

Curriculum Vitae

Seba Jamal Najem Shbailat

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Education

Ph.D. in Biology- Evolutionary Developmental Biology (2005- 2010).

McGill University, Montreal, Canada.

Thesis title: "The Potential Roles of Interruption Points during Development and Evolution of the Gene Network Underlying Wing Polyphenism in Ants."

Supervisor: Prof. Ehab Abouheif.

GPA: 3.85/4.

M.Sc. in Biological Sciences- Biochemistry (1997-2000).

University of Jordan, Amman, Jordan.

Thesis title: "Turnover of Egg White Proteins with Special Reference to Lysozyme during Embryogenesis."

Supervisor: Prof. Ibrahim Ibrahimi.

GPA: 3.62/4. Rating: Very good.

B.Sc. in Biological Sciences- Zoology (1994-1997).

United Arab Emirates University, Al-Ain, UAE.

GPA: 3.7. Honor degree.

Professional Experience

30/1/2011-Up to present

Assistant Professor, Department of Biology and Biotechnology, The Hashemite University, Zarqa, Jordan.

5/9/2008-30/4/2009

Teaching Assistant, Department of Biology, McGill University, Montreal, Canada.

16/3/2003-30/12/2004

Research and Teaching Assistant, Department of Biology and Biotechnology, The Hashemite University, Zarqa, Jordan.

23/1/2002-15/3/2003

Teacher of Biology and Science, Al-Weibdeh Secondary School, Amman, Jordan.

23/1/2000-22/1/2002

Teacher of Biology and Science, Bader Secondary School, Amman, Jordan.

28/1/1998-31/12/1998

Teaching Assistant, Department of Biology, The University of Jordan, Amman, Jordan.

Awards and Scholarships

Alma Mater Student Travel Grant, McGill University, Canada, 2009.

Ph.D. Scholarship, The Hashemite University, Jordan, 2005-2007.

Prince Zaid Eben Sultan Prize for Excellence in Academic Achievement, United Arab Emirates University, UAE, 1997.

Research Grants

The Deanship of Scientific Research grant, The Hashemite University, Zarqa, Jordan (2011-2014; 11,400 JD). Turnover of egg white proteins during the development of *Meleagris gallopavo* embryos.

The Deanship of Scientific Research grant, The Hashemite University, Zarqa, Jordan (2015-2019; 51,000 JD). Identification of the digestive enzymes and nutrient transporters that are activated during the development of *Columba livia domestica* embryo.

Research Interests

To investigate the fate of egg proteins during the development of avian embryos.

To understand the evolutionary basis underlying the growth of avian embryos.

Publications

Dajani R., Salah T., **Shbailat S.J.**, Wei Z., Daas M. and Hakonarson H. (2018). Genes associated with cancer, schizophrenia and type 2 diabetes in the Circassian and Chechen populations in Jordan. *Jordan Medical Journal*. 52(1): 59-75.

Shbailat S.J. and Aslan E.O. (2018). Fate of egg proteins during the development of *Columba livia domestica* embryo. *JEZ-B: Molecular and Developmental Evolution*. 330(1): 23–32.

Shbailat S.J. and Abuassaf R.A. (2018). Transfer of egg white proteins and activation of proteases during the development of *Anas platyrhynchos domestica* embryo. *Acta Biologica Hungarica*. 69(1): 72–85.

Dajani R., **Shbailat S.J.**, Arafat A., Sobar S., Bitar H., Tayyem R., Wei Z. and Hakonarson H. (2018). Association of genetic variants with macronutrient intake in Circassian and Chechan populations in relation to diabetes. *Meta Gene*. 16: 199-207.

Falah R.R., Talib W.H. and **Shbailat S.J.** (2017). Combination of metformin and curcumin targets breast cancer in mice by angiogenesis inhibition, immune system modulation and induction of p53 independent apoptosis. *Therapeutic Advances in Medical Oncology*. 9(4): 235-252.

