

CURRICULUM VITA

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PERSONAL STATEMENT

I was fortunate to be one of the early researchers to join QBRI during its initial stages. At Qatar Foundation (QF), I had the privilege of establishing the first stem cell research program dedicated to diabetes research in Qatar. Since March 2014, I have been leading the stem cell research efforts at QBRI, where I have built a highly skilled team proficient in all aspects of human pluripotent stem cell (hPSC) work. My research at QBRI/HBKU focuses on utilizing hPSC technology to delve into the pathophysiology underlying diabetes development and to generate functional pancreatic cells for potential cell therapy. Over the years, I have been fortunate to receive numerous internal and external grants to investigate diabetes and pancreatic beta cell differentiation. Furthermore, I currently serve as the chair of the Harvard Stem Cell Institute (HSCI)-QBRI Agreement Steering Committee, overseeing various aspects of the program such as training, collaborative projects, and future clinical study planning. Since January 2022, I am supervising the Stem Cell Core at QBRI. Within my team, we have successfully optimized several protocols including iPSC generation, CRISPR/Cas9 genome editing, and differentiation of hPSCs into pancreatic beta cells, hepatocytes, adipocytes, epidermal keratinocytes, MSCs, and skeletal muscle. I have also fostered strong collaborations in the field of diabetes with prominent scientists and clinicians from institutions including HMC, Sidra Medicine, CHLS, WCMQ, and CMUQ. In addition, I serve on the editorial boards of "Stem Cells and Development," "Frontiers in Endocrinology," and "World Journal of Stem Cells." As one of the pioneering faculty members at CSE and CHLS at HBKU, I have enhanced my capabilities as an academic advisor. I have coordinated multiple courses, including Stem Cell Biology, HBKU Life Science Seminar Series, and the practical course "Techniques in Biochemistry and Molecular Biology." Moreover, I have supervised 15 graduate students from HBKU, with 11 of them successfully graduating between 2018 and 2023. The work of my students has garnered recognition both nationally and internationally, evidenced by the receipt of nine awards, including the International Society for Stem Cell Research (ISSCR) Merit Award in 2019 and the HH the Emir Sheikh Tamim Bin Hamad Al Thani Educational Award granted to one of my PhD students in 2021.

EDUCATION/DEGREES

- March 2009 PhD in Medical Science, Graduate School of Medicine, Shiga University of Medical Science, Japan.
- August 2002 MVSc in Cytology and Histology, Fac. of Vet. Med., Suez Canal University, Egypt.
- May 1998 BVM, Fac. of Vet. Med., Suez Canal University, Egypt.

POSITIONS/ EMPLOYMENT

- 2023- Present **Senior Scientist (Group Leader)**, Diabetes Research Center, Qatar Biomedical Research Institute, HBKU.
- 2023-Present **Associate Professor**, College of Health and Life Sciences (CHLS), HBKU, Qatar Foundation.
- 2018-2023 **Assistant Professor**, College of Health and Life Sciences (CHLS), HBKU, Qatar Foundation.
- 2015-2018 **Assistant Professor**, College of Science and Engineering (CSE), HBKU, Qatar Foundation.
- 2014- Present **Associate Professor**, Cytology and Histology Dep., Fac. of Vet. Med., Suez Canal University, Egypt (on leave of absence).
- 2014- May 2023 **Scientist (Group Leader)**, Diabetes Research Center, Qatar Biomedical Research Institute, HBKU
- Sep 2013-Mar2014 **Postdoctoral Fellow**, Stem Cell and Regenerative Medicine Center, QBRI, Qatar Foundation.
- 2012- 2016 **Visiting Associate Professor**, Molecular Neuroscience Research Center (MNRC), Shiga University of Medical Science, Japan.
- 2009- 2014 **Assistant Professor**, Cytology and Histology Dep., Fac. of Vet. Med., Suez Canal University, Egypt.
- 2009- 2011 **Postdoctoral Fellow** [Japan Society for Promotion of Science; JSPS], Shiga University of Medical Science, Japan.
- 2008- 2009 **Assistant Professor**, MNRC, Shiga University of Medical Science, Japan.
- 2002- 2009 **Assistant Lecturer**, Cytology and Histology Dep., Fac. of Vet. Med., Suez Canal University, Egypt.
- 1999- 2002 **Demonstrator**, Cytology and Histology Dep., Fac. of Vet. Med., Suez Canal University, Egypt.

AWARDS AND HONORS

- 2022 1st place, “QBRI-Affiliated Publications as corresponding author Award” for the years of 2017-2022.
- 2022 “Mentoring Graduate Students” Award, QBRI.
- 2022 “External Funding Obtained” Award, QBRI.
- 2021 QBRI publication Award for the years of 2018-2021.
- 2021 QNL Open Initiative Award, for promoting student mentorship, biomedical science education, and open access research in Qatar.
- 2020 The Best Oral Presentation Award at the 4th Qatar Diabetes, Endocrinology and Metabolic Conference (QDEM), Doha, Feb 2020 (the award was presented to my postdoc, Dr. Ahmed Kamel).
- 2019 ISSCR Merit Award (the award was presented to my PhD student Bushra Memon).
- 2019 My team has received 4 awards (2 oral presentations and two poster presentations) at the CUDOS Congress 2019 - Doha, Qatar.
- 2018 The third place for the QNRF’s BRIO 2 (Best Representative Image of an Outcome) competition.
- 2015 Thanaa Award for professional excellence, Qatar Biomedical Research Institute (QBRI), Qatar.
- 2013 Misr El Kheir Foundation’s Scientific Award, Egypt.
- 2012 The State Prize of Encouragement, Egypt.
- 2007 President’s Award, for the outstanding PhD student, Shiga University of Medical Science, Japan.
- 2012 Best presentation from the 3rd congress of African Association of Veterinary Anatomists.
- 2010 Misr El Kheir Foundation’s Scientific Award, Egypt.
- 2004 Prize of the best thesis, Suez Canal University, Egypt.

RESEARCH INTERESTS

- Generation of pancreatic beta cells from stem cells for diabetes therapy.
- Study human pancreatic beta cell development using pluripotent stem cells.
- Elucidating the molecular mechanisms underlying the development of monogenic and polygenic diabetes using induced pluripotent stem cell (iPSC) and genome editing technologies (disease modeling).
- Differentiation of pluripotent stem cells (hESCs & hESC) into specific cell types.

- Understanding the molecular mechanisms controlling unique characteristics of pluripotent stem cells (PSCs).

