

BIOGRAPHICAL SKETCH

birth date: 01/03/1954

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Education and Training

1989 University of Pavia, Italy - Residency in Clinical Biology

1984 University of Padova, Italy - Residency in Clinical Pediatrics

1979 School of Medicine, University of Padova, Italy - Doctor in Medicine (M.D.)

Personal statement

From 1986, after founding the Laboratory of Molecular Pathology at the Cystic Fibrosis Center of the Hospital of Verona, Italy, I worked on the genetic disease cystic fibrosis with the original identification of the role of protein kinase C in the alternative activation of CFTR protein function (*J Biol Chem.* 1993;268:11321) and on the effect of nonsense mutations on CFTR gene expression (*J Clin Invest.* 1993;92:2683).

From 1992, I focused my research interests on replication-defective virus-derived vectors for CFTR gene transfer, by setting a novel functional analysis of CFTR in single cell based on membrane potential sensitive probes (Telethon project, ref. *Hum Gene Ther* 6, 1275–1233, 1995. To the aim of defining the precise molecular bases of interaction of adenoviruses with host cells, I led my research group in Verona to the identification of one of the major receptors involved in the binding of adenoviruses types 2 and 5 with mammalian cells (Telethon project, ref. *J Virol* 75, 8772–8780, 2001). In parallel, I extended and performed studies on the biosafety of vectors for gene transfer by investigating how adenoviruses elicit the early pro-inflammatory response by interacting with human respiratory cells, in terms of transcriptional regulation of pro-inflammatory genes (key ref. *J Virol* 80,11241-54,2006).

From 2001, mainly in collaboration with Colleagues at the University of Ferrara, IT, I further focused my interests on cystic fibrosis lung disease, to identify both novel molecular targets and innovative therapeutic molecules to correct CFTR genetic defect and to treat the inflammatory response in the lung of patients affected by cystic fibrosis, with special attention to the overexpression of the neutrophilic chemokine CXCL8/IL-8, hallmark of cystic fibrosis lung inflammation, on which I contributed in the mapping the transcriptional machinery activated upon bacteria-bronchial epithelial cells interactions. In these experimental tracks, I have been co-inventor of the organic molecule 4,6,4'-trimethylangelicin as F508del CFTR corrector and potentiator (2014), which has been included as Orphan Drug for cystic fibrosis by the European Medicines Agency.

From 2010, I extended my scientific interests to malignant brain tumors, mainly gliomas, with special regards to the epigenetic modulation of genes relevant to the response to first-line therapy and genes relevant to neo-angiogenesis in glioblastoma. I am now applying these basic findings to develop translational tools a) to detect the presence of glioma and monitor the progression with liquid biopsy and b) to identify biomarkers able to predict the response to second-line targeted therapy of glioblastomas (key ref. *Neuro Oncol.* 2021;23:264-276)

My main research focus is presently the investigation of the chronic inflammatory process intervening in the lungs of the patients affected by cystic fibrosis, even in the era of the new potent modulators of the mutant CFTR protein, the interplay between CFTR modulators, bacterial infection, pro-inflammatory mediators, anti-inflammatory drugs, in the aim of identifying more relevant molecular targets and more effective Cystic Fibrosis-tailored drugs to halt the progression of the respiratory tissue damage. In these experimental tracks, I have been co-inventor of the organic molecule GY971 as novel anti-inflammatory molecules for cystic fibrosis lung disease, which has been included as Orphan Drug for cystic fibrosis by the European Medicines Agency (2024).

