

## CV

### Ioannidis Konstantinos

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### Current position

BSRC “Alexander Fleming”, Greece  
**Post-doctoral researcher** (2023 – )

Institute for BioInnovation (IBI)  
M. Tsoumakidou

### Research experience

Hebrew University of Jerusalem (HUJI), Israel

**Research associate/senior lecturer** (2021 – 2022)

**Post-doctoral research fellow** (2017 – 2021)

- Organ-on-chip development and applications with focus on liver and kidney micro-tissues. Organoid cultures in static and in flow/perfusion.
- *In vitro* interrogation of hepatic steatosis/fatty liver disease genetics through genome-wide CRISPR.

The Rachel and Selim Benin School of  
Computer Science and Engineering

Y. Nahmias

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NCSR Demokritos, Greece

**PhD student** (2008 – 2016)

- Genetic engineering of the BmNPV baculovirus. Assessment of a knock-out phenotype designed for protein expression.

Institute of Biosciences and Applications

K. Iatrou

Hellenic Pasteur Institute, Greece

**MSc student** (2003 – 2005)

- Study of BM88 conditional over-expression in the developing fetal murine brain.

R. Matsa

### Education

University of Athens (UOA), Greece

**PhD in Molecular Biology/Virology** (2016)

*“Lepidopteran Nuclear Polyhedrosis Viruses (NPV): molecular characterization and applications in biotechnology”*

Faculty of Biology

summa cum laude

University of Athens (UOA), Greece

**MSc in “Applications of Biology in Medicine”** (2005)

*“Study of the role of the BM88 protein, during cell cycle exit and neuronal differentiation, in Central Nervous System development”*

Faculty of Biology/School of medicine

8.9/10

University of Athens (UOA), Greece

**BSc degree** (4year) (2002)

Faculty of nursing

8.79/10

### Publications

Ghosheh M, Ehrlich A, **Ioannidis K**, Ayyash M, Goldfracht I, Cohen M, Fischer A, Mintz Y, Gepstein L, Nahmias Y. Electro-metabolic coupling in multi-chambered vascularized human cardiac organoids. *Nat Biomed Eng.* 2023 Aug 7. doi: 10.1038/s41551-023-01071-9.

Ehrlich A, **Ioannidis K**, Nasar M, Abu Alkian I, Daskal Y, Atari N, Kliker L, Rainy N, Hofree M, Shafran Tikva S, Houry I, Cicero A, Pavanello C, Sirtori CR, Cohen JB, Chirinos JA, Deutsch L, Cohen M, Gottlieb A, Bar-Chaim A, Shibolet O, Mandelboim M, Maayan SL, Nahmias Y. **Efficacy and safety of metabolic interventions for the treatment of severe COVID-19: in vitro, observational, and non-randomized open-label interventional study.** *Elife*. 2023 Jan 27;12:e79946. doi: 10.7554/eLife.79946. PMID: 36705566; PMCID: PMC9937660.

**Ioannidis K**, Cohen A, Ghosheh M, Ehrlich A, Fischer A, Cohen M, Nahmias Y. **Aminoglycoside-induced lipotoxicity and its reversal in kidney on chip.** *Lab Chip* (2022), DOI: 10.1039/d2lc00825d.

Karmi O, Marjault HB, Bai F, Roy S, Sohn YS, Darash Yahana M, Morcos F, **Ioannidis K**, Nahmias Y, Jennings PA, Mittler R, Onuchic JN, Nechushtai R. **A VDAC1-mediated NEET protein chain transfers [2Fe-2S] clusters between the mitochondria and the cytosol and impacts mitochondrial dynamics.** *Proc Natl Acad Sci U S A*. 2022 Feb 15;119(7):e2121491119. doi: 10.1073/pnas.2121491119. PMID: 35135884; PMCID: PMC8851467.

Rauti R, Shahoha M, Leichtmann-Bardoogo Y, Nasser R, Paz E, Tamir R, Miller V, Babich T, Shaked K, Ehrlich A, **Ioannidis K**, Nahmias Y, Sharan R, Ashery U, Maoz BM. **Effect of SARS-CoV-2 proteins on vascular permeability.** *Elife*. 2021 Oct;10 e69314. doi:10.7554/elife.69314. PMID: 34694226; PMCID: PMC8545399.

Karmi O, Sohn YS, Marjault HB, Israeli T, Leibowitz G, **Ioannidis K**, Nahmias Y, Mittler R, Cabantchik IZ, Nechushtai R. (2021) **A Combined Drug Treatment That Reduces Mitochondrial Iron and Reactive Oxygen Levels Recovers Insulin Secretion in NAF-1-Deficient Pancreatic Cells.** *Antioxidants (Basel)*. Jul 21;10(8):1160.

Cohen A, **Ioannidis K**, Ehrlich A, Regenbaum S, Cohen M, Ayyash M, Tikva SS, Nahmias Y (2021). **Mechanism and reversal of drug-induced nephrotoxicity on a chip.** *Science Translational Medicine* **13**(582): eabd6299

Ehrlich A, Tsytkin-Kirschenzweig S, **Ioannidis K**, Ayyash M, Riu A, Note R, Ouedraogo G, Vanfleteren J, Cohen M, Nahmias Y (2018). **Microphysiological flux balance platform unravels the dynamics of drug induced steatosis.** *Lab Chip* **18**(17): 2510-2522.

