Curriculum vitae Maurizio Parola

Personal details

Born in: 23rd May 1957 Moncalieri
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Education

1991 - Brunel University, Uxbridge, Middlesex (United Kingdom), PhD in Biochemistry

1987 - Università degli Studi di Torino – PhD in Experimental and Molecular Pathology

1980 - Università degli Studi di Torino – Degree in Biology

Professional experiences and current position

from 2018 to 30/6/2021	Member of the Commission for *Abilitazione Scientifica Nazionale* (ASN), SC 06/A2 - Patologia Generale e Patologia Clinica
from 1/10/2015 to 30/9/2021	President of the Course of Study in Biomedical Laboratory Techniques (Tecniche di Laboratorio Biomedico) Università degli Studi di Torino
from 1/11/2000 - today	Full Professor of General Pathology (ssd MED/04), Faculty of Medicine and Surgery (now School of Medicine) Università degli Studi di di Torino
from 2007 to 2012	Head of the Dept. Experimental Medicine and Oncology, Università degli Studi di Torino
from 1990 to 2000	University Researcher (ssd MED/04) Faculty of Medicine and Surgery (now School of Medicine) Università degli Studi di di Torino
from 1983 to 1987	Fellow, PhD Course in Experimental and Molecular Medicine, Università degli Studi di Torino
from 1981 to 1982	Research Fellow, National Foundation for Cancer Research (Bethesda, Maryland, USA)

Participation to Directive Boards of Scientific Societies and/or Institutions:

Honors

Giovanni Angelo Costa Award– 1995 – Università degli Studi di Torino

Teaching activity:

Present teaching activity (Course & Degree) as Full Professor at the School of Medicine – Università degli Studi di Torino:

- General Pathology - Degree in Medicine and Surgery – Torino
- General Pathophysiology – Degree in Biomedical Laboratory Techniques
- General Pathology (now Cellular and molecular basis of human diseases) – Degree in Medical Biotechnology
- General Pathophysiology – School of Specialization in Clinical Pathology and Clinical Biochemistry
- General Pathology - School of Specialization in Medical Genetics
- General Pathology - School of Specialization in Digestive Diseases
- General Pathology - School of Specialization in Anatomical Pathology

Research main topics

Long-standing experience in running preclinical and translational studies on pathogenic mechanisms underlying the progression of chronic liver diseases (CLDs), with a recent focus on the genesis and development of hepatocellular carcinoma (HCC), including:
i) studies on isolated liver cells, hepatic myofibroblasts (HSC/MFs) and liver cancer (HCC) cells,
ii) studies in animal models, including transgenic mice, of chronic hepatic damage and repair;
iii) studies involving analysis of plasma/serum samples and liver specimens obtained from human patients, including HCC patients;
iv) experiments designed to investigate either the involvement of hypoxia or of signal transduction (including redox signalling) in the pathogenesis of liver-related chronic diseases.

Main projects as PI:

2023-2027	PI for the project: Oncostatin M, tumor associated macrophages and acquired immunity in NAFLD/NASH - related hepatocellular carcinoma. Agency: AIRC (Italian Association for Cancer Research) Milano, Italia (IG-2022, Id 27667; € 524.000,00)
2018-2022	PI for the project: Hepatocellular carcinoma development in non-alcoholic fatty liver disease: role of specific hypoxia-related mediators. Agency AIRC (Italian Association for Cancer Research) Milano, Italia (IG-2017, Id 20361; € 403.000,00)
2015-2017	PI for the project: Hypoxia and lipotoxicity in the progression of non-alcoholic fatty liver disease and the development of hepatocellular carcinoma. Agency: AIRC (Italian Association for Cancer Research) Milano, Italia (IG-2014, Id 15274; € 216.000,00)
2011-2014	PI of the research unit for a Research Contract with Shire Pharmaceutical Development Ltd. (Basingstoke, Hampshire RG24, UK) for experimental studies on the effects of new diuretic drugs on experimental cirrhosis and refractary ascite. (€ 172.000,00)
2011-2013	PI of the local research unit in a multicentric study on: 'Interactions between resident and infiltrating liver cells as a driving force for the progression of non-alcoholic fatty liver disease (NAFLD). Agency: Fondazione CARIPLO, Italia (€ 80.000,00; Scientific Research in Biomedicine, 2011)
2009-2011	PI of the local research unit for the project "The role of hypoxia in the fibrogenic progression of NASH'. Agency: MIUR, Rome, Italia (€ 77.689,00; PRIN 2009)
2007-2009	PI for the project "Experimental regenerative medicine in hepatology as a future alternative to liver transplant". Agency: Fondazione CRT, Torino, Italia (€ 80.000,00, Fondazione CRT – Progetto Alfieri 2007)
2006-2008	PI of the local research unit for the project 'Fibrogenesis and angiogenesis in experimental chronic liver diseases". Agency: MIUR, Roma, Italia (€ 54.300,00; PRIN 2006)
2001-2003	National Coordinator for the project: 'Biological effects of oxidative stress and hypoxia. Molecular mechanisms of signal transduction, gene expression and cell response' Agency: MIUR, Roma, Italia(€ 300.000,00; FIRB 2001)
2000-2002	National Coordinator for the project: 'Cell and molecular biology of liver fibrosis'. Agency: MIUR, Roma, Italia (€ 232.406,00; PRIN 2000)

