

# Lama AlAbdi, PhD

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## Education

**Biochemistry Department, King Saud University (KSU) | Riyadh, Saudi Arabia | B.S. | July, 2009**

**Bioscience, King Abdullah University of Science and Technology (KAUST) | Thuwal, Saudi Arabia | M.S. | December, 2011**

**Department of Biochemistry, Purdue University | West Lafayette, IN, USA | PhD | August, 2019**

- Thesis Title: “Molecular Mechanisms That Govern Stem Cell Differentiation and Their Implications in Cancer” with Dr. Humaira Gowher.

## Appointments

- University Demonstrator, Zoology Department, King Saud University, College of Science (2011 - Current).
- Research Assistant (Developmental Genetics), King Faisal Specialist Hospital and Research Center (2009 - 2010).
- Research Intern (DNA repair & Apoptosis), King Faisal Specialist Hospital and Research Center (2009).

## Skills & Abilities

### PUBLICATIONS

The Acute Myeloid Leukemia variant DNMT3A Arg882His is a DNMT3B-like enzyme

Norvil, Allison; Alabdi, Lama; Liu, Bigang; Forstoffer, Nicole; Michie, Amie; Chen, Taiping; Gowher, Humaira, Nucleic Acids Res, Under Review.

OCT3/4-mediated Inhibition of LSD1 Activity Promotes the Active and Primed State of Pluripotency Enhancers. Lama AlAbdi, Debapriya Saha, Ming He, Mohd Saleem Dar, Sagar M. Utturkar, Putu Ayu Sudyanti, Stephen McCune, Brice, H. Spears, James A. Breedlove, Nadia A. Lanman, Humaira Gowher. Cell Reports, Under Review.

Norvil, A. B., Petell, C. J., Alabdi, L., Wu, L. C., Rossie, S., and Gowher, H. (2018) Dnmt3b Methylates DNA by a Noncooperative Mechanism, and Its Activity Is Unaffected by Manipulations at the Predicted Dinner Interface. *Biochemistry-U.S.* 57, 4312-4324

AlAbdi, L., He, M., Yang, Q. Y., Norvil, A. B., and Gowher, H. (2018) The transcription factor Vezf1 represses the expression of the antiangiogenic factor Cited2 in endothelial cells. *J Biol Chem* 293, 11109-11118

Petell, C. J., Alabdi, L., He, M., San Miguel, P., Rose, R., and Gowher, H. (2016) An epigenetic switch regulates de novo DNA methylation at a subset of pluripotency gene enhancers during embryonic stem cell differentiation. *Nucleic Acids Res* 44, 7605-7617

Abu-Safieh, L., Alrashed, M., Anazi, S., Alkuraya, H., Khan, A. O., Al-Owain, M., Al-Zahrani, J., Al-Abdi, L., Hashem, M., Al-Tarimi, S., Sebai, M. A., Shamia, A., Ray-zack, M. D., Nassan, M., Al-Hassnan, Z. N., Rahbeeni, Z., Waheeb, S., Alkharashi, A., Abboud, E., Al-Hazaa, S. A. F., and Alkuraya, F. S. (2013) Autozygome-guided exome sequencing in retinal dystrophy patients reveals pathogenetic mutations and novel candidate disease genes. *Genome Res* 23, 236-247

Abu-Safieh, L., Al-Anazi, S., Al-Abdi, L., Hashem, M., Alkuraya, H., Alamr, M., Sirelkhatim, M. O., Al-Hassnan, Z., Alkuraya, B., Mohamed, J. Y., Al-Salem, A., Alrashed, M., Faqeih, E., Softah, A., Al-Hashem, A., Wali, S., Rahbeeni, Z., Alsayed, M., Khan, A. O., Al-Gazali, L., Taschner, P. E. M., Al-Hazaa, S., and Alkuraya, F. S. (2012) In search of triallelism in Bardet-Biedl syndrome. *Eur J Hum Genet* 20, 420-427

Khan, A. O., Aldahmesh, M. A., Al-Abdi, L., Mohamed, J. Y., Hashem, M., Al-Ghamdi, I., and Alkuraya, F. S. (2011) Molecular Characterization of Newborn Glaucoma Including a Distinct Aniridic Phenotype. *Ophthalmic Genet* 32, 138-142

Khan, A. O., Al-Abdi, L., Mohamed, J. Y., Aldahmesh, M. A., and Alkuraya, F. S. (2011) Familial juvenile glaucoma with underlying homozygous p.G61E CYP1B1 mutations. *J Aapos* 15, 198-199

