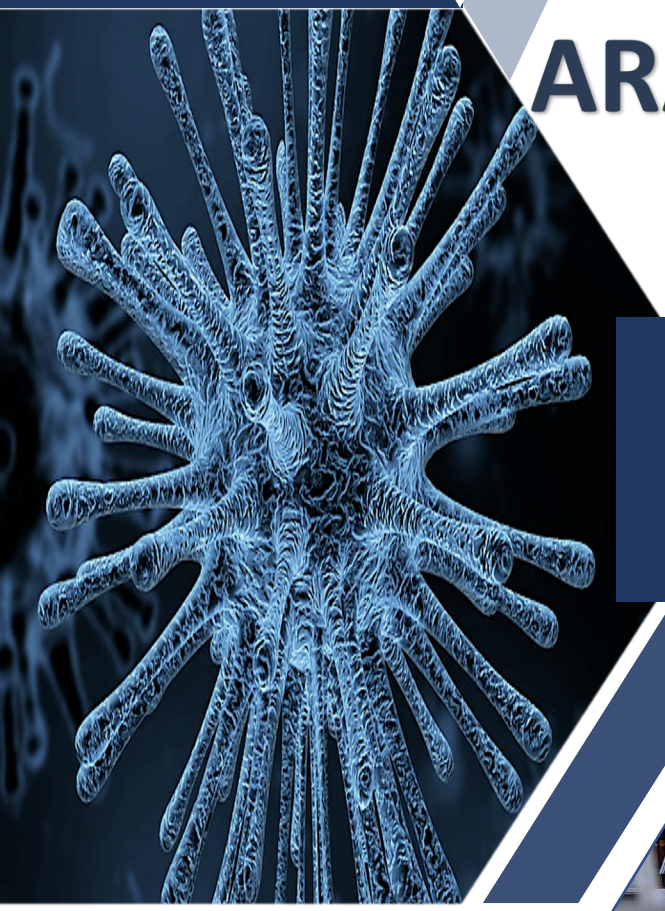
ATA SOT Est. 2019
Arab Toxicologists Association



ARAB TOXICOLOGISTS ASSOCIATION

NEWSLETTER

December 2021 VOL. 2

President's Message

It is my great pleasure to serve as President of the Arab Toxicologists Association (ATA) for 2021-2022. ATA was established in 2019 after years of hard work and networking by professionals of Arab origin, with expertise in various areas of toxicology and working in Arab countries and all over the world. As you all know 2020 has shaped up to be a memorable year (to say the least), however ATA was busy and accomplished many activities.

Hanan Ghantous, PhD, DABT
ATA President

As a special interest group in the Society of Toxicology, we aim to work closer together to develop the next generation of toxicology leaders for the Arab regions. In the years ahead we plan to address current toxicological issues that affect Arab nations and increase awareness of the involvement of toxic substances in causing diseases. We encourage you to join ATA if you are not a member yet and get involved in any of the several committees available (Award, Program, Newsletter) and many more. Explore our website for more information.

EXECUTIVE OFFICERS 2021-2022

MISSION

- To effectively communicate toxicological ideas and support its members to succeed and achieve excellence in toxicology in the United States and worldwide.
- To address current toxicological issues that affect Arab nations and increase awareness of the involvement of toxic substances in causing diseases.
- To promote the development of marginalized branches of toxicology in Arabic nations.
- To serve as an educational guide for Arabic studies in toxicological science.
- To promote the establishment of regional toxicology societies and of a Pan Arab toxicologist association to be an umbrella for all toxicology associations in all Arab countries.

Hanan Ghantous, PhD
President

Burhan Ghanayem PhD
Vice President

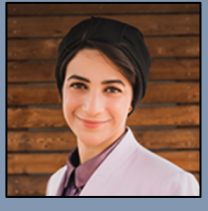
Nabil Al-Humadi PhD
Vice President-Elect

Nabila Saber PhD
Secretary

Iyden Mohammed PhD
Councilor

Osama Abdulla PhD
Postdoctoral Representative

Amira Mohammed PhD
Treasurer



Hadil Al Muhisen PhD Candidate
Councilor

Saeed Algahtani PhD Candidate
Graduate student Representative

Hasan Alghetaa PhD
Past President

Saif Alharthy PhD
Councilor

Noor Aly PhD Candidate
Graduate student Representative

ACHIEVEMENTS & ACTIVITIES

Publications

Dr. Maha Almazrou'a

Participated in WHO guideline for clinical management of exposure to lead (pb) visit link. Dr. Almazrou'a is the conference president of Knowledge, Skills and Abilities in Pharmacy and Toxicology (KSAPT) which is held annually in Saudi Arabia. For more information visit link.