Positions and Honors

Positions and Employment

27/10/2020-present

- Director, Research Center on Innovative Therapies for Cystic Fibrosis

Department of Life Sciences and Biotechnologies, University of Ferrara, Italy

Main activities: *Co-founder and coordinator of the new inter-department Research Center*

09/10/2018-present

- Emeritus

Department of Life Sciences and Biotechnologies, University of Ferrara, Italy

Main activities: *Teaching and research activity in the scientific areas of general and molecular pathology*

01/07/2017-present

- Research Advisor

Department of Neurosciences, Biomedicine and Movement, University of Verona, Italy

Main activities: *Scientific advisor and consultant on research projects*

01/03/1986-30/06/2017

- Head, Laboratory of Molecular Pathology, University Hospital of Verona, Italy

Main activities: *Group leader of experimental research projects in biomedicine, mainly focused on the genetic disease cystic fibrosis: investigation on the mechanisms of the genetic defect, development of pre-clinical approaches of gene transfer and small organic molecules to be applied to innovative therapies to correct the genetic defect and the lung inflammatory process. Preclinical investigator on malignant brain tumors as gliomas.*

01/11/1995 - 30/10/2017

- Adjunct Professor of General Pathology (SSD MED/04)

Main activities: *Regular courses of General Pathology at the School of Medicine of the University of Verona, IT - SSD MED/04: Patologia Generale (Academic disciplines list for Italian University research and teaching: Experimental medicine and pathophysiology)*

01/02/1985 - 28/02/1986

- Visiting Scientist, Laboratory of Membrane Biophysics, Cardiovascular Research Institute, University of California San Francisco, CA, U.S.A.

Main activities: *Experimental research on biochemistry and biophysics of biological membranes (Alan S. Verkman's team)*

01/01/1982 - 31/01/1985

- Research Fellow, Institute of General Pathology, University of Verona, Italy

Main activities: *Experimental research in biomedicine, mainly on the transmembrane signalling involved in the inflammatory response (Filippo Rossi's team)*

01/09/1979 - 31/12/1981

- Clinical Fellow, Cystic Fibrosis Center, Hospital of Verona, Italy

Main activities: *Physician in the field of pediatrics at the Cystic Fibrosis Center (Gianni Mastella's team)*

Professional Memberships and Other Experiences

- Member, Expert panel - European Medicines Agency, Amsterdam (NL) (2024-present)
- Member, Scientific Committee, Italian Cystic Fibrosis Research Foundation (2022-present)
- Member, Steering Committee, Research Center on Innovative Therapies for Cystic Fibrosis, Department of Life Sciences and Biotechnologies, University of Ferrara, IT (2020-present)
- Member, Scientific Advisory Board, Cystic Fibrosis Center, Verona, IT (2020-present)
- Member, Scientific Committee CORIS - *Consorzio Ricerca Sanitaria* - University of Padova and Regione Veneto, Padova, IT (2016 - 2023)
- Member, Permanent Committee for Pre-clinical and Clinical Research, Italian Society for Cystic Fibrosis (2017 - 2022)
- Member, Scientific Committee *Brain Research Foundation* - Verona, IT (2016 - 2023)
- Member, Scientific Advisory Board of Centre de Recherche Saint-Antoine, Université Pierre et Marie Curie/INSERM, Paris, F (2016 - 2019)
- Coordinator, Working group on Inflammation, Italian Society for Cystic Fibrosis (2007-2017)
- Member, *Working Group on Modifier Genes* European Society for Cystic Fibrosis, Paris, F (2011-2017)
- Member, Working group "*Programma Ricerca ed Innovazione* - Health Technology Assessment (PRIHTA) Regione Veneto, Venezia, IT (2011-2015)
- Member of the "*Nucleo Ricerca ed Innovazione*", Azienda Ospedaliera Universitaria Integrata (University Hospital) Verona, IT (2009-2015)

Editorial Board memberships

Frontiers in Pharmacology sections

- *Respiratory Pharmacology* (from 2015), Associate Editor (from 2023)
- *Pharmacology of Ion Channels and Channelopathies*, Associate Editor (from 2013)
- Cancers*, Associate Editor (from 2020)

Ad hoc peer reviewing (last 10 years)

Human Gene Therapy, European Respiratory Journal, The Journal of Leukocyte Biology, Clinical Chemistry, The Journal of Biological Chemistry, Molecular Therapy, Human Mutations, Journal of Neurochemistry, PlosOne, Frontiers in Immunology, Frontiers in Pharmacology, European Journal of Pharmacology, Experimental Lung Research, American Journal of Respiratory and Critical Care Medicine, Frontiers in Immunology, Current Medicinal Chemistry, Oncotarget, Molecular Therapy, Epigenomics, Cancers, Scientific Reports, Cells, Epigenomics, European Journal of Pharmacology, Current Opinion in Pharmacology, American Journal of Physiology, Biomolecules, International Journal of Molecular Sciences

