

# Aya Almatary

A lecturer at the Faculty of Pharmacy, Horus University, Egypt. I have an MSc and PhD degrees in Pharmaceutical Organic Chemistry. My experience and interests fall into synthetic chemistry, drug design, and computational drug design.

## EDUCATION

### Mansoura University, Egypt — *PhD in Pharmaceutical Organic Chemistry*

December 2018 - October 2022

Thesis title: "Design, Synthesis and Biological Evaluation of Nitrogenous Heterocyclic Derivatives as Hypoxia-Targeting Agents in Cancer Cells"

### Mansoura University, Egypt — *MSc by research in Pharmaceutical Organic Chemistry*

November 2015 - July 2018

Thesis title: "Design and Synthesis of Heterocyclic Isosters as Phosphodiesterase-4 Inhibitors"

3.8 GPA

### Mansoura University, Egypt — *BSc in Pharmaceutical Sciences*

September 2009 - July 2014

Excellent (1:1 First-Class Honor)

## EXPERIENCE

### Horus university, Egypt — *Lecturer*

- Daily teaching and research duties as a Lecturer.
- Supervising undergraduate research projects.
- Secretary of the Pharmaceutical department council.
- Supervising the practical lessons
- Member of student transfer committee
- Member of the scientific research committee

### Horus university, Egypt — *Senior teaching assistant*

September 2018 - PRESENT

- Daily teaching and research duties as a demonstrator.
- Supervising undergraduate research projects.
- Coordinator of Pharmaceutical Organic Chemistry department.
- Contact person between my professors and my colleagues.
- Member at the strategic planning committee.
- Undertaking administrative duties as requested by the college.
- Member of the schedule committee and student transfer committee.
- Organizing conferences held at the university.

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## SKILLS

- Computational drug design.
- Spectral analysis.
- Column chromatography.
- Chemical synthesis
- Stereochemistry
- MestreNova software.
- MOE software.

## COURSEWORK

**Organometallic Chemistry**  
(Mansoura University, 2018)

**Bioorganic Chemistry**  
(Mansoura University, 2018)

**Heterocyclic Chemistry**  
(Mansoura University, 2018)

**Green Chemistry**  
(Mansoura University, 2019)

**Combinatorial Chemistry**  
(Mansoura University, 2019)

**NMR spectral analysis**  
(Horus University, 2018)

**Computer-aided drug design**  
(Mansoura University, 2017)

## WORKSHOPS

Computer-aided drug design using MOE software presented by me at Horus University September, 2018.

## **Horus university, Egypt — Teaching assistant**

September 2017 - August 2018

- Demonstrating the practical sections and tutorials of Pharmaceutical Chemistry.
- Academic guidance to a group of students to help them navigate the University system.
- Collaboration with admission on establishing action plans for students.

## **Ministry of Health, Egypt — Hospital Pharmacist**

November 2015 - August 2017

- Offering information on potential side effects and its compatibility with other medications .
- Monitoring the effects of treatments to ensure that they are proving effective, safe and appropriate to patients.

## **Saif Pharmacy group, Egypt — Community Pharmacist**

August 2014 - November 2015

Working there has provided me with a wide range of knowledge and interaction between the academic/scientific field and the practical and industrial area.

## **Sanofi, Egypt — Medical representative trainee**

July 2013 - September 2013

First hands-on experience that enhanced my knowledge in the areas of marketing and communication skills and how a worldwide medical company works.

## **COURSES TAUGHT**

- Spring 2018, 2019, 2023, winter 2020, 2021, 2022: Introduction to organic chemistry, synthesis, and chemical reaction of aliphatic compounds .
- Winter 2017, 2018, 2019, spring 2020, 2021, 2023: Aromaticity, synthesis and chemical reactions of aromatic compounds.
- Spring 2019, Winter 2019, 2021, 2022: Stereochemistry.
- Winter 2018, Winter 2019, winter 2020, summer 2021, winter 2021, 2022: Structural Elucidation of chemical compounds (UV, NMR, IR, Mass spectroscopy).
- Summer 2018, 2019, winter 2021: Heterocyclic chemistry.
- 2017, 2018, 2019, 2020, 2021: Identification of organic compounds.
- Spring 2020: Chemdraw as a chemical structures building tool.
- Spring 2021, 2022, 2023 winter 2022: Scientific Writing.
- Spring 2020: Medicinal Chemistry
- Fall 2022: Drug design

## **SEMINARS**

PDE4 as a drug target presented by me at Horus University, February, 2018.

## **VOLUNTEERING**

Resala Charity Organization  
(medical convoys to poor areas, free study classes for students)

## **PAPERS**

Almatary, Aya M., et al. "Design, synthesis, and molecular modeling of heterocyclic bioisostere as potent PDE4 inhibitors." *Archiv der Pharmazie* 351: (2018): 1700403

Almatary AM, El Husseiny WM, Selim Eisa HM. Nitroimidazole-sulfonamide carbonic anhydrase IX and XII inhibitors targeting tumor hypoxia: Design, synthesis, molecular docking and molecular dynamics simulation. *Journ Molecular Structure*. 2022 May 9:13326

## **CONFERENCES**

1<sup>st</sup> International Conference of Pharmaceutical Sciences, Faculty of Pharmacy, Mansoura University (MU-PHARM 2017), April 2017, poster presentation. Title: "Design, Synthesis and Structural Elucidation of Cilomilast Bioisostere PDE4 Inhibitors".

Al- Azhar 5<sup>th</sup> International Conference of Pharmaceutical Sciences and Drug Industries, September 2017, poster presentation. Title: "Design and Synthesis of Roflumilast Analogues as PDE4-B Inhibitors".

3<sup>rd</sup> International Conference of Mansoura Pharmaceutical Sciences (MU-PHARM 2022), August 2022, Title: Nitroimidazole Sulfonamides as carbonic anhydrase IX and XII inhibitors targeting tumor hypoxia: Design, synthesis and molecular docking study.

