

# Nesreen Ibrahim Alsanousi Mohammed, Ph.D., | Biochemistry

Department of Biochemistry, Faculty of Medicine and Surgery,  
National University-Sudan  
Khartoum, Sudan  
+ 249 91283 1724 (Cell)  
[nesreen.alsanousi@gmail.com](mailto:nesreen.alsanousi@gmail.com)



## EDUCATION

### **Osaka University, Osaka, Japan**

- Ph.D., Biological sciences/ Biochemistry-Structural biology (September 2016)
- M.Sc., Biological sciences/ Biochemistry-Structural biology (September 2013)

### **Al-Neelain University, Khartoum, Sudan**

- B.Sc., Biochemistry with First Class Honors

## EMPLOYMENT EXPERIENCE

### **Assistant professor - *National University - Sudan (NUSU)***

*Department of Biochemistry, Faculty of Medicine and surgery*  
(August, 2019 – Current)

- Teaching the Biochemistry courses
- Involve in research and designing of new courses
- Leading class discussion sessions and seminars
- Participate in medicine program accreditation process

### **Head of department of Biochemistry – *Al fajar University Collage for Science and technology (ACST)***

(October, 2017- Current)

- Leading the department of Biochemistry in Program of Medicine
- Instructor of Biochemistry courses
- Teaching biochemistry courses to medical field students
- Participate in curriculum development for the following courses:
  - Basic biochemistry
  - Nutrition & nutritional biochemistry
  - Endocrine system and Metabolism
  - Basics of Medical genetics and molecular biology
- Participate in medicine program accreditation process
- Preparation of TBL and PBL

**Assistant professor- *Napata University College, Khartoum, Sudan***  
(2018 – 2019)

- Teaching biochemistry courses to medical field students.
- Advise the students the importance of the subject and what stream of biochemistry should be chosen by them.

**Assistant professor (Part time) - *University of Medical Science and Technology (UMST), Sudan***  
(April 2017- June 2021)

Instructor of Biochemistry courses, Faculty of Pharmacy and Faculty of Medical laboratories

- Course responsibilities included leading weekly lecture and discussion activities, holding office hours, and grading exams

**Researcher (2017- current)**

*Neelain Institute for Engineering, Technology and Computer Researches (NIETCR), Biotechnology Researches Center*

- Research in Labs of Al-Neelain university

**Teaching assistant- *Department of Biochemistry, Al-Neelain University, Sudan***  
(2007-2010)

- Taught the laboratory section for the 1<sup>st</sup> year- 4<sup>th</sup> year undergraduate courses.
- Organized lectures and designed laboratory demonstrations to illustrate course concepts.
- Planned lessons and assignments, led discussion sections, graded papers and exams.

**RESEARCH EXPERIENCE**

**Osaka University, Japan**

***Ph.D. Research,***

- Project 1: Optimization and preparation of nanoscale phospholipid bilayers (nanodisc) for its application to structural studies of membrane proteins.
- Project 2: Solution NMR study of molecular basis for drastic enhancement of cytoprotective activity of Humanin caused by D-isomerization of specific serine residue.
- Project 3: Solution NMR studies of CERT-PH domain interaction with phospholipid bilayers, in nanodiscs as a model membrane system.

**Advisors:**

Professor: KOJIMA Chojiro

Professor: FUJIWARA Toshimichi

### ***Master thesis,***

**Title:** Solution NMR analysis of the transmembrane bacterial Transducer Protein HtrII reconstructed into Phospholipid Bilayer

**Supervised by:** Professor KOJIMA Chojiro

### **Department of Biochemistry, Al-Neelain University, Sudan**

#### ***Undergraduate Honors Research,***

**Title:** The Effect of Low Levels of Dietary *Rutagraveolens* and *Solenostemmaargel* or Their Mixture on Bovans Chicks.

## **TEACHING EXPERIENCE IN GRADUATE LEVEL COURSES**

*National University - Sudan (NUSU)*

*(2019-2020)*

*Faculty of Medicine, Department of Biochemistry*

Program: Master in Bioinformatics

Course: Introduction to Proteomics

- I have prepared the materials, taught the course, supervised seminars, evaluated student performance, prepare and graded the final exam.

