Curriculum Vitae

ANTONIO D'AVOLIO
Born in Rivoli (TO), 06/06/1970

ACADEMIC BACKGROUND

[**1994**] Degree in Biological Sciences (New Order, 5 years), Faculty of Science, University of Turin, Address Pathophysiologic (104/110).
[**1996**] Professional Qualification and registration in the Biologist Board.
[**2001**] Teaching qualification in high schools for the class competition A060 (Natural Sciences, Chemistry, Geography and Microbiology).
[**2002**] Specialization Degree in Microbiology and Virology, Faculty of Medicine, University of Turin (70/70).
[**From 01/01/2004 to 31/03/2005**] Research grant entitled: "Study of hospital infection surveillance and cyclical monitoring strategies use of antibiotics in intensive care."
[**From 01/06/2005 to 30/09/2006**] Research grant entitled "Clinical pharmacology of antiretroviral drugs: intracellular concentrations and pharmacodynamics."
[**2006-2009**] Researcher in Infectious Diseases, University of Turin.
[**2006-today**] Head of "Laboratory of Clinical Pharmacology and Pharmacogenetics", University of Turin at the Hospital Amedeo di Savoia (ASL TO2).
[**2009-2016**] Assistant Professor in Infectious Diseases, University of Turin.
[**2009-today**] Agreement with the National Health Service of the "Laboratory of Clinical Pharmacology and Pharmacogenetics" at Department of Medical Sciences of University of Turin at the Amedeo di Savoia Hospital (ASL TO2).
[**2012-today**] Inclusion in the auditors of the Italian Ministry of Education.
[**2014-2018**] Enabling for competition in Italian National Scientific 05/G1 sector - Associate Professor in Pharmacology.
[2016-today] Associate Professor of Pharmacology, University of Turin.
[2017-2023] National Scientific Qualification for the sector of competition 05/G1 - PHARMACOLOGY, CLINICAL PHARMACOLOGY and PHARMACOGNOSY, as FULL Professor.
[2018-today] Founder and Deputy Director of CIFACS (Interdepartmental Center for Clinical and Experimental Pharmacology), University of Turin

SCIENTIFIC BACKGROUND

- Since 1992, he attended the “Laboratorio di Farmacologia del Polo Biologico Universitario del Dipartimento di Scienze Cliniche e Biologiche, dell’Ospedale S. Luigi, Orbassano (TO)”, directed by Prof. Francesco Di Carlo. He had the opportunity to use and investigate the basic techniques of molecular biology (including the use of radioactive material), cell cultures and microbiological tests.

- In the same laboratory, he also had the opportunity to use an HPLC and to perform the first chromatographic experiences that were deepened and considerably expanded over the years, through many work experiences (3/1996-8/2004, Bioanswers sas as production manager and research; 9/2004-9/2006 Activities of specialized consulting). It could be stated that, after more than 18 years of work on different types and models of chromatographic instruments, he has developed an excellent aptitude and ability to develop and use new techniques and/or methods applied to the chromatography, in particular for the determination of drugs, and other biological markers (proteins, DNA ...) in the diagnostic, clinical, chemical, environmental and food, using HPLC / UPLC, HPLC-MS and MS/MS, GC and GC-MS.

- During the Specialization Degree in Microbiology and Virology he attended microbiology laboratories. This allowed him to know and apply clinical microbiology methods for the identification of potential pathogens (through a fresh reading of cervicovaginal samples, using Gram and Ziehl-Neelsen staining, sowing on selective media according to the methods recommended dall'AMCLI, biochemical tests, etc..). Moreover, he learn to investigate pathogens’ susceptibility (with bioMerieux VITEK instrumentation, ATB and KB) on different materials processed in a clinical microbiology laboratory (urine, feces, sputum, blood, bronchial aspirates, CSF, swabs and other materials). He also had the opportunity to use, study and investigate the methods used in clinical virology for the identification of possible pathogenic viruses, through techniques of molecular biology, cell cultures and viral cultures (identification of cytopathic effects on cell lines), for the different materials processed in a virology laboratory with safety level P3 room.

