

Address and Telephone

University of Florida
Department of Pharmacotherapy and Translational Research
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Education

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Faculty of Science, Cairo University, Cairo, Egypt	BS	05/2004	Chemistry/Zoology
Faculty of Science, Cairo University, Cairo, Egypt	MS	06/2010	Immunology and Parasitology
Faculty of Science, Ain Shams University, Cairo, Egypt	Ph.D.	12/2016	Molecular Biology
Children's Cancer Hospital, Cairo, Egypt	Postdoctoral Associate	06/2019	Molecular Biology
The University of Florida, Gainesville, Florida	Postdoctoral Associate	present	Pharmacogenomics

Position and Scientific Appointments

2023- Present	Research Assistant Professor, Department of Pharmacotherapy& Translational Research, College of Pharmacy, University of Florida, Gainesville, FL
2019 - 2023	Postdoctoral Associate, Department of Pharmacotherapy& Translational Research, College of Pharmacy, University of Florida, Gainesville, FL
2017 - 2019	Postdoctoral Associate, Basic Research Department, Genomics Unit, Children's Cancer Hospital Egypt-57357, Cairo, Egypt
2012 - 2016	Clinical Research Associate, Research Department, Children's Cancer Hospital Egypt-57357, Cairo, Egypt
2011 - 2012	Research Associate, Cancer Biology Unit, National Cancer Institute, Cairo University, Cairo, Egypt
2009 - 2011	Research Associate, Cancer Biology Research Laboratory (CBRL), Faculty of Science, Cairo University, Cairo, Egypt
2006 - 2009	Research Associate, Cancer Biology Unit, National Cancer Institute, Cairo University, Cairo, Egypt
2019- Present	Member, American Society for Clinical Pharmacology and Therapeutics (ASCPT)

2019 - Present	Member, American Society of Human Genetics (ASHG)
2019 - Present	Member, American Heart Association (AHA)
2014 - Present	Member, American Association for Cancer Research (AACR)
2012 - 2019	EACR Ambassador, European Association for Cancer Research

Honors and Awards

- Travel Fellowship, The European Association for Cancer Research, 2013.
- David Goldstein M.D., Ph.D., (Highest-scoring abstract), American Society for Clinical Pharmacology and Therapeutics, 2020.
- Presidential Trainee Award Winner, American Society for Clinical Pharmacology and Therapeutics, 2020.
- Postdoctoral Poster Award Showcase Research Day, College of Pharmacy, University of Florida, 2022.
- Poster Walk Top Abstract, American Society for Clinical Pharmacology and Therapeutics, 2022.
- Travel award, American Society for Clinical Pharmacology and Therapeutics, 2023.

Active Research Support

DeSantis Precision Medicine Research Pilot Grant **01/01/2024- 31/12/2025** **Tantawy (P.I.)**

“Cardiovascular Adverse Events Related to Aromatase Inhibitors in Female Breast Cancer Patients”

The goal of this project is to comprehensively investigate the incidence, impact on mortality, and genetic associations of Aromatase inhibitors related to cardiovascular adverse events in female breast cancer patients across diverse racial and ethnic groups within the OneFlorida and All of Us databases.

Role: PI

NIH/R01HL159319, **07/01/2021 – 06/30/2025** **Gong (P.I.)**

"A multi-omics evaluation of carfilzomib-related cardiotoxicity in multiple myeloma patients"

The goal of this project is to identify and institute preventive strategies for MM patients at high risk for carfilzomib-related H.F., prior to carfilzomib administration, in order to prevent or minimize such risk. Our central hypothesis is that characteristic biomarkers for carfilzomib-related cardiotoxicity can be discerned a priori through interrogation of multi-omics data.

Role: Post Doctoral Associate

**CTSI/UFII, Big Data in Health Precision Medicine Pilot Award 06/01/19-05/31/20
Gong (P.I.)**

"Toward prevention of Cardiotoxicity in cancer: a multimodal approach leveraging genomics, images and clinical data."

This project aims to explore a novel approach to identifying patients predisposed to cancer therapy-induced cardiotoxicity through interrogation of pharmacogenomics, medical images, and clinical factors linked in the electronic health records in the U.K. Biobank data.

Role: Post Doctoral Associate

**University of Florida College of Pharmacy; Program for Education and Research
(PROSPER)**

**Research Seed Award Application for Collaborative Investigators Award 09/2022 –
09/2023**

Gong (P.I.)