**Ioannidis K**, Swevers L, Iatrou K (2016). **Bombyx mori nucleopolyhedrovirus lef8 gene: effects of deletion and implications for gene transduction applications.** *J Gen Virol* **97**(3): 786-796.

Swevers L, **Ioannidis K**, Kolovou M, Zografidis A, Labropoulou V, Santos D, Wynant N, Broeck JV, Wang L, Cappelle K, Smagge G (2016). **Persistent RNA virus infection of lepidopteran cell lines: Interactions with the RNAi machinery.** *J Insect Physiol* **93-94**: 81-93.

## **Awards and Grants**

**Post-doctoral fellowship** (2017 – 2021)  
Hebrew University of Jerusalem (HUJI), Israel

**ERASysAPP fellowship** (2013)  
6<sup>th</sup> International Course in Yeast Systems Biology (ICYSB-2013)

**PhD fellowship** (2006 – 2012, 4.5years)  
Institute of Biosciences & Applications, NCSR Demokritos

**Academic achievement award** (2003)

“State Scholarships Foundation”, Greece

**Honorary award (2002)**

Rector’s council, University of Athens, Greece

**Academic achievement awards (1999 – 2002)**

“State Scholarships Foundation”, Greece / Merchant Seamen’s Fund

**Conference presentations**

**Konstantinos Ioannidis**, Einat Apter, Yael Almog, Sofiya Kandelis-Shalev, Avner Ehrlich, Yaakov Nahmias. **Genome-wide-screen in primary-like human hepatocytes identifies new therapeutic targets for fatty liver disease**. Fast talk-poster presentation, 10<sup>th</sup> ILANIT/FISEB conference, Eilat, Israel, February 2023.

**Konstantinos Ioannidis**, Aaron Cohen, Mohammad Ghosheh, Avner Ehrlich, Amit Fischer, Merav Cohen Yaakov Nahmias. **Aminoglycoside-induced lipotoxicity and its reversal in kidney on chip**. Poster presentation, 10<sup>th</sup> ILANIT/FISEB conference, Eilat, Israel, February 2023.

Avner Ehrlich, **Konstantinos Ioannidis**, Makram Nasar, Ismaeel Abu Alkian, Nofar Atari, Limor Kliker, Nir Rainy, Matan Hofree, Sigal Shafran Tikva, Inbal Hourri, Arrigo Cicero, Chiara Pavanello, Cesare Sirtori, Jordana Cohen, Julio Chirinos, Lisa Deutsch, Merav Cohen, Amichai Gottlieb, Adina Bar-Chaim, Oren Shibolet, Michal Mandelboim, Shlomo Maayan, Yaakov Nahmias. **Metabolic Regulation of SARS-CoV-2 Infection**. Oral presentation, 10<sup>th</sup> ILANIT/FISEB conference, Eilat, Israel, February 2023.

Mohammad Ghosheh, Avner Ehrlich, **Konstantinos Ioannidis**, Muneef Ayyash, Idit Goldfracht, Merav Cohen, Amit Fisher, Yoav Mintz, Lior Gepstein, Yaakov Nahmias. **The Electro-Metabolic Coupling of a Microphysiological Human Heart**. Oral presentation, 10<sup>th</sup> ILANIT/FISEB conference, Eilat, Israel, February 2023.

**Konstantinos Ioannidis**, Avner Ehrlich, Muneef Ayyash, Yaakov Nahmias. **Real-Time Bioenergetic Analysis in a Microphysiological Human Hepatic Function Model for Cell-Stressor Identification**. Poster presentation, 9<sup>th</sup> ILANIT/FISEB conference, Eilat, Israel, February 2020.

**Konstantinos Ioannidis**, Avner Ehrlich, Muneef Ayyash, Merav Cohen, Yaakov Nahmias. **Real-Time Monitoring of the Metabolic Fingerprint of ER Stress inducing drugs in a Human Liver-On-Chip Microphysiological Platform**. Poster presentation, ISMBE conference, Haifa, Israel, February 2019.

**Employment history**

**Registered nurse (2014 – 2016)**

Surgical Intensive Care Unit (ICU) – Primary healthcare, immigrant-refugee support centers  
Hellenic Center for Disease Control and Prevention (HCDCP)

**Research assistant (2013 – 2014)**

“New approaches to insect transduction”

Laboratory of “Insect Molecular Genetics and Biotechnology” (Institute of Biosciences & Applications, NCSR Demokritos)

**Research assistant (2013 – 2014)**

“Genetic manipulation of Silkworm Baculoviruses”

Laboratory of “Insect Molecular Genetics and Biotechnology” (Institute of Biosciences & Applications, NCSR Demokritos)

**Registered nurse (2006)**

Attica Psychiatric Hospital for Children