



Short Curriculum Vitae: Petros Kolovos

Current Position: Assistant Professor of Molecular Biology - Systems Biology, Department of Molecular Biology and Genetics, Democritus University of Thrace, Alexandroupolis, Greece.

Undergraduate Education: Bachelor in Biology, Aristotle University of Thessaloniki, Greece

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- Post-graduate Education:**
- Master by Research in Reproductive Biology, University of Edinburgh, Scotland, UK
 - PhD in Molecular Biology and Computational Biology, Department of Cell Biology, Erasmus MC, Rotterdam, The Netherlands
 - Postdoctoral researcher. Department of Cell Biology, Erasmus MC, Rotterdam, The Netherlands
 - Postdoctoral researcher. BRIC Institute, Copenhagen, Denmark

Areas of Interest

The bimodal role and dynamics of transcription factors in complex processes of development/differentiation as well as their role in the spatiotemporal organization of chromatin architecture in various biological systems. The holistic approaches can redefine the way we approach the dynamic interactions between the compounds of the nucleus, between a cell and its environment and can lead to the development of the knowledge forming biological networks and regulating the properties of biological systems. Developing methodologies to analyze the microbiome and bacteria genome, in order to *in silico* taxonomically and phylogenetically classify them, predicting their potential probiotic, health or other properties.

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- Prizes**
- Marie Curie Individual Post-Doctoral Fellowship
 - Rubicon NWO Post-Doctoral Fellowship
 - Application of eDNA technology to monitor fish stocks and genetic resources of the aquatic environment of the Thracian Sea as a tool for sustainable management-ECOeDNA. Green Fund. PI – Scientific Coordinator
 - Valorization of Drama wine identity through a holistic characterization of the natural and microbial environment – Drama Terroir. GSRT. co-PI
 - Molecular identification and utilization of indigenous people of hop varieties for the production of high quality beers with name production – PUZL. GSRT. co-PI
 - AGRO4+ - Holistic approach to Agriculture 4.0 for new farmers. GSRT. co-PI, Deputy scientific coordinator
 - FOODBIOMES - Infrastructure of Microbiome Applications in Food Systems Funding. GSRT. co-PI
 - Pavlidis_Terroir - Exploitation of the microbiol terroir of the "Pavlidis Winery" for the promotion of the distinct quality characteristics of the local wines.
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Eastern Macedonia & Thrace Operational Program 2014-2020. co-PI.

- Tegopoulos, K., Tsirka, T., Stekas, C., Gerasimidi, E., Skavdis, G., **Kolovos, P.#**, Grigoriou, M.E.#. (2024) Spatiotemporal Dynamics of Assyrtiko Grape Microbiota. **Microorganisms**, 12(3):577. (#Corresponding authors)
- Foutadakis, S., Roupakia, E., Liakopoulos, P., **Kolovos, P.#**, & Kolettas, E#. (2022). An Expanded Interplay Network between NF-κB p65 (RelA) and E2F1 Transcription Factors: Roles in Physiology and Pathology. **Cancers**, 14(20), 5047. (#Corresponding authors)
- Tegopoulos K. ,....., Galanis A.# and **Kolovos P.#** Genomic and Phylogenetic Analysis of Lactiplantibacillus plantarum L125, and Evaluation of Its Anti-Proliferative and Cytotoxic Activity in Cancer Cells. (2021) **Biomedicines** 9, 1718. (#Corresponding authors)
- Stergiou OS. ,....., **Kolovos P.#** and Galanis A.# (Whole-Genome Sequencing, Phylogenetic and Genomic Analysis of Lactiplantibacillus pentosus L33, a Potential Probiotic Strain Isolated From Fermented Sausages. (2021) **Front. Microbiol.** 12:746659. (#Corresponding authors)
- Boltsis I., ,....., **Kolovos P.#** Chromatin Conformation in Development and Disease. (2021). **Front Cell Dev Biol** 9: 723859. (#Corresponding authors)
- Giraud G.*, **Kolovos P.***, Boltsis I.*, et al. Interplay between FLI-1 and the LDB1 complex in murine erythroleukemia cells and during megakaryopoiesis. (2021). **iScience** 24, 102210. (*Equal contribution)
- **Kolovos P.***, Nishimura K.*, Sankar, A.*, et al. (PR-DUB maintains expression of critical genes through FOXK1/2- and ASXL1/2/3-dependent recruitment to chromatin and H2AK119ub1 deubiquitination. 2020). **Genome Res** 30, 1119-1130. (*Equal contribution)
- Birkhoff J.C., et al. Targeted Chromatin Conformation (T2C) analysis identifies novel distal neural enhancers of ZEB2 in pluripotent stem cell differentiation. (2020). **Hum Mol Genet** 29, 2535-2550.
- Laugsch M et al. Modeling the Pathological Long-Range Regulatory Effects of Human Structural Variation with Patient-Specific hiPSCs. (2019) **Cell Stem Cell**. May 2.
- **Kolovos P*** et al. Investigation of the spatial structure and interactions of the genome at sub-kilobase-pair resolution using T2C. (2018) **Nature Protocols**. Mar;13 (#Corresponding authors)
- Cruz-Molina S et al. PRC2 facilitates the regulatory topology required for poised enhancer function during pluripotent stem cell differentiation. (2017) **Cell Stem Cell**. Feb 28.
- Zuin J et al. Role of the lncRNA NIPBL-AS1 and identification of a distal enhancer element. (2017) **PLoS Genet**. Dec 20
- **Kolovos P*** et al. Binding of nuclear factor kappa-B to non-canonical consensus sites reveals its multimodal role during the early inflammatory response. (2016) **Genome Research**. Nov; 26 (11) (*Corresponding authors)
- Tresini M et al. The core spliceosome as target and effector of non-canonical ATM signalling. (2015) **Nature**. Jul 2;523(7558).
- Zuin J et al. Cohesin and CTCF differentially affect chromatin architecture and gene expression in human cells. (2014) **PNAS**. Jan 21;111(3).

**Representative
publications**

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- **Kolovos P** *et al.* Targeted Chromatin Capture (T2C): a novel high resolution high throughput method to detect genomic interactions and regulatory elements. (2014) **Epigenetics Chromatin**. Jun 16;7:10.
 - Diermeier S*, **Kolovos P***, *et al.* TNFalpha signalling primes chromatin for NF-kappaB binding and induces rapid and widespread nucleosome repositioning. (2014) **Genome Biology**. Dec 3;15(12). (*Equal contribution)
 - Stadhouders R*, **Kolovos P***, Brouwer R*, *et al.* Multiplexed chromosome conformation capture sequencing for rapid genome-scale high-resolution detection of long-range chromatin interactions. (2013) **Nature Protocols**. Mar;8(3). (*Equal contribution)
 - **Kolovos P**, *et al* Enhancers and silencers: an integrated and simple model for their function. (2012) **Epigenetics Chromatin**. Jan 9;5(1):1.
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