Dr. Mohamed Badawy

Published a paper that Investigated the correlation between dietary and non-dietary residues including pesticide residues. This could save money, time, and resources during pesticide registration.
Paper link

Dr. Saeed Algahtani

Published a paper with a title of "Disruption of pulmonary resolution mediators contribute to exacerbated silver nanoparticle-induced acute inflammation in a metabolic syndrome mouse model"
Paper link

Dr. Hasan Alghetaa &Dr. Amira Mohammed

Published a paper titled with " Resveratrol-mediated attenuation of superantigen-driven acute respiratory distress syndrome is mediated by microbiota in the lungs and gut"
Paper link

Dr. Osama Abdulla
Published three papers:

The Ability of AhR Ligands to Attenuate Delayed Type Hypersensitivity Reaction Is Associated With Alterations in the Gut Microbiota. Visit Link

AhR Ligands Differentially Regulate miRNA132 Which Targets HMGB1 and to Control the Differentiation of Tregs and Th-17 Cells During Delayed-Type Hypersensitivity Response. Visit Link

The Endocannabinoid Anandamide Attenuates Acute Respiratory Distress Syndrome by Downregulating miRNA that Target Inflammatory Pathways. Visit Link

Mentee/Mentor Program

Dr. Mohamed Ghorab is serving as a mentor in the @toxmsdt program which is mentoring and skills development training program that is funded by NIH. For more information please visit the link

Awards

DR.BUHAN GHANAEYM OUTSTANDING GRADUATE RESEARCH AWARD-
This award recognizes and celebrates graduate students success in carrying out high quality research in toxicological sciences. The recipient of the award receives $500 + plaque.

Interested graduate students must submit to ATA an abstract that was accepted by the SOT no later than two months before the annual SOT meeting The graduate student must be enrolled in a graduate program and include the name of the university and the advisor. The abstract must be part of the student's dissertation research.
Please contact ATA officers for more information.

Arabic Countries Facts Corner

Widely spoken language in the Middle East and North Africa include Arabic, Persian, Turkish, Berber, Kurdish, French, and English.

Judaism, Christianity, and Islam are the three largest monotheistic and Abrahamic religions in the world, each of which originates in the Middle East.

Arabic is the most commonly spoken language in the Middle East. It is the official language of more than 20 countries and is spoken by approximately 300 million people worldwide.

Psychiatric hospital were first constructed in Baghdad and Cairo in the 8th and 9th centuries CE.

Awards Announcement

Best Publication

Distinguished Scientific Presentation

Graduate Student Best Abstract Award:

Outstanding Professional Award

Student Travel award

Apply to be one of the winners
For more information contact ATA officers or visit the link

From Adversaries to Advocates: FDA, and the Evolution of HIV Therapies

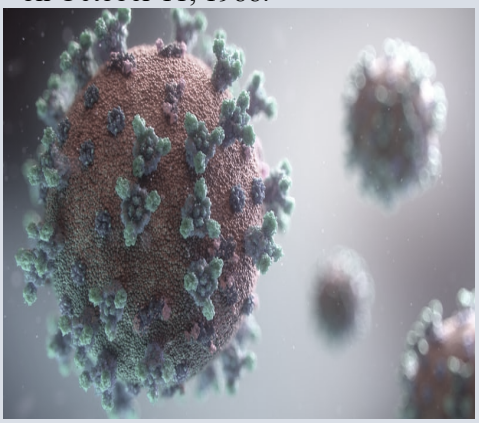
By Peyton Myers and Hanan Ghantous

Forty years ago (June 1981) a disease in otherwise healthy young gay men was first reported by public health authorities. Initially it was called multiple names (such as Gay Related Immune Deficiency) but in 1982, the US Center for Disease Control and Prevention – CDC adopted the term AIDS (Acquired Immune Deficiency Syndrome) for the previously unknown disease. The cause, human immunodeficiency virus (HIV) was isolated and identified in 1983 in T-cells cultured from infected patients.

