

### **Assistant Professor (Jan 2002 – December 2003)**

Department of Biochemistry, Baqai Medical University, Karachi, Pakistan.

### **Graduate Research Assistant (1997)**

Department of Medical Laboratory Sciences, Florida International University, Miami, USA.

### **Graduate Assistant (1995-1996)**

Department of Medical Laboratory Sciences, Florida International University, Miami, USA.

### **Teaching Assistant / Cooperative Teacher (August 1993-December 1994)**

Department of Biochemistry, University of Karachi, Karachi, Pakistan.

### **Junior Research Fellow (1993-1994)**

H.E.J. Research Institute of Chemistry, University of Karachi, Karachi, Pakistan.

## **OTHER POSITIONS / SERVICES**

Member of ICCBS Animal Care and Use committee (2004-Present)

Institutional Biosafety Committee (2006-Present)

Reviewer, Acta Pharmacologica Sinica from July to September in 2007

Member of “GO MANCHESTER” community service organization (2000-2001), Manchester, UK.

Member of the Graduate Student Grievance Committee, 1996-1997 (Graduate Students Representative), Florida International University, Miami, USA.

Instructor (Volunteer), Ida Rieu, School for Special Children, Karachi, Pakistan

### **CURRENT RESEARCH ACTIVITIES /Research Students**

Ongoing projects are:

1. Anti-inflammatory and anti-arthritic activity of synthetic compound / DMARDs in collagen-induced arthritis (CIA) and adjuvant-induced arthritis (AIA) models of chronic inflammatory pain.
2. Determination of cFos expression in seizure / epileptic model in mice and their regulation by anticonvulsants.
3. Modulation of immune and hematopoietic functions with anti-epileptic drugs (AEDs)
4. Effect of GABA receptor agonist or GABA analog on the expression of BDNF in adjuvant-induced arthritic model of chronic inflammatory pain.
5. GABA receptor agonist or GABA analog on the expression of CD29, CD44 and CD90 in adjuvant-induced arthritic model of chronic inflammatory pain.
6. BDNF expression in epileptic mice treated with anti-convulsants isolated from natural products.
7. Effects of Gabapentin and Verapamil on the expression of P-glycoprotein in the brain samples of kindled mice.

### **HONOR(s) / AWARD(s)**

- ISN Travel Award (2009), International Society for Neurochemistry
- 7<sup>th</sup> AOEC Travel Award (2008), ILAE / IBE Congress Secretariat, Xiamen, China
- University Research Studentship Awards, University of Manchester, 1998-2001 (UK).
- Overseas Research Studentships (ORS) awarded for 1998-2001 (UK).
- Academic Affairs award (1996 & 1997), Florida International University.
- Member of Phi Kappa Phi Honorary Society, 1996-97.
- Merit certificates, University of Karachi, 1991 and 1992.

### **MEMBERSHIP OF SCIENTIFIC SOCIETIES**

Society for Neuroscience

International Society for Neurochemistry

European Society for Neurochemistry

Inflammation Research Association

International Brain Research Organization

Canadian Interdisciplinary Network for Complementary & Alternative Medicine Research

Western Pharmacology Society

### **PATENT:**

Title: New Anticonvulsant Compounds

Publication Date: 01/03/2008

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Kind Code: A1

**PAPER(s)**

Anjuman Gul, Muhammad Ataur Rahman, Asmat Salim, Shabana U Simjee (2009). Advanced glycation end products in senile diabetic and nondiabetic patients with cataract. *J Diabetes Complications* 23 (5): 343-348.

Raza ML, Zeeshan M, Ahmad M, Shaheen F, Simjee SU. (2008). Toxicity testing behavior assessment of anticonvulsant fraction isolated from Delphinium specie. *J. Pharmacol. Toxicol Methods*, **58(2)**: 152.

Gul, A., Rahman, M.A., Salim, A. and Simjee, S.U. (2008) Advanced glycation end products in senile diabetic and non-diabetic patients with cardiovascular complications. *AGE* 30(4):303-9.

Gul A, Rahman MA, Hasnain SN, Salim A and Simjee SU (2008). Could Oxidative Stress Associate with Age-Products in Cataractogenesis? *Current Eye Research*, 33: 669-675.

