

**Name** Jumana AlHaj Abed

**Institution:** Max Planck Institute of Immunobiology and Epigenetics

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**Position:** Group Leader

## **Academic education including academic degrees**

### **Scientific graduation**

2008-2014 Ph.D. in Molecular and Cell Biology

Graduate Student. Rick Jones laboratory, Department of Biology, Southern Methodist University (Dallas, TX, U.S.A).

Thesis Project: De novo establishment of Polycomb-Group protein Repression.

2003-2007 B.Sc. in Genetics and Biotechnology

Jordan University of Science and Technology (JUST) (Amman, Jordan)

2001-2003 The International Baccalaureate Diploma Programme (Chemistry and Biology higher level, English A1, Arabic B, Math Methods, Information Technology, Theory of Knowledge, Extended Essay in Biology) (Amman, Jordan)

1999-2001 Cambridge IGCSE/O Levels (Chemistry, Biology, Physics, Economics, Mathematics, Art and Design, English as a second language, Arabic as a first language) (Amman, Jordan)

## **Employment**

December 2023 Group Leader position. Max Planck Institute of Immunobiology & Epigenetics (Freiburg, Germany).

March 2016- Postdoctoral research fellow. Chao-Ting Wu's laboratory, Department of Genetics, November Harvard Medical School (Boston, MA, U.S.A).

Sept. 2014- Postdoctoral research fellow. Mitzi Kuroda's laboratory, Department of Genetics, March. 2016 Harvard Medical School and Brigham and Women's Hospital (Boston, MA, U.S.A).

2007-2008 Instructor of Chemistry Cambridge IGCSE/O Levels and pre-IGCSE/O Levels biology (Amman, Jordan)

## **Other activities, awards and honours**

2013 Chaney Foundation Research Fellowship Award

2008-2010 Fulbright Scholarship

## **Other Activities (Supervision and Teaching experience)**

January 2020 Genome Organization: Visualizing 3D Genome Architecture in Single Cells 1-day-Bootcamp for Harvard Genetics graduate students, Harvard Medical School (Boston, MA, U.S.A)

October 2019 Chromosome walking using Sequential Imaging and Single-Molecule Localization Microscopy 1-week workshop (Vutara microscope Bruker Nano technology), Harvard Medical School (Boston, MA, U.S.A)

Fall 2013 Teaching Assistant, Genetics, Southern Methodist University (Dallas, TX, U.S.A)

2011-2014 Summer training and mentoring undergraduates, basic cloning protocols, embryo immunostaining, ChIP protocol optimization, fly genetics, and project management. Southern Methodist University (Dallas, TX, U.S.A).

Mentoring the following students resulted in authorships or acknowledgements on one publication in G3 journal: LauraLee Madigan, Erica Onwuegbuchu, Alex Frolov, Chase Crowell, Connie Cheng, Basilia Oseguero, Alexandria McIlveene McDonald

2007-2008 Chemistry Cambridge IGSCSE/O Levels and pre-IGCSE/O Levels biology (Amman, Jordan)

### Ten most important publications

- **MioS, an integrated imaging and computational strategy to model gene folding with nucleosome resolution**, Neguembor, M. V.\*, Pablo, J., Diana, B., Lema, R., Walther, J., Garate, X., Martin, L., Romero, P., AlHaj Abed, J., Gut, M., Blanc, J., Lakadamyali, M., Wu, C.t, Heath, I. B., Orozco, M., Dans, P. D., and Cosma, M. P., *Nat Struct Mol Biol.* (in press), 2022.
- **Transcription-mediated supercoiling regulates genome folding and loop formation**, Neguembor, M. V.\*, Martin, L., Castells-García, A., Gómez-García, P. A., Vicario, C., AlHaj Abed, J., Granados, A., Sebastian-Perez, R., Sottile, F., Solon, J., Wu, C.t, Lakadamyali, M., and Cosma, M., P., *Mol. Cell.* 81(15):3065-3081.e12, 2021.
- **The genome-wide, multi-layered architecture of chromosome pairing in early Drosophila embryos**, Erceg, J., AlHaj Abed, J., Goloborodko, A.\*, Lajoie, B. R., Fudenberg, G., Abdennur, N., Imakaev, M., McCole, R. B., Nguyen, S. C., Saylor, W., Joyce, E. F., Senaratne, N. T., Hannan, M. A., Nir, G., Dekker, J., Mirny, L. A., Wu, C. T., *Nat Commun.* 10(1):4486, 2019.
- **Highly Structured Homolog Pairing Reflects Functional Organization of the Drosophila Genome**, AlHaj Abed, J., Erceg, J., Goloborodko, A.\*, Nguyen, S. C., McCole, R. B., Saylor, W., Fudenberg, G., Lajoie, B. R., Dekker, J., Mirny, L. A., Wu, C. T., *Nat Commun.* 10(1):4485, 2019.
- **Walking along chromosomes with super-resolution imaging, contact maps, and integrative modeling**, Nir, G., Farabella, I., Estrada, C. P., Ebeling, C. G., Beliveau, B. J., Sasaki, H. M., Lee, S. H., Nguyen, S. C., McCole, R. B., Chatteraj, S., Erceg, J., AlHaj Abed, J., Martins, N. M. C., Nguyen, H. Q., Hannan, M., Russell, S., Durand, N., Rao, S. S. P., Kishi, J. Y., Soler-Vila, P., Di Pierro, M., Onuchic, J. N., Callahan, S., Schreiner, J., Jeff Stuckey, J., Yin, P., Lieberman, E., *PLoS Genet.* 14(12), 2018.
- **De novo recruitment of Polycomb-group proteins in Drosophila embryos**, AlHaj Abed, J.\*, Ghotbi-Ravandi, E., Ye, P., Frolov, A., Benes, J., Jones, R. S., *Development* 145: dev165027, 2018.
- **Mapping Polycomb Response Elements at the Drosophila melanogaster giant locus**, AlHaj Abed, J.\*, C. L. Cheng, C. R. Crowell, L. L. Madigan, E. Onwuegbuchu, S. Desai, J. Benes, R. S. Jones, *G3.* 3(12):2297-2304, 2013.
- **H3K36me3 key to Polycomb-mediated gene silencing in lineage specification**, AlHaj Abed, J. and R.S. Jones, *Nat Struct Mol Biol.* 19(12):1214-5, 2012.