Reviewer of applications for grant funding or evaluator of honors (last 10 years)

- University of North Carolina UNC, (Chapel Hill, NC, U.S.A.)
- Royal Irish Academia (Dublin, IE)
- Consorzio Italiano Interuniversitario Biotecnologie CIB (Rome, IT)
- Cystic Fibrosis Trust (London, UK).
- University of California (San Diego, CA, USA)
- Swiss Science Foundation (Geneve, CH)
- AFM-Telethon (Paris, F)
- Irish Thoracic Society (Dublin, IE)

Teaching activity

ASN 2012 - National certificate as Associate Professor of General Pathology (MED-04)

- University of Ferrara, IT - Course "Patologia cellulare recettoriale" (1995-96)
 - University of Verona, IT - Course "General Pathology" (1996-97)
 - University of Verona, IT - Course "General Pathology" - (from 1996 to 2001)
 - University of Verona, IT - "Molecular biology" - Residency course Clinical Biochemistry (2000-01)
 - University of Verona, IT - Course "General Pathology" - School of Medicine - (from 2004 to 2017)
 - University of Ferrara, IT - Lectures on Molecular oncology - Pharmaceutical chemistry course (2018-19; 2019-20; 2020-2021; 2021-2022) and on spectrofluorometric techniques - Biotechnology course (2018-19 and 2019-20)
 - University of Ferrara, IT - PhD Program "Life Sciences and Biotechnology" - Course "Biomarkers and Targets in Molecular Oncology" (2023-2024)
- GC has been tutor of several students for B.Sci. diplomas, post-graduate residents and PhD attending the University of Ferrara, Verona, Bologna, San Raffaele Vita e Salute (Milano,IT)

International patents

2016 United States Patent No. US 9.183.206 B2 March 15, 2016

TRIMETHYLANGELICIN AS CFTR CORRECTOR IN BRONCHIAL EPITHELIAL CELLS

Inventors: CABRINI Giulio, CASAVOLA Valeria, GAMBARI Roberto.

Research grants

in the different roles of Coordinator of multicenter project, Principal Investigator, Partner or Collaborator:

- 1) Italian Cystic Fibrosis Research Foundation. FFC #3/2016 MicroRNA therapeutics in CF: targeting CFTR and inflammation networks. 01/09/2016 – 31/08/2017
- 2) Italian Cystic Fibrosis Research Foundation FFC #1/2016 New generation trimethylangelicin (TMA) analogues for selective modulation of defective CFTR or inflammation 01/09/2016 – 31/08/2018
- 3) Italian Cystic Fibrosis Research Foundation FFC #22/2015 A systematic investigation of miglustat-derivative iminosugars clusters as possible anti-inflammatory agents for cystic fibrosis lung disease
01/09/2015 – 31/08/2017
- 4) Italian Cystic Fibrosis Research Foundation FFC #20/2015 Mitochondrial quality control machinery a role in the P.aeruginosa-triggered inflammatory response in cystic fibrosis 01/09/2015 – 31/08/2017
- 5) Italian Cystic Fibrosis Research Foundation FFC #9/2015 Identification of molecular targets to reduce the side effect of gating potentiators on the F508del-CFTR plasma membrane stability 01/09/2015 – 31/08/2017
- 6) Italian Cystic Fibrosis Research Foundation FFC #28/2014 *In vitro* study of potential pro-fibrotic effect of everolimus in different human airway cell lines. Searching for new biomarkers to optimize MTOR-inhibitor immunosuppressive treatment of cystic fibrosis patients undergoing lung transplantation 01/09/2014 – 31/08/2016
- 7) Italian Cystic Fibrosis Research Foundation FFC #24/2014 The role of GBA2 in cystic fibrosis lung inflammation:from molecular mechanism to therapeutic strategies 01/09/2014 – 31/08/2016
- 8) Italian Cystic Fibrosis Research Foundation FFC #19/2014 Mitochondrial Ca²⁺ dependent inflammosome activation exacerbates the P.aeruginosa-driven inflammatory response 01/09/2014 – 31/08/2016
- 9) Italian Cystic Fibrosis Research Foundation FFC #17/2014 TRPA1 channels as novel targets for anti-inflammatory therapies in CF lung 01/09/2014 – 31/08/2016
- 10) Italian Cystic Fibrosis Research Foundation FFC #8/2014 Design and synthesis of improved analogs of TMA for personalized treatment of cystic fibrosis 01/09/2014 – 31/08/2015