Nisar M., Khan I., Simjee SU., Gilani AH., Obaidullah and Humera Perveen. Anticonvulsant, analgesic and antipyretic activities of *Taxus wallichiana* Zucc. *J Ethnopharmacol.* 2008 Jan 20; Mar 28;116(3):490-494.

Shabana U Simjee, Huma Jawed, Javeria Quadri and Sheikh A. Saeed (2007). Quantitative gait analysis as a method to assess mechanical hyperalgesia modulated by disease modifying anti-rheumatoid drugs in the adjuvant induced arthritic rat. *Arthritis Research & Therapy* 9(5):R91.

SA Saeed, KF Shad, SU Simjee (2007). Dual inhibition of cyclooxygenase and lipoxygenase enzymes by human cerebrospinal fluid. *Exp Brain Res.* Apr;178(4): 560-4.

Merly L., Simjee S., Smith SL. (2007). Induction of inflammatory cytokines by cartilage extracts. *Int. Immunopharmacol.* **7(3)**: 383-391.

M. Kamran Azim, Humera Perveen, M. Ahmed Mesaik and Shabana U. Simjee (2007). Antinociceptive activity of natural honey in thermal-nociception models in mice. *Phytother. Res.* **21(2)**: 194-197.

Sheikh Arshad Saeed, Shumaila Tasneem, Nazia Qidwai and Shabana Usman Simjee (2005). Low dose aspirin depresses human platelets aggregation triggered by activating agents whose mechanisms involve arachidonic acid. *JCPSP* 15(10): 665.

Sheikh Arshad Saeed, Imran Manzoor, Javeria Quadri, Shumaila Tasneem and Shabana Usman Simjee (2005). Demystifying Phytochemicals: An Insight. *Intl. J. Pharmacol.* **1(3)**: 218-222.

Shabana Simjee, Barbara Pleuvry, Paul Coulthard (2004). Modulation of the gait deficits in arthritic rats by infusions of muscimol and bicuculline. *Pain*, 109(3): 453-460

Coulthard P, Simjee SU, Pleuvry BJ. (2003). Gait analysis as a correlate of pain induced by carrageenan intraplantar injection. *J Neuroscience Methods*, 128(1-2): 95-102.

**ABSTRACT(s):**

**Simjee SU**, Ashraf N, Shaheen F, Choudhary MI, Rahman AR, Khan N, Salim A, Jamall S. Suppression of c-fos protein and mRNA expression in different regions of pentylentetrazole-induced kindled mouse brain by N-22-4. *Neuroscience 2009*, Society for Neuroscience's 39<sup>th</sup> Annual Meeting, Oct. 17-21, Chicago, USA.

**Simjee SU**, Aslam K, Perveen H, Salim A, Jamall S, Khan R. Protective effect of AC-31B in model of epileptogenesis and epileptogenesis-induced alteration in hematopoietic functions in bone marrow cells. 22nd Biennial Joint Meeting of the ISN/APSN, August 23-29, 2009, Busan, S. Korea.

Raza ML, Zeeshan M, Ahmad A, Shaheen F, **Simjee SU**. Anticonvulsant activity of *Aconitum violaceum* against Maximal Electroshock induced seizure model. *Frontiers in Behavioral Neuroscience. Conference Abstract: 41st European Brain and Behaviour Society Meeting*, September 13 - 18, 2009, Rhodes Island, Greece.

Momin D.-e.-S., Khurshid S, Jawed H, Aslam K, Saeed SA, **Simjee SU**. Modulatory role of novel acetaminophen derivative OS-2 on the expression of cd44 cell surface markers in the brain of adjuvant induced arthritic model (AIA) of rats. WIP 2009, 5<sup>th</sup> World Congress, World Institute of Pain, March 13-16, 2009, New York USA.

Khan R, Salim A, **Simjee SU**. Suppressive Effect of Diazepam and GABA on CD Surface Markers Expression on Bone Marrow Stromal Cells From Kindled Mice. Epilepsy Society of Australia 23<sup>rd</sup> Annual Scientific Meeting, 5<sup>th</sup> – 7<sup>th</sup> November 2008, Sydney, Australia.

**Simjee SU**, Salim A, Khan R. Suppression of long-term kindled seizures induced alterations in hematopoietic functions in bone marrow cells by essential oil from *Allium cepa*. 38th annual meeting of the Society for Neuroscience, 15<sup>th</sup> November – 19<sup>th</sup> November 2008, Washington, DC., USA.

