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Citizenship: British
Present Position: Senior Lecturer
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OBJETIVE

To secure a rewarding position in which I may utilize my extensive training and experiences both in teaching and research, while simultaneously advancing my technical knowledge and expertise, and where my experience, interest and enthusiasm will have application.

SUMMARY

- Offering over ten years research and teaching experiences that I acquired in the most advanced universities/research laboratories in the Netherlands, Japan, Pakistan, USA, and UK.
- Excellent inter-personnel communication skills both verbal and written and ability to define and implement the chance to explore the potential of new technologies with strong influential skills and collaborative approach.
- Ability to manage time and resources to finish project in time.

EDUCATION

Ph.D 1994-1997 Department of Physiology, Kagawa Medical University, Japan

Dissertation:

A chronological study of glial fibrillary acidic Protein and Calbindin-D28k in electrically lesioned rat brain

MSc. 1990-1991 Department of Chemistry, University of Karachi, Pakistan

Topic of MSc. Thesis:

An investigation of some aspects of mechanism of iron release between transferrin and microbial iron chelators

BSc. (Hons) 1987-1990 Department of Chemistry, University of Karachi, Pakistan

EMPLOYMENT

Teaching Experience

January 2005-present Senior lecturer, Division of Science, University of Luton, Luton, UK

1990-1991 Lecturer in Chemistry, Women College, Karachi, Pakistan
1991-1994 Lecturer in Chemistry, St. Patrick's College, Karachi, Pakistan
1995-1996 Teaching Assistant (neuroscience), Kagawa Medical University,
Kagawa, Japan
1995-1996 Taught Medical English classes, Kagawa Medical University, Kagawa,
Japan

Research Experience

Research Associate

**1997-1999 Department of Pediatrics Neurology, Baylor College of Medicine,
Houston, USA**

Studied the regulation and developmental differences of Bcl-2, Bax and Bcl-xl in Kainate induced seizure in rat brain.

Postdoctoral Research Fellow

1999-2000 Scott-Ritchey Research Center, Auburn University, Alabama, USA

Studied (a) novel peptide ligands for targeted delivery to brain; (b) immunostimulation of microglia by CpG oligonucleotide.

2001-2004 Department of Anatomy, University College London, UK

Investigated the involvement of certain genes in axonal regeneration, using Cre-loxP system and gene therapy techniques.

INVITED SEMINARS

1. Efficient delivery of Cre-recombinase to adult mouse brain using adeno-associated and lentiviral vectors (August 20, 2003) Invited by KIBGE research Institute, Karachi, Pakistan
2. Efficient delivery of Cre-recombinase to adult mouse brain using adeno-associated and lentiviral vectors (August 19, 2003) Invited by HEJ research Institute, University of Karachi, Pakistan.
3. Targeting peptides for microglia identified via phage display (Oct 1999) Invited by Department of Chemistry, University of Karachi, Pakistan.
4. Excitotoxicity and Cell death: Regulation of BCl-2, Bax and BCl-xl by kainic acid-induced seizure (Dec. 1997) Invited by Department of Chemistry, University of Karachi, Pakistan.

EXPERIMENTAL SKILLS

Gene Therapy

Preparation and application of adeno-associated and lentiviral vectors.

Molecular biology techniques

DNA gel electrophoresis, cDNA cloning, subcloning, plasmid transformation and preparation, in situ hybridization, northern blot analysis.

Anatomy and cell biology techniques

tissue processing, cell and tissue staining, immunohistochemistry, immunofluorescence, confocal microscopy, electron microscopy, western blot analyses, kinase assays immunoprecipitation, application of different retrograde tracers in vivo by microinjection.

Cell culture

microglial cells, astrocytes, neuronal cells, embryonic cells, cancer cells, cell transfection.

Phage display technique

Affinity selection of cell binding phage in vitro (on cells) and in vivo (tissue specific). Phage selection, phage amplification on bacteria, phage purification, phage separation, next round of selection, phage titrating, plaque amplification and isolation of phage DNA.