Bibliometry (1982-present) (*www.scopus.com*)

At 1st March 2023

Scopus:	H index 54,	citations: 10594
ISI Web of Science	H index 56,	citations: 10418
Google Scholar	H index 65,	citations: 15062

publications

At 1st March 2023:

- Author of more than 200 scientific articles, reviews or chapters published on peer reviewed international scientific journals (153 actually indexed on PubMed, 138 having ISI Impact Factor; 159 actually indexed on Scopus) or in scientific books published in English.

A full list of scientific articles, reviews and editorials published on peer reviewed international scientific journals are in the accompanying pdf file.

Selected 20 publications (1992-2022)

1. **Parola M.**, Leonarduzzi G., Biasi F., Albano E., Biocca M.E., Poli G., and Dianzani M.U. Vitamin E dietary supplementation protects against carbon tetrachloride – induced chronic liver damage and cirrhosis. Hepatology (1992) 16, 1014-1021.
2. **Parola M.**, Robino G., Marra F., Pinzani M., Bellomo G., Leonarduzzi G., Chiarugi P., Camandola S., Poli G., Waeg G., Gentilini P., Dianzani M.U. HNE interacts directly with JNK isoforms in human hepatic stellate cells. J. Clin. Invest. (1998) 102, 1942-1950.
3. **Parola M.**, Bellomo G., Robino G., Barrera G., Dianzani M.U. 4-Hydroxynonenal as a biological signal: molecular bases and pathophysiological implications.Antioxidant & Redox Signaling (1999) 1, 255-284.
4. **Parola M.**, Robino G. Oxidative stress – related molecules and liver fibrosis. J. Hepatol. (2001) 35, 297-306.
5. Novo E. , Marra F., Zamara E., Valfrè di Bonzo L., Caligiuri A., Cannito S., Antonaci C., Colombatto S., Pinzani M., **Parola M.** Dose-dependent and divergent effects of superoxide anion on cell death, proliferation and migration of activated human hepatic stellate cells. Gut (2006) 55:91-98. doi:10.1136/gut.2005.069633
6. Novo E. , Marra F., Zamara E., Valfrè di Bonzo L., Monitillo L., Cannito S., Petrai I. Mazzocca A., Bonacchi A., DeFranco R., Colombatto S., Autelli R., Pinzani M., **Parola M.** Overexpression of Bcl-2 by activated human hepatic stellate cells: resistance to apoptosis as mechanism of progressive hepatic fibrogenesis. Gut (2006) 55: 1174-1182. doi: 10.1136/gut.2005.082701
7. Valfrè di Bonzo L, Ferrero I, Cravanzola C, Mareschi K, Rustichelli D, Novo E, Sanavio F, Cannito S, Zamara E, Bertero M, Davit A, Francica S, Novelli F, Colombatto S, Fagioli F, **Parola M**. Human mesenchymal stem cells as a two-edged sword in hepatic regenerative medicine: engraftment and hepatocyte differentiation versus profibrogenic potential. Gut (2008), 57:223-231. Doi: 10.1136/gut.2006.111617.
8. **Parola M**, Marra F., Pinzani M. Myofibroblast - like cells and liver fibrogenesis: emerging concepts in a rapidly moving scenario. Mol Asp Med (2008), 29:59-67. Doi:10.1016/j.mam.2007.09.002.
9. Cannito S, Novo E, Valfrè di Bonzo L, Busletta C, Colombatto S, **Parola M**. Epithelial-mesenchymal transition: from molecular mechanisms, redox regulation to implications in human health and disease". Antioxidants and Redox Signaling (2010) 12:1383-1430. doi:10.1089/ars.2009.2737.
10. Novo E, Busletta C, Valfrè di Bonzo L, Povero D, Paternostro C, Mareschi K, Ferrero I, David E, Bertolani C, Caligiuri A, Cannito S, Tamagno E, Compagnone A, Colombatto S, Marra F, Fagioli F, Pinzani M, **Parola M**. Intracellular reactive oxygen species are required for directional migration of resident and bone marrow – derived profibrogenic cells. J Hepatol (2011), 54:964-974. doi: 10.1016/j.jhep.2010.09.022
11. Novo E, Povero D, Busletta C, Paternostro C, Valfrè di Bonzo L, Cannito S, Compagnone A, Bandino A,

