Djamel Nehar-Belaid

Curriculum Vitae

The Jackson Laboratory for Genomic Medicine
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EDUCATION

2014	Systems Immunology	Ph.D.	Sorbonne University, Paris, France. *Dissertation:* "Systems biology approach to the study of tumor and uterine microenvironments" *Thesis advisor:* Pr. David Klatzmann
2010	Immunology	M.Sc.	Sorbonne University, Paris, France.
2009	Molecular & Cellular Biology	B.Sc.	Sorbonne University, Paris, France.

RESEARCH EXPERIENCE

09/2020 - present	**Associate Research Scientist**. The Jackson Laboratory for Genomic Medicine, CT, USA. *Mentor: Pr. Jacques Banchereau*
09/2016 - 09/2020	**Postdoctoral Associate.** The Jackson Laboratory for Genomic Medicine, CT, USA. *Mentor: Pr. Jacques Banchereau*
10/2015 - 09/2016	**Postdoctoral Fellow**. French national center for scientific research (CNRS), Paris, France. *Mentor: Pr. David Klatzmann*

HONORS AND DISTINCTIONS

Three years full scholarship for Ph.D. studies. French National Center for Scientific Research

TEACHING EXPERIENCE

Courses:

Spring 2015: Analysis and visualization methods for transcriptomic microarray data. University of Patras, Greece.

M.Sc. committee:

2012-2016: Candidate selection. Sorbonne University, Paris. France

MENTORING EXPERIENCE

1. *Isabelle chen*, intern, Northwestern University. October 2018 - present
2. *Rushil Yerrabelli*, intern, Conard High School, West Hartford, CT. Sept 2019 - present
3. *Summit Singhaviranon*, MD-Ph.D rotation, UConn health, Sept 2020 - Dec 2020
4. *Omar Mustapha Omar*, MD-Ph.D summer intern, UConn health, Jun 2018 - Aug 2019
5. *Dong JinHong*, MD-Ph.D rotation, UConn health, Jun 2018 - Aug 2019
6. *James Seuch*, Summer Student Program, The Jackson laboratory, summer 2018

ORAL PRESENTATIONS (in chronological order)

1- Invited seminars

1. "2nd Meeting on Stochasticity and Control in Adaptive Immune Repertoires", Paris. France. October 2018
2. "Graphical visualization methods of microarray data", university of Patras, Greece, Spring 2015

2- Formal seminars

1. "Human immune system heterogeneity across the lifespan at the single cell resolution", FOCIS meeting. Oct. 2020**. Selected abstract oral presentation in thematic session & FOCIS Research Award 2020**
2. "Single immune cells from newborns to grandparents", Systems Immunology in Aging and Complex Diseases. Sept. 2020. **Selected from Attendee Abstract.**
3. "Different cell types contribute to unique components of the interferon signature in SLE PBMCs", FOCIS meeting, Boston, MA, USA. June 2019. **Selected abstract oral presentation in thematic session.**
4. "Signature discovery: a bridge between tumoral and materno-foetal tolerances", Workshops: Translational Data Analysis, Hospital Pitié-Salpêtrière Paris, France. 2016
5. "Tregs orchestrate similar immune evasion of fetuses and tumors", European Congress of Reproductive Immunology, Oxford, UK. 2015
6. "Transcriptomics reveal an early immunological storm induced by tumor cells", colloque Cancer-Vaccination. Nantes, France. 2014
7. "Using systems immunology to the study of tumor microenvironment", French Society of Immunology, Paris, France. 2014

POSTERS (in chronological order)

1. "A single cell approach to map cellular subsets involved in SLE heterogeneity", FOCIS meeting, Boston, MA, USA. June 2019
2. "Different cell types contribute to unique components of the interferon signature in SLE PBMCs", FOCIS meeting, San Francisco, CA, USA. June 2018
3. "All leukocytes contribute to unique components of the SLE blood signature", 27th Annual Short Course on Experimental Models of Human Cancer, Bar Harbor, ME, USA. August 2018.
4. "Transcriptomics reveal an early immunological storm induced by tumor cells", French Society of Immunology, Paris, France. 2015
5. "Using systems immunology to the study of tumor microenvironment", French Society of Immunology, Paris, France. 2014

PEER REVIEWED PUBLICATIONS (in chronological order)

