

Soltan Ahmad Ebrahimi

Email: soltan.ahmad.ebrahimi@gmail.com

Education:

1987-1990 University of Portsmouth, UK:
Bachelor of Science with Second Class Honours (1st Division) in
Pharmacology

1990-1995 University of Portsmouth, UK:
Doctor of Philosophy (Ph.D) in Biochemical-Pharmacology
Thesis Title:
Characterization of Guinea Pig Liver Monoamine Oxidase, which
involved purification, to homogeneity, of MAO from guinea pig
liver homogenate after detergent solubilization using
chromatographic techniques (ion-exchange, hydrophobic
interaction and size-exclusion chromatography). The enzyme
activity was then characterized, kinetically, using a radioassay at
the department of pharmacology, University of Cambridge, UK,
and also using an HPLC method which measured benzaldehyde
semicarbazone formation by the enzyme.

Employment History:

- Head of the Pharmacology department, School of Medicine, Iran University for Medical Sciences (2014-2018).
- Professor of Pharmacology, Iran University for Medical Sciences, School of Medicine, Dept of Pharmacology, 2016.
- Associate Professor of Pharmacology, Iran University for Medical Science, School of Medicine, Dept of Pharmacology, Since 2006.

- Assistant Professor of Pharmacology, Iran University for Medical Science, School of Medicine, Dept of Pharmacology, 1996 -2006.
- Scientific editor of the Iranian Journal of Pharmacology and Therapeutics, 2002-2010.
- Head of the chromatography section of Massoud Diagnostic Laboratory (2003-2018).

Professional Activities:

- I set up the mass spectrometry section of the CDMDL in 2017. The laboratory is equipped with a model 8045 Shimadzu Tandem Mass Spectrometer together with a quaternary solvent delivery system, column oven and autosampler. The complete set runs on the integrated Lab Solution software. I developed and validated a 15 min LCMSMS method for the quantitation of amino acids from dried blood spots which uses deuterated amino acids as internal standards and can measure 24 amino acids. I also developed the chromatographic/mass spectrometric conditions for the analysis of organic acids in urine samples.
- I was the head of the chromatography department of Massoud diagnostic laboratory (CDMDL) which is a private diagnostic lab in Tehran (2003-2018). CDMDL processes about 800 human serum/blood samples each day by HPLC of which about 500 are assayed for 25(OH)D3 and 200 are assayed for HbA1c. I developed a semi-automated in-line extraction method for the analysis of vitamin D3 samples which has since been licensed to a private company for large scale manufacturing. They are in the process of obtaining required certifications (based on ISO13485) in Iran. Other tests which have been developed, validated and brought online for clinical service in Massoud diagnostic lab, by me include HPLC assays for anti-epileptic drugs (topiramate, levetiracetam, lamotrigine, 10(OH)-oxcarbazepine, carbamazepine, primidone, phenobarbital, phenytoin), HbA1c cation-exchange chromatography assay and phenylalanine neonatal screening.
- I set up the machining and electronics workshops in the department of pharmacology.
- I designed, fabricated and coded software for a digital physiograph currently working in the teaching lab of the pharmacology department of Tehran University for Medical Sciences.

- I designed and fabricated a cell chamber and an electrode holder/amplifier housing for electrophysiological studies on cultured cells. This setup was used to study the effects of mebudipine and dibudipine on intracellular Ca^{2+} ion concentration changes.
- I designed and fabricated a capillary electrophoresis system.
- I designed and fabricated a cell chamber for fluorescence studies on cultured cells.
- I designed, fabricated and developed the software for a computer controlled filter changer for an Olympus IX-71 inverted fluorescence microscope which was then used for the ratiometric analysis of Fura-II fluorescence fluctuations in response to intracellular Ca^{2+} changes.

Special Research Interests:

- Liquid Chromatography coupled to tandem mass spectrometry.
- Application of analytical methods to pharmacological research.
- Protein purification and analysis.
- Therapeutic Drug Monitoring.
- HPLC/Capillary electrophoresis.
- Anticancer agents.
- Molecularly imprinted polymers as therapeutic/biosensing tools.