"Determine the Underlying Mechanism of *TMSB10* Variant Association with Cardiotoxicity using Induced Pluripotent Stem Cells".

This project aims to determine the functional significance of this variant in cardiomyocytes.

Role: Co-Investigator

Completed Research Support

**NIH/NCATS/CTSI, COVID-19 Rapid-Response Research 07/01/2020 – 12/30/2020
Gong (P.I.)**

"Genomics and Pharmacogenomics of susceptibility and severity of COVID-19 in the U.K. Biobank."

This project aims to identify genetic, pharmacogenetic, and nongenetic risk factors for susceptibility and severity of COVID-19 in UKB participants.

Role: Co-Investigator

**The Science and Technology Development Fund (STDF), Center of Excellence
06/01/14-12/01/19**

Ezzat (P.I.)

"Genetic Epidemiology Centre of Excellence, Genome-Wide Association Study of B-cell precursor Childhood Acute Lymphoblastic Leukemia in the Egyptian Population."

The goal of this project is to discover the genetic associations, and identifying the cancer susceptibility genes will have a great impact on understanding the ALL tumor biology.

Role: Co-Investigator

The Science and Technology Development Fund (STDF); Research Support 09/15/14-09/14/16

Tantawy (P.I.)

"Profiling of miRNAs expression in Egyptian Pediatric Central Nervous System Tumour"

This project aimed to profile miRNA expression in pediatric brain tumors to distinguish between different subtypes.

Role: P.I.

Academy of Science and Research Technology (ASRT), Egypt

2011-2015

Abdelwahab (P.I.)

"Expression profile of microRNA for Egyptian HCV-associated hepatocellular carcinoma"

This project aimed to profile miRNA expression in Egyptian HCV- associated with hepatocellular carcinoma.

Role: Research Associate

Academy of Science and Research Technology (ASRT) STDF young research grants, Egypt, 2009-2011

Mustafa (P.I.)

"Understanding the Role of the Tumor Associated Leukocytes in Breast Cancer Lymph-Node Metastasis: Novel Experimental Approach"

This project focused on understanding the role of the tumor-associated leukocytes in breast cancer lymph node metastasis.

Role: Research Associate

AVON, USA.

2009-2011

Mustafa (P.I.)

"Inflammatory Breast Cancer: Research paradigm for understanding disease morbidity"

This project focused on inflammatory breast cancer and a research paradigm for understanding disease morbidity

Role: Research Associate

Academy of Science and Research Technology (ASRT), Egypt

2006-2009

Abdelwahab (P.I.)

"Screening test for early detection of colorectal cancer in Egyptians using stool-based DNA markers"

This project aimed to find screening test for early detection of colorectal cancer in Egyptians using stool-based DNA markers.

Role: Research Associate

Cairo University, Egypt
Abdelwahab (P.I.)

2006-2009

“Mitochondrial DNA mutations as a genetic marker for colorectal cancer”.

This project aimed to find Mitochondrial DNA mutations as a genetic marker for colorectal cancer.

Role: Research Associate

Original Publications (in Reverse Chronological order)

Complete List of Published Work in My Bibliography:

https://www.ncbi.nlm.nih.gov/myncbi/1di_zva5woMYUy/bibliography/public/

1. **Tantawy M**, Yang G, Algubelli RR, DeAvila G, Rubinstein SM, Cornell RF, Fradley MG, Siegel EM, Hampton OA, Silva AS, Lenihan D, Shain KH, Baz RC, Gong Y. Whole-Exome sequencing analysis identified TMSB10/TRABD2A locus to be associated with carfilzomib-related cardiotoxicity among patients with multiple myeloma. *Front Cardiovasc Med.* 2023 Jun 20;10:1181806. doi: 10.3389/fcvm.2023.1181806. PMID: 37408649; PMCID: PMC10319068.
2. **Tantawy M**, Collins JM, Wang D. Genome-wide microRNA profiles identify miR-107 as a top miRNA associating with expression of the CYP3As and other drug metabolizing cytochrome P450 enzymes in the liver. *Front Pharmacol.* 2022;13:943538. Published 2022 Aug 17. doi:10.3389/fphar.2022.943538.
3. **Tantawy M**, Chekka LM, Huang Y, Garrett TJ, Singh S, Shah CP, Cornell RF, Baz R.C., Fradley MG, Waheed N, DeRemer DL, Yuan L, Langae T, March K, Pepine CJ, Moreb JS, Gong Y. Lactate Dehydrogenase B and Pyruvate Oxidation Pathway Associated With Carfilzomib-Related Cardiotoxicity in Multiple Myeloma Patients: Result of a Multi-Omics Integrative Analysis. *Front Cardiovasc Med.* 2021 Apr 29;8:645122. doi: 10.3389/fcvm.2021.645122. PMID: 33996940; PMCID: PMC8116486.
4. **Tantawy M**, Pamittan FG, Singh S, Gong Y. Epigenetic Changes Associated with Anthracycline-Induced Cardiotoxicity. *Clin Transl Sci.* 2020 Aug 8. doi: 10.1111/cts.12857. Epub ahead of print. PMID: 32770710.
5. Khafagy MM, El-Guendy N, **Tantawy MA**, Eldaly MA, Elhilali HM, Abdel Wahab AHA. Novel CYP1B1 mutations and a possible prognostic use for surgical management of congenital glaucoma. *Int J Ophthalmol.* 2019; 12(4):607-614. PubMed PMID: 31024815; PubMed Central PMCID: PMC6469545.
6. El-Guendy NM, Helwa R, El-Halawany MS, Abdel Rahman Ali S, **Tantawy M**, Hasan Alieldin N, Fouad S.A., Saeid H, Abdel-Wahab AH. The Liver MicroRNA Expression Profiles Associated With Chronic Hepatitis C Virus (HCV) Genotype-4 Infection: A

Preliminary Study. *Hepat Mon.* 2016 Apr; 16(4):e33881. PubMed PMID: [27275163](#); PubMed Central PMCID: [PMC4893413](#).

7. El-Halawany MS, Ismail HM, Zeeneldin AA, Elfiky A, **Tantawy M**, Kobaisi MH, Hamed I, Abdel Wahab AH. Investigating the pretreatment miRNA expression patterns of advanced hepatocellular carcinoma patients in association with response to TACE treatment. *Biomed Res Int.* 2015; 2015:649750. PubMed PMID: [25811030](#); PubMed Central PMCID: [PMC4355598](#).
8. Kassem AM, El-Guendy N, **Tantawy M**, Abdelhady H, El-Ghor A, Abdel Wahab AH. Mutational hotspots in the mitochondrial D-loop region of cancerous and precancerous colorectal lesions in Egyptian patients. *DNA Cell Biol.* 2011 Nov; 30(11):899-906. PubMed PMID: [21612400](#); PubMed Central PMCID: [PMC3208246](#).
9. El-Shinawi M, Mohamed HT, El-Ghonaimy EA, **Tantawy M**, Younis A, Schneider RJ, Mohamed MM. Human cytomegalovirus infection enhances NF- κ B/p65 signaling in inflammatory breast cancer patients. *PLoS One.* 2013; 8(2): e55755. PubMed PMID: [23418456](#); PubMed Central PMCID: [PMC3572094](#).
10. Said F, **Tantawy M**, Sayed A, Ahmed S. Clinical Significance of MicroRNA-29a and MicroRNA-100 Gene Expression in Pediatric Acute Myeloid Leukemia. *Journal of Pediatric Hematology/oncology.* 2021 Apr. DOI: 10.1097/mp.0000000000002168.
11. Hassan, R., **Tantawy, M.**, Gouda, N.A. et al. Author Correction: Genotypic characterization of multiple drug resistant Escherichia coli isolates from a pediatric cancer hospital in Egypt. *Sci Rep* 10, 7415 (2020). <https://doi.org/10.1038/s41598-020-64153-7>.
12. Yehia D, Fikry M, Gozlan S, Taha H, **Tantawy M.** MicroRNA Expression in Low- and High-Grade Gliomas in Pediatric Patients and Correlation with Matrix Metalloproteinase Expression. *Journal of Molecular and Genetic.* 2018 October 15; 12(4).
13. **Tantawy M**, Elzayat MG, Yehia D, Taha H. Identification of microRNA signature in different pediatric brain tumors. *Genet Mol Biol.* 2018 Jan-Mar; 41(1):27-34. PubMed PMID: [29658967](#); PubMed Central PMCID: [PMC5901491](#).
14. Abdelahamid, S. , Khedr, R. , El Wakeel, M. , Younes, A. , Ahmed, G. , Elkinaai, N. , **Tantawy, M.** and Hafez, H. (2018) Hepatoblastoma in Developing Countries; Eight Years of Single Centre Experience. *Journal of Cancer Therapy*, 9, 793-806. doi: 10.4236/jct.2018.910065.
15. **Tantawy M.**, the Effect of MicroRNAs on Cancer Cell. *Journal of Molecular and Genetic.* 2017 February 06; 11(1).