## **AWARDS AND HONOURS**

- Japanese Governmental Scholarship (Monbukagakusho) for Doctoral Program, 2013.
- Japanese Governmental Scholarship (Monbukagakusho) for Master Program, 2011.
- Academic Affairs of Al Neelain University 2004 and 2005.
- The Academic Prize of Ustaz Al Fadel Rabee Abd Al Kareem in Biochemistry, Sudan Institute for Natural Sciences, Ministry of Higher Education& Scientific Research 2006, Khartoum Sudan.

## **SKILLS AND EXPERTIES**

#### ***- Language skills:***

- Arabic
- English
- Japanese

#### ***- Technical and laboratory practical skills:***

- Standard protein chemistry; Protein expression and purification.
- Molecular biology tools; cloning, PCR, mutagenesis.
- Ultra centrifugation
- Chromatography; HPLC, Column, Gas, Absorption
- Light microscope, Electron microscope
- ITC (isothermal titration calorimetry)
- Histology

- Various Biochemical and Biophysical tools such as solution NMR spectroscopy, x-ray crystallography and various spectroscopic techniques.
- Structural biology tools.
- Assay development.
- Cell culture.

- **Enthusiastic and responsible researcher, equally efficient in team and as an individual**

- **Ability to manage multiple tasks and meet deadline**

- ***Other Skills:***

- Ability to present and organize large amounts of information in a clear manner.
- Fluency in Microsoft Office packages.
- Analysis of complex data and presentation of emerging conclusions and concepts.
- Experience in qualitative and/or quantitative analysis.
- Sensitive to the needs of others, active listener.
- Diplomacy and confidentiality.
- Problem-solving skills and good decision maker.
- Ability to plan a project and deliver it to agreed timelines.
- Ability to communicate effectively to a range of audiences

## **Training and Workshops**

(2018)

- **Workshop on Team Based Learning (TBL) Method.** *Alfajr University Collage for Science and technology (ACST), Sudan.*

(2019)

- **Workshop in medical education,** *National University - Sudan (NUSU)*

(2020)

- **Introduction to E-learning /Moodle Workshop.** *National University - Sudan (NUSU)*
- **Educational objectives and Course development Workshop.** *Alfajr University Collage for Science and technology (ACST), Sudan.*
- **Learning theories and Education strategies Workshop.** *Alfajr University Collage for Science and technology (ACST), Sudan.*

## **Publications**

1. **Nesreen Alsanousi**, Toshihiko Sugiki, Kyoko Furuita, Masatomo So, Young-Ho Lee, Toshimichi Fujiwara and Chojiro Kojima. Solution NMR structure and inhibitory effect against amyloid- $\beta$  fibrillation of Humanin containing a D-isomerized serine residue. *Biochemical and Biophysical research communications*. **477**, 647-653, 2016.
2. **Nesreen I. El-Sanusi** and S. EI-Adam. The **Effect** of Low Levels of Dietary *Rutagraveolens* and *Solenostemmaargel* or Their Mixture on Bovans Chicks. *Asian Journal of Animal and Veterinary Advance*. **2**, 27-31, 2007.
3. Shama I.Y. Adam, **Nesreen Alsanousi**, Ahdaf M.A. Ahmed, Sahar Y. Ali, Maiada M. Abdallah, A.A. Anfal and Sara M. Hamed, 2019. Evaluation of Toxicity and Anti-microbial Activity of *Tribulus terrestris* Fruits in Sudan. *Asian Journal of Biological Sciences*, 12: 130-139.

### ***Submitted Manuscript***

4. Toshihiko Sugiki, Young-Ho Lee; **Nesreen Alsanousi**; Kaito Murata; Izuru Kawamura; Toshimichi Fujiwara; Kentaro Hanada; Chojiro Kojima. A hybrid strategy combining solution NMR spectroscopy and isothermal titration calorimetry to characterize protein-nanodisc interaction. *Analytical Biochemistry*.2021.

## **Teaching and Research interest**

- Biochemistry
- Molecular biology
- Biophysics
- Toxicology and pharmacology
- Proteomics
- Protein expression, purification and characterization
- Structural biology