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Education:
1- BSc Biology (Major) with Medical Technology (Minor) (1976)
Biology Department, University of Jordan, Amman, Jordan
2- PhD Biochemistry(1983)
Biochemistry Department, School of Medicine, State University of New York at Buffalo, Buffalo, NY, USA

Academic Appointments:
1- Assistant Professor: 1983-1985
Department of Biological Sciences, College of Science and Technology, Abu Dies, Jerusalem
2- Postdoctoral fellow 1985-1988.
Biochemistry Department, University of Wisconsin, Madison, WI, USA
2- Scientist. 1988-1990
Biochemistry Department, University of Wisconsin, Madison, WI, USA
Madison, WI, USA
4- Senior Scientist: 1990-1996
Biochemistry Department, University of Wisconsin, Madison, WI, USA
5- Associate Professor: 1996-2006
Department of Biochemistry, Faculty of medicine, AlQuds University, Abu Dies, Jerusalem

6- Professor: **2006-Present**
Department of Biochemistry, Faculty of medicine, AlQuds University, Abu Dies, Jerusalem
7- Visiting Professor **2007-2008**
Department of Biocemistry, Faculty of Medicine, Annajah National University, Nablus, West Bank, Palestine
8- Visiting Professor **2014-2015**
Faculty of Allied Medical sciences
Arab American University Jenin (AAUJ)
Jenin, Palestine.
9- Professor. **2015- present.**
Faculty of Allied Medical sciences
Arab American University Jenin (AAUJ**)**
Jenin, Palestine.

Administrative Appointments:

1- Acting Director: **1978-1979**
Medical laboratory, Makased Hospital,
Jerusalem.
2- Chairman, Biochemistry Department: **1999-2002**
Faculty of Medicine, AlQuds
University, Abu Dies, Jerusalem
3- Dean **2002-2005**
Faculty of Health Professions, AlQuds University
4- AQAC Commissioner: **2006-2012**
Ministry of Education and Higher Education
(MOEHE), Ramallah
5- Chairman, Curriculum Development Committee **2003-2007**
Ministry of Education and Higher Education
(MOEHE), Ramallah
6- Chairman, Promotion Committee **2009-2011**
AlQuds University, Abu Dis, Jerusalem
7- President, **Hemophilia Society** **1997-2000**
Ramallah, West Bank, Plaestine
8-Vice President, PSBD. **2007-Present**
Palestinian Society for Blood Diseases,
Ramallah, West Bank, Palestine
9-Executive committee Member **1997-2002**
Thalassemia patients Friends Society,
Ramallah, West Bank, Palestine
10- Vice President **2002-2011**
Thalassemia patients Friends Society,
Ramallah, West Bank, Palestine
11- President, Alsabq Society **2005-2011**
AlSabq Society for Creative Thinking
Ramallah, West Bank, Palestine
12- Science Qualification Committee **2007-present**
Ministry of Education and Higher Education,
Ramallah, West Bank, Palestine
13- Scientific Research Committee **2013-present**

Ministry of Education and Higher Education
Ramallah, West Bank, Palestine
14- Director, Medical Research Center **2010-2015.**
AlQuds University
16- Dean, Faculty of Allied Medical Sciences **2014- 2016.**
Arab American University.
17- Coordinator, MSC program in Molecular Genetics and Genetics Toxicology. **2017-Present**
Arab American University

Teaching Experience:

Over the past 20 years, I was involved in teaching the following courses ;

1- General Biology for medical students
2- Cell Biology for medical students
3- Structural Biochemistry for medical and dental students
4- Metabolic Biochemistry for medical and dental students
5- Endocrinology for medical students
6- Endocrinology for medical laboratory sciences
7- Molecular Biology for medical students
8- Molecular Biology for medical laboratory sciences
9- Medical Genetics for medical students
10- Medical Genetics for medical laboratory sciences
11- Advanced Biochemistry for MSc students
12- Advanced Cell biology for MSc students
13- Gene regulation mechanisms for MSc students
14- Research (thesis) supervision for MSc students
15- Selected topics in Biochemistry for MSc students (Metabolic disorders and Gene Therapy)
16- Biotechnology for senior Pharmacy students
17- Fundamentals of Research Methods
18- Advanced Research Methods for MSC students
19- Undergraduate senior seminar
20- Seminar for MSC students

Research Grants:

