



CURRICULUM VITAE

Personnel and Contact Information

Osamah Batiha
Associate professor of cell and molecular genetics
Department of biotechnology and genetic engineering
Jordan University of Science and Technology
Mailing address: P.O. Box 3030, Irbid 22110, Jordan
Office #: 7201000 ext. 23466
Cell #: 0799879552
E-mail: oybatiha@just.edu.jo

Education

Ph.D. in Cell and Developmental Genetics. 2008-2013

Department of biological sciences. University of Windsor, Ontario, Canada.

Graduation date: October/2013.

-Dissertation title: Regulation of the Anaphase Promoting Complex/Cyclosome in *Drosophila* female meiosis.

-Advisor: Dr. Andrew Swan

M.Sc. in Applied Biology. 2003-2005

Department of applied biology, Jordan University of Science and Technology. Irbid, Jordan.

-Graduation date: January/2006

-Thesis title: "Genetic basis of infertility in Jordanian adult males"

-Advisor: Dr. Ahmed M. Elbetieha

B.Sc. in Biology. 1998-2002

Department of Biology. Yarmouk University Irbid, Jordan.

Work Experience

Associate professor, January 2021-now

Department of biotechnology and genetic engineering, Jordan University of Science and Technology. Irbid, Jordan

Assistant professor, June 2020-now

Department of biotechnology and genetic engineering, Jordan University of Science and Technology. Irbid, Jordan

Assistant professor. February 2014-June 2020

Department of applied biology, Jordan University of Science and Technology. Irbid, Jordan

Visiting scientist, June/2016-August/2016

Andrew Swan lab, University of Windsor, Canada.

Research assistant. 5/2008-7/2013

Dr. Andrew Swan laboratory, University of Windsor, ON, Canada.

Graduate assistant. 9/2008-1/2013

Department of Biological Sciences. University of Windsor, Ontario, Canada.
Teaching molecular genetics and biotechnology laboratories for second and fourth year students.

Laboratory Specialist. 8/2005- 4/2008

Al Yamama Company for health and environmental projects, Amman, Jordan.
Laboratory specialist in Magnetic Cell Separation (MACS®) of cells and Biomolecules technology.

Part-time lecturer. 2/2006- 6/2006

Department of biotechnology and genetic engineering, Jordan University of Science and Technology, Irbid, Jordan.
Teaching microbial genetics laboratory for third-year students.

Teaching Assistant. 2003-2004

Department of applied biology, Jordan University of Science and Technology, Irbid, Jordan.
Teaching introductory laboratory in biology.

Scholarships, Fellowships, and Awards

- Queen Elizabeth II Ontario Graduate Scholarship in Science and Technology (QEII-GSST). Summer 2012, Fall 2012 & Winter/2013
- Windsor prostate cancer Award. April/2013
- Queen Elizabeth II Ontario Graduate Scholarship in Science and Technology (QEII-GSST). Fall, 2011 & winter, 2012
- University of Windsor doctoral tuition scholarship. 2008 -2012
- Graduate excellence award. Department of Biological Sciences, University of Windsor, April 2012.
- A.R and E.G Ferriss Scholarship. 2012
- Runner up for the best presentation award. Canadian Drosophila Research

Conference. St. Catharines. June 2011. The work presented at the conference was recognized by the Windsor Star daily news, which wrote an article entitled “Infertility research creates buzz” on August 3rd, 2011.

- Runner up for the best presentation award in the “three-minute thesis competition”. The University of Windsor. March/2013.
- Best presentation award, graduate studies scientific day at Jordan University of Science and Technology. May/2005.

Research Interests

Keywords:

Genetics, infertility, cell cycle regulation, meiosis

My laboratory is interested in understanding the cellular and molecular processes leading to infertility. I am using molecular techniques such as PCR, DNA sequencing, in addition to fluorescent in situ hybridization (FISH) to identify factors that affect sperm and oocyte quality. In addition to that, I am using the model system *Drosophila melanogaster* to study the cellular and genetic basis of human diseases.