Early in the epidemic patient activist groups began to complain, sometimes forcefully, that the FDA was not properly addressing the public health crisis. By 1989 HIV/AIDS had become the second leading cause of death among all young men with gay/bisexual men disproportionally effected by HIV/AIDS related mortalities (MMWR January 25, 1991 / Vol. 40 / No. 3). Reflecting an unfortunate bias against gay men, there was open hostility toward HIV patients. The Reagan administration seemed to ignore anything related to "AIDS" and in a classic case of blaming the victims mocked patients in press briefings. The Administration did not even mention HIV/AIDS (as the disease had come to be called) until 1985, in response to a reporter's question at a press conference. The first major speech from the Administration about the epidemic was in mid-1987-when approximately 21,000 people had died from the disease in the United States alone. This open hostility and outright neglect by the Reagan administration hurt the FDA's image especially in the gay community.

Although the FDA was perceived as being inactive and even hostile to the gay community, in fact it was actively pursuing approval of the first drug, zidovudine (AZT) for the treatment of HIV. The sponsor, Burroughs Wellcome, halted a phase 2 clinical trial after 16 weeks due to compelling evidence of efficacy
(survival of seriously ill patients). The FDA quickly approved AZT as the first drug to treat HIV on March 19, 1987. The Agency also began to pursue multiple avenues to speed the availability of drugs to patients.

It is also notable that in 1987 activists in the gay community, frustrated with government inaction (some perceived/some real), coalesced into ACT UP (AIDS Coalition To Unleash Power) in NYC. ACT UP had many demands concerning conduct of clinical trials that FDA now commonly employ: early access to experimental therapies, advocates that work with the patient community, some form of payment system for experimental therapies, no placebo controlled trials for serious and life threatening diseases, and inclusion of specific patient groups, especially minorities, ACT UP took their demands to FDA headquarters on October 11, 1988.



Activists blocked the entrances to the Parklawn building in Rockville, Maryland. Although debate continues as to the effectiveness of this demonstration, within a few months following subsequent meetings with FDA officials many of the changes in clinical development demanded by ACT UP were accepted.

The Agency adopted several changes:

- Patient Advocates: Introduced in 1988, the Office of AIDS and Special Health Issues was tasked with building relationships with patient communities. FDA began to include at least one patient representative on every advisory committee. First patient advocate served on an advisory committee in 1993.
- Parallel Track: Introduced in 1990. Commissioner Frank Young (FDA) and Dr. Anthony Fauci (NIH) both expanded access programs for HIV patients in 1989. "The Agency's Parallel Track policy [57 FR 13250] permits wider access to promising new drugs for AIDS/HIV related diseases under a separate "expanded access" protocol that "parallels" the controlled clinical trials that are essential to establish the safety and effectiveness of new drugs."

  Accelerated Track:
- Implemented in 1992. FDA created a number of programs to accelerate development of drugs for HIV. By 1992 the Agency adopted concepts from HIV trials to create the regulatory concepts of a surrogate endpoint (e.g., CD4 counts).