- The frequency of ARPA Piemonte laboratories allowed him to learn methods applied in the laboratories of mutagenesis and ecotoxicology for the detection of toxic and mutagenic compounds in complex matrices such as air, soil and water. In this field of research he optimized the "micronucleus technique" and the Ames test for mutagenicity at ARPA laboratory of

Grugliasco (TO).

- The study of microorganisms within the Specialization Degree allows him to know and apply the general principles of the fermentation in the food, with optimization of the product and/or fermentative process, at industrial level, for baked or not products.

- The over ten years of working activity in the production and research laboratories of private companies (3/1996-8/2004, Bioanswers sas as Head of Production and Research; 9/2004-9/2006 Specialist consultancy activity), as well as the role of manager of the sector in which he worked, also allowed him to train as a "manager" and coordinator of human resources; to be able to set and apply the rules on the control of the Quality System (ISO 9000, Vision and 9001) and safety (626/94 and 81/2008) in the laboratories.
The development and validation of diagnostics continued within the Laboratory of Clinical Pharmacology and Pharmacogenetics with the certification of it (the only public certified laboratory in Europe) for ISO 13485, and with the CoQua Lab Spin-Off.
In the area of diagnostics management, experience has been gained not only with the European regulation IVDR 2017/746, but also activities with ISO 20387 (Biobank Management), ISO 17025 (Accredited Analysis Methods) and ISO 15189 (Analysis Laboratories).

- In the "Laboratory of Clinical Pharmacology and Pharmacogenetics" in the last 15 years he has had the opportunity to deepen all the issues concerning clinical pharmacology, pharmacokinetics and pharmacogenetics, becoming today an internationally recognized expert in "therapeutic drug monitoring" and personalization of therapy, especially in the anti-infectious field and in the field of new therapies with biological/monoclonal drugs. At the same time, he implemented his technical knowledge in the field of mass spectrometry and the application of this technology/instrumentation in the clinical-diagnostic field, becoming one of the leading experts in this field.

- As Head of the "Laboratory of Clinical Pharmacology and Pharmacogenetics" of the University of Turin, in the Academic Year 2021/2022 he managed to coordinate and direct a research group directly and exclusively related to the laboratory composed of 2 laboratory technicians and 10 PhD/fellows/ (including biologists, biotechnologists and pharmacists and biomedic laboratory technicians).

RESEARCH & CLINICAL ACTIVITY

- The research and clinical activity of Prof. D'Avolio, in universities and hospitals (ASL Città di Torino), as manager of the "Laboratory of Clinical Pharmacology and Pharmacogenetics", took place from 2006 to present on the following topics:

- clinical pharmacology of anti-infectives, oncological drugs (including tyrosine kinase inhibitors, mitotane, etc.), antihypertensives, iron chelators, etc .;
- study of the pharmacogenetics of anti-infectives, oncological drugs, iron chelators, etc .;
- management and personalization of therapy in patients; plasma, intracellular and tissue pharmacokinetic evaluation of anti-infective and non-infectious drugs, also through the use of pharmacogenetics applied to the clinic in patients undergoing chemotherapy treatment (in the context of clinical routine and clinical studies).
- diagnostic analysis as a clinical routine of biological samples arriving at the laboratory for "therapeutic drug monitoring" and pharmacogenetic tests (evaluation of single nucleotide genetic polymorphisms).
- Personalization of therapy with latest generation biological and monoclonal drugs
- Personalization of therapies based on genetics, biomarkers and TDM

- In recent years the research activity is expanding, as evidenced by the numerous recent publications, especially on other not infectious issues, but always in the context of clinical pharmacology; This activity was possible by analyzing data coming not only from its own laboratory, but also from other numerous research centers (national and international hospitals) with which we are opened for partnerships acting within pharmacology, pharmacogenetics and related diagnostics.