Funded Research

- Study the association between mutations in the *FMRI* gene and primary ovarian insufficiency among Jordanian infertile females. 20,000 US\$. Deanship of research, JUST, Jordan
- Study the association between mutations in the Androgen Receptor gene and male infertility. 10,000 US\$. Deanship of research, JUST, Jordan
- Genetic study using *Drosophila melanogaster* to analyze the genotoxicity of different heavy metals. 14,000 US\$. Deanship of research, JUST, Jordan
- Gene expression profiling of cell cycle regulators of human oocyte and female infertility. 10,000 US\$. Deanship of research, JUST, Jordan
- Study the association between mutations in the *CDC20* gene and unexplained female infertility. 10,000 US\$. Deanship of research, JUST, Jordan
- Molecular analysis of *CDC20* gene mutations as a maternal risk factor for Down syndrome. 14,000 US\$. Deanship of research, JUST, Jordan
- The association between *DAZL* gene and male infertility in Jordanian population. 10,000 US\$. Deanship of research, JUST, Jordan
- A genetic screen for suppressors and enhancers of cortex gene in *Drosophila melanogaster*. 10,000 US\$. Deanship of research, JUST, Jordan
- Identification of Cell Cycle Substrates for the Anaphase Promoting Complex/Cyclosome in meiosis. 10,000 US\$. Deanship of research, JUST, Jordan
- De novo mutations affecting male infertility. 14,000 US\$. Deanship of research, JUST, Jordan

- Genetic and epigenetic study of the role of Methylentetrahydrofolate reductase (*MTHFR*) gene in males with reduced sperm motility. 10,000 US\$. Deanship of research, JUST, Jordan

Publications

- Al Smadi, M. A., Hammadeh, M. E., **Batiha, O.**, Al Sharu, E., Altalib, M. M., Jahmani, M. Y., Mahdy, A., & Amor, H. (2021). Elevated seminal protein carbonyl concentration is correlated with asthenozoospermia and affects adversely the laboratory intracytoplasmic sperm injection (ICSI) outcomes. *Andrologia*. doi.org/10.1111/and.14232
- **Batiha O**, Burghel G, Alkofahi A, Alsharu E, Smith H, Alobaidi B, Al-Smadi M, Awamlah N, Hussein L, Abdelnour A, Sheth H & Veltman J (2021): Screening by single-molecule molecular inversion probes targeted sequencing panel of candidate genes of infertility in azoospermic infertile Jordanian males, *Human Fertility*, DOI: 10.1080/14647273.2021.1946173
- Alsmadi M, Hammadeh M, Solomayer E, **Batiha O**; Altalib M; Jahmani M; Shboul M; Nusair B; Amour H. Impact of Mitochondrial Genetic Variants in ND1, ND2, ND5 and ND6 Genes on Sperm Motility and Intracytoplasmic Sperm Injection (ICSI) Outcomes. *Reproductive Sciences*. September, 2021, 28 (5), 1540-1555
- Sindiani A, **Batiha O**, Al-zoubi E, Khadrawi S, Alsoukhni G, Alkofahi A, Alahmad N, Shaaban S, Alshdaifat E, and Abu-Halima M. Association of Single-nucleotide Polymorphism in ESR2 and FSHR Genes with Poor Ovarian Response in Jordanian Infertile Women. *Clinical and Experimental Reproductive Medicine*. 2021, 48 (1), 69.
- Al Zoubi M, Bataineh B, Rashed M, Al-Trad B, Aljabali A, Al-Zoubi R, Hamad M, AbuAlArjah M, and **Batiha O**, and Al-Batayneh K. CAG Repeats in the androgen receptor gene is associated with oligozoospermia and teratozoospermia in infertile men in Jordan. *Andrologia*. 2020;00:e13728. Online ahead of print
- Al Zoubi M, Al-Batayneh K, Alsmadi M, Rashed M, Al-Trad B, Al Khateeb W, Aljabali A, Otoum O, Al-Talib M, and **Batiha O**. 4,977-bp human mitochondrial DNA deletion is associated with asthenozoospermic infertility in Jordan. *Andrologia*. 2020;52:e13379.
- **Batiha O**, Al-Deeb T, Al-zoubi E, and Alsharu E. Impact of COVID-19 and other viruses on reproductive health. *Andrologia*. 2020 Aug 13;e13791. doi: 10.1111/and.13791. Online ahead of print
- **Batiha O**, Alahmad NA, Sindiani A, Bodoor K, Shaaban S, and Al-Smadi M. Genetics of female infertility: Molecular study of newborn ovary homeobox gene in poor ovarian responders. *J Hum Reprod Sci* 2019;12:85-91\
- Bodoor K, Abu-Sheikha A, Matalaka I, Alzou'bi H, **Batiha O**, Abu-Awad A, Jalboush SA, Fayyad LM, Qadiri E, Jarun Y, Albatayneh K, Haddad Y. Immunohistochemical analysis of heat shock proteins in triple negative breast cancer: HSP60 expression is a marker of poor prognosis. *Eur. J. Gyn. Onc.* Doi: 10.12892/ejgo4347.2018.
- Bodoor K, Melhem D, Shotar A, Alkhatib A, **Batiha O**, Abu-Sheikha A, Haddad A. Prevalence of cervical human papillomavirus is associated with p16

