

SARA SEDDIQI

(+971) 569393939

sseddiqi.25@asdubai.org

saraseddiqi.com

EDUCATION

American School of Dubai, Al Barsha, Dubai
Class of 2025

HONORS AND AWARDS

Biology Achievement Award

May 2021

- Recognized for Being the Highest Student Achiever in Biology at the American School of Dubai

Oxford Scholastica Certificate of Achievement

July 2023

- Certificate of Achievement for Medicine and Research

National Honor Society

May 2024

- Inducted for Maintaining a GPA of 3.8 or Higher

Global Seal of Biliteracy

Sep 2024

- Awarded for English and Arabic

INTERNSHIPS AND RESEARCH

Mohammed Bin Rashid Medical Center

September 2024-Present

- Intern under Dr. Nasna Nassir, whose research focus includes neurodevelopmental disorders
- Project Title: Integrative Analysis of Long-read Whole Genome Sequencing and Single-cell Transcriptomics in Congenital Heart Disease Tissue.
- Took CHD tissue samples that were collected from affected individuals post-surgery. High molecular weight DNA was extracted from CHD tissue samples and sequenced using long-read sequencing platforms. Used single-cell RNA sequencing to profile the transcriptomic landscape at single-cell resolution.
- Collaborate with graduate students to participate in two research projects: A rare genetic case study and ongoing single-cell sequencing and genomics
- Utilise CRISPR to analyze the 3 billion letter sequence of the genome to identify any defects in efforts to treat genetic diseases

AHV International*August 2024*

- Interned at a lab focused on animal health solutions in Zwolle, Netherlands
- Conducted research in the cell culture, microbiology and chemical analysis labs to analyse and investigate biofilm formation and inhibition mechanisms relevant to disease prevention in livestock
- Focused on developing sustainable alternatives to antibiotics by exploring novel biofilm inhibitors for pathogen control
- Performed cell culturing, sub-culturing, and detailed phenotypic and molecular analysis of biofilm-forming bacteria to evaluate the efficacy of antimicrobial strategies

GI-Cell*April 2024*

- Participated in a research assistantship at a cancer pharmaceutical company in Seongnam, South Korea
- Mentored by scientists in the field of innovative immunotherapy, specifically the role of Natural Killer cells in the prevention and cure of Cancer cells forming and spreading.
- Investigated epigenetic modifications, which included Methylation and histone acetylation, to better understand their role in regulating oncogene and tumour suppressor gene expression, with a specific focus on how these transcriptional changes drive tumour progression
- Focused on researching and working at the lab to see how CAR-t cells and NK cells are modified with viral vectors to express specific receptors, enhancing their ability to target and destroy cancer cells, then genetic engineering is used to modify NK cells to be able to detect and recognise tumour antigens
- Exposed to a variety of different technologies used in different aspects of Science labs some being Advanced flow cytometry and symphony machines which are used to detect immune cells based on their genetic markers

Oxford Scholastica*July 2023*

- Conducted research and published journal article on the benefits and harm of colorectal cancer screening strategies
- The article highlights screening strategies and risk stratification
- Analyzed genetic factors in relation to CRC, including Lynch syndrome and FAP
- Reviewed the role of genetic biomarkers in early CRC detection and personalised screening

Micro Bio Me*May 2024- Present*

- Created blog to showcase different aspects of the human microbiome such as its link to genetics and case studies
- Conduct interviews with experts in the field such Dr. Usama Warshaw who is a consultant gastroenterologist and hepatologist

COMMUNITY SERVICE

Eupepsia Summer Camp Coach

May 2017 - Present

- Lead summer camp activities such as hiking, arts and crafts and team sports
- Supervise children, ages 3-11, as they participate in recreational

World Food Programme, Zanzibar

September 2016 - Present

- Lead efforts to collect food and clothing throughout the local community
- Package and organize donations to prepare to be shipped to families in Zanzibar

Housing for HIV

July 2023-August 2024

- Administrative member working for the nonprofit, Housing for HIV, which is an entity that provides HIV Voluntary counseling, testing and treatment to under-resourced communities in South Africa.

Ahmed Qasim Mosque

September 2016-Present

- Lead efforts to collect food and prepare meals to distribute to communities throughout Jumeirah
- Set up tents during Ramadan to provide food every day for those facing food insecurity to break their fast

Mini Falcons Soccer Coach

November 2022-Present

- Coach Grade 4 and 5 girls soccer two days every week
- Lead drills and scrimmages; encourage teamwork and positivity
- End the season with a tournament for the falcons

High Tide

August 2021-Present

- Led and participated in local beach cleanups throughout Kite Beach community
- Promote efforts to dispose of litter and recycle to preserve local ecosystems

SCHOOL CLUBS

Med Society: *August 2022 - Present*

- Participate in weekly meetings to discuss medicine and global health
- Attend guest speaker events to learn about career trajectories in the field of healthcare

Science Club: *August 2022 - Present*

- Selected to join the executive board for 2024-2025 as secretary
- Mentor and support elementary students in the school community to inspire a love of science
- Develop lesson plans and lead experiments in small-group workshops

Business Club: *August 2023-Present*

- Participate in weekly discussions to gain insight into investment, entrepreneurship and international business
- Explored the intersection of business and healthcare through research and presentations

Advisory Representative: *August 2023-Present*

- Lead advisory sessions every week, where important school matters are discussed, mental health activities, presentations for homeroom

Falcon Ambassador: *August 2021-June 2024*

- Selected to mentor and introduce new students coming into the ASD community

ATHLETICS

Varsity Girls Football, American School of Dubai: *November 2019 - Present*

- Varsity starter
- Left-back
- Participated in the international MESAC tournament

Scouted for UAE National Team, United Arab Emirates: *August 2019- August 2022*

- The youngest Emirati girl to be scouted on the team
- Recruited and trained with the UAE women's team

ADDITIONAL EDUCATION AND SKILLS

Columbia Pre-College Modern biology and its real world application Program

July-Aug 2024

- 3-week program which involved daily lectures by Dr. Harbi, immersive group discussions and group projects
- Created a 50-slide presentation which discusses all the scientific aspects of the autoimmune disease Giant cell Myocarditis
- The course explored the basic elements of molecular biology, genetics, and evolution and how these sciences affect modern medicine, agriculture and ecology
- The course described in detail the structure, function, and synthesis of DNA, RNA, and proteins