Memberships:

- Member of the research committee of IUMS Medical School between 2000 and 2007.
- Member of the postgraduate affairs committee of IUMS Medical School between 2007 and 2009.
- Representative for IUMS in the Committee for Inventions and Innovations of the Ministry of Health.

Publications and Presentations:

Maternal voluntary exercise ameliorates learning deficit in rat pups exposed, in utero, to valproic acid; role of BDNF and VEGF and their receptors. Rahimi R, Akhavan MM, Kamyab K, **Ebrahimi SA**. Neuropeptides. 2018 Jun 30. pii: S0143-4179(18)30041-6.

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Conjugated Linoleic Acid Stimulates Apoptosis in RH and Tehran Strains of *Toxoplasma gondii*, in Vitro. Shamseddin J, Akhlaghi L, Razmjou E, Shojaee S, Monavari SH, Tajik N, **Ebrahimi SA**, Meamar AR. *Iran J Parasitol*. 2015 Apr-Jun;10(2):238-44.

Effect of the different assays of HbA1c on diabetic patients monitoring. Razi F, Nasli Esfahani E, Rahnamaye Farzami M, Tootee A, Qorbani M, **Ebrahimi SA**, Nahid M, Pasalar P. *J Diabetes Metab Disord*. 2015 Aug 4;14:65. doi: 10.1186/s40200-015-0193-7.

Effect of berberine on nitric oxide production during oxygen-glucose deprivation/reperfusion in OLN-93 oligodendrocytes. Nadjafi S, **Ebrahimi SA**, Rahbar-Roshandel N. *Pak J Biol Sci*. 2014 Nov;17(11):1185-9.

Commentary on prevention a possible drug-drug interaction: is concurrent administration of orlistat and pioglitazone increase the risk of drug-induced hepatotoxicity? Emzhik M, Rahimi-Moghaddam P, **Ebrahimi SA**, Keyhanfar F, Moazzam AS. *Int J Prev Med*. 2015 Feb 20;6:16.

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The inhibitory effect of Acyclovir loaded nano-niosomes against herpes simplex virus type-1 in cell culture. Monavari SH, Mirzaei Parsa MJ, Bolouri B, **Ebrahimi SA**, Ataei-Pirkooch A. *Med J Islam Repub Iran*. 2014 Sep 17;28:99.

Protective Effects of Berberine on Oxygen-Glucose Deprivation/Reperfusion on Oligodendrocyte Cell Line (OLN-93). Nadjafi S, **Ebrahimi SA**, Rahbar-Roshandel N. *Int J Prev Med*. 2014 Sep;5(9):1153-60.

Antiangiogenic Activity of Xanthomicrol and Calycopterin, Two Polymethoxylated Hydroxyflavones in Both In Vitro and Ex Vivo Models. Abbaszadeh H, **Ebrahimi SA** and Akhavan MM. *Phytother. Res.* (2014) Published online in Wiley Online Library DOI: 10.1002/ptr.5179

Synthesis of a phenylalanine imprinted polymer for attenuation of phenylalanine absorption via the gut in murine hyperphenylalaninemia model. Najafizadeh P, **Ebrahimi SA**, Panjeshahin M, Kamyab Hesari K and Rezayat Sorkhabad SM. *Materials Chemistry B*, 2014.

In vitro selection and characterization of deoxyribonucleic acid aptamers for digoxin. Kiani Z, Shafiei M, Rahimi-Moghaddam P, Karkhane AA, **Ebrahimi SA**. *Anal Chim Acta.* 2012 Oct 20;748:67-72. doi: 10.1016/j.aca.2012.08.025. Epub 2012 Sep 5.

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A non-radioactive method for angiotensin II receptor binding studies using the rat liver. Akhavan MM, **Ebrahimi SA**, Mahmoudian M. J Pharmacol Toxicol Methods. 2006 May-Jun;53(3):206-14. Epub 2005 Sep 13.

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Some kinetic properties of guinea pig liver monoamine oxidase. Barwell CJ and **Ebrahimi SA** (1994) J Neural Transm.[Suppl]41:39-45.

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