TEACHING (last two years)

Custody of the following undergraduate courses at the University of Turin

Academic Year 2020-2021
Pharmacology; Degree in Nursing (Can. A)- University of Turin
Pharmacology; Degree in Nursing (Can. ASL Città di Torino)- University of Turin
Pharmacology; Degree in Paediatric Nursing – University of Turin
Pharmacology; Degree in Medicine – (B) University of Turin
Professor in the doctoral program in "Sperimental Therapy and Medicine" School Doctorate in Life Sciences and Health,

University of Turin
Tutor Degree in Medical Biotecnology – University of Turin
Molecular Biology, School of Specialization in Infectious Diseases
Monitoring of anti-infective therapies, School of Specialization in Infectious Diseases, University of Turin
Pharmacology, School of Specialization in Infectious Diseases, University of Turin
Pharmacology, School of Specialization in Anestesiology, University of Turin
Pharmacology, School of Specialization in Medical Genetics, University of Turin

Academic Year 2021-2022
Pharmacology; Degree in Nursing (Can. A)- University of Turin
Pharmacology; Degree in Paediatric Nursing – University of Turin
Pharmacology; Degree in Medicine – (B) University of Turin
Pharmacology, Degree in Medical Biotecnology – University of Turin
Professor in the doctoral program in "Sperimental Therapy and Medicine" School Doctorate in Life Sciences and Health, University of Turin
Tutor Degree in Medical Biotecnology – University of Turin
Molecular Biology, School of Specialization in Infectious Diseases
Monitoring of anti-infective therapies, School of Specialization in Infectious Diseases, University of Turin
Pharmacology, School of Specialization in Infectious Diseases, University of Turin
Pharmacology, School of Specialization in Anestesiology, University of Turin
Pharmacology, School of Specialization in Medical Genetics, University of Turin

- At the Laboratory of Clinical Pharmacology and Pharmacogenetics, since 2004, Prof. D'Avolio has followed more than **120** students/trainees in experimental apprenticeship and for compilation of related thesis and specifically: n. > 40 Thesis in Biology, n. > 50 Thesis in Medical Biotechnology, no. Thesis 4 Specialty of Infectious Diseases (Medicine), no. 3 Thesis in Medicine, n. 1 Thesis Specialization in Hospital Pharmacy, n.1 Thesis in Pharmacy and n. 3 Thesis in Biomedical Laboratory Technician.

INSTITUTIONAL and ORGANIZATIONAL ACTIVITY

• Head of the Laboratory of Clinical Pharmacology and Pharmacogenetics (Amedeo di Savoia Hospital) of the Department of Medical Sciences
• Member of the Department of the Medical Science Council
• Member of the Board of the Department of Medical Sciences
• Member of the Research Commission of the Department of Medical Sciences
• Responsible of Activity 'of Teaching and Research in Laboratory (RADRL) for the Department of Medical Sciences
• University coordinator for SISTRI procedure for the disposal of non-hazardous waste disposed of Hospital
• Member of the Board of the Nursing Degree Course (Headquarters Orbassano)
• Member of the Board of the Nursing Degree Course (Headquarters Ivrea)
• Member of the Board of the School of Specialization in Infectious Diseases
• Member of the Organizing Committee of the School of Specialization in Infectious and Tropical Diseases
• Member of the Board of the PhD in Sperimental Therapy and Medicine of the Graduate School of Life Sciences and Health
• Vice Director Interdepartmental Center for Clinical and Experimental Pharmacology (CIFACS), University of Turin
• Member of the Rectoral Study Group (University of Turin) for the study of Cannabis and its therapeutic applications

PRIZES

- Best oral presentation
Valeria Avataneo, Amedeo De Nicolò, Gabriele Bonifacio, Franco Rabbia, Elisa Perlo, Paolo Mulatero, Franco Veglio, Giovanni Di Perri and **Antonio D'Avolio**. " Development of an UHPLC-MS/MS method for the therapeutic drug monitoring of antihypertensive drugs in human plasma: validation on patients with "resistant" hypertension ". Spring Meeting dei Giovani SIIA e SISA - Rimini (Italy), 11-12 Marzo 2016.