1- During my work With the fat soluble research group at the University of Wisconsin, the group was Successful to Obtain the following grant awards:

A- Program Grant Award From The National Institute Of Health, NIH
Grant duration 1990 -1995 Fund Awarded = $ 5Million

B- Renewed Program Grant Award From the National Institute of Health, NIH
Grant duration 1995 -1999 Fund Awarded = $ 4 Million

C- **Annual Research Funding From The Wisconsin Alumni Research Foundation, (WARF).** This Grant was Awarded Annually to the Group Due to the Continued Success in Designing and Generating many Potential Active Analogs of

of Several Human Diseases Vitamin D Which Have High Potential For the Treatment Including Leukemia, Osteosarcoma, Breast Cancer, Osteoporosis and Other Diseases.

2- **Research Grant to Study the Mutations Profile in the Beta Globin Gene Among the Thalassemia Patients in Palestine. Palestine Avenir and the Thalassemia Patients Friends Society**

Grant Period 1998 – 2000 Fund Awarded = $ 10,000.00

3- **Research Grant to Investigate the Melecular Genetics of Colon Cancer between Palestinian and Israeli Patients.** A Comparative Study. This Study is a collaborative Work Between Our Group in AlQuds University and the Group of Dr. Nadir Arber in Ichelov Hospital in Tel Aviv.

Grant Duration 1999 – 2003 Fund Awarded = $ 36,000.00

4- **Research grant to investigate the prevalence of osteoporosis among postmenopausal Palestinian postmenopausal women from the Health Work Committees.**

Grant Duration 2002 – 2004 Fund Awarded = $ 15,000.00

5- **Research grant to do a comparative study of Toxoplasmosis among Bedouin, Semi-Bedouin women and their children in Jericho district awarded by the Islah Society-Jericho (Grant Agreement No.02-156).**

Grant Duration 2004 – 2005 Fund Awarded = $ 6,000.00

6- **Research grant to study genetic marker polymorphism among osteoporotic Palestinian women awarded by AED**.

Grant Duration 2004 – 2006 Fund Awarded = $ 15,000.00

7- **Research grant to extend the molecular epidimeology study of osteoporosis in the southern region of the west bank awarded from WHO**.

Grant duration 2010 – 2012 Fund awarded = $ 20,000.00

8- **Research grant provided from the UN to study the molecular and biochemical complications among Palestinian type II diabetes patients**

Grant duration 2012 – 2013 Fund awarded = $ 15,000.00

9- **International regional project grant including European and middle eastern Countries to study the molecular efficacy of drug treatment among postmenopausal osteoportic women. (a PF7 grant presented to the EU)**

Grant duration 2011 – 2014 Fund requested = $ 4,000,000.00

Grant was approved with no funding provided due to priority score

10- **Research grant on molecular toxicology provided through the SMART II program from the German Republic government**

Grant duration 2011 – 2013 Fund Requested = $250,000

Grant was accepted but no funding was provided due to priority score.

11- **Research grant on the pharmacogenomics of postmenopausal osteoporosis Submitted to QNRF**

Grant duration 2013-2016 Fund Requested= $1.1 million

Grant was accepted but returned to provide initial data before considering the proposal for funding.

12- **Grant on the Molecular Genetics of Postmenpausal Osteoporosis .A grant provided by the European Union and awarded by the ministry of higher education in Palestine.**

Grant Duration 2013-2016 Fund awarded = $70,000

13- **AlQuds University Center for Health and Biomedical Research**

A center of excellence proposal submitted to the Ministry of Higher Education

Fund Duration 2015-2018 Fund requested= $ 892,500.00

Grant was approved but funds were not provided due to shift priority in the MOEHE

14- **Molecular genetics of Autism among Palestinian patients.**
Arab American University 2017-2019 Fund awarded $10,000.00
15- **Molecular typing of bacterial strains isolated from dental plaques.**
Arab American university 2017-2019 Fund awarded $10,000.00
16- **Grant on the molecular genetics of aggressive and early onset breast cancer among Palestinian patients from the National Institute of Health NIH.**
A collaborative study with professor Victoria Seewaldt in the city of Hope university, Hope, California, USA.
Grant duration 2017-2020 Fund awarded $70,000.00/year

Patents.