Shbailat S.J., Qanadilo S. and Al-Soubani F.A. (2016). Protease activity in the egg yolk during the development of *Meleagris gallopavo* (Galliformes: Phasianidae) embryos. *Italian Journal of Zoology*. 83(3): 291-297.

Shbailat S.J. and Safi H.M. (2015). Transfer of egg white proteins with reference to lysozyme during the development of *Meleagris gallopavo* (Galliformes: Phasianidae) embryos. *Italian Journal of Zoology*. 82(3): 349-357.

Abderrahman S.M. and **Shbailat S.J.** (2014). Genotoxic and cytotoxic effects of *Artemisia herba-alba* on mammalian cells. *Caryologia: International Journal of Cytology, Cytosystematics, and Cytogenetics*. 67(4): 265-272.

Shbailat S.J. and Abouheif E. (2013). The wing patterning network in the wingless castes of Myrmicine and Formacine ant species is a mix of evolutionary labile and non-labile genes. *JEZ-B: Molecular and Developmental Evolution*. 320(2): 74-83.

* *Cover photo of the Journal*

* *Featured by the Journal, 320(2): Fm i.*

<https://doi.org/10.1002/jez.b.22472>

Shbailat S.J., Khila A. and Abouheif E. (2010). Correlations between spatiotemporal changes in gene expression and apoptosis underlie wing polyphenism in the ant *Pheidole morrisi*. *Evolution & Development*. 12(6): 579-590.

Shbailat S., Al-Hajj H. and Ibrahimi I. (2004). Turnover of lysozyme during the development of chicken embryo. *Dirasat, Medical and Biological Science*. 31(2): 103-115.

Graduate Students Supervision

Ibtisam Omar Aslan (2015-2017). The Fate of Egg White Proteins in the Fertilized Eggs of *Columba livia domestica* (pigeon). M.Sc. degree. Department of Biology and Biotechnology- The Hashemite University.

Razan Ataallah Abuassaf (2016-2017). The Fate of Egg White Proteins in the Fertilized Eggs of *Anas platyrhynchos domesticus* (Pekin Duck). M.Sc. degree. Department of Biology and Biotechnology- The Hashemite University.

Graduate Students Co-supervision

Rabah Rashad Falah Al-Rawi (2014-2015). Targeting Breast Cancer in Mice Using a Combination of Metformin and Curcumin. M.Sc. degree. Department of Clinical Pharmacy and Therapeutics- Applied Science Private University.

Participation in Examining Thesis Committees

Yasmin Mohammed Sharif Abdelrahim (2019). *In vitro* Cytotoxic and *In vivo* Genotoxic Effects of *Anastatica heirochuntica* Extracts. M.Sc. degree. Department of Biology and Biotechnology- The Hashemite University.

Islam Faleh Hilail Al-Khalaf (2019).). *In vitro* Cytotoxic and *In vivo* Genotoxic Effects of *Taraxacum officinale* Extracts. M.Sc. degree. Department of Biology and Biotechnology- The Hashemite University.

Wajeha Sudqi Ali Nimer (2018). Investigating the Association between *FOKI* Polymorphism in Vitamin D Receptor Gene (*VDR*) and Type II Diabetes Mellitus in the Jordanian Population. M.Sc. degree. Department of Biology and Biotechnology- The Hashemite University.

Hamzeh Zaher Mousa Sokr (2018). The Effect of Thermal Manipulation during Embryogenesis on the mRNA Expression of Anti-Oxidative Factors Stress

Response in Two Broiler Strains in Jordan. M.Sc. degree. Department of Applied Biology- Jordan University of Science and Technology.

Nuha Ahmad Tobeh (2017). Genetic Polymorphism of *CYP2C8* in Chechan Population. M.Sc. degree. Department of Biology and Biotechnology- The Hashemite University.

Manal Shafiq Da'as (2017). Trauma Induced Epigenetic Modifications in Syrian Refugees. M.Sc. degree. Department of Biology and Biotechnology- The Hashemite University.