TEACHING INTERESTS

- Coordinator and instructor for the following courses at HBKU (BBS and GPM graduate programs):
 - Stem Cell Biology (LS640) (2016 -present)
 - Independent study (2016 -present)
 - Life Science Seminar Series (LS962) (2015-2019)
 - Techniques in Biochemistry and Molecular Biology (LS600) (Co-organizer) (2016)
- Giving lectures in the following courses (graduate programs):
 - Signal Transduction in Health and Disease (HBKU)
 - Molecular and Cellular Biology of Neurodegenerative Diseases (LS609)
 - Stem Cell Engineering (Carnegie Mellon-Qatar)
 - Biomedical Ethics and Law in Research (Master program, Qatar University)
 - Advanced Graduate Seminar (BIOL 600) (PhD program, Department of Biological and Environmental Sciences at Qatar University)
- Coordinator and instructor for the following courses at Suez Canal University (undergraduate and graduate programs):
 - Stem Cell Biology
 - Cytology & Histology
 - Neuroanatomy

MENTORING AND SUPERVISION

Supervision-Masters	Supervision-PhD	Post-Doc Supervision
Completed: 6	Completed: 5 In Progress: 3	Total: 5

Current HBKU students under my supervision

As a primary supervisor:

1. Fatima Al-Khawaga (PhD; GPM Program, Jan 2022-present)
2. Noura Aldous (PhD; BBS Program, Jun 2022-present)

3. Aldana Nasef (PhD; BBS Program; Aug. 2019-present)

As a co-supervisor:

4. Munia Hamdan (PhD; GPM Program; Aug. 2021-present)

I was the **primary supervisor for 10 students** that were graduated in 2018, 2019, 2021& 2022 as detailed below:

PhD and MS graduates (4 PhD and 6 MS) – Primary Supervisor			
Student name	Degree	Thesis title	Period
Bushra Memon	PhD in Biological and Biomedical Sciences (HBKU)	Studying pancreatic beta cell development and diabetes pathogenesis using human pluripotent stem cells	Aug 2018-May 2022
Idil Ahmed	PhD in Biological and Biomedical Sciences (HBKU)	Investigating the role of NKX6.1 in favoring pancreatic progenitor specification into functional beta cells	Aug 2016-May 2021
Yasmin Abu-Aqel	PhD in Genomics and Precision Medicine (HBKU)	Generating human iPSC-based models to study the molecular mechanisms underlying the development of diabetes due to glucokinase mutations	Aug 2017-May 2021
Sarah Al-Khawaga	PhD in Biological and Biomedical Sciences (HBKU)	The clinical spectrum and genetic characteristics of monogenic diabetes in the state of Qatar: a spotlight on using pluripotent stem cells to understand pancreatic beta cell development and pathophysiology	Aug 2015-May 2019
Noura Aldous	MS in Biological and Biomedical Sciences (HBKU)	Investigating the role of transcription factors in the differentiation and development of pancreatic β -cells using human pluripotent stem cells	Aug 2020-May 2022
Debora Mattei	MS in Biological and Biomedical Sciences (HBKU)	Effect of pregnancy on differentiation potential of equine mesenchymal stem cells	Jan. 2020-Nov 2021
Maryam Aghadi	MS in Genomics and Precision Medicine (HBKU)	Studying the genetic defects-associated with diabetes in insulin-target cells using human induced pluripotent stem cell technology	Aug 2019-May 2021
Mariam Al-Wakeel	MS in Genomics and Precision Medicine (HBKU)	Human induced pluripotent stem cell-derived hepatocytes as a model to study insulin resistance	Aug 2019-May 2021
Bushra Memon	MS in Biological and Biomedical Sciences (HBKU)	Enhanced differentiation of pancreatic progenitors co-expressing PDX1 and NKX6.1	Aug 2016- May 2018
Amera Al-Sadoun	MS in Biological and Biomedical Sciences (HBKU)	Using human pluripotent stem cells to investigate the role of PDX1 in pancreatic progenitors	Aug 2016- May 2018

PhD and MS graduates (1 PhD) – Co-Supervisor

Student name	Degree	Thesis title	Period
Eman Abdelsalam	PhD in Genomics and Precision Medicine (HBKU)	Role of human microbiome and virome in the pathogenesis and disease course of idiopathic nephrotic syndrome in children	Aug 2017-May 2022

Participation in QBRI Summer Research Program (SRP):

I participated in all SRP since 2015 and trained/supervised 15 undergraduate students mainly from CMU-Q, Qatar University, and WCM-Q.

Post doc, RA, and fellowship mentoring (in Qatar):

#	Name	Position	project	Period
1	Bushra Memon	Postdoc	QBRI budget	Jun. 2022-present
2	Racha Chouaib	Postdoc	QBRI budget	Oct. 2021-present
3	Ahmed Kamel	Postdoc	QBRI budget	Mar. 2017-Dec. 2020
4	Manjula Nandakumar	Postdoc	QNRF-funded project (NPRP9-283-3-056)	Aug. 2017-Aug. 2018
5	Gowher Ali	Postdoc	QNRF-funded project (NPRP9-283-3-056)	Apr.2018-Feb. 2020
6	Manale Karam	Postdoc	QNRF-funded project (NPRP9-283-3-056)	
7	Idil Ahmed	RA	QBRI budget	Feb. 2016-present
8	Yasmin Abu-Aqel	RA	QBRI budget	Apr. 2017-present
9	Maryam Aghadi	RA	QNRF-funded project (NPRP9-283-3-056)	Mar 18, 2018-Feb 17, 2019 (Full time) Sep 2, 2018 – Aug 31, 2019 (part-time)
10	Noor Alareer	RA	QNRF-funded project (NPRP9-283-3-056)	6 months (part time)
11	Sara Nasser	RA-	QNRF-funded project (NPRP9-283-3-056)	6 months (part time)
12	Doja Qaraqe	RA	QNRF-funded project (NPRP10-1221-160041)	5 months (part time)

MEMBERSHIP IN SCIENTIFIC SOCIETIES

- European Association for the Study of Diabetes (EASD) (2021-present)
- International Society for Stem Cell Research (ISSCR) (2006 – present).

- International Brain Research Organization (IBRO) (2006 – 2018).
- Japan Neuroscience Society (JNS) (2006 – 2018).
- The International Neuropeptide Society (INPS) (2010 – 2019).

PROFESSIONAL SERVICES

- **Scientific Supervisor, Stem Cell Core, QBRI, HBKU** (Jan. 2022-present).
- **Editor in scientific journals:** Stem Cells and Development, World Journal of Stem Cells, Stem Cell International (Guest Editor), Frontiers in Cell and Developmental Biology (Guest Associate Editor).
- **Reviewer for scientific journals (selected):** Advanced Science, Stem Cell Reports, Stem Cells, Stem Cells and Development, Stem Cell Research & Therapy, Stem Cell Translational Medicine, Signal Transduction and Targeted Therapy, Stem Cell International, Cell Death & Disease, Diabetes, Obesity and Metabolism, Endocrinology, Scientific Reports, Cell Cycle, iScience, Cell Proliferation, Endocrine Connections, Cell Regeneration, Brain Structure & Function, PloS ONE, Peptides, Placenta, Nanomedicine, Frontiers in Neuroscience, Frontiers in Cell and Developmental Biology, DNA and Cell Biology, Journal of Translational Medicine, Cells,....among others.
- **Grant reviewer:**
 - A grant proposal (ID-N research projects) for the University of Leuven, Belgium (2022).
 - Two grant proposals for the National Science Center, Poland (2022).
 - The Netherlands Organisation for Health Research and Development, ZonMw's Programme "Pluripotent Stem cells for Inherited Diseases and Embryonic research (PSIDER)" (2021).
 - Qatar University (QU) Internal Grants (2021 & 2022).
 - HMC Internal Research Grant Competition (2018, 2019 & 2022).
- **Committee membership:**
 - Chair, Harvard Stem Cell Institute (HSCI)-QBRI Agreement Steering Committee (Jan 2022-present)
 - Chair, Translational Advances in Stem Cells for Diabetes Symposium Committee (March 8-9, 2023)
 - Chair, QBRI Research in Focus Organizing Committee (September 28, 2022)
 - Member, Scientific Committee, Dubai Stem Cell Congress, 27th-28th February 2023
 - Elected member, QBRI Executive Committee (April 2021-September 2022)