1- "Vitamin D Compounds With Antiprogesterone Activity"
Inventors: **1-** Hector F. Deluca
2- Kato L. Perlman
3- Hisham M. Darwish
Patent Was Submitted, Accepted and Registered in the US Patent Office on August 16, 1993. Assignment, WARF P92019 US, Deluca/Perlman/Darwish

2- Synthesis Of 19-Nor-3-Desoxy-20-Oxopregnacalciferol and 19-Nor-3-Desoxy-2,20- Dioxopregnacalciferol : Novel Analogs That Bind Progesterone Receptor''
Inventors: **1-** Hector F. Deluca
2- Kato L. Perlman
3- Rafal R. Sicinski
4- Hisham M. Darwish

Patent Was Submitted, Accepted and Registered in the US Patent Office On February 10, 1996. Assignment, Warf P92055 US, Deluca/Perlman/Sicinski/Darwish

Graduate Thesis Supervision.

Over the past 18 years (2000-2018), I was honored to supervise more than thirty five MSc students in different disciplines including biochemistry, molecular biology, public health and Islamic studies on current medical practices. These students obtained their MSc degrees after joining the relevant graduate programs at AlQuds university, Annajah national university and Birzeit university.

Public Lectures and Media Activities.

Since joining AlQuds University, I have delivered a large number of public lectures (>200), TV and radio interviews and newspapers interviews concerning blood diseases, Inherited diseases and various medical issues of public concern across the West Bank. The lectures and other media activities were directed to various medical teams in medical centers, university students in all campuses, social gatherings, public schools and special groups forums including UNRWA, PMA and other groups. These activities focused on raising public awareness of the indicated medical complications, training medical teams on diagnosis and treatment and implement programs to mobilize social support at all levels for the inflicted patients. This work constitutes a major part of my involvement with society through various organizations like Thalassemia Patients Friends Society (TPFS), the Palestinian Society for Bleeding Disorders (PSBD), the Palestinian Organization for Osteoporosis Prevention (POPS)

and others to improve the public understanding of these medical complications and promote plans for eradicating them from society.

Development of new school curriculum.

During the time between 2002-2008, I took active role with the efforts of the ministry of health in the massive project to develop a new Palestinian curriculum for public schools. I joined the teams for the general science curriculum for the lower classes and then became in charge of the team that developed the new biology curriculum for the last two high school years. Over these years our groups managed to produce ten books, six in general science and four in biology for the high school level students. This was an outstanding projects that gathered hundreds of educators from across the west bank and Gaza Strip that resulted in the production of the new curriculum. Plans are underway to organize follow up teams that include the original groups with new members to enrich the efforts for the continuous re-evaluation of the curriculum and provide updates as new knowledge and discoveries are warranted in the various discipline.

Development of new university curriculum for Medical Sciences Programs.

During my appointment at AlQuds university as the chairman of the Biochemistry department, I was engaged in the major development of the faculty of medicine program to adopt the **integration teaching approach leading to development of teaching methodology** for the basic medical sciences based on human system approach which provides students comprehensive understanding of the functional coordination between the various human body systems to maintain homeostasis. In addition, this change allowed the faculty of medicine at AlQuds university to join the international strategy for medical education which already shifted to this approach some years ago in many leading universities and proved to be more efficient and effective. This process took about one year with continuous efforts by all faculty members in the faculty which included review of adopted system in several universities and develop the suitable system design based on the available staff and technical resources. In addition, and during my deanship term in the faculty of health professions at AlQuds university, the curriculum of the various departments in the faculty including nursing, medical technology, medical imaging and physiotherapy was reviewed by a special committee headed by the dean and included selected senior members of the various departments that included review courses content, developing new courses and decrease the graduation requirements without affecting the quality of teaching standards. One major objective in the curriculum development was **to shift the teaching methodology in the faculty to be more student oriented rather than instructor oriented** with more participation of students in the overall process. This process took in consideration the international standards of medical professions curricula and adopt it to the faculty and technical resources available at AlQuds university. One advantage here was the curriculum in the faculty was under review by the previous deans of the faculty which made the process very effective and focused. After leaving AlQuds university and assumed the deanship of the faculty of Allied Medical Sciences at the Arab American University in 2014, one major task was apparent that included the need of major effort to develop the curriculum of the whole faculty at all levels. This process took about two years that engaged all faculty members in the faculty and included addition of many new courses, eliminating others and developing of content of the core courses. In addition, the process included major developments of the existing labs and creating several advanced labs for all

