

# Rasha M. Hussein

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## PERSONAL STATEMENT

I am an associate Professor of Biochemistry, Faculty of Pharmacy. I teach several undergraduate as well as postgraduate Biochemistry courses such as Basic Biochemistry, Clinical Biochemistry and Clinical Nutrition. My research interests include molecular genetics, protein aggregation diseases, cancer and antioxidants. I am a committed, knowledgeable research fellow and a confident teacher able to deliver complex information to audiences of all levels.

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## EMPLOYMENT HISTORY

September 2018 – Present

**Associate Professor | Mutah University, Al-Karak city, Jordan**

- Teach Pharmaceutical Biochemistry courses and others to undergraduate students
- Conduct research projects

November/2014 – September/2018

**Assistant Professor | Beni-Suef University, Beni-Suef city, Egypt**

- Taught Biochemistry courses to both undergraduate and postgraduate students
- Built a new version of the Biochemistry Department, Faculty of Pharmacy
- Successfully managed a research project, budget, team and equipment
- Advised eight students for the completion of their Master or PhD degrees.

June 2005 – October/2014

**Academic Tutor | Beni-Suef University, Beni-Suef City, Egypt**

- Gave laboratory tutorials to undergraduate students on Pharmaceutical Biochemistry including protein identification tests, enzyme kinetics as well as measurement of serum lipid profile, glucose concentration, kidney and liver functions.
  - Travelled to Sweden and obtained Master degree in biomedicine from Lund University during 2008- 2010
  - Secured a visiting PhD position in Groningen University, The Netherlands after granting a joint PhD scholarship from the Egyptian Missions Department, The Higher Education Ministry during 2011- 2013
  - Leant Western blotting technique, cell culture, in vitro analysis, protein purification
  - Developed high skills in presentation and communication at seminars and conferences.
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## EDUCATION

March 2020-Present

**Beni-Suef University | Beni-Suef City, Egypt**

Associate professor of Biochemistry

October/2011 – October /2014

**Beni-Suef University | Beni-Suef City, Egypt**

**PhD in Biochemistry** through a joint supervision scholarship to Groningen University, The Netherlands.  
Thesis Title: The specific role of the small heat shock proteins as chaperone in protecting against protein aggregation mediated diseases.

September /2008 – June/2010

**Lund University | Lund City, Sweden**

**MSc: Biomedicine (Biochemistry)**

Thesis Title: In vitro combinatorial therapeutics in breast cancer against the Notch and PI3K pathways.

September/1999 – June/2004

Cairo University, Beni-Suef branch | Beni-Suef City, Egypt  
BSc: Pharmaceutical Sciences (Excellent with honor degree)

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### PROFESSIONAL TRAINING AND COURSES:

Advanced Courses at Lund University, Sweden:

- Clinical chemistry and clinical genetics
- Tumor Biology
- Clinical microbiology and Immunology
- Bioinformatics and sequence analysis

Advanced courses at Groningen University, The Netherlands:

- Advanced light microscopy master class.
- Alzheimer's disease, aging brain and brain development master class.

Advanced courses at Beni -Suef University, Egypt:

- Basic Statistics
- Organic chemistry
- Metabolism
- Nucleic Acids

Courses for improving teaching skills:

- Student evaluation and examination techniques
  - Research ethics
  - University legal and financial Aspects
  - The credit Hour system
  - Communication skills
  - Modern Educational techniques
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### ADDITIONAL SKILLS

- **Languages:** English TOEFL iBT certificate
  - **Computer skills:** International Computer driving License (ICDL) certificate
  - Data Collection and Analysis
  - Teaching, Tutoring and Presenting
  - **Research interests:** Protein aggregation, Cancer, antioxidants, molecular biology, animal models, cell culture
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### AWARDS

- Principal investigator of a research project (50000 EGP) funded by Beni-Suef University, 2017.
  - The prize of the best PhD thesis in Pharmaceutical Sciences awarded by Beni-Suef University, 2016.
  - The prize of best University Staff member in Biochemistry Department, Faculty of Pharmacy, Beni-Suef University for academic year 2016-2017 .
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### CONFERENCES:

- 3<sup>rd</sup> Huntington disease symposium at Leiden University, the Netherlands, 2013.
- 13<sup>th</sup> chaperone Society meeting at Utrecht University, the Netherlands, 2013.
- 1<sup>st</sup> international conference in antioxidants, aging and degenerative diseases, Malaysia, 2015.
- PI3K like protein conference, Milan, Italy, 2015.
- Active Pedagogical Techniques in Higher Education: Combining Multidisciplinary Learner-Centered Educational Experience from Egypt, Germany, Malaysia and the United States, Mutah City, Jordan, 2018.
- 1<sup>st</sup> International Symposium on Recent Advances in Treatment of Cancer and Diabetes, Mutah City, Jordan, 2019.