- Member, HBKU Library Committee (January 2022-present).
- Final Dissertation Committee (CHLS, April 2018, April 2020, April 2022; CSE, April 2017)
- Judge, The National Scientific Research Competition (NSRC), QRDI (5-7 April 2020, Nov. 1-4, 2021 & Oct. 2, 2022)
- Judge, The Undergraduate Research Experience Program (UREP) competition, QRDI (Oct. 24-26, 2021 & Oct. 18, 2022)
- Member, Organizing Committee of the CUSOD 2019 congress (Nov. 2019).
- Qualifying Exam Committee (CHLS, Feb. 2019)
- Member, Research Advisory Committee (RAC) for HBKU students (2017-present)
- Member, Post-doc/RA recruitment committee (QBRI, 2019-present).
- Member, PhD Candidacy Examination Committee, HBKU (2017).
- Member, HBKU Admission Committee (2016).
- Member, HBKU Curriculum Committee (2016- 2019).
- Member, HBKU Life Science Seminar Series Committee (2016- 2019).
- Member, QBRI Institutional Biosafety Committee (IBC) (2014- 2018).
- Scientific Review Committee (SRC) of Qatar STEAM Fair (2015).
- Organizer, the QBRI-Kyoto University joint stem cell symposium, Doha, Qatar (March 4-5, 2015).
- Scientific Advisor, Arab Scientific Community Organization (ARSCO) (2013-present).
- Vice head, Consultative Committee for Graduate Studies and Research Development, Suez Canal University (2012-2013).

FULL PUBLICATION LIST (69 articles, 4 book chapters & 2 books)

*** Corresponding author**

I- Articles in Peer-Reviewed Journals:

- 1) Ali R, Sulaiman AA, Memon B, Pradhan S, Algethami M, Aouida M, McKay G, Madhusudan S, **Abdelalim EM**, Ramotar D (2023). Altered regulation of the glucose transporter GLUT3 in PDRX1 null cells caused hypersensitivity to arsenite. *Cells*, in press.
- 2) Elsayed AK, Alajez NM, **Abdelalim EM***(2023). Genome-wide differential expression profiling of long non-coding RNAs in FOXA2 knockout iPSC-derived pancreatic cells. *Cell Communication and Signaling*, 2023 Sep 5;21(1):229.
- 3) Noura Aldous, Abu Saleh Md Moin, **Abdelalim EM***(2023). Pancreatic β -cell heterogeneity in adult human islets and stem cell-derived islets. *Cellular and Molecular Life Sciences*, 2023 Jun 3;80(6):176.
- 4) Memon B, **Abdelalim EM***(2023). Comment on Carrasco et al. Spatial environment affects *HNMF4A* mutation-specific proteome signatures and cellular morphology in hiPSC-derived β -like cells. *Diabetes* 2022;71:862-869 (Letter). *Diabetes*, 2023;72:e1-e2.

- 5) Aldous N, Elsayed AK, Alajezi NM, **Abdelalim EM*** (2023). iPSC-derived pancreatic progenitors lacking FOXA2 reveal alterations in miRNA expression targeting key pancreatic genes. *Stem Cells Reviews and Reports*, **19**, 1082-1097.
- 6) Aigha II, **Abdelalim EM*** (2023). p53 inhibition in pancreatic progenitors enhances the differentiation of human pluripotent stem cells into pancreatic β -cells. *Stem Cells Reviews and Reports*, **19**, 942-952.
- 7) Cieslar-Pobuda A, **Abdelalim EM**, Bhattacharya S (2023). Transdetermination, Transdifferentiation and Reprogramming of Cells: In vitro and in vivo strategies. *Frontiers in Molecular Biosciences*, 2023 Apr 13;10:1194013.
- 8) Ehtewish H, Mesleh A, Ponirakis G, De la Fuente A, Parray A, Abdesselem H, Bensmail I, Ramadan M, Khan S, Chandran M, Ayadathil R, Elstouhy A, Own A, Al Hamad H, **Abdelalim EM**, Decock J, Alajezi N, Albagha OME, Thornalley PJ, Arredouani A, Malik RA, El-Agnaf OMA (2023). Blood-Based Proteomic Profiling Identifies Potential Biomarker Candidates and Pathogenic Pathways in Dementia. *International Journal of Molecular Sciences*, 2023 May 1;24(9):8117.
- 9) Toor SM, Aldous EK, Parray A, Akhtar N, Al-Sarraj Y, **Abdelalim EM**, Arredouani A, El-Agnaf O, Thornalley, PJ, Pananchikkal SV, Pir GJ, Ayadathil R, Kuni T, Shuaib A, Alajezi NM, Albagha OME. Circulating MicroRNA Profiling Identifies Distinct MicroRNA Signatures in Acute Ischemic Stroke and Transient Ischemic Attack Patients. *International Journal of Molecular Sciences*, 2022 Dec 21;24(1):108.
- 10) Islam Z, Aldous N, Choi S, Schmidt F, Mifsud B, **Abdelalim EM**, Kolatkar PR (2022). Flavin adenine dinucleotide (FAD) and pyridoxal 5'-phosphate (PLP) bind to Sox9 and alter the expression of key pancreatic progenitor transcription factors. *International Journal of Molecular Sciences*, 2022 Nov 14;23(22):14051.
- 11) Vishnubalaji R, Shaath H, Gehani SA, Al-Alwan M, **Abdelalim EM**, Alajezi NM (2022). Reciprocal Interplay between microRNAs and Pluripotency Transcription Factors in Dictating Stemness Features of Human Cancers. *Seminars in Cancer Biology*, 2022 Dec 21;24(1):108.
- 12) Toor SM, Aldous EK, Parray A, Akhtar N, Al-Sarraj Y, **Abdelalim EM**, Arredouani A, El-Agnaf O, Thornalley PJ, Pananchikkal SV, Pir GJ, Kuni RAT, Shuaib A, Alajezi NM, Albagha OME (2022). Identification of distinct circulating miRNAs in acute ischemic stroke patients with type 2 diabetes mellitus. *Frontiers in Cardiovascular Medicine*, 2022 Oct 6; 9:1024790.
- 13) Memon B, Elsayed AK, Bettahi I, Suleiman N, Younis I, Wehedy E, Abou-Samra AB, **Abdelalim EM*** (2022). iPSCs derived from insulin resistant offspring of type 2 diabetic patients show increased oxidative stress and lactate secretion. *Stem Cell Research & Therapy*, 2022 Aug 20;13(1):428.
- 14) Aghadi M, Elgendy R, **Abdelalim EM*** (2022). Loss of FOXA2 induces ER stress and hepatic steatosis and alters developmental gene expression in human iPSC-derived hepatocytes. *Cell Death & Disease*, 2022 Aug 16;13(8):713.
- 15) Ali G, **Abdelalim EM*** (2022). Directed differentiation of human pluripotent stem cells into epidermal keratinocytes. *STAR Protoc*, September 2022; 3(3):101613.
- 16) Memon B, **Abdelalim EM*** (2022). Toward precision medicine with human pluripotent stem cells for diabetes. *Stem Cells Translational Medicine*, 2022 Jul 20;11(7):704-714.