departments that are unique in their structure and capability. Similar to what was started in AlQuds university, **a major objective here was to motivate a shift in the teaching methodology to become more students oriented and less instructor oriented giving significant responsibility for students to be engaged in preparing the lectures material and take active role in class presentation.** One major factor that allowed the significant achievements in this task in the very generous attitude adopted by the university administration to provide all the requested funds and resources to do all the needed upgrading changes. The resources invested here by the university administration was above all expectations from providing new sophisticated building for the faculty with modern teaching facility and provide the needed space to create many new well equipped technical teaching facilities for all departments in the faculty including medical laboratory medicine, medical imaging, health sciences including physiotherapy and occupational therapy, public health and Nursing departments. The plans of the Nursing department development in a separate faculty were started in 2014 and officially established at the start of the 2016/2017 academic year. In addition, a new program was developed during my deanship in the faculty under my direct supervision is the establishment of new distinguished MSC program in molecular genetics and genetic toxicology which started at the start of the 2017/2018 academic year. Part of tis project, a very sophisticated lab facility to serve research activities and service in this program was established by generous support from the university administration that initially included more than $ 1 million at the current stage. Plans all already in place to work to upgrade this program to the PhD level following graduating two groups in the MSC program and recruit the needed faculty members for that purpose which is within reach base on the university strategy to provide all needed sources for teaching excellence in the whole country.

Publications

1- Schmitt, R.C., **Darwish, H.M**., Cheney, J.C. and Ettinger, M.J.
Copper Transport Kinetics By Isolated Rat Hepatocytes
Am.J.Physiol. 244, G183 (1983)

2- **Darwish, H.M**., Schmitt,., Cheney, J.C. and Ettinger, M.J.
Mobilization Of Copper From Plasma Components and the Mechanisms Of Copper Transport By Rat Hepatocytes.
Inorg. Chem. Acta 79, 226 (1983)

3- **Darwish, H.M.,** Hoke, J.E. and Ettinger, M.J.
Kinetics of Copper Transport and Accumulation By Hepatocytes From Copper-Deficient Mice and the Brindled Mouse Model of Menkes Disease
J.Biol.Chem. 258, 13621 (1983)

4- **Darwish, H.M.,** Schmitt, R.C., Cheney, J.C. and Ettinger, M.J.
Copper Efflux Kinetics By Isolated Rat Hepatocytes
Am.J. Physiol. 246, G48 (1984)

5- **Darwish, H.M.,** Cheney, J.C., Schmitt, R.C. and Ettinger, M.J.
Mobilization Of Copper From Plasma Components and the Mechanisms of Hepatic Copper Transport
Am. J. Physiol. 246, G72 (1984)

6- **Darwish, H.M.,** Lonergan, P. A. and Ettinger, M.J.
Distribution of Newly Arrived Copper Among Cytosolic Components Of Hepatocytes From Normal and Cu-Deficient Rats and brindled Mice
In: Trace elements Metabolism In Man and animals; Editor: C.F.Mills, (1984).

7- Murray J. Ettinger, **Hisham M. Darwish** and Robert C. Schmitt
Mechanism of Copper Transport From Plasma To Hepatocytes
Federation Proceeding 45, 2800-2804 (1986)

8- **Hisham M. Darwish,** Johann Krisinger, Molly Strom and Hector F. Deluca (1987)
Molecular Cloning Of the cDNA and Chromosomal Gene For the Vitamin D Dependent Calcium Binding Protein
Proc. Natl. Acad. Sci. USA 85: 6108.

9- Johann Krisinger, **Hisham Darwish,** Noboya Maeda and Hector F. Deluca
Structural and Nucleotide Sequence Of the Rat Intestinal Vitamin D-Dependent Calcium Binding Protein Gene
Proc. Natl. Acad. Sci. USA 85, 8988 (1988)

10- **Darwish, H.M.,** Krisinger, J. and Deluca H.F.
Methylation Of the Vitamin D-Dependent CaBP Gene (Calbindin D9K) Does Not Mediate Tissue Or Vitamin D Regulation
Biochem.Biophys.Res.Comm. 160, 1281 (1989)

11- Hector F. Deluca, Johann Krisinger and **Hisham Darwish**
The Vitamin D System
Kidney International Vol. 38, Suppl. 29 (1990)

12- Hector F. Deluca, James Burmester, **Hisham Darwish** and Johann Krisinger
Molecular Mechanism Of Action Of 1,25(OH)2 Vitamin D3
In: Comprehensive Medicinal Chemistry;(C. Hanch, J.C. Emett, P.D. Kennewell, C.A. Ramsden, P.G. Sammes and J.B.Taylor. Editors). Vol. 3, pp 1129-1143. Pergman Press, Elmsford, N.Y.(1990).

