

**CURRICULUM DIDATTICO-SCIENTIFICO DEL PROF. FEDERICO IACOVELLI**

**DATI PERSONALI**

**Nome e Cognome:** Federico Iacovelli

**Luogo e data di nascita:** Tivoli, 28/04/1986

**ATTUALE POSIZIONE:** Assegnista di ricerca AIRC

**Dipartimento:** Biologia

**Indirizzo:** Via della Ricerca Scientifica 1

**Numero studio:** 326

**E-mail:** federico.iacovelli@uniroma2.it

**Orario ricevimento:** Su appuntamento

**Settore scientifico-disciplinare:** BIO/11



**ATTIVITA' DIDATTICA - SCIENTIFICA**

**Titoli accademici e di studio:**

2010 - Laurea Triennale in Biologia Umana presso l'Università degli studi di Roma Tor Vergata

2012 - Laurea Magistrale in Bioinformatica presso l'Università degli studi di Roma Tor Vergata

2016 - Dottorato di ricerca in Scienze Chimiche presso l'Università degli studi di Roma Tor Vergata

**Formazione post-laurea presso istituzioni italiane ed estere ed incarichi professionali (didattici e di ricerca):**

2016 - Assegno di Ricerca Orio Carlini, presso Consortium GARR

2017 - Assegno di Ricerca Smart Campus, presso l'Università degli studi di Roma Tor Vergata

2018 - Assegno di Ricerca triennale AIRC, presso l'Università degli studi di Roma Tor Vergata

2016 → Docente a contratto per il modulo di Bioinformatica del corso integrato di Biologia molecolare e metodologie bioinformatiche e chimiche del corso di Laurea Magistrale in Biotecnologie Mediche presso l'Università degli studi di Roma Tor Vergata

**Attività di ricerca: migliori 15 pubblicazioni**

Raniolo S, Vindigni G, Ottaviani A, Unida V, Iacovelli F, Manetto A, Figini M, Stella L, Desideri A, Biocca S. Selective targeting and degradation of doxorubicin-loaded folate-functionalized DNA nanocages. *Nanomedicine*. 2018 Feb 17;14(4):1181-1190.

Takarada JE, Guedes APM, Correa RS, Silveira-Lacerda EP, Castelli S, Iacovelli F, Deflon VM, Batista AA, Desideri A. Ru/Fe bimetallic complexes: Synthesis, characterization, cytotoxicity and study of their interactions with DNA/HSA and human topoisomerase IB. *Arch Biochem Biophys*. 2017 Dec 15;636:28-41. doi: 10.1016/j.abb.2017.10.015.

Leo S, Capo C, Ciminelli BM, Iacovelli F, Menduti G, Funghini S, Donati MA, Falconi M, Rossi L, Malaspina P. SSADH deficiency in an Italian family: a novel ALDH5A1 gene mutation affecting the succinic semialdehyde substrate binding site. *Metab Brain Dis*. 2017 Oct;32(5):1383-1388. doi: 10.1007/s11011-017-0058-5.

Iacovelli F, Tucci FG, Macari G, Falconi M. Multiple molecular dynamics simulations of human LOX-1 and Trp150Ala mutant reveal the structural determinants causing the full deactivation of the receptor. *Proteins*. 2017 Oct;85(10):1902-1912. doi: 10.1002/prot.25344.

