 ***Curriculum Vitae***

**Ahmed Mahmoud Sayed, (**Ph.D.)

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**Education**

2014.01 – 2018.07 **Ph.D., Department of Biological Sciences (DBS), National University of Singapore (NUS)** ( **ranked** #11 in **QS** Global **World Rankings** 2022)

Characterizing A Novel Effector Protein of *Edwardsiella tarda (E. tarda)*: Thioredoxin-Like Protein (TRX3)

2009.12 - 2013.03 **MSC., Biochemistry, Chemistry Department, Assiut University, Egypt**

 Biochemical studies on aflatoxinβ1-metabolites in living animal

2004.08 - 2008.07 **Bachelor of Chemistry, Chemistry Department, Assiut University, Egypt**

**Areas of Expertise / Volunteer Work**

* Molecular Biology: Molecular cloning, site directed mutagenesis and DNA sequencing.
* Proteomics: Protein Expression and purification, Mass spectrometry, Gel filtration, Ion exchange and Affinity Chromatography, pull down assays and Western blot.
* Structural Biology: Protein crystallization and NMR spectroscopy

Biophysical techniques: Circular dichroism (CD), Isothermal calorimetric titration (ITC), Fluorescence spectroscopy and Bio-Layer Interferometry assay (BLI)

* Enzymatic Assay: Enzyme activity determination and studying its kinetics.
* Bioinformatics: Molecular Docking and Molecular dynamics (MD) simulation.
* Mentor of honor students NUS, Singapore (August 2015- April 2016), (August 2016- April 2017).
* Trained Summer Intern at NUS, Singapore (June 2015 – September 2015).
* Safety leader of my previous research group at NUS, Singapore (2016-2018).

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**Work Experience**

2018.10 – Present **Lecturer of Biochemistry, Chemistry Department, Assiut University, Egypt.**

2013.04 – 2018.07 **Assistant Lecture, Chemistry Department, Assiut University, Egypt.**

2009.04 – 2013.03 **Demonstrator, Chemistry Department, Assiut University, Egypt.**

**Courses taught**

1. Laboratory Techniques in Life Sciences (LSM2191) - DBS,NUS, Singapore.
2. Princibles of Biochemistry (C 413) - Assiut University, Egypt.
3. Biotechnology for Biochemistry Diploma Students (B 518) - Faculty of Science, Assiut University, Egypt.
4. Advanced NMR Module for Postgradute Students (C 639) - Faculty of Science, Assiut University, Egypt.
5. Structure and Function of Proteins and Enzymes for Postgradute Students (C675) - Faculty of Science, Assiut University, Egypt.
6. Macromolecular Recognition for Postgradute Students (C 679) - Faculty of Science, Assiut University, Egypt.
7. Proteomics for postgraduate students (M.B.5020) - Molecular Biology Research and Studies Institute, Assiut University, Egypt.

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**Publications: (Q-Ranking SCOPUS)**

