

## External Research Grants

1. Virtual Research Institute for Precision Medicine - ASPIRE and International fundings: 7,850,000 AED, PI: Rifat Hamoudi
2. Molecular And Functional Analysis of Non-Invasive Salivary Biomarker Panel to Classify and Manage Severe Asthmatic Patients – Sanofi pharmaceutical, Rashid hospital and University of Sharjah: 400,000 AED, PI: Rifat Hamoudi; CoPI: Bassam Mahboub, Poorna Manasa Bhamidimarri
3. The role of HER2, Estrogen and Progesterone receptors in Breast Cancer pathogenesis within the UAE population - Al Jalila Foundation: 298,000 AED. PI: Rifat Hamoudi; CoPI: Riyadh Bendardaf, Iman Talaat
4. Effect of PDL-1 downregulation and FoxP3 inhibition on KRAS mutated NSCLC - Boehringer Ingelheim: 40,000 AED, PI: Rifat Hamoudi
5. Role of Galanin/Galanin Receptor signaling as a potential novel therapeutic target for colorectal cancer with mutant p53 - Al Jalila Foundation: 293,000 AED, PI: Maha Saber-Ayad; CoPI: Rifat Hamoudi, Iman Talaat
6. Deciphering the immunological mechanism involved in early lung cancer in the UAE population - Al Jalila Foundation: 300,000 AED, PIs: Saba Al Heialy, Rifat Hamoudi
7. The role and therapeutic implications of cyclin- dependent kinases 4 and 6 in colorectal cancer patients in the UAE - Al Jalila Foundation: 298,500 AED, PI: Riyadh Bendardaf, CoPIs: Rifat Hamoudi, Iman Talaat

8. Construction Of Interpretable Artificial Intelligence and Deep Learning Models Based on Integrative Neuroimaging and Genetics Data for Predicting Abnormal Emotional Development - Skolkovo Institute of Technology and University of Sharjah: 260,000 AED; PI: Rifat Hamoudi, CoPI: Amal Bouzid
9. Deciphering the mechanism of triple negative breast cancer resistance to PI3K inhibitors - Al Jalila Foundation: 300,000 AED, PIs: Rifat Hamoudi, Mohamed Rahmani
10. Understanding the molecular mechanism of Asthma through Systems Engineering approach - Sharjah Research Academy: 385,000 AED, PIs: Rifat Hamoudi, Qutayba Hamid, Bassam Mahboub, Azzam Magazachi
11. Role of Natural Killer Cells in Suppressing and/or Eradicating Hepatic Metastases in NOG Mice. Involvement of Chemokine/Chemokine Receptors axis - Terry Fox foundation: 200,000 AED PIs: Azzam Magazachi, Rifat Hamoudi.
12. Genetic and molecular characterization of recurrent triple negative breast cancer - Sheikh Hamdan: 200,000 AED, PI: Rifat Hamoudi, CoPIs: Mohamed Rahmani, Iman Talaat
13. Utilization of WHOOP wearable activity straps to promote cardiovascular overall health and wellness for their worker using engineering mathematics and artificial intelligence algorithms – EXPO 2020: 800,000 AED. PI: Rifat Hamoudi
14. Investigating the role of combined inhibition of insulin growth factor receptors and autophagy to prevent colorectal cancer metastasis: A novel therapeutic approach - MBRU-ALMAHMEED COLLABORATIVE RESEARCH AWARD: 300,000 AED, PI: Maha Saber, CoPI: Iman Talaat

15. Exploring the Relevance of Pharmacogenetics Testing in Patients with Asthma-  
Sheikh Hamdan Bin Rashid Al Maktoum Award for Medical Sciences: 185,000 AED,  
PI: Maha Saber
16. DNA Barcoding of Important Medicinal Plants in UAE- Sharjah Research Academy  
and University of Sharjah: 400,000 AED, PI: Kareem A. Mosa, Co-PIs: Ali El-Keblawy,  
Ana Martins, Mohamed Helmy