- CROI-ICAR Awards 2015 for Italian Scientific Research
Marinaro L, Calcagno A, Cusato J, Scarvaglieri ME, Simiele M, Tettoni MC, Trentini L, **D'Avolio A**, Di Perri G and Bonora S. "Determinants of Parathyroid Hormone Levels in HIV-positive Tenofovir-treated Patients with Normal Renal Function". The annual Conference on Retroviruses and Opportunistic Infections (CROI) 2015, 23-26 February, Seattle, Washington, USA.

- L. Marinaro, A. Calcagno, M. Simiele, G. Mengozzi, M. Mussa, L. Trentini, M.C. Tettoni, C. Alcantarini, M. Lucchiari, J. Cusato, **A. D'Avolio**, G. Di Perri and S. Bonora. "Determinants of Renal Tubular Dysfunction in HIV-positive Patients of More than 50 Years-old". OC 74 Oral Communication. Italian Congress on Aids and Retroviruses ICAR 2014, Rome, 25-27/5/14.

- In October 2013 he was awarded, as co-author and scientific director, of editorial prize "Mario Greco" to SIFO XXXIV National Congress, held in Turin on October 17 to 20, 2013, for the study:
"Descriptive pharmacokinetic (PK) and pharmacogenetics (PG) of efavirenz in a cohort of Italian population"
Cristina Tomasello, Jessica Cusato, Anna Leggieri, Stefano Bonora, Giovanni Di Perri, **Antonio D'Avolio**.
Area of the award: "Pharmacogenetics and therapeutic drug monitoring (TDM)"

- In September 2011, was awarded, as co-author of "Best Poster Award" as part of the 35th National Congress of the Italian Society of Pharmacology, held in Bologna on September 14 to 17, 2011, for the study:
"Pharmacogenetic determinants of imatinib, dasatinib and nilotinib in chronic myeloid leukemia patients."
Alessandra Ariaudo, Silvia De Francia, **Antonio D'Avolio**, Elisa Pirro, Francesca Piccione, Marco Simiele, Carmen Fava, Giuseppe Saglio, Francesco Di Carlo

- In October 2009, was awarded, as co-author of "Poster Award" in the 34th National Congress of the Italian Society of Pharmacology, in October, 2009, for the study:
"New HPLC-MS method for the simultaneous quantification in human plasma of the antileukemia drugs imatinib, dasatinib and nilotinib."
De Francia S, **D'Avolio A**, De Martino F, Pirro E, F Pigeon, Racca S, Di Carlo F

- In November 2004, he was awarded as the co-author of the award for the most innovative scientific work at the 7th International Congress on Drug Therapy in HIV Infection, held in Glasgow (Scotland), for the study:
"Nevirapine Affects PLASMA EXPOSURE DURABILITY OF EFFICACY AND SELECTION OF PRIMARY Virological RESISTANCE MUTATIONS: DEFINITION OF MUTANT SELECTION WINDOW" [P270].
Stefano Bonora (1), Daniel Gonzalez de Requena (1), Silvia Garazzino (1), Francesca Sing (1), Rosalie Brown (1), Mauro Sciandra (1), **Antonio D'Avolio** (1), Marta Boffito (2), Alessandro Sinicco (1), Giovanni Di Perri (1).
(1) Department of Infectious Diseases, University of Turin, Turin, Italy;
(2) PK Research, Chelsea and Westminster Hospital, London, UK;
Int Cong Drug Therapy HIV 2004 November 14 to 18, 7: Abstract No. P270

- First Prize National GAO, Poster with honorable mention to the XII Annual Meeting "GAO" 1995
G. Berta, **A. D'Avolio**, F. Ghezzo, V. Vercellino, F. Di Carlo.
"Clinical significance of the expression of the human gene of calciclina in tumors of the oral cavity"

PROJECT/FUNDING

- Scientific Responsible and Principal Investigator (including units) of various projects financed at the Italian (n = 4) and International (n = 3) level, from which funds of approximately 1.7 million euros were obtained (see also table last page).