1. **Sayed AM,** Hassanein EH, Ali FE, Omar ZM, Rashwan EK, Mohammedsaleh ZM, Abd El-Ghafar OA. Regulation of Keap-1/Nrf2/AKT and iNOS/NF-κB/TLR4 signals by apocynin abrogated methotrexate-induced testicular toxicity: Mechanistic insights and computational pharmacological analysis. Life Sciences. 2021 Aug 25:119911. **(IF: 5.037, Q1)**
2. Hassanein EH, Ahmed MA, **Sayed AM**, Rashwan EK, Abd El‐Ghafar OA, Mahmoud AM. Edaravone mitigates hemorrhagic cystitis by modulating Nrf2, TLR‐4/NF‐κB, and JAK1/STAT3 signaling in cyclophosphamide‐intoxicated rats. Journal of Biochemical and Molecular Toxicology. 2021 Aug 13:e22889. **(IF: 3.642, Q2)**
3. Shalkami AG, Hassanein EH, **Sayed AM**, Mohamed WR, Khalaf MM, Hemeida RA. Hepatoprotective effects of phytochemicals berberine and umbelliferone against methotrexate-induced hepatic intoxication: experimental studies and in silico evidence. Environmental Science and Pollution Research. 2021 Jul 13:1-5. **(IF: 4.223, Q2)**
4. Tolba MS, **Sayed AM**, Sayed M, Ahmed M. Design, Synthesis, Biological Evaluation, and Molecular Docking of Some New Thieno [2, 3-d] Pyrimidine Derivatives. Journal of Molecular Structure. 2021 Jul 25:131179. **(IF: 3.196, Q2)**
5. Ali FE, **Sayed AM**, El-Bahrawy AH, Omar ZM, Hassanein EH. Targeting KEAP1/Nrf2, AKT, and PPAR-γ signals as a potential protective mechanism of diosmin against gentamicin-induced nephrotoxicity. Life Sciences. 2021 Jun 15;275:119349. **(IF: 5.037, Q1)**
6. Abd El‐Ghafar OA, Hassanein EH, **Sayed AM**, Rashwan EK, Shalkami AG, Mahmoud AM. Acetovanillone prevents cyclophosphamide‐induced acute lung injury by modulating PI3K/Akt/mTOR and Nrf2 signaling in rats. Phytotherapy Research. 2021 May 9. **(IF:5.878,Q1)**
7. Hassanein EH, Mohamed WR, Khalaf MM, Shalkami AG, **Sayed AM**, Hemeida RA. Diallyl disulfide ameliorates methotrexate‐induced nephropathy in rats: Molecular studies and network pharmacology analysis. Journal of Food Biochemistry. 2021 May 16:e13765. **(IF: 2.720, Q2)**
8. **Sayed AM**, Hassanein EH, Salem SH, Hussein OE, Mahmoud AM. Flavonoids-mediated SIRT1 signaling activation in hepatic disorders. Life Sciences. 2020 Aug 1:118173. **(IF: 5.037, Q1)**
9. **Sayed A**, Chakraborty S, Leung KY, Sugii S, Mok YK. Trxlp, a thioredoxin-like effector from Edwardsiella piscicida inhibits cellular redox signaling and nuclear translocation of NF-κB. International Journal of Biological Macromolecules. 2020 Jan 13. **(IF: 6.953, Q1)**
10. Hassanein EHM, Abd El-Ghafar OAM, Ahmed MA, **Sayed AM**, Gad-Elrab WM, Ajarem JS, Allam AA, Mahmoud AM. Edaravone and Acetovanillone Upregulate Nrf2 and PI3K/Akt/mTOR Signaling and Prevent Cyclophosphamide Cardiotoxicity in Rats. Drug Des Devel Ther. 2020;14:5275-5288. **(IF: 4.162, Q1)**
11. Ahmed M, Younis O, Orabi EA, **Sayed AM,** Kamal El-Dean AM, Hassanien R, Davis RL, Tsutsumi O, Tolba MS. Synthesis of Novel Biocompatible Thienopyrimidine Chromophores with Aggregation-Induced Emission Sensitive to Molecular Aggregation. ACS Omega. 2020 Nov 24. **(IF: 3.512, Q1)**
12. Hassanein EM, **Sayed AM**, Hussein OE, Mahmoud AM. Coumarins as Modulators of the Keap1/Nrf2/ARE Signaling Pathway. Oxidative Medicine and Cellular Longevity. 2020;2020. **(IF:6.543, Q1)**
13. Ramesh K, Walvekar VA, Wong B, **Sayed AM**, Missé D, Kini RM, Mok YK, Pompon J. Increased mosquito midgut infection by dengue virus recruitment of plasmin is blocked by an endogenous Kazal-type inhibitor. iScience. 2019 Nov 22;21:564-76. **(IF: 5.458, Q1)**
14. Ashraf NM, Krishnagopal A, Hussain A, Kastner D, **Sayed AM**, Mok YK, Swaminathan K, Zeeshan N. Engineering of serine protease for improved thermostability and catalytic activity using rational design. International journal of biological macromolecules. 2019 Apr 1;126:229-37. **(IF: 6.953, Q1)**
15. Ren B**\***, **Sayed AMM\***, Tan HL, Mok YK and [Chen ES](https://www.ncbi.nlm.nih.gov/pubmed/?term=Chen%20ES%5BAuthor%5D&cauthor=true&cauthor_uid=29194511). Identifying Protein Interactions with Histone Peptides Using Bio-layer Interferometry. Bio-protocol. 2018;8(18).
16. Ren B, Tan HL, Nguyen TT, **Sayed AM**, Li Y, Mok YK, Yang H, Chen ES. Regulation of transcriptional silencing and chromodomain protein localization at centromeric heterochromatin by histone H3 tyrosine 41 phosphorylation in fission yeast. Nucleic acids research. 2018 Jan 9;46(1):189-202. **(IF:16.971, Q1)**
17. Tan HL, Lim KK, Yang Q, Fan JS, **Sayed AM**, Low LS, Ren B, Lim TK, Lin Q, Mok YK, Liou YC. Prolyl isomerization of the CENP-A N-terminus regulates centromeric integrity in fission yeast. Nucleic acids research. 2018 Feb 16;46(3):1167-79. **(IF:16.971, Q1)**

**Conferences and talks**

1. Ahmed Mahmoud Mohammed Sayed, Mona EL-Baz, Ali Abdel Hafez and Ahmed Nassar. Simple chromatographic detection of aflatoxicosis in the urine of exposed living body. The 1st Conference on Science Diplomacy and Developments in Chemistry, Egypt (2012).
2. Ahmed Mahmoud Mohammed Sayed and Yu Keung Mok. Structural and Functional Study of Thioredoxin 3 as a Type III Secretion System (T3SS) Effector Protein of Edwardsiella tarda. The 20th BSGC, Thailand (2015).
3. Ahmed Sayed. Lethal Injection for Survival. Research Talk, DBS, NUS, Singapore (2016).
4. Ahmed Sayed.Proteomics new approaches. 1st international conference of Metabolic and genetic Disorders, Egypt (2019).

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**Awards**

1. [Singapore International Graduate Award (SINGA).](https://www.a-star.edu.sg/Scholarships/For-Graduate-Studies/Singapore-International-Graduate-Award-SINGA)
2. 5th Year Research Grant, DBS,NUS, Singapore.

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