Electrophysiology

long term potentiation and depression recordings using theta burst stimulation in hippocampal slices.

AWARDS & FELLOWSHIPS

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| 2002 | Personal working license under the Animals (Scientific Procedures) Act 1986, UK. |
| 2000-2002 | Biogrant in brain research project, "peptide ligands for targeted delivery to brain" Auburn University, Auburn, Alabama, USA |
| 1994-1997 | S&T Scholarship Award, Ministry of Science & Technology, Government of Pakistan |
| 1994-1997 | Kuraoka Scholarship Award, Kuraoka Foundation, Kagawa, Japan |
| 1994-1997 | Nankai Ikekai Scholarship Award, Nankai Foundation, Kagawa, Japan |
| 1992-1994 | M.Phil Research Award, Karachi University, Karachi, Pakistan |

PUBLICATIONS

- (1) **Ahmed B.Y.**, Zhang J.Y., Sablitzky., F. Verhaagen J., Lieberman A. R., and

Anderson P, Adeno-associated and lentiviral mediated Cre deletion of floxed genes in mouse brain, in preparation

(2) **Ahmed B.Y.**, Zhang J.Y., Raivich G., Sablitzky., F. Verhaagen J., Lieberman A. R., and Anderson P, Comparison of retrograde labeling in the facial nucleus using fluorescent tracers following facial nerve crush after adeno-associated and lentiviral mediated Cre deletion of floxed genes in mouse brain, in preparation.

(3) **Ahmed B.Y.**, Chakravarthy S., Eggers R., Hermens W,T.J.M.C., Zhang J.Y., Nicolu S., Levelett C., Sablitzky., F. Anderson P., Lieberman A. R., and Verhaagen J., Efficient delivery of Cre-recombinase to adult mouse brain using adeno-associated and lentiviral vectors, **BMC Neuroscience 5 (2004) 4-15** (This article is available from <http://www.biomedcentral.com/147-22025/5/4>).

(4) Samoylova T.I., **Ahmed B.Y.**, Vodyanoy V., Morrison N.E., Samoylova A.M., Globa L.P., Baker H.J., and Cox N.R., Targeting peptides for microglia identified via phage display. **J. Neuroimmunology**127 (2002) 13-21

(5) Samoylova T.I., Cox N.R., **Ahmed B.Y.**, Morrison N.E., Samoylova A.M., Smith B.F., Globa L.P., and Baker H.J., Peptide ligands for targeted delivery to brain. **Molecular therapy 3 (2001) 356**

(6) **Ahmed B. Y.**, Yamaguchi F., Tsumura T., Gotoh T., Sugimoto K., Tai Y., Konishi R., Kobayashi R. and Tokuda M., Expression and subcellular localization of multifunctional calmodulin-dependent protein kinases-I, II and -IV are altered in rat hippocampal CA1 neurons after induction of long term potentiation. **Neuroscience letters 290 (2000)149-153.**

(7) Chen Y-R., Meyer C., **Ahmed B. Y.**, Yao Z. and Tan T-H., Caspase-mediated cleavage and functional changes of hematopoietic progenitor kinase 1 (HPK1). **Oncogene 18 (1999) 7370-7377**

(8) Tokuda M., **Ahmed B. Y.**, Miyamoto O., Lu Y-F., Matsui H., and Hatase O., Involvement of calmodulin-dependent protein kinases I and IV in long term potentiation. **Brain research, 755 (1997) 162-166**

(9) Hiroka K., Tokuda M., Tsumura T., **Ahmed B. Y.**, Itano T., Matsui H. and Hatase O., Reticulmin: A novel calcium calmodulin dependent protein kinase IV like protein in rat retina. **Vision research, 37 (1997) 2029-2033.**

(10) **Ahmed B. Y.**, Toyoshima T., Yamaguchi S., Jin L., Itano T., Tokuda M., Murakami T.H., and Hatase O., A chronological study of glial fibrillary acidic protein and calbindin-D28k in electrically lesioned rat brain. **Neuroscience research, 26 (1996) 271-278.**

(11) Toyoshima T., Yamagami S., **Ahmed B. Y.**, Jin L., MiyamotoO., ItanoT.,Tokuda M., Matsui H. and Hatase O., Expression of calbindin-D28k by reactive astrocytes in

gerbil hippocampus after ischemia. **Neuroreport**, 7 (1996) 2087-2091.