13- **Hisham M. Darwish,** John Krisinger, David Furlow, Connie Smith, Fern Murdoch and Hector F. Deluca (1990)
An Estrogen Responsive Element In the Rat Calbindin Gene Mediates the Transcriptional Regulation Of the Gene In the Uterus
J. Biol. Chem. 266: 551.

14- Johann Krisinger, Molly Strom, **Hisham Darwish,** Kato Perlman, Connie Smith and Hector F. Deluca
Induction Of Calbindin D9K mRNA But Not Calcium Transport In Rat Intestine By 1,25(OH)2-Vitamin D3-24-Homologes
J.Biol.Chem. 266, 1910 (1991)

15- Molly Strom, Johann krisinger, **Hisham Darwish** and Hector F. Deluca
1,25(OH)2 Vitamin D3 and Not Calcium Is the Major Regulator Of Calbindin D9K mRNA Levels In Vivo
Proc. Soc. Exp. Biol. Med. 199, 369 (1992)

16- **Hisham M Darwish** and Hector F. Deluca
Identification Of a 1,25(OH)2 Vitamin D3 Responsive Region In the Rat Calbindin D9K Gene
Proc. Natl. Acad. Sci. USA 89, 603 (1992)

17- Hector F. Deluca, **H. M. Darwish,** T.K. Ross and V.E. Moss
Mechanism Of Action Of 1,25(OH)2 Vitamin D3 On Target Gene Expression.
J. Nut. Sci. Vit. Special Issue. Proceedings Of the First International Congress Of Vitamins and Biofactors in Life Sciences. Kobe-Japan, PP 19-26 (1992)

18- **Hisham M. Darwish,** James K. Burmester, Valerie E. Moss and Hector F. Deluca
Transcriptional Activation Of the 1,25(OH)2 Vitamin D3 Receptor Is Mediate By Phosphorylation

Biochem. Biophys. Acta 1167: 29-36 (1993)

19-**Hisham M. Darwish** and Hector F. Deluca
Vitamin D Regulated Gene Expression. In: Critical Review In Eukaryotic Gene Expression, Editors; Gary S. Stein, Janet L. Stein and Jan B. Lian.
CRC Press Inc. Vol (3), 89-116. (1993)

20-Troy K. Ross, **Hisham M. Darwish,** Valerie E. Moss and Hector F. Deluc
Vitamin D-Influenced Gene Expression Via a Ligand-Independent Receptor DNA Complex Intermediate
Proc. Natl. Acad. Sci. USA 90, 9257-9260 (199

21- Claudia Zierold, **Hisham M. Darwish** and hector F. Deluca
Identification Of A Vitamin D Response Element In the Rat 25-Hydroxyvitamin D 24-Hydroxylase Gene
Proc. Natl. Acad. Sci. USA 91, 900-902 (1994)

22- kato L. Perlman, **Hisham M. Darwish** and Hector F. Deluca
20-Oxo-Pregnacalciferols: Vitamin D Compounds That Bind the Progesterone Receptor
Tetrahedron Letters 35, 2295-2298 (1994)

23- Troy K. Ross, **Hisham M. Darwish** and Hector F. Deluca
"Molecular Biology of Vitamin D Action"
In: Steroids, Gerald Litwak, Editor. Academic Press, Inc. pp 281-310 (1994)

24- Claudia Zierold, **Hisham M. Darwish,** and Hector F. Deluca
Two Vitamin D Response Elements Function In the Rat 1,25-Dihydoxyvitamin D3 24- Hydroxylase Promoter
J. Biol. Chem. 270: 1675-1678. (1995)

25 -Nancy C. Arbour, **Hisham M. Darwish** and Hector F. Deluca
Transcriptional Control Of the Osteocalcin Gene By 1,25 Dihydrroxyvitamin D2 and Its 24 Epimer in Rat Osteosarcoma Cells
Biochem. Biophys. Acta 1263, 147-153 (1995)