PI or co-PI of following International financed project:
2018 VirTUAL :VULNERABLE POPULATION TUBERCULOSIS ANTIRETROVIRAL. Budget: 266.000 €
2019 CAPA-CT II : Leveraging capacity for early phase clinical trials for filoviruses in Uganda. Budget: 106.000 €
2020 Blo.Co.Vir Innovative and multitasking cyclodextrin based polymers for BLOcking Covid-19 VITurlence

OTHER

- From 2015 to 2020, Founding member and CEO of the Academic Spin-Off of the University of Turin "CoQua Lab srl".

- The "Laboratory of Clinical Pharmacology and Pharmacogenetics" of the University of Turin since 2008 is the only one in the world in its field, certified according to UNI EN ISO 9001 and UNI EN ISO 13485 for the following activities: "Design , development and application of dosage methods for clinical analytes and drugs. Execution of pharmacogenetic analyzes "and" Design and production of in-vitro diagnostics ". The result of this goal was achieved under the responsibility of Prof. D'Avolio Antonio. In addition, since 2017, the "Laboratory of Clinical Pharmacology and Pharmacogenetics" has been included by AIFA in the list of Italian laboratories authorized for PHASE I clinical studies.

- Scientific Manager and Principal Investigator of the international agreement between the company Lab 21 Ltd [Ex-Delphic Diagnostics Ltd] (Cambridge, UK) and the University of Turin, from which annual funding of approximately 60-70,000 is being obtained euro/year.

- Activities on behalf of third parties, aimed at acquiring funds, in the context of research projects financed by public and/or private entities, for an amount, to date of approximately, 800,000 euros.

- Organizer and scientific manager (sole responsible and within scientific committees) of at least n. 3 dissemination events, meetings and conferences (with ECM credits) per year.

- Member of the Local Organizing Committee of the World Congress of the International Association of Therapeutic Drug Monitoring and Clinical Toxicology (IATDMCT) (Rome, 19-22 September 2021).

- Reviewer activities for the following international journals indexed in PubMed: Antiviral Research, Therapeutic Drug Monitoring, Journal of Pharmaceutical and Biomedical Analysis, Journal of Chromatography A, Journal of Chromatography B, Analytical & Bioanalytical Chemistry, Journal of Chromatographic Science, Clinical Chemistry and Laboratory Medicine, International Immunopharmacology, Talanta, Bioanalysis, Journal of AIDS & Clinical Research, Antimicrobial Agents and Chemotherapy, European Journal of Pharmacology, Plos One, International Journal of Antimicrobial Agents, Journal of Infection, Pharmacological Research, Clinical Pharmacokinetics, Journal of Chemotherapy e Clinical Biochemistry, and many others.

- Member of the Editorial Board of the journal "Quaderni di Farmacologia Antinfettiva".
- Member of the Advisory Board in the Pharmadvances magazine of the Italian Society of Pharmacology (SIF)

- Member of the Italian Society of Clinical Biochemistry and Molecular Biology (SIBIOC), and active member of the Study Group on Mass Spectrometry and Head of the Study Group in “TDM and Personalized Therapy”.
- Member of the Italian Society of Pharmacology (SIF) and member of the Clinical Pharmacology section
- Member of the American Society for Mass Spectrometry (ASMS)
- Member of the International Association of Therapeutic Drug Monitoring and Clinical Toxicology (IATDMCT)

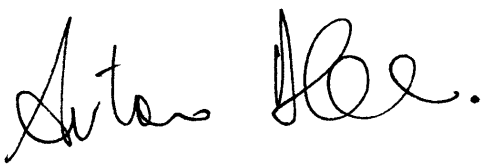
PUBLICATIONS/SPEECHES, CITATIONS AND NORMALIZED H-INDEX (updated 25/03/2021)

Since 1994 has participated as speaker at more than **300** between congresses, conferences, courses and seminars.
Author and / or co-authored more than **400** posters and congressional action.
Author and/or co-author of more than **400** international scientific publications: n.**292** indexed in PubMed (“D’AVOLIO A” in www.ncbi.nlm.nih.gov pubmed) and **337** indexed in ISI - Web of Knowladge (Tomson).