Aldahmesh, M. A., Nowilaty, S. R., Alzahrani, F., Al-Ebdi, L., Mohamed, J. Y., Rajab, M., Khan, A. O., and Alkuraya, F. S. (2011) Posterior Microphthalmos as a Genetically Heterogeneous Condition That Can Be Allelic to Nanophthalmos. *Arch Ophthalmol-Chic* 129, 805-807

Abu-Safieh, L., Abboud, E. B., Alkuraya, H., Shamseldin, H., Al-Enzi, S., Al-Abdi, L., Hashem, M., Colak, D., Jarallah, A., Ahmad, H., Bobis, S., Nemer, G., Bitar, F., and Alkuraya, F. S. (2011) Mutation of IGFBP7 Causes Upregulation of BRAF/MEK/ERK Pathway and Familial Retinal Arterial Macroaneurysms. *Am J Hum Genet* 89, 313-319

Al-Dosari, M. S., Almazyad, M., Al-Ebdi, L., Mohamed, J. Y., Al-Dahmash, S., Al-Dhibi, H., Al-Kahtani, E., Al-Turkmani, S., Alkuraya, H., Hall, B. D., and Alkuraya, F. S. (2010) Ocular manifestations of branchio-oculo-facial syndrome: Report of a novel mutation and review of the literature. *Mol Vis* 16, 813-818

## MENTORSHIP

- Undergraduate research mentees: Andjela Djokovic (Summer 2016), Stephen McCune (Fall 2016- Spring 2017), Rmaya Modi (Fall 2017), Brice Hurling-Spears (Summer 2017), James Breedlove (fall 2017-Present), Sophia Tu (Summer 2018) and Nicole Adkins (Spring 2018-Present).
- Graduate students (rotations): Eliana Torres Zelada (Spring 2016), Sristi Chakravotry (Fall 2016), Smriti Hoda (Fall 2017), Debasmita Saha (Fall 2018), Isaiah Mensah (Fall 2018), and Sarah McGrevor (Spring 2019).

## Synergistic Activities

- Purdue University Center for Cancer Research (PCCR) travel award (2018).
- BirdStair Fellowship (2017-Current).
- Recipient of Saudi Arabian Cultural Mission (SACM) fellowship (2013-Current).
- Recipient of Interdisciplinary Life Science-PULSe Excellence Award (2015).
- Co-Chair of the Science in School outreach program (2016-2018).
- Ranked 3rd in College of Science. Granted the Dean's Award (2009).

## Talks and conferences

- FASEB's Biological Methylation: Fundamental Mechanisms in Human Health and Disease, Florence, Italy (June 17-22, 2018). Poster title: **Regulation of pluripotency by DNA methylation in F9 Embryonal carcinoma cells**
- Academic leadership workshop (January 21<sup>st</sup>, 2018).
- Midwest Chromatin & Epigenetics Meeting, Purdue University, West Lafayette, IN (June 10-12, 2018). Talk title: **Regulation of pluripotency by DNA methylation in F9 Embryonal carcinoma cells**
- Interdisciplinary Life Science-PULSe 5min thesis competition (2016 and 2017).

- Biochemical Horizons Symposium. Purdue University, West Lafayette, IN (November 17, 2017). Poster title: **Biological outcomes of the catalytic specialization of DNA methyltransferases**
- American Society for Biochemistry and Molecular Biology- Experimental Biology. Chicago, IL (April 22-26, 2017).
- Midwest Chromatin & Epigenetics Meeting. Van Andel Research Institute, Grand Rapids, MI (June 5-7, 2016). Poster title: **Dominant effect of Lsd1 inhibition on Dnmt3a activity at the pluripotency genes.**

## Courses and Committees

- Assisted in the following laboratory courses as well as proctoring their lecture-based exams (2011-2013):
  - Zoo543
  - Zoo 556
  - Zoo 103
  - Zoo 145
  - Zoo 433
  - Zoo 262
  - Zoo 375
  - Zoo 331
  - Zoo 511
  - Zoo 212
- Served on the following committees (2011-2013):
  - لجنة الجداول الدراسية
  - لجنة خدمة المجتمع
  - لجنة طلبية المواد الكيميائية
  - لجنة النشاط العلمي والثقافي
  - لجنة الاشراف على البوابة الإلكترونية ووحدة الحاسب الآلي
  - لجنة متابعة جاهزية استقبال الفصل الدراسي
- Language and PhD studies in the United States (2013-2019).