26- Hector F. Deluca, Claudia Zierold and **Hisham M. Darwish**
General Principles Of Vitamin D Action and Mechanism-Based Search For Analogs With Specific Actions
In: "Organ-Selective Actions Of Steroid Hormones" . Earnest Schering Research Foundation Workshop Series Berlin, (1995)

27- Kato L. Perlman, Rafal R. Sicinski, **Hisham M. Darwish** and Hector F. Deluca
Synthesis Of Novel 20-Oxopregnacalciferol Analogs and Their Binding To the Progesterone Receptor
Bioorganic and Medicinal Chemistry Letters 5, 2695-2700 (1995)

28-**Hisham M. Darwish** and Hector F.Deluca
Analysis Of the 1,25-Dihdroxyvitamin D3 Receptor Binding to Vitamin D Responsive Elements
Arch. Biochem.Biophys. 334, 223-234 (1996)

29- **Hisham M. Darwish** and Hector F. Deluca
Recent Advances In the Molecular Biology Of Vitamin D Action
In: " The Progress In Nucleic Acid Research and Molecular Biology". Waldo E. Cohen and Kivie Moldave, Editors. Academic Press, Inc. (1996)

30- Christine Jehan, **Hisham M. Darwish,** Steve A. Strugnell, Fredric Jehan, Bridgette Wiefling and Hector F. Deluca
DNA bending Is Induced by Binding of Vitamin D receptor-Retinoid X Receptor Heterodimer to Vitamin D Response Elements.
Journal of Cellular Biochemistry, 74: 220-228 (1999)

31- **Hisham M. Darwish** and Hector F. Deluca
Identification of a Putative Transcription factor That Binds to the Promoter Region of the Human Parathyroid Hormone Gene
Archives of Biochemistry and Biophysics, 365: 123-130 (1999)

32- **H. Darwish,** I.E. Trejo, M. Sughayer, B. Stern, M. Shaked, L. Baron, H. Hibshoosh, Samer Oweineh, Z. Halpren, and N. Arber.
Fighting Colorectal Cancer Through Collaboration: Molecular Epidemeology Differences Among Palestinians, Ashkanazi and Sephardic Jews.
Annals of Oncology, 13, 1497-1501 (2002)

33- **Hisham M. Darwish**, Fadia F. El-Khatib, and Suhail Ayesh
Spectrum of ß-Globin Gene Mutations Among Thalassemia Patients in the West Bank region of Palestine
Hemoglobin, 29 (2): 119-131 (2005)

34- Suhail K. Ayesh, Suhair M. Nassar, Wasif A. Al-Sharif, Bassam Y. Abu-Libdeh and **Hisham M. Darwish**
Genetic Screening of Familial Mediterranean Fever Mutations in the Palestinian Polpulation.
Saudi Medical J. 26 (5): 447-452 (2005**)**

35- Intisser Abd-Alhameed, Elias Saba, and **Hisham Darwish** (2010)
Prevalence and Awareness and of Osteoporosis Among Postmenopausal Palestinian Women.
Archives Of Osteoporosis, 10.1007/s11657-010-0041-9. 5, 111-118.

36- Ayman S. Hussein, Khaled Shelbayeh, and **Hisham Darwish** (2010)
Association Between Factor V Leiden Mutation and Poor Pregnancy Outcomes Among Palestinian Women.
Thrombosis Research, 126(2), e78-e82.

37- Akram T. Kharroubi, **Hisham M. Darwish**, Ahmad I. Abu Al-Halaweh and Umaiyeh M. Khammash [2014]
Evaluation of HbA_{1c} for Diagnosing Type 2 Diabetes and Prediabetes Among Palestinian Arab Population.
PLOS ONE 9(2), 1-6 2014.

38- Akram T. Kharroubi, **Hisham M. Darwish**, Mutaz A. Akkawi, Abdelkareem A. Ashareef , Zaher A. Almasri, Khaldoun A. Bader, and Umaiyeh M. Khammash
Total Antioxidant Status (TAS) Among Type 2 Diabetic Patients in Palestine
Journal of Diabetes Research, 2015, ID 461271,1-7.

39- Akram Kharroubi and **Hisham Darwish.**
Diabetes Mellitus; The epidemic of the century.
World J Diabetes 2015 June 25, 6[6]; 850-867.

