

PERSONAL INFORMATION

Ivana Kurelac

📍 University of Bologna, ITALY

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Gender F | Date of birth 09/10/1982 | Nationality Croatian

Enterprise	University	EPR
<input type="checkbox"/> Management Level	<input type="checkbox"/> Full professor	<input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist / Principal Investigator
<input type="checkbox"/> Mid-Management Level	<input checked="" type="checkbox"/> Associate Professor	<input type="checkbox"/> Level III Researcher and Technologist
<input type="checkbox"/> Employee / worker level	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

- 2016 - 2023 **Assistant Professor**
Department of Medical and Surgical Sciences, University of Bologna, ITALY
- Scientific Research (Targeting respiratory complex I in solid cancers, Circulating tumor cells in high grade serous ovarian cancer) and Teaching (Medical genetics, Cancer metabolism)
- 2016 - 2018 **Visiting scientist**
Tumor-host interaction lab (group leader: Ilaria Malanchi), Francis Crick Institute, London, UK
- Scientific Research (Tumor microenvironment upon targeting respiratory complex I)
- 2012 - 2015 **Post Doc**
Department of Medical and Surgical Sciences, University of Bologna, ITALY
- Scientific Research (Mitochondria and hypoxic sensing in solid cancers)
- 2011 **Visiting PhD student**
Molecular Pathology lab (group leader: Jorge Reis Filho), Breakthrough Breast Cancer Research Centre, Institute for Cancer Research, London, UK
- Scientific Research (Thyroid and pituitary gland cancer profiling by comparative genomic hybridization)

EDUCATION

- 2008 - 2012 **PhD student**
University of Turin, ITALY
Scientific Research (Mitochondrial genetics in cancer)
- 2001 - 2006 **Undergraduate student**
University of Zagreb, CROATIA

WORK ACTIVITIES

- Editorial activity**
- Reviewer for journals: Oncogene, Genes, Frontiers in Oncology, BMC Medical Genetics, BMC Cancer, Biochimica et Biophysica Acta, British Journal of Cancer, Cancers (Basel), Frontiers in Pharmacology, Scientific Reports, Pharmacological Reports, Journal of Experimental & Clinical Cancer, International Journal of Molecular Sciences and Frontiers in Cell and Developmental Biology
- Guest editor in Cancers (section Tumor Microenvironment)
https://www.mdpi.com/journal/cancers/special_issues/TME_cancer_heterogeneity
- Guest associate editor in Frontiers in Genetics (section Genetic Disorders)
<https://www.frontiersin.org/research-topics/7446/molecular-and-systems-approaches-to-evaluatemitochondrial-contribution-to-disease>
- Invited presentations**
- 12-14/07 2021 "Cell and Experimental Biology", Houston, USA (virtual): "The Effect of Respiratory Complex I Inhibition on Solid Tumor Microenvironment"

09-11/10/2018 "Mechanisms to Therapies: Innovations in Cancer Metabolism Programme, European Association of Cancer Research-EACR", Bilbao, Spain: "Inducing indolence in aggressive cancers by targeting mitochondrial complex I is counteracted by macrophage-mediated adaptive responses"

19-21/10/2017 "International Society of Cancer Metabolism (ISCAM)", Bertinoro, Italy: "Targeting respiratory complex I causes HIF1A destabilization in cancer cells and activates stroma-mediated angiogenesis"

09-10/10/2014 "Discovery on target", Boston, USA: "Mitochondrial Complex I and Cancer"

30/06-01/07/2012 "Adriatic society of pathology", Split, Croatia: "Methodological problems in mitochondrial genetics"

Grants

2020 "The efficacy of simultaneous targeting of respiratory complex I and macrophages in Ovarian Cancer" Cassa di Risparmio in Bologna (28,000,00 euro)

2019 "Morphological markers for early diagnosis in oncology", Italian Ministry of University and Research (107,190.00 euro)

2012 "Mitochondrial dysfunction and low-proliferative tumor phenotype: Taking lessons from oncocytic tumors", Italian Association for Cancer Research (60,000.00 euro)

MOST RELEVANT PUBLICATIONS

Kurelac I, Cavina B, Sollazzo M, Miglietta S, Fornasa A, De Luise M, Iorio M, Lama E, Traversa D, Nasiri HR, Ghelli A, Musiani F, Porcelli AM, Iommarini L, Gasparre G. NDUFS3 knockout cancer cells and molecular docking reveal specificity and mode of action of anti-cancer respiratory complex I inhibitors. **Open Biol.** 2022 Nov;12(11):220198. doi: 10.1098/rsob.220198. Epub 2022 Nov 9.

Miccio L*, Cimmino C*, **Kurelac I***, Villone MM, Bianco V, Memmolo P, Merola F, Mugnano M, Capasso M, Iolascon A, Maffettone PL, Ferraro P. Perspectives on liquid biopsy for label-free detection of "circulating tumor cells" through intelligent lab-on-chips. **VIEW** Volume1, Issue 3 September 2020. *co-first

Ombrato L, Nolan E, **Kurelac I**, Mavousian A, Bridgeman VL, Heinze I, Chakravarty P, Horswell S, Gonzalez-Gualda E, Matakchione G, Weston A, Kirkpatrick J, Husain E, Speirs V, Collinson L, Ori A, Lee JH, Malanchi I. Metastatic-niche labelling reveals parenchymal cells with stem features. **Nature.** 2019 Aug;572(7771):603-608. doi: 10.1038/s41586-019-1487-6. Epub 2019 Aug 28.

Kurelac I, Iommarini L, Vatrinet R, Amato LB, De Luise M, Leone G, Girolimetti G, Umesh Ganesh N, Bridgeman VL, Ombrato L, Columbaro M, Ragazzi M, Gibellini L, Sollazzo M, Feichtinger RG, Vidali S, Baldassarre M, Foriel S, Vidone M, Cossarizza A, Grifoni D, Kofler B, Malanchi I, Porcelli AM, Gasparre G. Inducing cancer indolence by targeting mitochondrial Complex I is potentiated by blocking macrophage-mediated adaptive responses. **Nat Commun.** 2019 Feb 22;10(1):903. doi: 10.1038/s41467-019-08839-1.

Iommarini L, Porcelli AM, Gasparre G, **Kurelac I**. Non-Canonical Mechanisms Regulating Hypoxia-Inducible Factor 1 Alpha in Cancer. **Front Oncol.** 2017 Nov 27;7:286. doi: 10.3389/fonc.2017.00286. eCollection 2017.

Kurelac I, MacKay A, Lambros MB, Di Cesare E, Cenacchi G, Ceccarelli C, Morra I, Melcarne A, Morandi L, Calabrese FM, Attimonelli M, Tallini G, Reis-Filho JS, Gasparre G. Somatic complex I disruptive mitochondrial DNA mutations are modifiers of tumorigenesis that correlate with low genomic instability in pituitary adenomas. **Hum Mol Genet.** 2013 Jan 15;22(2):226-38. doi: 10.1093/hmg/ddr422. Epub 2012 Oct 9.

Kurelac I, Lang M, Zuntini R, Calabrese C, Simone D, Vicario S, Santamaria M, Attimonelli M, Romeo G, Gasparre G. Searching for a needle in the haystack: comparing six methods to evaluate heteroplasmy in difficult sequence context. **Biotechnol Adv.** 2012 Jan-Feb;30(1):363-71. doi: 10.1016/j.biotechadv.2011.06.001. Epub 2011 Jun 13.