Khan R, Salim A, and **Simjee SU**. Effects of diazepam treatment on hematopoietic functions in bone marrow cells in PTZ-induced kindled mice. The 11th International Symposium on Natural Product Chemistry, 29<sup>th</sup> October – 1<sup>st</sup> November 2008, Karachi, Pakistan.

Ashraf N, **Simjee SU**, Begum S, Farhat. Protective effect of HHL-6 in scPTZ-induced seizure and kindling model of epilepsy in mice. The 11th International Symposium on Natural Product Chemistry, 29<sup>th</sup> October – 1<sup>st</sup> November 2008, Karachi, Pakistan.

Shah UA, Jawed H, Shahid, Anjum S, **Simjee SU**. Evaluation of anti-arthritic effect of compound GN1 on the inflammatory cytokines TNF $\alpha$  and IL-1 $\beta$  in adjuvant induced arthritic rats. The 11th International Symposium on Natural Product Chemistry, 29<sup>th</sup> October – 1<sup>st</sup> November 2008, Karachi, Pakistan.

Momin D-e-S., **Simjee SU**, Jawed H, Aslam K, Saeed SA, Khurshid S. Expression of CD44 cell surface markers in adjuvant induced arthritic model of rats. The 11th International Symposium on Natural Product Chemistry, 29<sup>th</sup> October – 1<sup>st</sup> November 2008, Karachi, Pakistan.

Bano H, Rahim N, Zafar M, Waseem A, **Simjee SU**. Anti-inflammatory activity of *Salmalia malabarica* (Linn.), *Commicarpus boissieri* (Hermerl) and *Xanthium strumarium* (DC). The 11th International Symposium on Natural Product Chemistry, 29<sup>th</sup> October – 1<sup>st</sup> November 2008, Karachi, Pakistan.

Jawed H, Awan SI, Anjum S, **Simjee SU**. Suppression of C-reactive Protein and Lipoprotein Levels in Arthritic Rats by Novel Glucosamine-analog GN1. 15<sup>th</sup> International IRA Conference, September 21<sup>st</sup> – 24<sup>th</sup>, 2008, Chantilly, VA, USA.

Shah SU, Jawed H, Hussain Z, Shah MR, **Simjee SU**. Preventive Role of ZH-67-2-1 in Adjuvant-induced Arthritis in Rats. 15<sup>th</sup> International IRA Conference, September 21<sup>st</sup> – 24<sup>th</sup>, 2008, Chantilly, VA, USA. Published in the Book of Abstracts of the IRA 2008

Momin D-e-S, Khurshid S, Jawed H, Aslam K, Saeed SA, **Simjee SU**. Modulatory role of 2-acetamidophenol on the expression of CD44 cell surface markers in the brain of adjuvant induced arthritic model (AIA) of rats. 15<sup>th</sup> International IRA Conference, September 21<sup>st</sup> – 24<sup>th</sup>, 2008, Chantilly, VA, USA.

**Simjee SU**, Salim A, Aslam K. Effect of anticonvulsants on expression of CD44 cell surface marker in PTZ-induced epileptic mice brain. 7th Asian & Oceanian Epilepsy Congress, 15th to 18th May 2008, Xiamen, China.

Raza M L, Perveen H, Zeeshan M, Ahmad M, Shaheen F, **Simjee SU**. Protective actions of DNS II in epilepsy model in mice. National Congress of the Italian Society of Neuroscience, Sept 27-30 2007, Verona, Italy.

ML Raza, M Zeeshan, F Shaheen, **Simjee SU**. Action of DNS acetone fraction against chemical induced neuronal hyperexcitability. 17<sup>th</sup> ESN Meeting-3<sup>rd</sup> Conference on Advances in Molecular Mechanisms of Neurological Disorders, May 19-22, 2007, Salamanca, Spain

Raza ML, M. Zeeshan, F. Shaheen, **Simjee S**. Screening of a new anticonvulsant from the flora of Pakistan. MipTec - The 10th Leading European Drug Discovery Event, 7<sup>th</sup>-10<sup>th</sup> May 2007, Basel, Switzerland

Raza ML, Muhammad Zeeshan, Ahmad M, Ilyas F, **Simjee SU**. Actions of DNS II in Epilepsy Model. Neuron Glia Biology 2007, 3, Suppl. S33-S79.