- expression and irregular menstrual cycles among married Jordanian women. Eur. J. Gyn. Onc. DOI: 10.12892/ejgo4318.2018
- **Batiha O**, Haifawi S, Al-Smadi M, Burghel G, Naber Z, Elbetieha A, Bodoor K, Al Sumadi A, Swaidat S, Jarun Y, and Abdelnour A. Molecular analysis of CAG repeat length of the androgen receptor gene and Y chromosome microdeletions among Jordanian azoospermic infertile males. *Andrologia*. 2018; e12979. <https://doi.org/10.1111/and.12979>
 - Bodoor K, **Batiha O**, Abu-Awad A, Al-Sarihin K, Ziad H, and Jarun Y. Identification of a Novel WFS1 Homozygous Nonsense Mutation in Jordanian Children with Wolfram Syndrome. *Meta gene* 2016 Jul 16;9:219-24
 - Guo Z, **Batiha O**, Bourouh M, Fifield E, Swan A. Role of Securin, Separase and Cohesins in female meiosis, and polar body formation in *Drosophila*. *J Cell Sci*. 2015. doi: 10.1242/jcs.179358
 - **Batiha O** and Swan A. Evidence that the Spindle Assembly Checkpoint does not regulate APC-Fzy activity in *Drosophila* female meiosis. 2011. *Genome /National Research Council Canada* 55(1): 63-67.
 - **Batiha O**, Al-Ghazo MA, Elbetieha A, Jaradat S. Screening for deletions in the AZF region of Y chromosome in infertile Jordanian males. 2012. *Journal of Applied Biological Sciences*. 6 (2): 019-022.
 - **Batiha O** and Bataineh S. (2016). *Genetics* by Chris Kaiser, Gerald Fink, Leona Samson, and Michelle Mischke, MIT OPEN COURSE WARE, CC BY NC SA. http://www.alecso.org/open_book_project/. (*translation*)

Conferences, Workshops and Seminars

Oral presentation

- **Batiha O**. Dual role of APC-Cort in *Drosophila* female meiosis and sex determination. *Frontiers in Stem Cells, Cancer and Reproduction workshop*. The Hashemite University, Zarqa, Jordan, 4-11 November 2018
- **Batiha O**, AL-AKUL H, and Elbetieha A. Comparison of Gene expression of cell cycle regulators between normal and females with egg maturation syndrome using single oocytes. *Middle East Fertility Symposium*. Beirut, Lebanon, November 1-3, 2018.
- **Batiha O**. Seminar in “Mitochondrial World & Three-Parent Baby”. Faculty of medicine, Yarmouk University, November, 2016.
- **Batiha O**, Padmanabhan V, and Swan A. Zygotic expression of the meiosis-specific activator of the Anaphase Promoting Complex, Cort, causes sex transformation. *Canadian Drosophila Research Conference*. St. Catharines, Ontario. June 4-7, 2011.