- 11) Italian Cystic Fibrosis Research Foundation FFC #1/2013 Mechanisms of action of trimethylangelicin in rescuing F508del CFTR functional expression Durata: 01/09/2013 – 31/08/2015
- 12) Italian Cystic Fibrosis Research Foundation FFC #14/2012 Structure-activity relationships (SAR) of neoglycoconjugates derived from deoxynojirimycin as possible therapeutic agents for Cystic Fibrosis lung disease, by modulating the metabolism of sphingolipids 01/09/2012 – 31/08/2014
- 13) Italian Cystic Fibrosis Research Foundation FFC #1/2012 The read-through approach for the treatment of cystic fibrosis caused by premature termination codons 01/09/2012 – 31/08/2014
- 14) Italian Cystic Fibrosis Research Foundation FFC #19/2011 Phospholipase C beta (PLCB) as candidate therapeutic target in CF lung proinflammatory signaling 01/09/2011 – 31/08/2013
- 15) Italian Cystic Fibrosis Research Foundation FFC #5/2011 European Cystic Fibrosis Modifier Gene Study 01/09/2011 – 31/08/2014
- 16) Italian Cystic Fibrosis Research Foundation FFC #1/2011 Properties of trimethylangelicin in F508del CFTR rescue 01/09/2011 – 31/08/2013
- 17) Italian Cystic Fibrosis Research Foundation FFC #17/2010 Molecular characterization of trimethylangelicin (TMA) and structurally-related compounds in CF lung disease: anti-inflammatory effects and potentiation of the CFTR biological activity 01/09/2010 – 31/08/2012
- 18) Italian Cystic Fibrosis Research Foundation FFC #16/2010 Modulation of sphingolipid metabolism as a strategy for the treatment of CF lung inflammation 01/09/2010 – 31/08/2012
- 19) Italian Cystic Fibrosis Research Foundation FFC #12/2010 Calcium signaling and PKC as targets of *Pseudomonas aeruginosa* infection 01/09/2010 – 31/08/2012
- 20) Italian Cystic Fibrosis Research Foundation FFC #8/2010 Decrease apical infection of CFTR by *Pseudomonas aeruginosa* infection: role of NHERF1 phosphorylation 01/09/2010 – 31/08/2011
- 21) Italian Cystic Fibrosis Research Foundation FFC #2/2010 Novel cellular model system and therapeutic molecules for the development of a read-through approach for CF caused by stop codon mutations of the CFTR gene 01/09/2010 – 31/08/2011
- 22) Italian Cystic Fibrosis Research Foundation FFC #19/2009 - Role of CFTR-Connexin interaction on PGE2 signaling and inflammation: implication for cystic fibrosis 01/09/2009 – 31/08/2011
- 23) Italian Cystic Fibrosis Research Foundation Project FFC #18/2009 Mapping IL-8 gene transcription machinery in bronchial epithelial cells 01/09/2009 – 31/08/2011
- 24) Italian Cystic Fibrosis Research Foundation Project FFC QUANTIGENE/2008 - National Service for gene expression 01/01/2008 – 31/12/2012
- 25) Italian Cystic Fibrosis Research Foundation Project FFC #12/2008 Anti-inflammatory effect of miglustat: sphingolipid ceramide metabolism as a therapeutic target for CF lung disease 01/09/2008 – 31/08/2010
- 26) Italian Cystic Fibrosis Research Foundation Project FFC #3/2008 - Genetic factors influencing pulmonary disease in Cystic Fibrosis (CF) patients 01/09/2008 – 31/08/2009
- 27) Italian Cystic Fibrosis Research Foundation Project FFC#13/2007 *A gene-targeted anti-inflammatory approach based on the Transcription Factor "decoy" strategy* 01/09/2007 – 31/08/2009
- 28) Italian Cystic Fibrosis Research Foundation Project FFC #22/2006 Genetic factors involved in the innate immunity influencing pulmonary disease in Cystic Fibrosis patients 01/09/2006 – 31/08/2007
- 29) Italian Cystic Fibrosis Research Foundation Project FFC #16/2006 Effect of correctors of defective CFTR on the *Pseudomonas aeruginosa*-dependent inflammatory response in respiratory epithelial cells 01/09/2006 – 31/08/2008
- 30) Italian Cystic Fibrosis Research Foundation Progetto FFC #1/2006 Novel methods of intracellular delivery of Δ F508-CFTR correctors 01/09/2006 – 31/08/2008
- 31) Italian Cystic Fibrosis Research Foundation Project FFC #4/2005 - Novel generation lentiviral vectors: evaluation of inflammatory potential in human respiratory cells. 01/09/2005 – 31/08/2006
- 32) Cariverona Foundation Call 2005 – A molecular biosensor of the immunity in the airway tract: application to safety of innovative therapies in cystic fibrosis 01/01/2006 – 31/12/2008
- 33) Italian Cystic Fibrosis Research Foundation Project FFC #14/2004 - Interaction in vitro between cystic fibrosis pathogens and epithelial cells expressing the cystic fibrosis transmembrane conductance regulator (CFTR). 01/09/2004 – 31/08/2006