40- Riham Smoom, Imad Abushkedem and **Hisham Darwish**
Identification of Two Novel Mutations in the Factor X Gene; A 5' Donor Splce-Site Mutation [IVS+1G>T] and a Missense Mutation [Asp413Asn G>T] in Unrelated Palestinian Factor X Deficient Patients.
Journal of Blood Disorders and Transfusion 2015, 6[4]; 1-5 ISSN;2155-9864 100029.

41- Akram Kharroubi, Elias Saba, Riham Smoom, Khaldonn Bader and **Hisham Darwish**
Serum 25 Hydroxy Vitamin D and other bone turnover markers in Palestinian postmenopausal osteoporosis and normal women
Osteoporosis International, 12:13 (2017).

42- Akram Kharrouibi, Elias Saba, Ibrahim Ghannam and **Hisham Darwish** Evaluation of the validity of osteoporosis and fracture risk assessment tools (IOF One Minute Test, SCORE, and FRAX) in postmenopausal Palestinian women Archives of Osteoporosis, 12:6, 1-7 (2016).

43- Niveen Rimawi, Annie RAMBAUD-COUSSON, and **Hisham Darwish** Aminotrasferase (TAT) Gene Mutations Among Palestinian Tyrosinemia Type II Patients; An extended study
Journal of the Arab American University 4(1), 1-17 (2018)

44- Ibrahim Abbasi, Lamia Halaseh, **Hisham Darwish**, Imad Matouk Strategy for DNA extraction and detection from insect pests in stored home grain. Samples Research.
Alquds Journal for Medical Research 1(1), 24-32 (2021).

45- Nouar Qutob, Zaidoun Salah, Damien Richard, **Hisham**

Darwish, Husam Sallam ,Iss Shtaye, Osama Najja Ruzayqat, Dana

Najjar, François Balloux, Lucy van.Dorp

Genomic epidemiology of the first epidemic wave of SARS-CoV-2

In Palestine.

Microbial Genomics, In Press (2021)

46- Akram T. Kharroubi[1], Ibrahim A. Ghannam[1], **Hisham M. Darwish**[2], Elias H. Saba.[3] FRAX Based Intervention Thresholds for the Management of Post-Menopausal Osteoporosis in Palestine.
PLOS ONEl. In press (2020)

47- Herzallah MM, Khudeish NY, Mughrabi IT, Natsheh JY, **Darwish HM**. A Dopamine Transporter Haplotype Modulates Learning from Positive Feedback in Healthy Subjects and Patients with Major Depressive Disorder. submitted to Neuron (2021).

48- Herzallah MM, Abulrub MA, Khudeish NY, Mughrabi IT, Natsheh JY, **Darwish HM**. Serotonin Transporter Genotypes Modulates the Effects of Dopamine Transporter Genotypes on Learning from Positive and Negative Feedback.
submitted to Proceedings of the National Academy of Sciences. (2021).

49- Herzallah MM, Natsheh AY, Natsheh JY, Mughrabi IT, Moustafa AA, **Darwish HM**. DAT1-COMT Gene Interaction Modulates Learning from Positive Feedback and Depressive Symptoms According to an Inverted U-Shaped Function.
submitted to Biological Psychiatry (2021)

50- Alaa Abahre, Nasrin Sadaqeh, **Hisham Darwish**, Thaer Abdelghani. Molecular Typing of Dental Plaque Bacteria with Reduced Susceptibility to Chlorhexidine and Mltidrug Resistance.
BMC Microbiology. Submitted (2021)

51- Osayed Zuhud, Siba Shanak, Volkhard Helms, Husam Salam, Zaidoun Salah **Hisham Darwish**. Structural and Functional Compatibility of Two Novel Mutations (Asp413Asn) and (Gly420Arg) in the Factor X gene.
Thrombosis Research. Submitted (2021)

Papers in progress from completed work.

52- Riham Smoom and **Hisham Darwish**
Genetic Marker Polymorphisms in the VDR and MTHFR Genes Among
Postmenopausal Palestinian Women
Osteoporosis International, submitted (2020)

53- Riham Smoom, Akram Kharroubi and **Hisham Darwish**
Correlation Between Various Polymorphisms in the TNF and OPG Genes with BMD and Selected Bone turnover Markers in Palestinian Postmenopausal Osteoporosis and Normal Women
Osteoporosois International; in progress (2020).

54- Huda Lahham, Samer Hamidi, and **Hisham Darwish**
Cardiovascular Diseases and Risk Factors Among Diabetic Patients in Palestine; A case Control Study.
Paper in progress for submission of completed work (2020).