1. Thibodeau A, Eroglu A, McGinnis CS, Lawlor N, **Nehar-Belaid D**, Kursawe R, Marches R, Conrad DN, Kuchel GA, Gartner ZJ, Banchereau J, Stitzel ML, Cicek AE, Ucar D. *AMULET: a novel read count-based method for effective multiplet detection from single nucleus ATAC-seq data*. Genome Biol. **2021** Sep 1;22(1):252. doi: 10.1186/s13059-021-02469-x. PMID: 34465366
2. Lawlor N, **Nehar-Belaid D**, Grassmann JDS, Stoeckius M, Smibert P, Stitzel ML, Pascual V, Banchereau J, Williams A, Ucar D. *Single Cell Analysis of Blood Mononuclear Cells Stimulated Through Either LPS or Anti-CD3 and Anti-CD28*. **2021** Mar 17; Front. Immunol. 12:636720. doi: 10.3389/fimmu.2021.636720. PMID: 33815388
3. **Nehar-Belaid D**, Hong S, Marches R, Chen G, Bolisetty M, Baisch J, Walters L, Punaro M, Rossi R, Chung C-H, Huynh R, Singh P, Flynn W.F, Tabanor J-A, Kuchipudi N, Mejias A, Collet M, Lucido A-L, Palucka K, Robson P, Lakshminarayanan S, Ramilo O, Wright T, Pascual V and Banchereau J. *Mapping SLE heterogeneity at the single cell leve*l. Nature Immunology. **2020** Aug 3. doi: 10.1038/s41590-020-0743-0. PMID: 32747814
4. Pereira BI*, De Maeyer RPH*, Covre LP*, **Nehar-Belaid D***, Lanna A, Ward S, Marches R, Chambers ES, Gomes DCO, Riddell NE, Maini MK, Teixeira VH, Janes SM, Gilroy DW, Larbi A, Mabbott NA, Ucar D, Kuchel GA, Henson SM, Strid J, Lee JH, Banchereau J, Akbar AN. *Sestrins Induce Natural Killer Function In Senescent-like CD8^{+} T Cells*. Nature Immunology. **2020** Mar 30. doi: 10.1038/s41590-020-0643-3. (* co-first authors). PMID: 32231301
5. Márquez EJ, Chung C-H, Marches R, Rossi RJ, **Nehar-Belaid D**, Mellert DJ, Kuchel GA, Banchereau J, Ucar D. *Sexual-dimorphism in human immune system aging*. Nature Communications. **2020** Feb 6;11(1):751. doi: 10.1038/s41467-020-14396-9. PMID: 32029736
6. Hong S, Banchereau R, Maslow BL, Guerra MM, Cardenas J, Baisch J, Branch DW, Porter TF, Sawitzke A, Laskin CA, Buyon JP, Merrill J, Sammaritano LR, Petri M, Gatewood E, Cepika AM, Ohouo M, Obermoser G, Anguiano E, Kim TW, Nulsen J, **Nehar-Belaid D**, Blankenship D, Turner J, Banchereau J, Salmon JE, Pascual V. *Longitudinal profiling of human blood transcriptome in healthy and lupus pregnancy*. The Journal of Experimental Medicine. **2019** May 6;216(5):1154-1169. doi: 10.1084/jem.20190185. PMID: 30962246
7. Pitoiset F, Vazquez T, **Nehar-Belaid D,** Levacher B, Vigneron J, Torrieri-Dramard L, Klatzmann D and Bellier B*. Retrovirus-based Virus-Like Particle Immunogenicity and its Modulation by Toll-Like Receptor Activation*. Journal of Virology. **2017** Oct 13;91(21). pii: e01230-17. doi: 10.1128/JVI.01230-17. PMID: 28794025
8. Nordor AV, **Nehar-Belaid D**, Richon S, Klatzmann D, Bellet D, Fournier T, Dangles-Marie V and Aryee MJ. *The early pregnancy placenta foreshadows DNA methylation alterations of solid tumors*. Epigenetics. **2017** Sep;12(9):793-803. doi: 10.1080/15592294.2017.1342912. PMID: 28678605
9. Courau T, **Nehar-Belaid D**, Florez LM, Levacher B, Vazquez T, Brimaud F, Bellier B and Klatzmann D. *TGFβ and VEGF cooperatively control the immunotolerant tumor environment and the efficacy of cancer immunotherapies*. The Journal of Clinical Investigation Insights. **2016**;1(9):e85974. doi:10.1172/jci.insight.85974. PMID: 27699271
10. **Nehar-Belaid D,** Courau T, Dérian N, Florez ML, Ruocco MG and Klatzmann D. *Regulatory T cells similarly orchestrate tolerance to fetuses and tumors*. The Journal of Immunology. January 15, **2016**, 196 (2) 678- 690; doi:10.4049/jimmunol.1501834. PMID: 26643476

SUBMITTED / IN REVISION/ IN PREPARATION ARTICLES

1. **Nehar-Belaid D**, Chen G, Yerrabelli R, Hong S, Marches R, Rossi R, Mejias A, Ucar D, Pascual V, Ramilo O Kuchel G and Banchereau J. *Mapping the immune perturbations associated with SARS-Cov-2 infection during the first weeks of life*. In preparation
2. **Nehar-Belaid D,** Chen G, Yerrabelli R, Hong S, Marches R, Rossi R, Mejias A, Ucar D, Pascual V, Ramilo O Kuchel G and Banchereau J. *Human immune system heterogeneity across the lifespan at the single cell resolution*. In preparation

REFERENCES

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