Conference Attendance

The 5th Middle East Molecular Biology Congress and Exhibition. 3-6 Oct 2018. Dead Sea, Jordan.

Poster Presentations

Al-Rawi R.R., Talib W.H. and **Shbailat S.J.** (2015). Targeting Breast Cancer in Mice Using a Combination of Metformin and Curcumin. 2nd Symposium of Recent Trends in Postgraduate Research, Amman, Jordan, p61.

* *First award in the poster session.*

Oral Presentations

Shbailat S.J. and Abouheif E. (2009). Evolution of the Inverse Dpp and Brk Gradients during the Development of Winged and Wingless Castes of Ants. 50th Annual *Drosophila* Research Conference, Chicago, Illinois, USA, p45.

Shbailat S.J., Khila A. and Abouheif E. (2007). The Developmental Genetic Basis of Interrupting Gene Expression in Wingless Castes of Ants: Testing the Major Gene Model. The 46th Annual Meeting of the Canadian Society of Zoologists, Montreal, Quebec, Canada, 38-02 spring Bulletin, p157.

Workshops Attendance

Building the Capacity of Jordanian Researchers: Evaluating Tempus and FP7 Proposals and Reports. Tempus IV Program, Amman, Jordan, April 7th- May 19th, 2012.

Frontiers in Human Pluripotent Stem Cells. The Jordanian Society for Fertility and Genetics, Amman, Jordan, April 22nd, 2011.

Teaching Technology and Assessment in Higher Education. The Hashemite University, Zarqa, Jordan, March 27th- 31st, 2011.

Ecdysone Workshop. 50th Annual *Drosophila* Research Conference, Chicago, Illinois, USA, March 4, 2009.

Seminars

Shbailat S.J. The Potential Roles of Interruption Points during Development and Evolution of the Gene Network Underlying Wing Polyphenism in Ants, Department of Biology and Biotechnology, The Hashemite University, Zarqa, Jordan, 2010.

Shbailat S.J. and Abouheif E. Evolution and Development of the Dpp/Brk Gradients in the Winged and Wingless Castes of Ants. Molecular Work in Progress (MWIPS), Department of biology, McGill University, Montreal, Quebec, Canada, 2009.

Shbailat S.J. and Abouheif E. Does a Major Gene Underlie the Interruption of the Gene Network Underlying Wingless Ant Castes? Ecology, Evolution and Behavior Retreat, Mont saint Hilaire, Quebec, Canada, 2008.

Shbailat S.J. and Abouheif E. The Developmental Genetic Basis of Interrupting Gene Expression in Wingless Castes of Ants: Testing the Major Gene Model. Molecular Work in Progress (MWIPS), Department of biology, McGill University, Montreal, Quebec, Canada, 2007.

Membership

Canadian Society of Zoologists, 2006-2008.

Teaching Experience

The Hashemite University (2011-up to present) - Course instructor for:

- Special Topics (2)- Graduate Course
- Special Topics- Undergraduate Course
- Gene Expression
- Practical Gene Expression
- Evolution
- Developmental Biology
- Applied Developmental Biology
- Seminar
- General Biology (1)

- General Biology (2).

McGill University (2008-2009) - Teaching assistant for:

- Developmental Biology
- Cell and Molecular Biology

The Hashemite University (2003-2004) - Teaching assistant for

- Practical General Biology (1)
- Practical General Biology (2)
- Practical Biochemistry
- Practical Embryology
- Practical Histology and Microtechniques
- Practical Entomology

The University of Jordan (1998-1999) - Teaching Assistant for:

- Practical General Biology (1)
- Practical Biochemistry

Acting as a Journal Reviewer

- Caryologia: International Journal of Cytology, Cytosystematics and Cytogenetics
- Jordan Journal of Biological Sciences
- Pharmaceutical Biology
- International Journal of Phytoremediation

References

Ehab Abouheif, Professor

(Canada Research Chair in Evolutionary Developmental Biology)

McGill University

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Stewart Biological Sciences Building, Room: N3/6

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