- 17) Aldous EK, Toor SM, Parray A, Al-Sarraj Y, Diboun I, **Abdelalim EM**, Arredouani A, El-Agnaf O, Thornalley PJ, Akhtar N, Pananchikkal SV, Shuaib A, Alajez NM, Albagha OME (2022). Identification of novel circulating miRNAs in patients with acute ischemic stroke. *International Journal of Molecular Sciences*, Mar 21;23(6):3387.
- 18) Aghadi M, Karam M, **Abdelalim EM*** (2022). Robust Differentiation of Human iPSCs into a Pure Population of Adipocytes to Study Adipocyte-Associated Disorders. *J Vis Exp*, Feb 9;(180).
- 19) Memon B, **Abdelalim EM*** (2022) Highly Efficient Differentiation of Human Pluripotent Stem Cells into Pancreatic Progenitors Co-expressing PDX1 and NKX6.1. In: *Methods in Molecular Biology*. Springer, New York, NY. 2022;2454:351-363. https://doi.org/10.1007/7651_2020_323.
- 20) Karam M, **Abdelalim EM*** (2022). Robust and Highly Efficient Protocol for Differentiation of Human Pluripotent Stem Cells into Mesenchymal Stem Cells. In: *Methods in Molecular Biology*. Springer, New York, NY. 2022;2454:257-271. https://doi.org/10.1007/7651_2020_318.
- 21) Memon B, **Abdelalim EM*** (2021). Differentiation of human pluripotent stem cells into pancreatic beta-cell precursors in a 2D culture system. *J Vis Exp*, 2021 Dec 16;(178).
- 22) Memon B, **Abdelalim EM*** (2021). ACE2 function in the pancreatic islet: Implications for relationship between SARS-CoV-2 and diabetes. *Acta Physiol (Oxf)*. 2021 Sep 24:e13733.
- 23) Rakib F, Al-Saad K, Ustaoglu SG, Mall R, Ullah E, Thompson R, **Abdelalim EM**, Ahmed T, Severcan F and Ali MHM (2021). Fourier transform infrared imaging-a novel approach to monitor bio molecular changes in subacute mild traumatic brain injury. *Brain Sciences*, 2021, 11(7), 918.
- 24) Elsayed AK, Al-Khawaga S, Hussain K, **Abdelalim EM*** (2021). An induced pluripotent stem cell line derived from a patient with neonatal diabetes and Fanconi-Bickel syndrome caused by a homozygous mutation in the SLC2A2 gene. *Stem Cell Research*, 54: 102433.
- 25) Memon B, Younis I, Abubaker F, **Abdelalim EM*** (2021). PDX1/NKX6.1⁺ progenitors derived from human pluripotent stem cells as a novel source of insulin-secreting cells. *Diabetes Metab Res Rev*. 2021; 37: e3400.
- 26) Elsayed AK, Younis I, Ali G, Hussain K, **Abdelalim EM*** (2021). Aberrant development of pancreatic beta cells derived from human iPSCs with FOXA2 deficiency. *Cell Death & Disease*, 12: 103.
- 27) **Abdelalim EM*** (2021). Modeling different types of diabetes using human pluripotent stem cells. *Cellular and Molecular Life Sciences*, 78: 2459-2483.
- 28) Elsayed AK, Vimalraj S, Nandakumar M, **Abdelalim EM*** (2021). Insulin resistance in diabetes: The promise of using induced pluripotent stem cell technology. *World J Stem Cells* 2021; 13(3): 221-235.
- 29) Aigha I, **Abdelalim EM*** (2020). NKX6.1 transcription factor: A crucial regulator of pancreatic β -cell development, identity, and proliferation. *Stem Cell Research & Therapy*, 2020 Oct 29;11(1):459.

- 30) Al-Khawaga S, **Abdelalim EM*** (2020). Potential application of mesenchymal stem cells and their exosomes in lung injury: an emerging therapeutic option for COVID-19 patients. *Stem Cell Research & Therapy*, 2020 Oct 15;11(1):437.
- 31) Abu Aqel YW, Ali G, Elsayed AK, Al-Khawaga S, Hussain K, **Abdelalim EM*** (2020). Generation of two human iPSC lines from patients with maturity-onset diabetes of the young type 2 (MODY2) and permanent neonatal diabetes due to mutations in the GCK gene. *Stem Cell Research*, 2020 Oct; 48:101991.
- 32) Ali G, Elsayed AK, Nandakumar M, Bashir M, Younis I, Abu Aqel Y, Memon B, Temanni R, Abubaker F, Taheri S, **Abdelalim EM*** (2020). Keratinocytes derived from patient-specific induced pluripotent stem cells recapitulate the genetic signature of psoriasis disease. *Stem Cells and Development*, 2020 Apr 1;29(7):383-400. (This work was featured on the cover of the journal).
- 33) Karam M, Younis I, Elareer NR, Nasser S, **Abdelalim EM*** (2020). Scalable Generation of Mesenchymal Stem Cells and Adipocytes from Human Pluripotent Stem Cells. *Cells*, 9(3), 710.
- 34) Elsayed AK, Aghadi M, Al-Khawaga S, Hussain K, **Abdelalim EM*** (2020). Derivation of a human induced pluripotent stem cell line (QBRIi007-A) from a patient carrying a homozygous intronic mutation (c.613-7T>G) in the SLC2A2 gene. *Stem Cell Research*, 2020 Feb 24;44:101736.
- 35) Memon B and **Abdelalim EM*** (2020). Stem cell therapy for diabetes: beta cells versus pancreatic progenitors. *Cells*, 9 (2): pii: E283.
- 36) Elsayed AK, Aghadi M, Ali G, Al-Khawaga S, Hussain K, **Abdelalim EM*** (2020). Generation of a human induced pluripotent stem cell line (QBRIi009-A) from a patient with a heterozygous deletion of FOXA2. *Stem Cell Research*, 42, 101705.
- 37) Al-Khawaga S, Mohammed I, Saraswathi S, Haris B, Hasnah R, Saeed A, Almabrazi H, Syed N, Jithesh P, El Awwa A, Khalifa A, AlKhalaf F, Petrovski G, **Abdelalim EM**, Hussain K (2019). The clinical and genetic characteristics of permanent neonatal diabetes (PNDM) in the State of Qatar. *Molecular Genetics & Genomic Medicine*, 2019 Aug 23: e753.
- 38) Al-Khawaga S, AlRayahi J, Khan F, Saraswathi S, Hasnah R, Haris B, Mohammed I, **Abdelalim EM**, Hussain K (2019). A novel SLC16A1 mutation in an infant with ketoacidosis and neuroimaging assessment: expanding the clinical spectrum of MCT1 deficiency. *Frontiers in Pediatrics*, 7:299.
- 39) Taouk G, Hussein O, Zekak M, Abouelghar A, **Abdelalim EM**, Karam M (2019). CD56 expression in breast cancer induces sensitivity to natural killer-mediated cytotoxicity by enhancing the formation of cytotoxic immunological synapse. *Scientific Reports*, 9(1): 8756.
- 40) Deola S, Guerrouahen BS, Sidahmed H, Al-Mohannadi A, Elnaggar M, Elsadig R, **Abdelalim EM**, Petrovski G, Gadina M, Thrasher A, Wels WS, Hunger SP, Wang E, Marincola FM, ATH Consortium; Maccalli C, Cugno C (2018). Tailoring cells for clinical needs. Meeting report from the Advanced Therapy in Health Care Symposium (October 28-29, 2017, Doha, Qatar). *Journal of Translational Medicine*, Oct 10; 16(1):276.
- 41) Ali M, Rakib F, **Abdelalim EM**, Mall R, Ullah E, Mesaali N, McNaughton D, Ahmed T, Al-Saad K, Limbeck A (2018). Fourier-transform infrared imaging spectroscopy and Laser ablation -