- 34) Italian Cystic Fibrosis Research Foundation Project FFC #4/2004 - Role of Adenovirus Receptors in the activation of Mitogen-Activated Proteins Kinase pathways and Nuclear Factor - κ B in human airways epithelial cells. 01/09/2004 – 31/08/2005
- 35) Italian Cystic Fibrosis Research Foundation Project FFC #1/2004 - Dissection of folding/defolding processes in CFTR and DF508 CFTR. Use of disarmed toxins to target chaperones and assist refolding and expression of DF508 CFTR. 01/09/2004 – 31/08/2005
- 36) Telethon Foundation Call 1999 – Research area 2.3 (Advanced research on gene therapy) Project A.153 Interactions of subgroup C adenoviruses with cell receptors. Relevance to targeting and efficiency of adenovirus-derived vectors 01/09/1999 – 31/08/2001
- 37) Telethon Foundation Call 1993 – Research area 2.3 (Research on gene therapy) Project A.04 Gene therapy of cystic fibrosis in airway cells: functional expression of the gene by viral vectors 01/09/1993 – 31/08/1994

Scientific dissemination (last years)

GC has been invited for lectures and speeches or as chairperson in several International and National scientific meetings and Universities as reported in this selection:

- European Cystic Fibrosis Conference – New Frontiers in Basic Science of Cystic Fibrosis – Tavira, Portugal, 2009

Co-chairperson Symposium 7 – Inflammation in Cystic Fibrosis (with T. Bonfield, U.S.A.)

Co-chairperson Special Group Discussion III – Modifier genes – what have we learnt ? (with M. Drumm, U.S.A.)

- European Cystic Fibrosis Society – New Frontiers in Basic Science of Cystic Fibrosis – Carcavelos, Portugal, 2010

Invited speaker: Pharmacological modulation of chemotactic signalling in CF respiratory models.

- European Cystic Fibrosis Conference – New Frontiers in Basic Science of Cystic Fibrosis – Carcavelos, Portugal, 2010

Co-chairperson Symposium 5 – Inflammatory signalling in CF lung disease (with A. Mehta, U.K.)

