

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.

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)

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 .
 - Prize of (high citing researchers) at Mutah University, Jordan 2022
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CONFERENCES:

- 3rd Huntington disease symposium at Leiden University, the Netherlands, 2013.
- 13th chaperone Society meeting at Utrecht University, the Netherlands, 2013.
- 1st 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.

- 1st International Symposium on Recent Advances in Treatment of Cancer and Diabetes, Mutah City, Jordan, 2019.
- The second international conference on COVID-19 Pandemic rearranges the scientific research priorities, Mutah University, Jordan, 2021

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 β 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 α 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 α 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 β -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/ β -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.
15. Hussein RM. Upregulation of miR-33 and miR-155 by gum acacia mitigates hyperlipidaemia and inflammation but not weight increase induced by Western diet ingestion in mice. *Archives of Physiology and Biochemistry*. 2021:1-7.
16. Hussein RM, Sawy DM, Kandeil MA, Farghaly HS. Chlorogenic acid, quercetin, coenzyme Q10 and silymarin modulate Keap1-Nrf2/heme oxygenase-1 signaling in thioacetamide-induced acute liver toxicity. *Life Sciences*. 2021;277:119460.
17. Hussein RM, Al-Dalain SM. Betaine downregulates microRNA 34a expression via a p53-dependent manner in cisplatin-induced nephrotoxicity in rats. *Journal of Biochemical and Molecular Toxicology*. 2021;35:e22856.
18. Hussein RM, Kandeil MA, Mohammed NA, Khallaf RA. Evaluation of the hepatoprotective effect of curcumin-loaded solid lipid nanoparticles against paracetamol overdose toxicity: Role of inducible nitric oxide synthase. *Journal of Liposome Research*. 2022:1-11.

19. Hussein RM, Youssef AM, Magharbeh MK, Al-Dalaen SM, Al-Jawabri NA, Al-Nawaiseh TN, et al. Protective Effect of Portulaca oleracea Extract Against Lipopolysaccharide-Induced Neuroinflammation, Memory Decline, and Oxidative Stress in Mice: Potential Role of miR-146a and miR-let 7. Journal of Medicinal Food. 2022.

OTHERS:

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

Research gate: 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