Marra F, Colombatto S, Pinzani M, **Parola M**. The biphasic nature of hypoxia-induced directional migration of activated human hepatic stellate cells. J Pathol (2012), 226:588-97. doi: 10.1002/path.3005.
12. Bocca C, Novo E, Miglietta A, **Parola M.** Angiogenesis and fibrogenesis in chronic liver diseases. Cell Mol Gastroenterol & Hepatol (2015), 1:477-488. doi: 10.1016/j.jcmgh.2015.06.011
13. Rovida E, Di Maira G, Tusa I, Cannito S, Paternostro C, Navari N, Vivoli E, Deng X, Gray NS, Esparís-Ogando A, David E, Pandiella A, Dello Sbarba P, **Parola M**, Marra F. The mitogen-activated protein kinase ERK5 regulates the development and growth of hepatocellular carcinoma. Gut (2015) 64:1454-65. Epub 2014 Sep 2. Doi:10.1136/gutjnl-2014-306761.
14. Morello E, Sutti S, Foglia B, Novo E, Cannito S, Bocca C, Rajsky M, Bruzzì S, Abate ML, Rosso C, Bozzola C, David E, Bugianesi E, Albano E, **Parola M**. Hypoxia-inducible factor 2α drives nonalcoholic fatty liver progression by triggering hepatocyte release of histidine rich glycoprotein.Hepatology (2018), 67:2196-2214. doi: 10.1002/hep.29754
15. **Parola M**, Pinzani M. Liver fibrosis: pathophysiology, pathogenetic targets and clinical issues.Mol Aspects Med (2019), 65, 37-55. doi: 10.1016/j.mam.2018.09.002
16. Cannito S, Foglia B, Villano G, Turato C, Delgado TC, Morello E, Pin F, Novo E, Napione L, Quarta S, Ruvoletto M, Fasolato S, Zanus G, Colombatto S, Lopitz-Otsoa F, Fernández-Ramos D, Bussolino F, Sutti S, Albano E, Martínez-Chantar ML, Pontisso P, **Parola M**. SerpinB3 differently up-regulates hypoxia inducible factors -1α and -2α in hepatocellular carcinoma: mechanisms revealing novel potential therapeutic targets. Cancers (Basel). 2019 Dec 4;11(12). pii: E1933. doi: 10.3390/cancers11121933
17. Foglia B, Sutti S, Pedicini D, Cannito S, Bocca C, Maggiora M, Bevacqua MR, Rosso C,Bugianesi E, Albano E, Novo E, **Parola M**. Oncostatin M, a novel profibrogenic mediator, is involved in the progression non-alcoholic fatty liver disease and stimulates migration of myofibroblasts. Cells. 2019 Dec 20;9(1), pii: E28. doi: 10.3390/cells9010028
18. Foglia B, Sutti S, Cannito S, Rosso C, Maggiora M, Autelli R, Novo E, Bocca C, Villano G, Ramavath NN, Younes R, Tusa I, Rovida E, Pontisso P, Bugianesi E, Albano E, **Parola M**. Hepatocyte-specific deletion of HIF2α prevents NASH-related liver carcinogenesis by decreasing cancer cell proliferation. Cell Mol Gastroenterol Hepatol 2022, 13(2):459-482. Doi:10.1016/j.jcmgh.2021.10.002
19. Di Maira G, Foglia B, Napione L, Turato C, Maggiora M, Sutti S, Novo E, Alvaro M, Autelli R, Colombatto S, Bussolino F, Carucci P, Gaia S, Rosso C, Biasiolo A, Pontisso P, Bugianesi E, Albano E, Marra F, **Parola M**, Cannito S. Oncostatin M is overexpressed in NASH-related hepatocellular carcinoma and can promote increased invasiveness of cancer cells and angiogenesis. J Pathol 2022, 257(5):82-95. Doi: 10.1002/path.5871
20. Novo E, Cappon A, Villano G, Quarta S, Cannito S, Bocca C, Turato C, Guido M, Maggiora M, Protopapa F, Sutti S, Provera A, Ruvoletto M, Biasiolo A, Foglia B, Albano E, Pontisso P, **Parola M**. SerpinB3 as a pro-inflammatory mediator in the progression of experimental non-alcoholic fatty liver disease. Front Immunol 2022, 13:910526. Doi: 10.3389/fimmu.2022.910526