- European Cystic Fibrosis Conference – New Frontiers in Basic Science of Cystic Fibrosis – Pisa, IT, 2011

Co-chairperson Symposium 5 – Inflammatory mechanisms in CF as therapeutic targets (with B. Scholte, NL) and Invited speaker: *Modulating chemotactic signaling: novel molecular targets*

- 26th Annual North American Cystic Fibrosis Conference - Orlando, Florida 2012

Workshop Session. APP/AD: Inflammation, oxidants and cytokines (Research).

Invited speaker: Introductory overview on inflammation and redox in CF lung pathology.

- Institute Pasteur - Innate host defence and inflammation Unit - Paris, F, 2013

Seminar: Regulation of expression of IL-8 gene induced by *P.aeruginosa* in epithelial cells: the model of cystic fibrosis lung disease

- European CF Conference - New Frontiers in Basic Science of Cystic Fibrosis – Malaga, Spain, 2013

Co-chairperson Symposium: Infection, inflammation and immunity (with M. Chignard, Paris, F)

- European Cystic Fibrosis Society – New Frontiers in Basic Science of Cystic Fibrosis – Malaga, Spain, 2013

Invited speaker: Phospholipase C beta and pro-inflammatory signalling in bronchial epithelial cells.

- European CF Society – New Frontiers in Basic Science of Cystic Fibrosis – St. Julians, Malta, 2014

Invited speaker: *P. aeruginosa* and modulation of IL-8 gene expression in bronchial epithelial cells

- European CF Conference - New Frontiers in Basic Science of Cystic Fibrosis - Pisa, Italy 2016

Co-chairperson Symposium: Therapeutic approaches (with M. Amaral, Lisboa, PT)

- European Cystic Fibrosis Society –Basic Science Conference - Pisa, Italy, 2016

Invited speaker: Intracellular calcium mobilization as amplifier of the inflammatory response in CF bronchial epithelial cells.

- IRCSS Istituto Neurologico "Carlo Besta" - Ciclo aggiornamenti in neuro-oncologia - Milano 2017 Seminar: Epigenetics of gliomas

- Italian National research Council (CNR) - Institute of Protein Biochemistry - Napoli 2017

Seminar: Inflammatory response in cystic fibrosis lungs: in search of druggable targets.

- University of Ferrara - Department of Life Sciences and Biotechnology - Ferrara 2018

Seminar: Innovative Therapies for cystic fibrosis from bench to bedside

- Società Italiana Genetica Umana - XXI Congresso Nazionale - Catania 2018

Plenary Session Lecture: Terapie innovative della fibrosi cistica: dal laboratorio al letto del paziente

- European Cystic Fibrosis Society Congress - Milano, 9-12 giugno 2021

Symposium 18 - Addressing inflammation in cystic fibrosis - Invited Chairperson

- European Cystic Fibrosis Society – Basic Science Conference - Dubrovnik, HR, 2023

Invited speaker: Intracellular calcium mobilization as amplifier of the inflammatory response in CF bronchial epithelial cells.

Co-chairperson Symposium 4: Mucus and mucins (with C. Ehre, Chapel Hill, NC, USA)

List of selected full papers

Publications as senior author (**), correspondence author (**), co-senior author (*)

Esposito A, Rossi A, Stabile M, Pinto G, D Fino I, Melessike M, Tamanini A, Cabrini G, Lippi G, Aureli M, Loberto N, Renda M, Galiotta LJV, Amoresano A, Dechecchi MC, De Gregorio E, Bragonzi A, Guaragna A. Assessing the Potential of *N*-Butyl-*l*-deoxynojirimycin (l-NBDNJ) in Models of Cystic Fibrosis as a Promising Antibacterial Agent.

ACS Pharmacol Transl Sci. 2024;7:1807-1822.

Bezzerri V, Gentili V, Api M, Finotti A, Papi C, Tamanini A, Boni C, Baldisseri E, Olioso D, Duca M, Tedesco E, Leo S, Borgatti M, Volpi S, Pinton P, **Cabrini G**, Gambari R, Blasi F, Lippi G, Rimessi A, Rizzo R, Cipolli M. SARS-CoV-2 viral entry and replication is impaired in Cystic Fibrosis airways due to ACE2 downregulation.

Nat Commun. 2023;14:132.