- ICPMS new vistas for biochemical analyses of ischemic stroke in rat brain. *Frontiers in Neuroscience*, Sep 19;12: 647.
- 42) Abdel-Motal UM, Akila G, **Abdelalim EM**, Ponnuraja C, Iken K, Jahromi M, Doss GP, El Bekay R, Hatem Zayed H (2018). Prevalence of Nephropathy of Type 1 Diabetes in the Arab World: A Systematic Review and Meta-analysis. *Diabetes Metab Res Rev*. 2018 Oct; 34: e3026.
 - 43) Uhlin M, Abumaree M, **Abdelalim EM** (2018). Therapeutic Use of Extra-Embryonic-derived Tissues (Editorial). *Stem Cells International*, Jun 13:6082698.
 - 44) Aigha II, Memon B, Elsayed AK, **Abdelalim EM*** (2018). Differentiation of human pluripotent stem cells into two distinct NKX6.1 populations of pancreatic progenitors. *Stem Cell Research & Therapy*, 2018 9(1): 83.
 - 45) Memon B, Karam M, Al-Khawaga S, **Abdelalim EM*** (2018). Enhanced differentiation of human pluripotent stem cells into pancreatic progenitors co-expressing PDX1 and NKX6.1. *Stem Cell Research & Therapy*, 2018, 9:15.
 - 46) Al-Khawaga S, Memon B, Butler AE, Taheri S, Abou-Samra AB, and **Abdelalim EM*** (2018). Pathways governing development of stem cell-derived pancreatic β cells: lessons from embryogenesis. *Biol Rev Camb Philos Soc*. 93(1): 364-389.
 - 47) Abdel-Motal UM, **Abdelalim EM**, Abou-Saleh H, Zayed H (2017). Neuropathy of type 1 diabetes in Arab world: A systemic review and meta-analysis. *Diabetes Research and Clinical Practice*, 127:172-180.
 - 48) **Abdelalim EM***, Bellier JP, Tooyama I (2016). Localization of Brain Natriuretic Peptide Immunoreactivity in Rat Spinal Cord. *Front. Neuroanat*. Dec. 2; 10:116. doi: 10.3389/fnana.2016.00116.
 - 49) **Abdelalim EM***, Emara MM (2015). Advances and challenges in the differentiation of pluripotent stem cells into pancreatic β cells. *World Journal of Stem Cells*, 2015 Jan 26; 7 (1): 174-81.
 - 50) **Abdelalim EM***, Emara MM, Kolatkar PR (2014). The SOX transcription factors as key players in pluripotent stem cells. *Stem Cells and Development*, 2014 Nov 15; 23 (22): 2687-99.
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II- Chapters in International Books:

- 1) **Abdelalim EM***, Emara MM (2017). Pluripotent stem cell-derived pancreatic β cells: from in vitro maturation to clinical application. *Recent Advances in Stem Cells: From Basic Research to Clinical Applications*, E.M. Abdelalim (Ed), ISBN 978-3-319-33270-3, pp 101-129, SPRINGER.

- 2) Kolatkar PR, Moovarkumudalvan B, **Abdelalim EM**, Emara MM (2016). 3D structure of Sox protein-DNA complexes. Sox2: Biology and Role in Development and Disease. Kondoh H. and Lovel-Badge R. (Ed), ISBN 9780128003527, pp 15-24, Elsevier.
- 3) **Abdelalim EM***, Tooyama I (2012). Regulation of self-renewal and pluripotency of embryonic stem cells: role of natriuretic peptide receptor A. Stem Cells and Cancer Stem Cells; Therapeutic applications in disease and injury, vol (8) M.A. Hayat (Ed), ISBN 978-94-007-4797-5, pp 123-131, SPRINGER.
- 4) **Abdelalim EM***, Tooyama I (2011). BNP Is a Novel Regulator of Embryonic Stem Cell Proliferation. Embryonic Stem Cells: The hormonal regulation of pluripotency and embryogenesis, Craig Atwood (Ed), ISBN 978-953-307-196-1, INTECH.

III- International Books:

- **Abdelalim EM** (Editor), 2017. Recent Advances in Stem Cells: From Basic Research to Clinical Applications” in the book series “Stem Cell Biology and Regenerative Medicine”, Springer, ISBN 978-3-319-33270-3. <https://www.springer.com/la/book/9783319332680>
- **Abdelalim EM** (Editor), 2021. Cell biology and translational medicine-Advances in experimental medicine and biology. Series Ed. Kusad Turksen, Springer, ISSN: 2522-090X. <https://www.springer.com/series/15838?detailsPage=aboutTheEditor>

IV- CONFERENCES:

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- 2) Aghadi M, Elgendy R, **Abdelalim EM***(2022). Loss of FOXA2 induces ER stress and hepatic steatosis and alters developmental gene expression in human iPSC-derived hepatocytes (oral presentation). 58th European Association for the Study of Diabetes (EASD) annual meeting, 19-23 September 19-23, 2022, Stockholm, Sweden ([oral presentation](#)).
- 3) Memon B, Elsayed AK, Bettahi I, Suleiman N, Younis I, Wehedy E, Abou-Samra AB, **Abdelalim EM**. iPSCs derived from insulin resistant offspring of type 2 diabetic patients show increased oxidative stress and lactate secretion. The Annual Meeting of the International Society for Stem Cell Research (ISSCR), Jun. 15-18, 2022, San Francisco, USA.
- 4) Abu Aqel Y, Gowher A, Elsayed AK, Al Khawaga S, Khalid Hussain K, **Abdelalim EM**. Generation of iPSCs from patients with MODY2 and neonatal diabetes due to glucokinase mutations. The Annual Meeting of the International Society for Stem Cell Research (ISSCR), Jun. 23-27, 2020, Online meeting.
- 5) Elsayed AK, Gowher A, Memon B, Nandakumar M, Bashir M, Younis I, Abu-Aqel Y, Temanni R, Abubaker F, Taheri S, **Abdelalim EM**. Understanding genetic factors involved in the development of insulin resistance in patients with psoriasis using patient-specific iPSCs. The 4th Qatar Diabetes, Endocrinology and Metabolic Conference (QDEM-4), February 14-15, 2020, Doha, Qatar.
- 6) Elsayed AK, Memon B, Aghadi M. Abu-Aqel Y, Aigha I, Bashir M, **Abdelalim EM**. Generation of insulin-secreting beta cells from hiPSCs derived from diabetic and healthy individuals. the 4th Qatar Diabetes, Endocrinology and Metabolic Conference (QDEM-4), February 14-15, 2020, Doha, Qatar.

