

Prof Alessandra Carattoli

Prof. Carattoli is a biologist, PhD in Molecular and Cellular Biology (Light regulated genes of *N. crassa*: 1993, Faculty of Medicine, Univ. Roma, Italy), and subsequently working on antiviral prostaglandins as a PostDoc

In 2014 she is a Research Director of Department Infectious, Parasitic and Immune-Mediated Diseases, Central Public Health Institute (*Istituto Superiore di Sanita= ISS*), Rome, Italy, - presently (2014): visiting scientist, Institut für Infektionskrankheiten, Bern, Switzerland.

For the last 20 years she has been working for the ISS and made her international reputation on the area of plasmidology:

- on PCR-Based Replicon-Typing of plasmids, and
- on pangenomics of plasmids (ESBL plasmids of Gram-negative bacteria from human, animal and environmental sources),

About her outstanding and internationally highly acknowledged work on these areas, she has authored so far over 120 peer reviewed papers (as: in PubMed). Her total impact factor (IF) is > 500, and her total citations are 5524, resulting an official Hirsch Index of 42. She is ranked as one of the top Italian Scientists.

Her main scientific achievements on her More relevant Projects are:

On Plasmid Identification and Typing:

- developed and launched the PCR-based Plasmid Replicon Typing (PBRT) = Kit (marketed)
- worked out: Plasmid Multi Locus Sequence Typing (pMLST) = curator
- Plasmid finder Database (in silico detect of plasmids in raw genomes) = curator

On Genomics of antimicrobial resistance mechanisms

- First detection of Integrons in *Salmonella* Typhimurium clinical isolates,
- First detection of ESBL producers in animal reservoirs
- Complete sequencing of Carbapenem-Resistant *Acinetobacter baumannii* genome
- First complete sequence of NDM-1 Carbapenemase major epidemic plasmids
- Identification of novel mechanism of resistance to tigecycline ribosomal target

Honorary Scientific and Teaching Activities:

Invited speaker assignments (2006-2013): Germany, France, Greece, Danmark, USA, Spain, Emirates

Giving invited university courses and leading PhD Theses:

University of Rome (multipl.), Technical University Danmark, University of Bern Switzerland.

Editorial Responsibilities :

Assistant Editor: Journal of Antimicrobial Chemotherapy
Assistant Editor. Journal of Global Antimicrobial Resistance

National and International Expert, and Advisor:

Ministry of Health, Italy (Antimicrobial Resistance = AMR)
Ministry of Research, Italy, (EU Research Joint Program on AMR)
National Expert on Bioterrorism
Expert assistance to different boards of EFSA and ECDC