Azim MK, Mesaik MA, **Simjee SU**, Auranzeb M, Nazimuddi, Saeed SA. Medicinal Properties of Honey from Northern Pakistan. 1<sup>st</sup> International Conference on the Medicinal Uses of Honey (From Hive to Therapy), 26<sup>th</sup> – 28<sup>th</sup> August 2006, Kelantan, Malaysia

**Simjee SU**, Jawed H, Aslam K, Perveen H. Natural Products: Do they offer new options for the treatment of pathologies? (Prize winning poster) World Health Updates: Conference and Symposia, January 2007, Karachi, Pakistan.

Raza ML, Zeeshan M, Ahmad M, Shaheen F, **Simjee SU**. Neuroprotection by *Delphinium* fraction against the neuronal hyperexcitability. 9<sup>th</sup> International Symposium on Thrombolysis & Acute Stroke Therapy (TAST 2006) & 19<sup>th</sup> Annual Scientific Meeting of the Hong Kong Neurological Society, December 2006, Hong Kong.

Raza ML, Zeeshan M, Ahmad M, Shaheen F, **Simjee SU**. Natural product against the chemoconvulsant induced seizure, XXIV Annual Conference of Indian Academy of Neurosciences and International update on Advances in Basic and Clinical Neurosciences, December 2006, Industrial Toxicology Research Centre, Lucknow, India.

Ahmad M, Shaheen F, **Simjee SU**. Safety profile and behavior analysis of anticonvulsant fraction from *Delphinium* specie. 6<sup>th</sup> Asian Oceanian Epilepsy Congress, November 2006, Kuala Lumpur, Malaysia.

Raza ML, Zeeshan M, Shaheen F, **Simjee SU**. Anticonvulsant action of DNS-II acetone fraction of *Delphinium nordhagenii* against picrotoxin induced seiziures in mice. 21<sup>st</sup> Annual Scientific Meeting of the Epilepsy Society of Australia, Oct 2006, Melbourne, Australia.

Perveen H, Anjum S, Rizvi NS, **Simjee SU**. Antinociceptive Effect of Seed Essential Oil from *Elettaria cardamom* in Mice. 1<sup>st</sup> International Chemistry Conference on “Recent Challenges in Chemistry”, November 2006, Govt. College University Faisalabad, Faisalabad, Pakistan.

Perveen H, Rizvi NS, Anjum S, **Simjee SU**. Anticonvulsant and Anti-epileptogenic Effect of AC-31B (*essential oil*) Extracted from *Allium cepa*. 3<sup>rd</sup> AFERP International days / 2<sup>nd</sup> Symposium Bi-National France-Pakistan, October 2006, Rennes, France.

Saeed SA, **Simjee SU**, Jawed H. New Aspects of the C-Reactive and Lipoproteins in Collagen Induced Arthritis: Possible Markers of Inflammation. Presented at 4<sup>th</sup> James Black Conference

(British Pharmacological Society): "The Challenges of Drug Discovery & Development", September 2006, University of Hardfordshire, UK

Kamran MA, Mesiak MA, **Simjee SU**, M. Auranzeb, M. Nazimuddin, Saeed SA. Medicinal Properties of Pakistani Honey. Paper presented in 10<sup>th</sup> International Symposium on Natural Product Chemistry, January 2006, Karachi, Pakistan.

Azim MK, Mesaik MA, **Simjee SU**, Auranzeb M, M. Nazimuddin, Saeed SA. Medicinal Properties of Honey from Northern Pakistan. 1st International Conference on the Medicinal Uses of Honey (From Hive to Therapy). 26th - 28th august 2006, Malaysia

Jawed H, **Simjee SU**, Saeed SA. C-Reactive Protein and Lipoprotein Levels in the Blood Serum of Collagen-Induced Arthritic (CIA) Rats. 10<sup>th</sup> International Symposium on Natural Product Chemistry, January 2006, Karachi, Pakistan.

Perveen H, Anjum S, Rizvi N, **Simjee SU**. Antiepileptogenic Action of *Allium cepa* (piyaz) in PTZ-Induced Kindling in Mice. 10<sup>th</sup> International Symposium on Natural Product Chemistry, January 2006, Karachi, Pakistan.