- 7) Memon B, Elsayed AK, El-Allam M, Ali G, Aghadi M, Abdelsalam E, Bettahi I, Suleiman NN, Abou-Samra AB, **Abdelalim EM**. Generation of a novel hiPSC-based model to understand the mechanisms underlying insulin resistance in the offspring of T2D parents. The 4th Qatar Diabetes, Endocrinology and Metabolic Conference (QDEM-4), February 14-15, 2020, Doha, Qatar.
- 8) Abu-Aqel Y, Gowher A, Al Khawaga S, Hussain K, **Abdelalim EM**. Generation of iPSCs from patients with MODY2 and neonatal diabetes due to glucokinase mutations. The 4th Qatar Diabetes, Endocrinology and Metabolic Conference (QDEM-4), February 14-15, 2020, Doha, Qatar.
- 9) Aigha II, Memon B, Elsayed AK, **Abdelalim EM**. Understanding the Role of NKX6.1 in Favoring Pancreatic Progenitors Development into Functional β cells. The 4th Qatar Diabetes, Endocrinology and Metabolic Conference (QDEM-4), February 14-15, 2020, Doha, Qatar.
- 10) Memon B, Abubaker F, Younis I, **Abdelalim EM**. PDX1/NKX6.1⁺ progenitors derived from human pluripotent stem cells as a novel source of insulin-secreting cells. The 4th Qatar Diabetes, Endocrinology and Metabolic Conference (QDEM-4), February 14-15, 2020, Doha, Qatar.
- 11) Karam M, Younis I, **Abdelalim EM**. Scalable generation of mesenchymal stem cells and adipocytes from multiple human pluripotent stem cell lines (poster). Phacilitate Leaders World & World Stem Cell Summit 2020, 21-24 January 2020, Miami, USA.
- 12) Abu Aqel Y, Gowher A., Al Khawaga S, Hussain K, **Abdelalim EM**. Generation of iPSCs from patients with MODY2 and neonatal diabetes due to glucokinase mutations. CUDOS 2019, Jun. 20-26, 2019, Doha, Qatar.
- 13) Elsayed AK, Memon B, Aghadi M, Abu Aqel Y, Aigha I, Bashir M, **Abdelalim EM**. Generation of insulin-secreting beta cells from hiPSCs derived from diabetic and healthy individuals. CUDOS 2019, Jun. 20-26, 2019, Doha, Qatar.
- 14) Memon B, Abubaker F, Younis I, **Abdelalim EM**. PDX1/NKX6.1⁺ progenitors derived from human pluripotent stem cells as a novel source of insulin-secreting cells. CUDOS 2019, Jun. 20-26, 2019, Doha, Qatar.
- 15) Elsayed AK, Ali G, Memon B, Nandakumar M, Bashir M, Younis I, Abu Aqel Y, Temanni R, Abubaker F, Taheri S, **Abdelalim EM**. Understanding genetic factors involved in the development of insulin resistance in patients with psoriasis using patient-specific iPSCs. CUDOS 2019, Jun. 20-26, 2019, Doha, Qatar.
- 16) Karam M, Maryam Aghadi, Younis I, **Abdelalim EM**. Scalable generation of mesenchymal stem cells and adipocytes from multiple human pluripotent stem cell lines. CUDOS 2019, Jun. 20-26, 2019, Doha, Qatar.
- 17) Aigha II, Memon B, Kamel A, **Abdelalim EM**. Understanding the Role of NKX6.1 in Favoring Pancreatic Progenitors Development into Functional β cells. CUDOS 2019, Jun. 20-26, 2019, Doha, Qatar.
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- 20) Ali G, Elsayed AK, Nandakumar M, Bashir M, Abu Aqel Y, Aghadi M, Memon B, Temanni R, Karam M, Taheri S, **Abdelalim EM**. Patient-specific iPSC-derived keratinocytes recapitulate the genetic defects in psoriasis disease. The Annual Meeting of the International Society for Stem Cell Research (ISSCR), Jun. 26-29, 2019, Los Angeles, USA.

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- 22) Elsayed AK, Nandakumar M, Abu-Aqel Y, Bashir M, Memon B, Taheri S, **Abdelalim EM**. Generation of induced pluripotent stem cells from insulin resistant Qatari patients. The Annual Meeting of the International Society for Stem Cell Research (ISSCR), Jun. 20-23, 2018, Melbourne, Australia.
- 23) Aigha II, Elsayed A, Memon B, **Abdelalim EM** (2018). Generation of a novel population of pancreatic multipotent progenitor cells expressing NKX6.1. Annual Research Conference (ARC 2018), March 19-20, 2018. Doha, Qatar.
- 24) Memon B, Karam M, Khawaga S, **Abdelalim EM**. Enhancement of differentiation of multipotent β cell precursors from human embryonic stem cells. Annual Research Conference (ARC 2018), March 19-20, 2018. Doha, Qatar.
- 25) Elsayed AK, Nandakumar M, Abu-Aqel Y, Bashir M, Memon B, Taheri S, **Abdelalim EM**. Generation of induced pluripotent stem cells from insulin resistant Qatari patients. Annual Research Conference (ARC 2018), March 19-20, 2018. Doha, Qatar.
- 26) Memon B, Karam M, Khawaga S, **Abdelalim EM**. Enhancement of differentiation of multipotent β cell precursors from human embryonic stem cells. 2nd Qatar Diabetes, Endocrinology and Metabolic Conference (QDEM-2), Nov. 30-Dec. 2, 2017. Doha, Qatar.
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- 29) Al-Khawaga S, Malik R, **Abdelalim EM**, Hussain K. A case of Fanconi-Bickel syndrome: A 19-year-old Female with Complex Syndromic Diabetes Mellitus, A Therapeutic Conundrum. 2nd Qatar Diabetes, Endocrinology and Metabolic Conference (QDEM-2), Nov. 30-Dec. 2, 2017. Doha, Qatar.
- 30) **Abdelalim EM**, Al-Khawaga S, Memon B, Aigha I, Kamel A (2017). Differentiation of human pluripotent stem cells into two distinct populations of pancreatic progenitors. The Annual Meeting of the International Society for Stem Cell Research (ISSCR), Jun. 14-17, 2017, Boston, USA.
- 31) **Abdelalim EM** (2016). Pluripotent Stem Cell-Derived Pancreatic Beta Cells: Therapeutic Potential and Challenges in Diabetes Treatment. 3rd MEMBS Conference, Doha, Nov. 14-16, 2016.
- 32) **Abdelalim EM** (2015). Pluripotent stem cells for disease modeling and cell therapy in diabetes. Arab Diabetes Medical Congress, Oryx Rotana, Doha, 23-25, April 2015.
- 33) **Abdelalim EM** (2015). Pluripotent stem cell therapies for diabetes: dream or nightmare? Middle East Stem Cell Symposium, Crown Plaza, Doha, 24-25, March 2015.
- 34) Magdeldin S, Yamamoto T, Tooyama I, **Abdelalim EM** (2014). New proteomic insights on the role of NPRA in regulating self-renewal of embryonic stem cells. The 7th AOHUP Congress and 9th International Symposium of the Protein Society of Thailand (7th AOHUPO/9th PST), August 6-8, 2014, Bangkok, Thailand.
- 35) **Abdelalim EM**, Magdeldin S (2014). New proteomic insights on the role of NPRA in regulating self-renewal of embryonic stem cells. The 12th International Conference of the International Society for Stem Cell Research (ISSCR), June 18-21, 2014, Vancouver, Canada.

