

# Curriculum Vitae



## Amir Norouzy

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## Education

-**2010-2015** PhD in Biotechnology at Jacobs University Bremen, Germany

-**2004-2007** Master of Science in biochemistry at Babol University of medical sciences (MUBabol), Babol, Iran

-**1999-2003** Bachelor of Science in applied chemistry at Azad University Center of Tehran Branch (IAUCTB),  
college of basic sciences, Tehran, Iran

## Publications

[1] **Norouzy A**, Azizi Z, Nau W. M. Indicator Displacement Assays in Live Cells. *Angew. Chem. Int. Ed*, **2014**;  
54: 792-795.

[2] **Norouzy A**, Assaf K, Jacob M, Nau W. M. Coulomb Repulsion in Short Polypeptides. *J Phys Chem B*,  
**2014**; 119: 33-43.

[3] Parente Carvalho C, **Norouzy A**, Ribeiro V, Nau W. M, Pischel U. Cucurbiturils as supramolecular  
inhibitors of DNA restriction by type II endonucleases. *Org. Biomol. Chem*, **2015**; 13: 2866-2869.

[4] **Norouzy A** and Nau, W. M. Synthetic macrocyclic receptors as tools in drug delivery and drug discovery.  
*European Drug target review*, **2014**.

[5] Abdali N, Barth E, **Norouzy A**, Schulz R, Nau W. M, Kleinekathöfer U, *et al.* Corynebacterium jeikeium  
jk0268 constitutes for the 40 amino acid long PorACj, which forms a homooligomeric and anion-selective cell  
wall channel. *Plos one*, **2013**; 8: e75651.

[6] Jacob MH, Dsouza RN, Ghosh I, **Norouzy A**, Schwarzlose T, Nau W. M. Diffusion-enhanced Forster  
resonance energy transfer and the effects of external quenchers and the donor quantum yield. *J Phys Chem B*,  
**2013**;117:185-198.

[7] Qujeq D, Roushan T, **Norouzy A**, Mehdinejad-Shani M. Effects of dichlorvos and carbaryl on the activity  
of free and immobilized acetylcholinesterase. *Toxicol Ind Health*, **2012**;28:291-295.

- [8] **Norouzy A.** , Qujeq D, Vatani M, Badiei A. Adsorptive immobilization of acetylcholine esterase on octadecyl substituted porous silica: optical bio-analysis of carbaryl. *B Korean Chem Soc*, **2010**;31:157-161.
- [9] **Norouzy A.** Qujeq D. The inhibitory effect of dissolved carbaryl in dioxane on physically adsorbed acetylcholinesterase. *React Kinet Catal L* **2009**;98:391-401.
- [10] **Norouzy A.** Qujeq D, Habibi-Rezaei M. Evaluation and Characterization of Free and Immobilized Acetylcholinesterase with Fluorescent Probe, Differential Scanning Calorimetry and Docking. *Int Biol Biomed J* **2016**;1:1-9.

## **Positions and Projects**

### **2004 M.Sc. Thesis:**

- Preparation & characterization of structural and catalytical properties of immobilized acetylcholinesterase. (*Department of biochemistry and biophysics, Babol University of medical sciences, Babol/Iran*)

### **2008, Internship:**

- Chemically synthesis peptide silaffin R5 for biomineralization and imaging of silica particles and eGFP expression in E.Coli. (*TUM-Munich, Germany*)

### **2009, Researcher:**

- Studying scorpion's toxin effect on metabolism and histology of Balb-C mice. (*Pasteur Institute of Iran*)

### **2010, PhD Thesis (Two Main Projects):**

- 1- Indicator Displacement Assays in Live Cells.
- 2- Polypeptide Dynamics and Structure Studies Simultaneously by Collision-induced Fluorescence Quenching and Resonance Energy Transfer in the 10-Å Domain.  
(*Jacobs University Bremen, Germany*)

### **2015, Researcher (at NIGEB):**

- Technology development for semi-industrial synthesis and US-pharmacopeia trial of Leuprolide acetate, a peptide-based drug.
- Design and synthesis of novel oligopeptide-based drugs against tumor antigens

- M.Sc thesis entitled: “Comparative Study of MOG, MOG-Derivatives and Cuprizone on EAE Mice-model”

### 2017, PI at NIGEB

- Evaluating the Binding Affinity of the Labeled Peptides to HLA-A2
- Design and Synthesis of Novel Cyclic Cell-penetrating Peptides
- Pharmacopeia Trial of Leuprolide Acetate
- Supervising EU Pharmacopeia Tests on Growth Hormone

