Diego Cotella

Curriculum vitae

PERSONAL DATA

Born in Ovada (Italy) on 15.12.1974
Living in Novara

BIO AND EDUCATION

1987 – 1993	Secondary School Diploma in Mechanical Engineering, ITIS "C.Barletti", Ovada
1993 – 1999	*Laurea* (MSc) in Biology, *Università del Piemonte Orientale* (UPO) Alessandria
2000 – 2003	Doctorate (PhD) in Environmental Sciences, UPO Alessandria
1999 – 2002	*R&D staff scientist*, Innosense srl, Colleretto Giacosa
2004 – 2006	Postdoctoral fellow, Dresden University of Technology (Germany)
2006 - 2010	*Assegnista di Ricerca* (Research Assistant), UPO Novara
2010 – 2011	Postdoctoral researcher, University of Medicine and Dentistry of New Jersey (UMDNJ), Piscataway (USA)

UNIVERSITY CAREER

since 2010	Assistant Professor (with tenure since 2012) in Experimental Biology, UPO
2006 - 2010	Contract professor, Laboratory of Recombinant DNA Technology, UPO

UNIVERSITY POSITIONS

Since 2016	Member, Departmental Commission for Research
Since 2015	Member, Graduation Commission of the Degrees in Biotechnology (BS) and in Medical Biotechnology (MS)
Since 2015	Member, State exam and Graduation Commission of the Degree in Physiotherapy
2013 -2018	Thesis Advisory Committee member, PhD Program "Science and Medical Biotechnologies"
2011 - 2016	Thesis Advisory Committee member, PhD Program "Biotechnologies for the Human Health"
Since 2012	Departmental contact person for the University Orientation Programs
Since 2012	Departmental referent of the international student mobility programs for Healthcare Professions

TEACHING

since 2019	Biology (BSc in Nursery)
since 2015	Cell Biology (BSc in Biotechnology)
since 2011	Applied Biology (BSc in Healthcare Professions)
since 2011	Cell Biology (preparatory course to the entrance exam in Medicine and Healthcare Professions)
2006 – 2010	Laboratory of Recombinant DNA technology (BSc in Biotechnology)
2016 – 2018	Outreach Program for High School Students

SCIENTIFIC MEMBERSHIP

since 2013 Member of the Italian society of Biophysics and Molecular Biology (SIBBM)
since 2012 Member of the Italian Association of Biology and Genetics (AIBG)

Awards

2019 National Scientific Habilitation to Associate Professor in Molecular Biology (BIO/11)
2017 National Scientific Habilitation to Associate Professor in Applied Biology (BIO/13)
2006 EU Marie European Reintegration Grant (ERG)
2004-2006 EU Marie Curie Host Development Program Postdoctoral Fellowship
2000-2002 PhD Fellowship from the *Fondazione per le Biotecnologie* (Turin)

MAIN FIELDS OF INTEREST

1. Long non-coding RNAs (lncRNAs)
2. Biomolecular interactions
3. Cell biotechnology
4. Phage display

CURRENT RESEARCH FOCUS

1. The non-coding genome and the Long noncoding RNAs (lncRNAs)
The discovery of long noncoding RNA (lncRNA) represents a significant advance in cell biology. Our goal is to develop new tools to study the interaction between lncRNA and proteins, to understand their function. To this end, we focus on SINEUP, a family of natural antisense (NAT) lncRNAs, whose effect is to promote the translation of specific target mRNAs. Understanding the interaction between proteins and SINEUP could greatly enhance our understanding of the molecular activity of SINEUP.

2. Engineering cell factories for the sustainable production of biopharmaceuticals.
Recombinant proteins are fundamental resources for basic and applied research, as well as for biotechnological applications. They can be produced in a variety of expression systems although mammalian cells are the first choice when post-translational processing is required for function. This project aims at engineering CHO (Chinese Hamster Ovary) and other mammalian cells, to develop novel cell lines capable to produce proteins at elevated level. To this regard, I use my expertise to design, validate and finally apply the SINEUP^{TM} and other genetic tools to engineer mammalian cell factories to improve the production processes of recombinant proteins.

CURRENT FUNDED PROJECTS

FUNDING PROGRAM	TITLE OF THE PROJECT
Bando DiSS – Fondi di Ateneo 2019 (intramural)	Development of innovative biological material for the functional regeneration of cardiac tissue models

TOP FIVE PAPERS

1] Fasolo F, Patrucco L, Volpe M, Bon C, Peano C, Mignone F, Carninci P, Persichetti F, Santoro C, Zucchelli S, Sblattero D, Sanges R, **Cotella D***, Gustincich S*. The RNA-binding protein ILF3 binds to transposable elements sequences in SINEUP lncRNAs. *FASEB J,* 33(12):13572-13589. DOI: 10.1096/fj.201901618RR

2] Patrucco L, Peano C, Chiesa A, Guida F, Luisi I, Boria I, Mignone F, De Bellis G, Zucchelli S, Gustincich S, Santoro C, Sblattero D, **Cotella D**. (2015) Identification of novel proteins binding the AU-rich element of α-prothymosin mRNA through the selection of open reading frames (RIDome). RNA Biol. 12(12):1289-300. doi: 10.1080/15476286.2015.1107702.

3] Patrucco L, Peano C, Chiesa A, Guida F, Luisi I, Boria I, Mignone F, De Bellis G, Zucchelli S, Gustincich S, Santoro C, Sblattero D, **Cotella D** (2015). Identification of novel proteins binding the AU-rich element of α-prothymosin mRNA through the selection of open reading frames (RIDome). *RNA Biol*. 12(12):1289-300. doi: 10.1080/15476286.2015.1107702.

4]. **Cotella D**, Hernandez-Enriquez B, Duan Z, Wu X, Gazula VR, Brown MR, Kaczmarek LK, Sesti F (2013). An evolutionarily conserved mode of modulation of Shaw-like K channels. *FASEB J.* 27(4):1381-93. doi: 10.1096/fj.12-222778. Epub 2012 Dec 11. PubMed PMID: 23233530;

5]. **Cotella D**, Hernandez-Enriquez B, Wu X, Li R, Pan Z, Leveille J, Link CD, Oddo S, Sesti F (2012). Toxic role of K+ channel oxidation in mammalian brain. *J Neurosci.* 32(12):4133-44. doi: 10.1523/JNEUROSCI.6153-11.2012.