## PUBLICATIONS

1. Lambert W, Rutsdottir G, Hussein R, Bernfur K, Kjellström S, Emanuelsson C. Probing the transient interaction between the small heat-shock protein Hsp21 and a model substrate protein using crosslinking mass spectrometry. *Cell Stress Chaperones*. 2013;18(1):75-85.
2. Månsson C, Arosio P, Hussein R, Kampinga HH, Hashem RM, Boelens WC, et al. Interaction of the molecular chaperone DNAJB6 with growing amyloid-beta 42 (A $\beta$ 42) aggregates leads to substoichiometric inhibition of amyloid formation. *J Biol Chem*. 2014;289(45):31066-31076.
3. Hussein RM, Benjamin IJ, Kampinga HH. Rescue of  $\alpha$ B Crystallin (HSPB5) Mutants Associated Protein Aggregation by Co-Expression of HSPB5 Partners. *PLoS One*. 2015;10(5):e0126761.
4. Hussein RM, Hashem RM, Rashed LA. Evaluation of the amyloid beta-GFP fusion protein as a model of amyloid beta peptides-mediated aggregation: a study of DNAJB6 chaperone. *Front Mol Neurosci*. 2015;8:40.
5. Motawi T, Shaker O, Hussein R, Houssem M. Polymorphisms of  $\alpha$ 1-antitrypsin and Interleukin-6 genes and the progression of hepatic cirrhosis in patients with a hepatitis C virus infection. *Balkan J Med Genet*. 2016;19(2):35-44.
6. Hussein RM. Biochemical relationships between bone turnover markers and blood glucose in patients with type 2 diabetes mellitus. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*. 2017;11:S369-S372.
7. Mohamed WR, Mehany AB, Hussein RM. Alpha lipoic acid protects against chlorpyrifos-induced toxicity in Wistar rats via modulating the apoptotic pathway. *Environ Toxicol Pharmacol*. 2018;59:17-23.
8. Hussein RM, Mohamed WR, Omar HA. A neuroprotective role of kaempferol against chlorpyrifos-induced oxidative stress and memory deficits in rats via GSK3 $\beta$ -Nrf2 signaling pathway. *Pestic Biochem Physiol*. 2018;152:29-37.
9. Mo'men YS, Hussein RM, Kandeil MA. Involvement of PI3K/Akt pathway in the protective effect of hesperidin against a chemically induced liver cancer in rats. *J Biochem Mol Toxicol*. 2019:e22305.
10. Ismail DM, Shaker OG, Kandeil MA, Hussein RM. Gene Expression of the Circulating Long Noncoding RNA H19 and HOTAIR in Egyptian Colorectal Cancer Patients. *Genetic testing and molecular biomarkers*. 2019;23(9):671-680.
11. Hussein RM. Evaluation of the Circulating Betatrophin Concentration and its Possible Correlations Among Diabetic Patients with Dyslipidemia. *Turkish Journal of Endocrinology & Metabolism*. 2019;23(1).
12. Ali MS, Hussein RM, Gaber Y, Hammam OA, Kandeil MA. Modulation of JNK-1/ $\beta$ -catenin signaling by Lactobacillus casei, inulin and their combination in 1, 2-dimethylhydrazine-induced colon cancer in mice. *RSC Advances*. 2019;9(50):29368-29383.
13. Ali MS, Hussein RM, Kandeil MA. The Pro-Oxidant, Apoptotic and Anti-Angiogenic Effects of Selenium Supplementation on Colorectal Tumors Induced by 1, 2-Dimethylhydrazine in BALB/C Mice. *Reports of Biochemistry and Molecular Biology*. 2019:216-226.
14. Mo'men YS, Hussein RM, Kandeil MA. A novel chemoprotective effect of tiopronin against diethylnitrosamine-induced hepatocellular carcinoma in rats: Role of ASK1/P38 MAPK-P53 signalling cascade. *Clin Exp Pharmacol Physiol*. 2020;47(2):322-332.

## OTHERS:

Website: <http://www.bsu.edu.eg/homepage.aspx?Pid=1703&lang=en>

Research gate: [https://www.researchgate.net/profile/Rasha\\_Hussein](https://www.researchgate.net/profile/Rasha_Hussein)

Linked in: <https://www.linkedin.com/in/rasha-hussein-556b165b/>

Google Scholar: <https://scholar.google.nl/citations?user=jfs382oAAAAJ&hl=en&oi=ao>

Website: <https://academic.mutah.edu.jo/Rasha.Hussein/sitepages/Home.aspx>

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## REFERENCES ON REQUEST