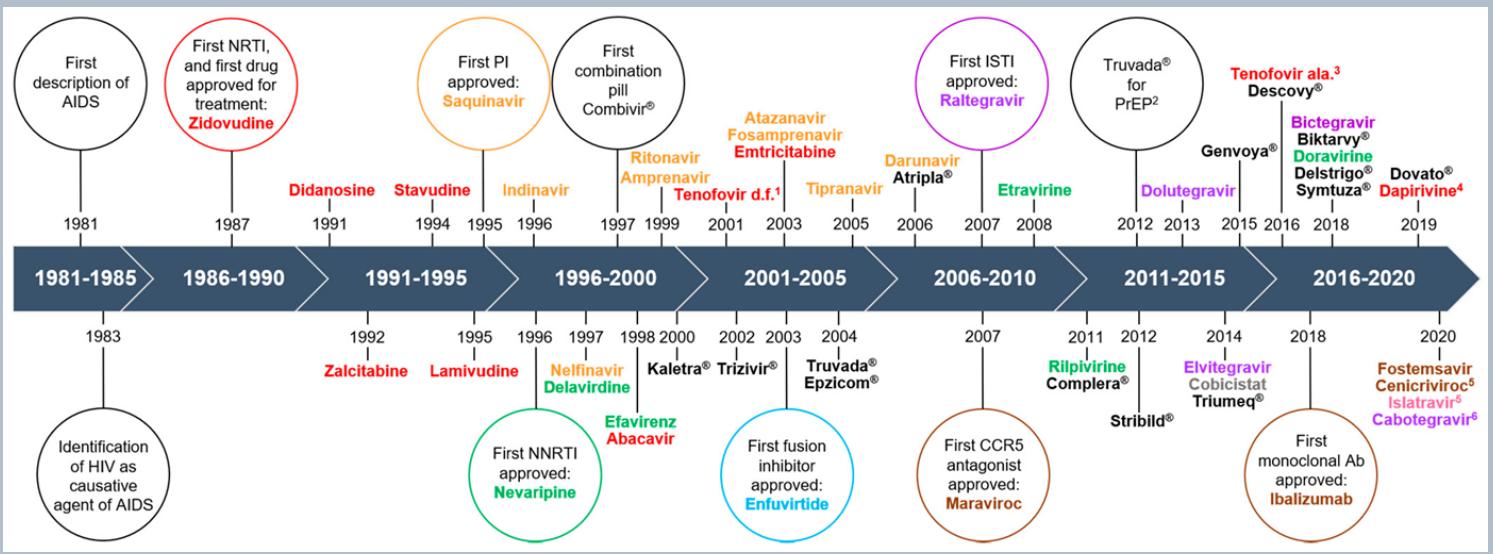
The Agency has worked diligently over the last 2-3 decades to be more proactive in patient engagement. For example, the Agency worked with the George W. Bush administration to implement the PEPFAR (President's Emergency Plan for AIDS Relief) program. Launched in 2003 with $15 billion, the Agency was authorized to review and grant full/tentative approval on an expedited basis of applications for HIV/AIDS drugs, particularly pediatric preparations, for distribution in resource-limited nations.

In summary, FDA (and DAV in particular) learned many valuable lessons during the HIV pandemic. Although there were many missteps in the early days of the HIV pandemic, FDA worked to win the trust of the gay (and now LGBT) community. The Agency adopted regulations to be flexible to patient needs and has expanded initial related practices and procedures. Furthermore, DAV has continued to work with the HIV community to embrace new treatment paradigms and has continued to work to be more inclusive to address patient needs whenever possible.

FDA continues to review marketing applications using accepted standards for approval. Drugs that would otherwise receive "final" approval are granted "tentative" approval because of patent or marketing exclusivity issues. Drugs that are tentatively approved are not eligible for marketing in the U.S. but can be distributed outside the U.S., and money from the PEPFAR program can be used to procure them, usually at a cost savings.

In the early 2000s, the Division of Antiviral Products (DAV) began an effort with Agency partners on clinical trials for the prevention of HIV. This has now been termed PrEP (PreExposure Prophylaxis). The first drug pursued for PrEP was Truvada (comprising 2 drugs previously approved as part of an HIV treatment regimen.) DAV has subsequently approved Descovy (an alternative form of tenofovir) and is working with sponsors to expand PrEP treatments and formulations.

In summary, FDA (and DAV in particular) learned many valuable lessons during the HIV pandemic. Although there were many missteps in the early days of the HIV pandemic, FDA worked to win the trust of the gay (and now LGBT) community. The Agency adopted regulations to be flexible to patient needs and has expanded initial related practices and procedures. Furthermore, DAV has continued to work with the HIV community to embrace new treatment paradigms and has continued to work to be more inclusive to address patient needs whenever possible.