Poster presentation

- **Batiha O**, Fifield E and Andrew Swan. A surprising role for the Anaphase Promoting Complex in sex determination. *53rd Annual Drosophila Research Conference*. Chicago, IL, March 7- 11, 2012
- **Batiha O**, Petrie A, Swan A. Regulation of the Anaphase Promoting Complex (APC) in *Drosophila* female meiosis". *51st Annual Drosophila Research Conference*. Washington, DC, April 7- 11, 2010

- **Batiha O**, Canavati C, Elbetieha A, Alkhatib R. The Effects of various heavy metals on *Drosophila melanogaster* third Instar Larvae Polytene Chromosomes. The Allied Genetics Conference (TAGC). Orlando, Florida. July 13 - 17, 2016
- **Batiha O**, Canavati C, Elbetieha A, Alkhatib R, Shaban S, Kofahi A. Study the genotoxicity of various heavy metals using *Drosophila* Polytene Chromosomes. The 25th European *Drosophila* research conference. London, UK. September 22-25, 2017

Graduate Students Supervision

- **Saja Haifawi**. Study the association between mutations in the Androgen Receptor gene and male infertility. 2013-2016
- **Elham Abdullah**. The association between DAZL gene and male infertility in Jordanian population. 2013-2016
- **Haya Ziad**. Molecular Characterization of WFS1 in Jordanian families with Wolfram Syndrome. 2013-2015. **(Co-advisor)**
- **Heidar Al-Akul**. Gene expression profiling of cell cycle regulators of human oocyte and female infertility. 2014-2017
- **Nour Alhoda**. Study the association between mutations in the CDC20 gene and unexplained female infertility. 2015-2018
- **Sherin T Shaaban**. A genetic screen for suppressors and enhancers of cortex gene in *Drosophila melanogaster*. 2016-2019
- **Ayesha Alkofahi**. Identification of cell cycle substrates for the anaphase promoting complex/cyclosome in meiosis. 2016-2019
- **Haifa Hammad**. Enhancers/suppressors screen for cortex interactors in the second chromosome of *Drosophila melanogaster*. 2017-2019
- **Manal Isam**. Genetic and epigenetic study of the role of Methyltetrahydrofolate reductase (MTHFR) gene in males with reduced sperm motility. **2018-Now**
- **Sara Hanoti**. Association of G8363A and A3243G Mutations in TK and TL1 Mitochondrial Genes and autism in Jordanian patients. 2019-now **(Co-advisor)**

Undergraduate Project Supervision

- Shireen Sha'ban, 2015
- Ayesha Kofahi, 2015
- Christina Canavati, 2015
- Khadra Omar, 2016
- Sally Abu Laila, 2016
- Ekhlas Rousan, 2016
- Hani Hammad, 2017
- Yazan Hamzeh, 2018
- Ahmad Maswadeh, 2019
- Mays Al Aqrouk, 2019

Taught Courses

Human genetics	Molecular genetics	Developmental biology
Epigenetics	Special topics in advanced human	Cytogenetics
Molecular biology	General biology	

Manuscript Review and Editorial Board

- Reviewer for: the Journal of assisted reproduction and genetics, Andrologia, Analytical Cellular Pathology, Heliyon, Journal of Men's Health, Jordan journal of biological sciences
- Member of the editorial board of the Journal of cellular biology and toxicology

Committees Membership

- Member of the Genetic Society of America, 2010-Now
- A representative of the department of applied biological sciences in the faculty of science and arts council/ JUST. Sep2015-Sep2016
- Member of the committee of student's affairs, faculty of science, JUST, Sep2015-Sep2016
- Member of the seminar committee, department of applied biological sciences, JUST, Sep2016-Now
- Member of the marks review committee, faculty of science, 2016-2017
- Member of the internet committee, department of applied biological sciences, JUST, Sep2017-Now
- Member of the social committee, department of applied biological sciences, JUST, Sep2016-2017
- Member of the committee of accreditation and quality control, department of applied biological sciences which obtained the European ASIIN accreditation in November 2018. JUST, Sep2017-Now
- Member of the Institution review board (IRB) at KAUH/JUST. September 2018-Now.