- Cardamone F, Iacovelli F, Chillemi G, Falconi M, Desideri A. A molecular dynamics simulation study decodes the early stage of the disassembly process abolishing the human SAMHD1 function. *J Comput Aided Mol Des*. 2017 May;31(5):497-505. doi: 10.1007/s10822-017-0014-9.
- Iacovelli F, Idili A, Benincasa A, Mariottini D, Ottaviani A, Falconi M, Ricci F, Desideri A. Simulative and Experimental Characterization of a pH-Dependent Clamp-like DNA Triple-Helix Nanoswitch. *J Am Chem Soc*. 2017 Apr 19;139(15):5321-5329. doi: 10.1021/jacs.6b11470.
- Cardamone F, Pizzi S, Iacovelli F, Falconi M, Desideri A. Virtual Screening for the Development of Dual-Inhibitors Targeting Topoisomerase IB and Tyrosyl-DNA Phosphodiesterase 1. *Curr Drug Targets*. 2017;18(5):544-555. doi: 10.2174/1389450116666150727114742.
- Franch O, Iacovelli F, Falconi M, Juul S, Ottaviani A, Benvenuti C, Biocca S, Ho YP, Knudsen BR, Desideri A. DNA hairpins promote temperature controlled cargo encapsulation in a truncated octahedral nanocage structure family. *Nanoscale*. 2016 Jul 21;8(27):13333-41. doi: 10.1039/c6nr01806h.
- Alves C, Iacovelli F, Falconi M, Cardamone F, Morozzo Della Rocca B, de Oliveira CL, Desideri A. A Simple and Fast Semiautomatic Procedure for the Atomistic Modeling of Complex DNA Polyhedra. *J Chem Inf Model*. 2016 May 23;56(5):941-9. doi: 10.1021/acs.jcim.5b00586.
- Iacovelli F, Falconi M. Decoding the conformation-linked functional properties of nucleic acids by the use of computational tools. *FEBS J*. 2015 Sep;282(17):3298-310. doi: 10.1111/febs.13315.
- Biocca S, Iacovelli F, Matarazzo S, Vindigni G, Oteri F, Desideri A, Falconi M. Molecular mechanism of statin-mediated LOX-1 inhibition. *Cell Cycle*. 2015;14(10):1583-95. doi: 10.1080/15384101.2015.1026486.
- Iacovelli F, Alves C, Falconi M, Oteri F, de Oliveira CL, Desideri A. Influence of the single-strand linker composition on the structural/dynamical properties of a truncated octahedral DNA nano-cage family. *Biopolymers*. 2014 Oct;101(10):992-9.
- Biocca S, Arcangeli T, Tagliaferri E, Testa B, Vindigni G, Oteri F, Giorgi A, Iacovelli F, Novelli G, Desideri A, Falconi M. Simulative and experimental investigation on the cleavage site that generates the soluble human LOX-1. *Arch Biochem Biophys*. 2013 Dec;540(1-2):9-18. doi: 10.1016/j.abb.2013.10.001.
- Juul S, Iacovelli F, Falconi M, Kragh SL, Christensen B, Frøhlich R, Franch O, Kristoffersen EL, Stougaard M, Leong KW, Ho YP, Sørensen ES, Birkedal V, Desideri A, Knudsen BR. Temperature-controlled encapsulation and release of an active enzyme in the cavity of a self-assembled DNA nanocage. *ACS Nano*. 2013 Nov 26;7(11):9724-34. doi: 10.1021/nn4030543.
- Falconi M, Iacovelli F, Desideri A. A structural modeling approach for the understanding of initiation and elongation of ALS-linked superoxide dismutase fibrils. *J Mol Model*. 2013 Sep;19(9):3695-704. doi: 10.1007/s00894-013-1896-7.



## Università degli Studi di Roma "Tor Vergata"

### *ACADEMIC AND SCIENTIFIC CURRICULUM OF PROF. FEDERICO IACOVELLI*

#### **PERSONAL DATA**

**Name and Surname: Federico Iacovelli**

**Place and date of birth: Tivoli, 1986/04/28**

**CURRENT POSITION:** Airc Research fellow

**Department:** Biology, Tor Vergata

**Address:** Via della Ricerca Scientifica 1

**Phone number:** 0672594326

**E-mail:** federico.iacovelli@uniroma2.it

**Consulting hours:** by appointment

**Italian Ministry of Education Academic-Scientific sector:** BIO/11



#### **SCIENTIFIC AND DIDACTIC ACTIVITY**

##### **Education and academic positions:**

Bachelor degree in Human Biology, University of Rome Tor Vergata

Master degree in Bioinformatics, University of Rome Tor Vergata

PhD in Chemical Sciences, University of Rome Tor Vergata

##### **Professional and didactic activities in Italian and Foreign Institutions:**

2016 - Orio Carlini research fellow, Consortium GARR

2017 - Smart Campus research fellow, Università degli studi di Roma Tor Vergata

2018 – AIRC research fellowship, Università degli studi di Roma Tor Vergata

2016 → Adjunct professor for the Bioinformatics module of the integrated course in Molecular Biology and bioinformatics and chemical methodologies, Master's Degree in Medical Biotechnology of the University of Rome Tor Vergata

##### **Research activity: 15 selected publications**

Raniolo S, Vindigni G, Ottaviani A, Unida V, Iacovelli F, Manetto A, Figini M, Stella L, Desideri A, Biocca S. Selective targeting and degradation of doxorubicin-loaded folate-functionalized DNA nanocages. *Nanomedicine*. 2018 Feb 17;14(4):1181-1190.

Takarada JE, Guedes APM, Correa RS, Silveira-Lacerda EP, Castelli S, Iacovelli F, Deflon VM, Batista AA, Desideri A. Ru/Fe bimetallic complexes: Synthesis, characterization, cytotoxicity and study of their interactions with DNA/HSA and human topoisomerase IB. *Arch Biochem Biophys*. 2017 Dec 15;636:28-41. doi: 10.1016/j.abb.2017.10.015.

Leo S, Capo C, Ciminelli BM, Iacovelli F, Menduti G, Funghini S, Donati MA, Falconi M, Rossi L, Malaspina P. SSADH deficiency in an Italian family: a novel ALDH5A1 gene mutation affecting the succinic semialdehyde substrate binding site. *Metab Brain Dis*. 2017 Oct;32(5):1383-1388. doi: 10.1007/s11011-017-0058-5.

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