Raza ML, Perveen H, Zeeshan M, Shaheen F, **Shabana U Simjee**. Anticonvulsant Action of DNS-II Acetone Fraction of *Delphinium nordhagenii* against Picrotoxin-induced seizures in Mice. 10<sup>th</sup> International Symposium on Natural Product Chemistry, January 2006, Karachi, Pakistan.

Bano H, Mehmood ZA, Ahmed W, Azher I, **Simjee SU**. In vitro Anti-*Helicobacter pylori* Activity of Ethanolic Extracts Prepared from Three Different Pakistani Plants. Poster presented in 10<sup>th</sup> International Symposium on Natural Product Chemistry, January 2006, Karachi, Pakistan.

Raza ML, Perveen H, Zeeshan M, Ali L, Ahmad M, Shaheen F., **Simjee SU**. Extraction of Bioactive Constituent from *Delphinium nordhagenii*. 40<sup>th</sup> IUPAC Congress, August 2005, Beijing, China.

Bano H, **Simjee SU**. Anti-leishmanicidal and anti-bacterial activity of crude ethanolic extract XLO01 of *Xanthium strumarium L.* Poster presented in AFASSA Symposium on Natural Products & Regional Meeting, July 2005, ICCBS, University of Karachi.

Raza ML, Perveen H, Zeeshan M, Ahmad M, Malik LA, Rizvi T, Shaheen F, **Simjee SU**. Anticonvulsant Activity of DNS-II Acetone Fraction of *Delphinium nordhagenii*. Poster presented in AFASSA Symposium on Natural Products & Regional Meeting, July 2005, International Center for Chemical Sciences, University of Karachi.

Zeeshan M, Ahmad M, Raza L, Perveen H, Rizvi T, Jawed H, Malik LA, **Simjee SU**, Shaheen F. Active Principle of Bioactive Constituents from *Aconitum violaceum*. Poster presented in AFASSA Symposium on Natural Products & Regional Meeting, July 2005, International Center for Chemical Sciences, University of Karachi.

**Shabana U Simjee**, Farzana Shaheen. Anticonvulsants from Medicinal Plants. Paper presented in AFASSA Symposium on Natural Products & Regional Meeting, July 2005, International Center for Chemical Sciences, University of Karachi.

Perveen H, Raza ML, Zeeshan M, Ahmad M, Shaheen F, **Simjee SU**. Antiepileptic activity of acetone fraction of *Aconitum* specie. Poster presented in 5<sup>th</sup> National & 15<sup>th</sup> International Conference of Chemistry, November 2004, Quaid-e-Azam University.

**Simjee SU**, Pleuvry BJ. Modulation of inhibitory amino acid neurotransmitter in the development of chronic pain. Paper presented at 7<sup>th</sup> International Conference, 2003, Pakistan Society for Biochemistry and Molecular Biology.

L. Merly, **SU Simjee**, B. Gonzalez, A. Cornelissen & S. L. Smith. In vitro response of human leukocytes to shark cartilage treatment. Proceedings of the 9th International Congress of ISDCI, St Andrews, Scotland. 2003

L. Merly, **SU Simjee**, B. Gonzalez, A. Cornelissen, S. L. Smith. In vitro immune responses of human leukocytes to treatment with extracts of commercial shark cartilage. Proceedings of the 6<sup>th</sup> Biology Research Symposium, Miami, FL. 2003

**Simjee SU**, Smith SL. Shark cartilage-stimulated secretion of the Tumor Necrosis Factor by human leukocytes. Paper presented at International Congress of ISDCI (International Society for Development and Comparative Immunology) in July 1997. Abstract published in *Developmental & Comparative Immunology*, Volume 21(2).

**Simjee SU**. In vitro effect of shark cartilage extracts on human leukocyte cultures. Paper presented in Graduate student annual Scholarly Forum, 1997, Florida International University, FL, USA.

**Simjee SU**, Smith SL. Effect(s) of shark cartilage on TNF production by human peripheral blood leukocytes. Poster presentation, MBRS symposium, 1996, Miami, USA.

**Simjee SU**, Haleem MA, Haleem DJ. Effect of immobilisation stress on tryptophan pyrrolase activity in liver. Proceedings of the National Symposium of Biochemistry, 1994, University of Karachi, Pakistan.

## **REFERENCES**

Will be provided on request