- 36) **Abdelalim EM**, Tooyama I (2013). Knockdown of p53 impairs self-renewal of embryonic stem cells. World Stem Cell Summit, Dec. 4-6, 2013, San Diego, CA, USA.
- 37) **Abdelalim EM** (2012). NPR-C is Essential for Viability of Embryonic Stem Cells. 3rd international conference "Mansoura University Regenerative Medicine Program (MURMP) from bench to bedside". November 28, 2012.
- 38) **Abdelalim EM** (2012): Pluripotent stem cells. 3rd international conference "Mansoura University Regenerative Medicine Program (MURMP) from bench to bedside". November 27, 2012.
- 39) **Abdelalim EM** (2012): NPR-C is essential for viability of embryonic stem cells. The 3rd congress of African Association of Veterinary Anatomists, March 17, 2012.
- 40) **Abdelalim EM**, Tooyama I (2012). Inhibition of p53 suppresses self-renewal of murine embryonic stem cells. The 10th International Conference of the International Society for Stem Cell Research (ISSCR), Jun. 13-16, 2012, Yokohama, Japan.
- 41) **Abdelalim EM**, Tooyama I (2011). NPR-C is required for embryonic stem cell survival. The 9th International Conference of the International Society for Stem Cell Research (ISSCR), Jun. 15-18, 2011, Toronto, Canada.
- 42) Tooyama I, **Abdelalim EM**, (2011). BNP signaling is crucial for embryonic stem cell proliferation. The 5th International Conference on cGMP, Jun. 24-26, 2011, Halle (Saale), Germany.
- 43) **Abdelalim EM**, Tooyama I (2010). NPR-A is essential for embryonic stem cell self-renewal and pluripotency. The 16th International Conference of the International Society of Differentiation, From Stem Cells to Organisms, Nov. 15-18, 2010, Nara, Japan.
- 44) **Abdelalim EM**, Tooyama I (2010). BNP is required for embryonic stem cell proliferation. Stem Cells & Regenerative Medicine World Congress, Jan. 20-21, 2010, South San Francisco, CA, USA.
- 45) **Abdelalim EM**, Tooyama I (2009). BNP signaling pathway in embryonic stem cells. 50th meeting of the Japan Society of Histochemistry and Cytochemistry, 2009, Ostu, Japan.
- 46) **Abdelalim EM**, Masuda C, Tooyama I (2008). Expression of natriuretic peptide-activated guanylate cyclases by cholinergic and dopaminergic amacrine cells of the rat retina. The 31st Annual Meeting of the Japan Neuroscience Society, July 9-11, 2008, Tokyo, Japan.
- 47) **Abdelalim EM**, Takada T, Tooyama I, Torii R (2008). In Vitro Expression of Natriuretic Peptides in Cardiomyocytes Differentiated from Monkey Embryonic Stem Cell. Egypt-Japan International Symposium on Science and Technology. 8-10 June 2008, Tokyo, Japan.
- 48) **Abdelalim EM**, Osman AHK, Takada T, Torii R, Tooyama I. (2007). Immunohistochemical mapping of natriuretic peptide receptor-A in the brainstem of *Macaca fascicularis*. 3rd International Symposium on Dopaminergic and Nondopaminergic Mechanisms in Parkinson's disease (INPD), November 23-24, 2007, Osaka, Japan.
- 49) **Abdelalim EM**, Osman AHK, Takada T, Torii R, Tooyama I. (2007). Immunohistochemical mapping of natriuretic peptide receptor-A in the brainstem of *Macaca fascicularis*. Neuro2007, September 10-12, 2007, Yokohama, Japan.
- 50) **Abdelalim EM**, Takada T, Yamashita A, Tooyama I, Torii R (2007). Highly efficient method to induce cardiomyocytes from monkey embryonic stem cells using basic FGF. 6th Congress of Japanese Society of Regenerative Medicine, Yokohama, Japan, March 13-14, 2007.
- 51) **Abdelalim EM**, Takada T, Toyoda F, Omatsu-Kanbe M, Matsuura H, Tooyama I and Torii R (2006). Expression of ANP and BNP in Monkey Embryonic Stem Cell-Derived Cardiomyocytes. The 20th IUBMB International Congress of Biochemistry and Molecular Biology and the 11th FAOBMB Congress, Kyoto, Japan, June 18 -23, 2006.

- 52) **Abdelalim EM**, Takada T, Toyoda F, Omatsu-Kanbe M, Matsuura H, Tooyama I and Torii R (2006). Differentiation of Monkey Embryonic Stem Cells into Functional Cardiomyocytes In Vitro. The 53rd Conference of the Japanese Association for Laboratory Animal Science, May 11-13, 2006, Kobe, Japan.
- 53) **Abdelalim EM**, Takada T, Tooyama I and Torii R (2006). Monkey Embryonic Stem Cell-Derived Cardiomyocytes Express Natriuretic Peptides In Vitro. 5th Congress of Japanese Society of Regenerative Medicine, Okayama, Japan, March 2006.
- 54) **Abdelalim EM**, Takada T, Tooyama I, Torii R (2005). In Vitro Expression of Natriuretic Peptides in Cardiomyocytes Differentiated from Monkey Embryonic Stem Cell. International Symposium on Germ Cells, Epigenetics, Reprogramming and Embryonic Stem Cells, November 15-18, 2005 at Kyoto University, Japan.
- 55) **Abdelalim EM**, Takada T, Torii R, Tooyama I (2005). Molecular Cloning of Brain Natriuretic Peptide from Heart and its Immunohistochemical Localization in Hypothalamus of Monkey. 46th meeting of the Japan Society of Histochemistry and Cytochemistry, October 1-2, 2005, Kyoto, Japan.

PATENTS/ DISCLOSURES

- 1) Use of small molecules to enhance the generation of stem cell-derived pancreatic beta cells (Disclosure #: D2022-0105).
- 2) Cofactors FAD and PLP promote pancreatic progenitors in pancreatic development (Disclosure #: D2022-0041).
- 3) Establishing novel human iPSC lines (QBRIi010A and QBRIi011A) to study diabetes due to mutations in the GLUCOKINASE gene (Disclosure Ref: 2020-062). Disclosure status: approved.
- 4) Generation of induced pluripotent stem cells (iPSCs) with FOXA2 deletion (U.S. provisional patent application was filed on January 28, 2020 and assigned Application No. 62/966,875).
- 5) Generation of induced pluripotent stem cells (iPSCs) with GLUT2 mutation (Application date: January 28, 2020: Status: provisional patent filing; Country of filing: U.S.A.; Application/Professional No. US 62/966,875).
- 6) Generation of a novel population of pancreatic multipotent progenitor cells expressing NKX6.1 (US provisional patent application, 2017-075). Approved.