16. Moussa EA., El Nadi E, Zomor H El, Hafez HA, Younes A, Taha H, EL-Kenanii N, Zaghloul MS, El-Wekeel M, Labib RM, **Tantawi M.** Rhabdomyosarcoma in adolescents: A CCHE experience. *J Solid Tumors*. 2015;5:1–10.

Published Abstracts

1. **Tantawy, M.**, G. Yang, R. Aljubelli, S. Rubinstein, M. Fradley, Q. Lu, D. Lenihan, R. Cornell, R. Baz, and Y. Gong. TMSB10/TRABD2A Locus associated with Carfilzomib Related Cardiotoxicity in Patients with Multiple Myeloma: an Whole Exome Sequencing Analysis. In *CLINICAL PHARMACOLOGY & THERAPEUTICS*, vol. 111, pp. S69-S69. 111 RIVER ST, HOBOKEN 07030-5774, NJ USA: WILEY, 2022. . E-Poster American Society for Clinical Pharmacology and Therapeutics (ASCPT) annual meeting 2022. (**Poster Walk and Blue Ribbon**).
2. Nguyen, T., **M. Tantawy**, Y. Zhou, S. Rubinstein, T. Garrett, R. Baz, M. Fradley et al. Risk Stratification with Pre-Treatment Metabolite Risk Score for Carfilzomib-Related Cardiotoxicity in Multiple Myeloma Patients. In *CLINICAL PHARMACOLOGY & THERAPEUTICS*, vol. 111, pp. S66-S66. 111 RIVER ST, HOBOKEN 07030-5774, NJ USA: WILEY, 2022. E-Poster American Society for Clinical Pharmacology and Therapeutics (ASCPT) annual meeting 2022. (**Presidential Trainee award**)
3. Chekka L., **Tantawy M.**, Langaee T., Wang D., Rolf R., Chapman A., Gums J., Cooper-DeHoff R., Johnson J. Validation of Circulating MicroRNA Biomarkers of Blood Pressure Response to Thiazide Diuretics; In *CLINICAL PHARMACOLOGY & THERAPEUTICS* (Vol. 111, pp. S13-S14). 111 RIVER ST, HOBOKEN 07030-5774, NJ USA: WILEY. E-Poster American Society for Clinical Pharmacology and Therapeutics (ASCPT) annual meeting 2022. (Poster Walk and Blue Ribbon).
4. Sylvester-Armstrong K, **Tantawy M**, Reeder C, Cacho N, Ripps S, Ham T, Langaee T, Gong Y, Egerman R. Genetic polymorphisms and preterm neonatal respiratory distress syndrome among women treated with betamethasone. *Am J Obstet Gynecol* [Internet]. 2022;226:S180. Available from: <http://dx.doi.org/10.1016/j.ajog.2021.11.313>.
5. **Tantawy M**, Chekka LM, Huang Y, Garrett TJ, Singh S, Shah CP, Cornell RF, Baz R.C., Fradley MG, Waheed N, DeRemer DL, Yuan L, Langaee T, March K, Pepine CJ, Moreb JS, Gong Y. Lactate Dehydrogenase B and Pyruvate Oxidation Pathway Associated With Carfilzomib-Related Cardiotoxicity in Multiple Myeloma Patients: Result of a Multi-Omics Integrative Analysis. *Front Cardiovasc Med*. 2021 Apr 29;8:645122. doi: 10.3389/fcvm.2021.645122. PMID: 33996940; PMCID: PMC8116486.
6. **Tantawy M**, Yang G, Yiqing C, Pruitt E, Langaee T, Cooper-DeHoff RM, Pepine C, Lu Q, Gong Y. Genome-wide Association Study of Mortality in Covid-19 Patients in The U.K. Biobank Data. E-Poster American Society for Clinical Pharmacology and Therapeutics (ASCPT) annual meeting 2021.