Timeline of antiretroviral drug development **(Source: Figure 1 of https://www.mdpi.com/2073-4409/10/4/909)**

Wafa Harrouk, PhD

Dr. Harrouk has earned a bachelor's degree in Biochemistry (major)/ Chemistry (minor) from the University of North Texas (UNT, previously North Texas State University), a Masters' degree in Pathology from McGill University, Montreal, Quebec, Canada and a Ph.D. in Pharmacology and Therapeutics from McGill University. Her training was completed with a postdoctoral fellowship at the Food and Drug Administration (FDA), Center for Devices and Radiological Health (CDRH). In 2001, Dr. Harrouk started her regulatory career as a pharmacology/Toxicology reviewer in the Center for Drug Evaluation (CDER), Office of New Drugs (OND) where she has been working for the past 20 years. She worked in several review divisions Her review portfolio includes several review divisions and gained an extensive body of review expertise in diverse drug products across the pharmaceutical spectrum within OND.

Dr. Harrouk has also taken on leadership roles inside the FDA for several scientific committees including chairing FDA Education program (CASE), co-chairing the FDA's Developmental and Reproductive Toxicity (DART) Interest Group committee, and the OND's Reproductive and Developmental Toxicity Subcommittee (RDTS). She is a past fellow of the Excellence in Government program and is an active member in the FDA mentoring program as well as several scientific committees across the FDA.

Dr. Harrouk is an active member of the Health and Environmental Sciences Institute (HESI), DART Committee where she has served as a cochair and continues to be an active member of the committee. Dr. Harrouk is a long-time active member of the Society of Birth Defects and Prevention Society (previously known as the Teratology Society), the Society of Toxicology and its National Capital Region Chapter, as well as the American College of Toxicology. She has been an adjunct professor at the George Washington University in the Department of Physiology and Biochemistry since 2006. Dr. Harrouk has authored more than 30 peer-reviewed research papers, book chapters and has served as a reviewer for numerous scientific journals.

An Interview with Dr. Wafa

By Dr. Hanan Ghantous

When and why did you come to the USA?

I grew up in Lebanon during the 1975 war and by the time I finished my high school diploma (Baccalaureate I and II), my education prospects in Lebanon were very bleak with war zones all over the country. Right about that time, a scholarship opportunity sponsored by the late Rafiq Hariri to study abroad was presented to me. Prior to that point, I had not planned to leave the country, but this option was about the only one left for me as well as to thousands of young high school graduates to continue our education. As a young woman from conservative family in Tripoli, traveling by myself was a very bold and unusual decision but my progressive thinking family who wanted the best for me and couldn't provide me with better choices, reluctantly agreed that I submit my scholarship application. On the form, there was a choice of either continuing my education in French or English, so I chose English. I need to point out that at up to that point in my life, I had zero knowledge of the English language as I was educated in the public school system in Lebanon which used the French language as a second language.

After an intensive two semesters immersion in English at the American University in Beirut (EEE system[1]), I received my acceptance letter from UNT to start a bachelors' degree in Biochemistry. I was supposed to start in the Fall of 1985 but due to the extreme violence in the country, I didn't ma ke it to Denton, Texas till January 20, 1986 when I joined the winter s emester, and the rest is history!

What made you decide to become a Toxicologist?

My decision to become a pharmacol ogist/Toxicologist was not at all laid out in a straight path at the start of my postsecondary studies. When I started my Biochemistry/ Chemistry undergraduate degree I knew I wanted to be a scientist but was not sure which field. After I graduated from UNT, I moved to Canada where I joined the University of Quebec, Chicoutimi hoping to work towards a masters' degree in Genetics since there are certain interesting genetic diseases[1] that are unique to that region in Quebec, Canada and genetics was on the top of my list at that time. However, having lived in Lebanon and Texas, it was not obvious how I can survive the frigid conditions of that part of the world! So, I moved to Montreal, Quebec, Canada where I knocked (literally) on several laboratories' doors at McGill University until a young professor hired me to work as a summer student in his laboratory. Dr. Hugh Clarke was working on in vitro fertilization techniques in the mouse model at that time and accepted to take me on as a summer student where I continued to work in his laboratory after I joined the Department of Pathology where I earned my masters' degree in Pathology.