INVITED TALKS

- 1) A plenary Speaker, 4th Tissue Engineering & Regenerative Medicine Symposium (TERMSYMPO23) 23rd August 2023, Kuala Lumpur, Malaysia.
- 2) Invited speaker, PRECISIONMED EXHIBITION & SUMMIT INTERNATIONAL, Dubai, May 23-24, 2023.
- 3) Invited seminar, Technology Innovation Institute (TII), Abu Dhabi, May 22, 2023.
- 4) Invited speaker, Dubai Stem Cell Congress 2023, February 27-28, 2023.
- 5) Invited seminar, The Sharjah University, UAE, 13 December 2022.
- 6) Invited speaker, Precision Medicine and Functional Genomics organized by Sidra Medicine, 23-26 September 2022, St. Regis, Doha.

- 7) Invited speaker, Qatar Diabetes and Obesity Research Symposium, 27th March 2022.
- 8) Invited speaker, MENA Stem Cells Forum, Dubai, 18 - 19 March 2022.
- 9) Invited seminar, Qatar Diabetes Association (QDA), Diabetes Day, Nov 14, 2021, online seminar.
- 10) Invited seminar, Sidra Research Series, October 19, 2021.
- 11) Invited speaker, IMARS-14, Doha 2021 - Protein glycation in food, health, and disease, 20th – 24th September 2021.
- 12) Invited speaker, MENA Diabetes Medical Congress, (Virtual), April 1-3, 2021.
- 13) Invited speaker, Arab Science Week, online conference, Aug. 15-23, 2020.
- 14) Invited seminar, Qatar Diabetes Association (QDA), Sep 12, 2020, online meeting.
- 15) Invited seminar, Suez Canal Univ, Egypt, July 25, 2020, online meeting.
- 16) Invited seminar, Suez Canal Univ, Egypt, Aug. 15, 2020, online meeting.
- 17) Invited seminar, Suez Canal Univ, Egypt, Aug 29, 2020, online meeting.
- 18) Invited speaker, CUDOS 2019, Jun. 20-26, 2019, Doha, Qatar.
- 19) Invited seminar, Interim Translational Research Institute (iTRI), HMC, Doha, Nov. 19, 2019.
- 20) Invited speaker, 4th Arab Society for Paediatric Endocrinology and Diabetes (ASPED) Conference, Muscat, Oman, December 6-8, 2018.
- 21) Invited speaker, 5th MEMBS Conference, Jordan, October 3-6, 2018.
- 22) Invited seminar, HBKU Life Science Seminar Series, HBKU, Doha, March 14, 2018.
- 23) Invited speaker, The First Symposium on Science & Technology, Community College-Qatar, Doha, March 6, 2018.
- 24) Invited speaker, IBRO-MENA Annual Conference and Neuroscience School, Irbid, Jordan, November 19-24, 2017.
- 25) Invited speaker, Advanced Therapies in Healthcare, Oct. 28-29, 2017, Sidra Medicine, Doha, Qatar.
- 26) Invited speaker, Stem Cell Symposium, Qatar University, Oct 25-26, 2017.
- 27) Invited lecture, Stem Cell Engineering Course, Feb. 26, 2017.
- 28) Invited speaker, 3rd MEMBS Conference, Doha, Nov. 14, 2016.
- 29) Invited speaker, The 3rd Qatar Internal Medicine Conference, Doha, October 6-8, 2016.
- 30) Invited seminar, Interim Translational Research Institute (iTRI), HMC, Doha, May 8, 2016.
- 31) Invited speaker, The 1st Annual Qatar Metabolic Conference, Doha, April 30, 2016.
- 32) Invited seminar, BRC, Qatar University, March 31, 2016.
- 33) Invited seminar, Weill Cornell Medicine-Qatar, Doha, December 5, 2015.
- 34) Invited speaker, Arab Diabetes Medical Congress, Oryx Rotana, Doha, 23-25, April 2015.
- 35) Pluripotent stem cell therapies for diabetes: dream or nightmare? Middle East Stem Cell Symposium, Crown Plaza, Doha, 24-25, March 2015.
- 36) Invited seminar, Qatar University, Doha, March 18, 2015.
- 37) Invited lecture, Qatar University, Doha, December 3, 2014.
- 38) Invited lecture, Virgin Health Bank (VHB), Doha, April 15, 2014.
- 39) Invited seminar, Zewail City, Egypt, May 15, 2013.
- 40) Invited speaker, 3rd international conference "Mansoura University Regenerative Medicine Program (MURMP) from bench to bedside". November 28, 2012.
- 41) Invited speaker, 3rd international conference "Mansoura University Regenerative Medicine Program (MURMP) from bench to bedside". November 27, 2012.
- 42) Invited seminar, Faculty of Medicine, Suez Canal University, Egypt, November 5, 2012.
- 43) Invited seminar, Shiga University of Medical Science, Japan, June 26, 2012.

44) Invited speaker, Center of Biotechnology, Suez Canal University, Egypt, March 19, 2012.

45) Selected oral talk, The 3rd congress of African Association of Veterinary Anatomists, March 17, 2012, Cairo, Egypt.

RESEARCH GRANTS

Table A. External research awards/grants			
Year	Project title	Sponsor/Agency	
As a lead principal investigator (LPI)			
2017-2020	Studying insulin resistance in a Qatari cohort using patient-specific induced pluripotent stem cells	Q NRF (NPRP9-283-3-056)	
2018-2021	hiPSC-based models to investigate the mechanisms underlying insulin resistance in the offspring of type 2 diabetic Qatari parents.	Q NRF (NPRP10-1221-160041)	
As a principal investigator (PI)			
2019-2021	Study and analysis of mechanisms involved in protein-nucleic acid interactions of beta cell development using induced pluripotent stem cells.	Q NRF (NPRP11S-0120-180346)	
2021-2025	Exploring new therapeutic targets in cardiometabolic disease	Q NRF (NPRP13S-0127-200178)	

Table B. Internal research awards/grants			
Year	Project title	Sponsor/Agency	
As a lead principal investigator (LPI)			
2016-2020	Generating patient-specific induced pluripotent stem cells from Type 2 diabetic Qatari cohort and studying the molecular mechanisms underlying their differentiation into pancreatic beta cells.	IGP1 QBRI	
2018-2021	Investigating the Signaling Pathways Underlying the Generation of Pluripotent Stem Cell-Derived Pancreatic Progenitors	IGP2 QBRI	
2021-2024	Using iPSC technology to investigate the role of PTF1A in the development of diabetes	QBRI	

2019-2023	Investigating the role of key transcription factors in human pancreatic beta cell development and maturation using hPSCs	QBRI-HSCI #1 (Project coordinator)	
2020-2023	Metabolic Control of β -Cell Inflammation	QBRI-HSCI #3	
As a co-investigator (Co-PI)			
2019-2023	An integrated omic approach to identify biomarkers for type 2 diabetes-associated complications and comorbidities	IDRP-Diabetes QBRI	
2016-2019	Mechanistic analysis of transcription factor networks involved in pluripotency and β islet cell development.	QBRI	
2021-2025	Mechanisms in pancreatic development and breast cancer stemness mitigated by Sox2	QBRI	