### Communications:

- **A. Norouzy** (talk) “ Macrocyclic-based Hosting as a Tool for Detecting Intracellular Small Biomolecules and Drug Delivery” 1<sup>st</sup> Congress of Chemical Biotechnology, 6<sup>th</sup> to 8<sup>th</sup> March 2016 in NIGEB, Tehran, Iran
- Chairman and member of panels at the 1<sup>st</sup> Congress of Chemical Biotechnology, 6<sup>th</sup> to 8<sup>th</sup> March 2016 in NIGEB, Tehran, Iran
- **A. Norouzy**, Z. Azizivarzaneh, W. M. Nau “Host–Guest Reporter Pair with ‘Turn-on’ Fluorescence Response to Monitor the Uptake of Cationic Analytes into Live Cells ” Molecular life sciences, 3<sup>rd</sup> to 6<sup>th</sup> October 2013 in Frankfurt, Germany
- **A. Norouzy** (talk) ”Host-guest Reporter Pairs with ‘Turn-on’ Fluorescence Response to Signal the Uptake of Cationic Analytes into Live Cells” Retreat Molife center, 25<sup>th</sup> and 26<sup>th</sup> of March 2013 in Bad Bevensen Germany.
- “Hybrid in Microscopy” **Workshop** from 30<sup>th</sup>-31<sup>st</sup> January 2013 at Jacobs University Bremen.
- **A. Norouzy**, I. Ghosh, M. H. Jacob and W. M. Nau, “Simultaneous short-distance FRET and collision-Induced Fluorescence Quenching to quantify how peptide conformation and dynamics depend on side-chain charge” Förster resonance energy transfer, 27<sup>th</sup> to 30<sup>th</sup> of March, 2011 Göttingen, Germany
- **A. Rei**, I. Ghosh, R. D'Souza, **A. Norouzy**, M. H. Jacob, W. M. Nau, 2011, “Short-distance FRET applied to the polypeptide chain” MAF 12<sup>th</sup> conference on methods and applications of fluorescence spectroscopy, Imaging and Probes, Strasbourg, France, September, **2011**
- **Norouzy, A.** Qujeq, D., 2008. “Effect of carbaryl and dioxan on physically adsorbed acetylcholinesterase kinetic”. The 8<sup>th</sup> Iran biophysical chemistry conference, University of Sistan-O Baluchestan, Zahedan, Iran.

- **Norouzy, A.** Qujeq, D,... 2007. "Preparation and characterization of immobilized Acetylcholinesterase". The second International Congress of Biochemistry and Molecular Biology. Oral presentation, Shiraz University of medical sciences, Shiraz, Iran.
- **Norouzy, A** , Theoretical and Experimental workshop of "immobilization of enzymes" Main director and lecturer, Babol University of Medical Sciences, Babol, Iran.
- **Norouzy, A.** Qujeq, D.2007. "A New Approach to Protein Analysis through Bound-Alkyl/Thioflavin T Competition procedure". First Iranian proteomics congress, University of Tehran, Tehran, Iran.
- Qujeq, D. **Norouzy, A**,... 2005."Determination Of Serum Iron, TIBC and Ferritin of patients with hepatitis B". The First International Congress of Biochemistry and Molecular Biology. Oral presentation, Tarbiat Modarres University, Tehran, Iran.

### Memberships:

- German Chemical Society (GDCh: gesellschaft deutscher chemiker )
- The European peptide society (EPS: <http://www.eurpepsoc.com>)
- Iranian National Elites foundation (<http://en.bmn.ir/>)
- Bioprocess engineering faculty, NIGEB

### English proficiency:

-2009 ibt-TOEFL. Score: **101/120**

-1990-present Studying English language, last diploma is pre FCE-2 from Kalam English Institute, Tehran, Iran. Total GPA: **92/100**.

-1998 ITC (Instructors Training Course) Diploma, From Sadegh English Institute, Signed by M.S Hamzepoor, PhD

### Awards and Honors

**2010-2013**, DAAD fellowship: *Research Grants for Doctoral Candidates and Young Academics and Scientists*

**2008**, Awarded for excellent teaching at Zabol University of medical sciences.

**2002, 2003**, accepted among top-five students for three serial semesters in (IAUCTB), college of basic science.

**2004**, 13<sup>th</sup> placed among thousands of volunteers in the national University entrance examination in the field of medical biochemistry.

**2004**, 29<sup>th</sup> Placed among thousands of volunteers in the national University entrance examination in the field of biochemistry.

## Technical Skills

### 1- Spectroscopic

- Time-Resolved Fluorescence Spectroscopy
- Steady-stated Fluorescence Spectroscopy
- Fluorescence Studying of Proteins and Peptides
- UV-Visible Spectroscopy
- Circular Dichroism (CD) Spectroscopy for Studying Proteins structure

### 2- Chemical Synthesis

- Chemical Synthesis of Peptides (SPPS method)
- Organic Synthesis (DBO fluorophore was synthesized in 13 serially steps)
- Chemical Synthesis and Purification of Cucurbit[n]urils.
- Functionalizing of Inorganic Matrixes

### 3- Enzymes and Proteins

- Enzyme Handling (both pure or extracted from animal tissues)
- Immobilization of Enzymes and Proteins
- Protein Purification by HPLC
- Protein-based Biomineralization

### 4- Laboratory animal handling & Rat dissecting

### 5- Cellular

- Cell Culture and Other Routine Cell Handling Skills
- Cell Manipulation (Microinjection)
- *in vivo* Macromolecular Host/Dye Displacement Assay
- Fluorescence and CLSM (Confocal Laser Scanning Microscopy) Imaging

## Teaching Experiences

-2000-2006: Teaching chemistry at many institute and schools to high school students.

-2005-2006: Teaching biochemistry and organic chemistry to graduated and bachelor students in preparatory class held by many institutes.

-2002-2007: Teaching English in many language institutes.

**-2005-2006:** Teaching biochemistry and biochemistry laboratory in Babol University of medical science, professor assistant.

**-2007-2008:** Faculty of science at Zabol University of medical science.