Ribeiro CMP, Higgs MG, Muhlebach MS, Wolfgang MC, Borgatti M, Lampronti I, **Cabrini G****. Revisiting Host-Pathogen Interactions in Cystic Fibrosis Lungs in the Era of CFTR Modulators.

Int J Mol Sci. 2023;24:5010.

Cabrini G**. CFTR Modulators and Reduction of Airway Inflammation in Cystic Fibrosis: How Much is Enough?

Curr Med Chem. 2023;30:2205-2208.

Tupini C, Chilin A, Rossi A, De Fino I, Bragonzi A, D'Aversa E, Cosenza LC Vaccarin C, Sacchetti G, Borgatti M, Tamanini A, Dechecchi MC, Sanvito F, Gambari R, **Cabrini G**, Lampronti I. New TMA (4,6,4'-Trimethyl angelicin) Analogues as Anti-Inflammatory Agents in the Treatment of Cystic Fibrosis Lung Disease.

Int J Mol Sci. 2022;23:14483.

Vaccarin C, Gabbia D, Franceschinis E, De Martin S, Roverso M, Bogialli S, Sacchetti G, Tupini C, Lampronti I, Gambari R, **Cabrini G**, Dehecchi MC, Tamanini A, Marzaro G, Chilin A. Improved Trimethylangelicin Analogs for Cystic Fibrosis: Design, Synthesis and Preliminary Screening. *Int J Mol Sci.* 2022;23:11528.

Papi C, Gasparello J, Zurlo M, Manicardi A, Corradini R, **Cabrini G**, Gambari, R, Finotti A. Combined Treatment of Bronchial Epithelial Calu-3 Cells with Peptide Nucleic Acids Targeting miR-145-5p and miR-101-3p: Synergistic Enhancement of the Expression of the Cystic Fibrosis Transmembrane Conductance Regulator (*CFTR*) Gene. *Int J Mol Sci.* 2022;23:9348.

Rossi A, Bragonzi A, Medede M, De Fino I, Lippi G, Prodocimi M, Tamanini A, **Cabrini G***, Dehecchi MC. β -sitosterol ameliorates inflammation and *Pseudomonas aeruginosa* lung infection in a mouse model. *J Cyst Fibros.* 2023;22:156-160.

Catelan S, Oliosio D, Santangelo A, Scapoli C, Tamanini A, Pinna G, Sala F, Lippi G, Nicolato A, **Cabrini G***, Dehecchi MC. miRNAs in Serum Exosomes for Differential Diagnosis of Brain Metastases. *Cancers* (Basel). 2022;14:3493.

Cabrini G**, Rimessi A, Borgatti M, Pinton P, Gambari R. Overview of CF lung pathophysiology. *Curr Opin Pharmacol.* 2022;64:102214.

Ribeiro CMP, McElvaney NG, **Cabrini G****. Editorial: Novel Anti-Inflammatory Approaches for Cystic Fibrosis Lung Disease: Identification of Molecular Targets and Design of Innovative Therapies. *Front Pharmacol.* 2021;12:794854.

Oliosio D, Caccese M, Santangelo A, Lippi G, Zagonel V, **Cabrini G***, Lombardi G, Dehecchi MC. Serum Exosomal microRNA-21, 222 and 124-3p as Noninvasive Predictive Biomarkers in Newly Diagnosed High-Grade Gliomas: A Prospective Study. *Cancers* (Basel). 2021;13:3006.

Tamanini A, Fabbri E, Jakova T, Gasparello J, Manicardi A, Corradini R, **Finotti A, Borgatti M, Lampronti I**, Munari S, Dehecchi MC, **Cabrini G**, Gambari R. A Peptide-Nucleic Acid Targeting miR-335-5p Enhances Expression of Cystic Fibrosis Transmembrane Conductance Regulator (*CFTR*) Gene with the Possible Involvement of the *CFTR* Scaffolding Protein NHERF1. *Biomedicines.* 2021;9:117.