At that point, I had realized that the field of reproductive toxicology is my passion and decided to enroll in a PhD program in Pharmacology and Therapeutics under the leadership of Drs. Barbara Hales and Bernard Robaire where I worked on male mediated reproductive toxicity. To round out my toxicology training, I joined the laboratory of Drs. Carole and Gary Kimmel at CDRH, FDA where I worked on female-mediated reproductive toxicology.

How was your experience getting your Degree in Canada? What was positive and what was negative?

Canada is a great place to study. To start with, the tuition is a lot more reasonable than the exorbitant fees that the American universities burden the students and their families with. McGill University gave me the opportunity to work towards my masters 'and PhD degrees with hard work where I worked very hard every single day from the day I started in my summer job. The grant system afforded me a reasonable life where I did not have to work extra jobs outside the university to survive. The multicultural nature of the university life and the laboratory family helped me fit in the student life.

As for the negative aspects, it was the long winter and the stress of the laboratory life.

Tell me about your career as a toxicologist and jobs you had after you graduated

In 2001, I started my regulatory career straight out of my postdoctoral training where I was hired as a pharmacology/Toxicology reviewer in CDER, OND in the Division of Metabolic and Endocrine Products

For the past 20 years at the FDA, I worked in several review divisions in the following order: DMEP, the Division of Reproductive and Urologic Products (DRUP), Over the Counter (OTC) division and currently with the Division of Rare Diseases and Medical Genetics (DRDMG) and the Pharmacy Compounding Review Team (PCRT), OND. As a result, I have gained an extensive body of review expertise in diverse drug products across the pharmaceutical spectrum within OND.

What are the difficulties as an Arab you faced as a student in Canada or as an employee in the US?

As an immigrant, the primary challenge that I faced initially in the USA was the language because I started immediately taking science courses and did not take additional English as a second language classes. Luckily, the science courses were relatively easy for me to decipher due to my French background. However, in terms of communicating with people, I had difficulties comprehending the professors in the classroom (some of whom had their own heavy accents!). I believe that working outside the classroom in the registration office, laboratory and other campus jobs as well as working at a McDonald's after hours was the most helpful for me in learning the local accent in Denton, Texas. The second issue was the lack of mentors in the field of science from Arab descent; there were no Arab students in the program that I was in and most of my classmates that I could relate to and study with were either Chinese or Indians.

The food was another story altogether! An additional challenge that I kept all through my career is similar to the one raised by Dr. Burhan in the last issue of this newsletter which is the need to prove myself and my abilities at every turn and for every position which I have always faced with hard work and determination to succeed.

What advice you give toxicology students, postdocs or early career toxicologist from Arabic descent? What advice you specifically have to women Toxicologists?

My first advice is to volunteer for small and big projects! But also realize that you need to deliver on your promises and work hard to achieve results and meet deadlines. I also would like to emphasize that besides the obvious work ethics, you need to develop your soft skills which will help you tremendously in achieving your results as a successful employee and future leader in your field[1]. As a woman scientist, you need to put on an extra layer of self-confidence without arrogance, asking for help when needed, balancing your home and work lives, have a support system of family /friends /colleagues, and taking the time to look after your own health in the midst of all the deadlines and commitments in your career and

Interviewed
By Dr. Hanan Ghantous

FINANCIAL SUPPORT

ATA's committees and members started with huge ambition to keep ATA going and being successful. Therefore, ATA appreciates any donation and support to encourage scientists in all levels, and initiate scientific activities in Toxicology. Funding sponsor and donors will be recognized in the future events and on ATA website. For donation to ATA, please fill out the financial support form in the link below and follow the instructions to send the support through fax or SOT mail address. Please contact Dr. Nabila Saber (nabilasaber@yahoo.com)

https://www.toxicology.org/groups/sig/ATA/docs/SOT-Component-

JOIN US

Toxicologists of professionals in related fields can join ATA at any time during the year by applying in the following link

https://www.toxicology.org/groups/sig/ATA/docs/ATA-SOT-2021-Membership.pdf

https://www.toxicology.org/groups/sig/ATA/join-us.asp

For more information on becoming a member in SOT and ATA, please contact SOT headquarter sothq@toxicology.org