7. Yang, G.; Chen, Y.; **Tantawy, M.**; Pruitt, E.; Pepine, C.; Cooper-DeHoff, R.; Lu, Q.; Gong, Y. ACE2 polymorphisms and COVID-19: an analysis from the UK-Biobank; *Clinical Pharmacology & Therapeutics*; 109:S27-S28, 2021. Artigo em Inglês | Web of Science | ID: covidwho-1136823. E-Poster American Society for Clinical Pharmacology and Therapeutics (ASCPT) annual meeting 2021.
8. **Tantawy M**, Pamittan FG, Singh S, Gong Y. Epigenetic Changes Associated with Anthracycline-Induced Cardiotoxicity. *Clin Transl Sci*. 2020 Aug 8. doi: 10.1111/cts.12857. Epub ahead of print. [PMID: 32770710](#).
9. **Tantawy M**, Gong Y, Singh S, Yang G, Chen Y, Wu Y, Fang R, Hogan W, Gitzendanner M: ZMAT4 and DOCK9 Variants Associated with Heart Failure in Breast Cancer Patients in the U.K. Biobank Data, E-Poster American Society for Clinical Pharmacology and Therapeutics (ASCPT) annual meeting 2020. (**ASCPT 2020 Presidential Trainee Award and 2020 David J. Goldstein Trainee Award**).
10. **Tantawy M**, Chekka LM, Langaee T, Garrett T, Fradley, Cornell RF, Baz RC, Singh S, Yuan L, Shah C, Waheed N, Pepine CJ, Moreb JS, Gong Y. Abstract 3694: Differential expressions of miR-17 and complement factor D in carfilzomib-related cardiotoxicity in multiple myeloma patients: Results of microRNA array and proteomics integrated analysis. *Cancer Res*. 2020;80(16 Supplement):3694-3694. doi:10.1158/1538-7445.AM2020-3694. E-Poster presented at the American Association of Cancer Research (AACR) annual meeting 2020.
11. **Tantawy M**, Chekka LM, Garrett T, Singh S, Shah C, Fradley MG, Cornell R, Baz R, Waheed N, DeRemer D, Yuan L, Langaee T, March K, Pepine C, Moreb J, Gong Y. Abstract 15012: Lactate Dehydrogenase B and Pyruvate Oxidation Associated With Carfilzomib-Related Cardiotoxicity in Multiple Myeloma Patients: A Multi-omics Study. E-poster American Heart Association Scientific Sessions 2020.
12. Singh S, Yang G, Gitzendanner M, Chen Y, **Tantawy M**, Wu Y, Fang R, Hogan W, Gong Y. PHOSPHOLIPASE D PATHWAY IMPLICATED IN HEART FAILURE IN CANCER PATIENTS: RESULTS FROM THE UK BIOBANK. In *CLINICAL PHARMACOLOGY & THERAPEUTICS* 2020 Mar 1 (Vol. 107, pp. S84-S84). 111 RIVER ST, HOBOKEN 07030-5774, NJ USA: WILEY.
13. **Tantawy M**, Hassan N, Kobaisi M, Abdel Wahab A. The role of microRNA in the regulation of DUSP16 gene and JNK family in hepatocellular carcinoma patients. [abstract]. In: *Proceedings of the AACR Special Conference on Chromatin and Epigenetics in Cancer*; Sep 24-27, 2015; Atlanta, GA. Philadelphia (P.A.): AACR; *Cancer Res* 2016;76(2 Suppl): Abstract nr A32.
14. **Tantawy M**, Elzayat M, Yehia D, Taha H. Profiling of miRNAs expression in pediatric brain tumors. [abstract]. In: *Proceedings of the AACR Special Conference on Translational*

Control of Cancer: A New Frontier in Cancer Biology and Therapy; 2016 Oct 27-30; San Francisco, CA. Philadelphia (P.A.): AACR; Cancer Res 2017;77(6 Suppl):Abstract nr A11.

PharmD students Trainees:

Frances Pamittan 2019-2020

Graduate students Trainees

Jihyun Bae, Ph.D. student 2023-present

Raed A. Alshammari, Master Student 2023- present

Professional Service

Reviewers

Frontiers in Cardiovascular Medicine 2023-present

Clinical Translational Science 2023-present