Fabbri E, Tamanini A, Jakova T, Gasparello J, Manicardi A, Corradini R, Finotti A, Borgatti M, Lampronti I, Munari S, Dehecchi MC, **Cabrini G**, Gambari R. Treatment of human airway epithelial Calu-3 cells with a peptide-nucleic acid (PNA) targeting the microRNA miR-101-3p is associated with increased expression of the cystic fibrosis Transmembrane Conductance Regulator () gene. *Eur J Med Chem.* 2021; 209:112876

Santangelo A, Rossato M, Lombardi G, Benfatto S, Lavezzari D, De Salvo GL, Indraccolo S, Dehecchi MC, Prandini P, Gambari R, Scapoli C, Di Gennaro G, Caccese M, Eoli M, Rudà R, Brandes AA, Ibrahim T, Rizzato S, Lolli I, Lippi G, Delledonne M, Zagonel V, **Cabrini G****. A Molecular Signature associated with prolonged survival in Glioblastoma patients treated with Regorafenib. *NeuroOncol.* 2021;23:264-276.

Mancini G, Loberto N, Oliosio D, Dehecchi MC, **Cabrini G**, Mauri L, Bassi R, Schiumarini D, Chiricozzi E, Lippi G, Pesce E, Sonnino S, Pedemonte N, Tamanini A, Aureli M. GM1 as Adjuvant of Innovative Therapies for Cystic Fibrosis Disease. *Int J Mol Sci.* 2020;21:4486.

Rimessi A, Pozzato C, Carparelli L, Rossi A, Ranucci S, De Fino I, Cigana C, Talarico A, Wieckowski

MR, Ribeiro CMP, Trapella C, Rossi G, **Cabrini G**, Bragonzi A, Pinton P. Pharmacological modulation of mitochondrial calcium uniporter controls lung inflammation in cystic fibrosis. *Sci Adv*. 2020;6:eaax9093.

Cabrini G**, Rimessi A, Borgatti M, Lampronti I, Finotti A, Pinton P, Gambari R. Role of Cystic Fibrosis Bronchial Epithelium in Neutrophil Chemotaxis. *Front Immunol*. 2020;11:1438.

Sultan S, Rozzi A, Gasparello J, Manicardi A, Corradini R, Papi C, Finotti A, Lampronti I, Reali E, **Cabrini G**, Gambari R, Borgatti M. A Peptide Nucleic Acid (PNA) Masking the miR-145-5p Binding Site of the 3'UTR of the Cystic Fibrosis Transmembrane Conductance Regulator (<i>CFTR</i>) mRNA Enhances CFTR Expression in Calu-3 Cells. *Molecules*. 2020;25(7):1677.

Milani R, Brognara E, Fabbri E, Manicardi A, Corradini R, Finotti A, Gasparello J, Borgatti M, Cosenza LC, Lampronti I, Dehecchi MC, **Cabrini G**, Gambari R. Targeting miR-155-5p and miR-221-3p by peptide nucleic acids induces caspase-3 activation and apoptosis in temozolomide-resistant T98G glioma cells. *Int J Oncol*. 2019;55:59-68.

De Fenza M, D'Alonzo D, Esposito A, Munari S, Loberto N, Santangelo A, Lampronti I, Tamanini A, Rossi A, Ranucci S, De Fino I, Bragonzi A, Aureli M, Bassi R, Tironi M, Lippi G, Gambari R, **Cabrini G**, Palumbo G, Dehecchi MC, Guaragna A. Exploring the effect of chirality on the therapeutic potential of N-alkyl-deoxyiminosugars: anti-inflammatory response to *Pseudomonas aeruginosa* infections for application in CF lung disease. *Eur J Med Chem*. 2019;175:63-71.

Finotti A, Gasparello J, Fabbri E, Tamanini A, Corradini R, Dehecchi MC, **Cabrini G**, Gambari R. Enhancing the Expression of CFTR Using Antisense Molecules against MicroRNA miR-145-5p. *Am J Respir Crit Care Med*. 2019;199:1443-1444.

Cabrini G.** Innovative Therapies for Cystic Fibrosis: The Road from Treatment to Cure. *Mol Diagn Ther*. 2018 Nov 26.

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