(12) **Ahmed B. Y.** and Pierson M., Regulation and Developmental differences of BCl-2, Bax and Bcl-xl proteins in Kainate-induced seizure in rat brain, in preparation.

PUBLISHED ABSTRACTS OF MEETING PRESENTATION

(1) **Ahmed B.Y.**, Hermens W, T.J.M.C., Nicolu S., Levelett C., Eggers R., Sablitzky., F. Anderson P., Verhaagen J., and Lieberman A. R., "Efficient delivery of Cre-recombinase to adult mouse brain using adeno-associated and lentiviral vectors" Abstr. 32nd annual meeting, Society for Neuroscience, Orlando Convention Center, Florida, USA (Nov. 2002).

(2) Smith B. F., Samoylova T.I., Vodyanoy V.J., Pathirana S.T., Cox N. R., **Ahmed B. Y.**, and Baker H. J., "Tissue-specific targeting ligands for gene therapy", Abstr. American Society for gene therapy. Denver CO. USA (June 2000)

(3) **Ahmed, B. Y.**, "Excitotoxicity and Cell death: Regulation of BCl-2 and BCl-xl by kainic acid-induced seizure", Abstr. 28th annual meeting, Society for Neuroscience, Los Angeles Convention Center. USA (October 1998).

(4) **Ahmed B. Y.**, and Pierson M., " Regulation of BCl-2 and BCl-xl by kainic acid-induced seizure", Abstr. Fellow's day, Baylor College of Medicine, Houston, Texas. USA (March 13, 1998).

(5) **Ahmed B. Y.**, Tokuda M., and Hatase O., "Involvement of CaM kinases I and IV in long term potentiation", Abstr. 27th annual meeting, Society for Neuroscience, New Orleans, LA. USA (October 1997).

(6) **Ahmed B. Y.**, Tokuda M., and Hatase O. "Involvement of CaM kinases I and IV in long term potentiation", Abstr. 74th Physiological Society of Japan, Hamamatsu, Japan (March 1997).

(7) **Ahmed B. Y.**, Itano T., Tokuda M., and Hatase O. " A chronological study of the appearance of reactive astrocytes in the electrically lesioned rat brain", Abstr. 12th International Symposium of Federation of Asian and oceanian Biochemist and Molecular Biologist (FOABMB), Tokushima, Japan (July 1996).

(8) **Ahmed B. Y.**, Toyoshima T., Yamaguchi S., Jin L., Itano T., Tokuda M., Murakami T.H., and Hatase O. " Immunohistochemical study of calbindin-D28k in reactive astrocytes after electric lesioned", Abstr. 47th National Physiological conference, Kagawa, Japan (Nov. 1995).

(9) **Ahmed B. Y.** and Kazmi S.A., "Comparison of the kinetics of removal of iron (III) from transferrin by gallic acid and gallic methyl ester", Abstr. 4th National chemistry conference, Bahawalpur, Pakistan (Dec. 1992).

(10) **Ahmed B. Y.**, Maqsood Z. T. and Kazmi S.A, Spectrophotometric determination of redox potentials of Cu^{2+} /+glycine complex as a function of pH". Abstr. 4th National chemistry conference, Bahawalpur, Pakistan (Dec. 1992).

(11) **Ahmed B. Y.**, and Kazmi S. A., Kinetics and mechanism of removal of Iron from transferrin by gallic acid", Abstr. Ist International symposium of Contemporary Biology, Islamabad, Pakistan (Nov. 1991).

LANGUAGES

English, Japanese, Urdu