H-INDEX (Scopus): **34**

Google Scholar

Citations Index	All	From 2017
Citations	6430	3520
H-Index	41	27
i10-index	166	112



National and International Projects/Funds (last updated 01/02/2022)

ID	ID IRIS	Acronim	Type	Deadline	Title	Status	Responsable	Unit	Financing Body	Organizzation
15188	DAVA_INFRA-P2_B_21_01	SILK	POR PIEMONTE FESR 2014/2020 - INFRA-P 2 Linea B	2021	SARS-CoV-2 e non solo: portare fino alla sperimentazione umana un candidato farmaco antivirale pan-coronavirus. Thinking innovative to fight the unexpected.	Operativo	D'AVOLIO, ANTONIO	SCIENZE MEDICHE	REGIONE PIEMONTE	Università degli Studi di TORINO
14106	DAVA_FISR_COV_21_01	FAST-COV	FISR 2020 Covid	2020	Identificazione rapida e accurata dell'infezione da SARS-CoV-2	Operativo	D'AVOLIO, ANTONIO	SCIENZE MEDICHE	MINISTERO DELL'ISTRUZIONE, DELL'UNIVERSITA' E DELLA RICERCA	Università degli Studi del PIEMONTE ORIENTALE "Amedeo Avogadro"-Vercelli, Università degli Studi di TORINO, HUMANITAS University
4503	CESF_H2020_IMI2_20_02	Blo.Co.Vir	H2020 Innovative Medicines Initiative 2	2020	Innovative and multi tasking cyclodextrin based polymers for BLOcking COvid-19 VIRulence	Bozza	TROTTA, Francesco	CHIMICA		Università degli Studi di TORINO
3734	DIMM_PRIN_2017_19_01	--	PRIN 2017	2019	Programmi di Rilevante Interesse Nazionale - Bando PRIN 2017 -LINEA A/SETTORE LS7 - A blood-based biomarker approach for the optimization of treatment with immune-checkpoint inhibitors in solid tumors	Operativo	DI MAIO, Massimo	ONCOLOGIA	MINISTERO DELL'ISTRUZIONE, DELL'UNIVERSITA' E DELLA RICERCA	Università degli Studi di TORINO
3516	D_AA_H2020_RIA_18_02		H2020 Research and Innovation action	2019	PROGETTO H2020 ACRONIMO CAPA-CT II : Leveraging capacity for early phase clinical trials for filoviruses in UgandaL" PROF. D'AVOLIO	Operativo	D'AVOLIO, ANTONIO	SCIENZE MEDICHE	EUROPEAN COMMISSION	Università degli Studi di TORINO
3128	D_AA_H2020_RIA_18_01		H2020 Research and Innovation action	2018	PROGETTO H2020 VirTUAL :VULNERABLE POPULATION TUBERCULOSIS ANTIRETROVIRAL" PROF. D'AVOLIO	Operativo	D'AVOLIO, ANTONIO	SCIENZE MEDICHE	EUROPEAN COMMISSION	Università degli Studi di TORINO
2648	D_AA_FFABR_17_01		Fondo di Finanziamento delle Attività di Base di Ricerca	2018	Fondo Finanziamento delle Attività Base di Ricerca	Operativo	D'AVOLIO, ANTONIO	SCIENZE MEDICHE	MINISTERO DELL'ISTRUZIONE, DELL'UNIVERSITA' E DELLA RICERCA	Università degli Studi di TORINO