55- Herzallah MM, Mughrabi IT, Natsheh JY, **Darwish HM**, Gluck MA.
DAT1-COMT Gene Interaction Modulates Learning from Reward in Healthy Individuals.
Paper in preparation for submission (2020).

56- Mughrabi IT, Natsheh JY, Simon JR, **Darwish HM**, Herzallah MM, Gluck MA.
Dopamine Transporter 3-'UTR VNTR Polymorphism Modulates Learning from Positive and Negative Feedback.
To submitted to Neuropsychologia (2020)

57- Herzallah MM, Mughrabi IT, Natsheh JY**, Darwish HM**, Gluck MA.
Learning from Negative Feedback in Patients with Major Depressive Disorder is Attenuated by SSRI Antidepressants, while Learning from Positive Feedback is Modulated by Dopamine Transporter Genotype.
To be submitted to the Journal of Neuroscience (2020)

Conference Proceedings

1- Schmitt, R.C., **Drawish, H.M.,** Cheney, J.C. and Ettinger, M.J.
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2- **Darwish, H.M.,** Lonergan, P.A. and Ettinger M/J.
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4- L.Lamm, M.A.Kessler, **H. Darwish** and H.F.Deluca
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11- **H.M.Darwish,** K.L. Perlman, C.M.Smith and H.F.Deluca
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12- Claudia Zierold, **Hisham M. Darwish,** Kai-Shun Chen and Hector F. Deluca
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20- **Hisham M. Darwish**, Fadia F. Al-Khatib and Suhail Ayesh
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21- **Hisham M. Darwish**, Fadia F. Al-Khatib and Suhail Ayesh
Spectrum of Molecular Mutations in the β-Globin Gene Among Thalassemia Patients in the West Bank.
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22- Riham Smoom and **Hisham Darwish**
Genetic marker polymorphism in the VDR and MTHFR genes among osteoporotic and normal Palestinian women
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23- **Hisham M. Darwish**, Fadia F. El-Khatib and Suhail Ayesh
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24- Abdul Muhsen Abu Fannouneh and **Hisham Darwish**
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25- Khaled Shelbayeh, Ayman Hussein, and **Hisham Darwish**
Significant correlation between inherited resistance to activated protein C and factor V leiden mutation and poor pregnancy outcome among Palestinian women in the west bank.
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26- Riham Smoom and **Hisham Darwish**
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27- Niveen Rimawi and **Hisham Darwish**
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37- Ibrahim T. Mughrabi, Joman N. Natsheh, Jessica R. Simon, **Hisham M.Drawish**, Mohammad M. Herzallah and Mark A. Gluck.
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North African Neuroscience conference, Morocco, June 2013.

38- **Hisham Darwish**
Estrogen receptor α gene and vitamin K epoxide reductase (VKORC1) gene haplotypes and low BMD in Palestinian postmenopausal women.
Qatar foundation annual research conference Nov. 24-25, 2013.

39- Mohammad M. Hirzallah, Ibrahim T. Mughrabi, Joman Y. Natsheh, **Hisham M. Darwish** and Mark A. Gluck.
Learning from Negative feedback in patients with major depressive disorder is attenuated by SSRI antidepressants, while learning from positive feedback is modulated by dopamine transporter genotype.
Qatar foundation annual research conference Nov. 24-25, 2013.

40- Serum 25 Hydroxy vitami D and bone turnover markers in Palestinian =Pos menopausal osteoporosis and normal women

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41- EVALUATION OF THE VALIDITY OF THE IOF ONE MINUTE OSTEOPOROSIS RISK ASSESSMENT TEST FOR POSTMENOPAUSAL PALESTINIAN WOMEN

Hisham M. Darwish, Akram Kharroubi and Elias Saba

Current Research Interest.

1- **Molecular Genetics of Thalassemia, clotting factors and Homachromatosis.**
2- **Molecular Genetics of Osteoporosis.**
3- **Molecular Genetics of Diabetes type 1.**
4- **Molecular Genetics of Breast Cancer. A new collaborative project with the City of Hope Medical Center, CA, USA.**
5- **Neurogenetics in collaboration with the Neuroscience Science initiative at AlQuds University and Rutgers University, USA.**
6- **Molecular Genetics of Autism.**
7- **Molecular Genetics of Rare Diseases (Hirshsprung Syndrome).**