### PERSONAL INFORMATION



## Elisabetta Bugianesi, MD PhD

Division of Gastroenterology, aly



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# WORK EXPERIENCE Full Professor of Gastroenterology 2022 - current **Dept of Medical Sciences** University of Torino, Italy

- 2018 current Scientific Director and Deputy Director Dept of Medical Sciences **Dept of Medical Sciences** University of Torino, Italy
- 2021 current Director - Residency of Gastroenterology, School of Medicine Dept of Medical Sciences, AOU Città della Salute e della Scienza di Torino University of Torino, Italy

Director - Laboratory of Molecular Hepatology and Gastroenterology 2015 - current Dept of Medical Sciences, AOU Città della Salute e della Scienza di Torino

University of Torino, Italy

- Associate Professor of Gastroenterology 2015 - current Dept of Medical Sciences, AOU Città della Salute e della Scienza di Torino
  - University of Torino, Italy
  - Assistant Professor of Gastroenterology 2005 - 2015

Dept of Medical Sciences, AOU Città della Salute e della Scienza di Torino

- University of Torino, Italy
- Dirigente Medico I livello 2005 – current
  - Division of Gastroenterolgy

AOU Città della Salute e della Scienza di Torino, Torino, Italy

Dirigente Medico di I livello 1999-2004 **Division of Internal Medicine** AOU Città della Salute e della Scienza di Torino, Torino, Italy

### EDUCATION AND TRAINING

1998	PhD degree in Hepatology
1994 - 1998	PhD Fellowship in Hepatology c/o Gastroenterology and Hepatology Division, Cleveland Clinic (Prof AJ McCullough) and c/o Mass-Spect Lab (Prof SC Kalhan), Case Western Reserve University (CWRU), Cleveland (OH), USA = Stable isotopes techniques for in vivo metabolic studies = Clamp technique for quantification of insulin clearance
1988 -1993	Medical Residency in Internal Medicine cum laude University of Bologna, Italy
1989	Research Fellow, Division of Hepatology (Prof. N. McIntyre), Royal Free Hospital, London, UK
1988	Degree in Medical Doctor cum laude University of Bologna, Italy

### WORK ACTIVITIES

SCIENTIFIC EXPERTISE Prof. Bugianesi is a clinician and scientist, internationally acknowledged expert on Non-Alcoholic Fatty Liver Disease (NAFLD/NASH) with 20 years of experience in the field. She has made a particular impact with work describing the metabolic mechanisms related to the onset and progression of liver damage and its links with the metabolic syndrome and its components, the natural history of the disease, including the first demonstration of HCC as a complication, the development of non-invasive markers of fibrosis and the involvement in several trials for the treatment of NAFLD. Her post-graduate training included a PhD fellowship in Hepatology at Case Western

Reserve University in USA, where she became expert in the use of stable isotopes to study in vivo metabolism.

Main areas of investigation (listed in order of temporal development):

- Synthesis of urea in liver cirrhosis, mathematical models and the impact of nutrients, hormones and drugs

- Diabetes and cirrhosis: pathogenesis and clinical implications
- Metabolism of sulfur amino acids and glutathione synthesis in cirrhosis
- Nutritional status and chronic liver diseases: pathogenesis and clinical implications
- Evaluation of gluconeogenesis in cirrhosis
- Metabolic alterations in HCV-related chronic liver diseases
- Metabolic alterations resulting from OLT (orthotopic liver transplant)
- Pathogenetic mechanisms of Nonalcoholic fatty liver disease (NAFLD) and Nonalcoholic Steatohepatitis (NASH)
- Epidemiology and natural history of NAFLD
- NASH and hepatocellular carcinoma

- Biomarker discovery for the diagnosis and risk-stratification of patients with NAFLD

- Clinical trials examining new medical therapies for NAFLD
- Extrahepatic complications of NAFLD

Scientific skills:

- Use of stable isotopes for the in vivo study of glucose, lipid and protein metabolism
- Design of research projects
- Clinical trial design
- Database building and data analysis
- Writing scientific manuscripts

Scientific publications:

total number of publications in peer-review journals: 266 total Impact Factor (IF) 2.845 average IF/paper 10.7 total number of citations: 35.468 H index (Scopus): 80 Full list of publications in attachment

- CLINICAL EXPERTISE Prof Bugianesi's clinical practice is based in the Division of Gastroenterology at the AOU Città della Scienza e della Salute di Torino. She leads the regional NAFLD specialist clinical service based at the San Giovanni Antica Sede Hospital, in Torino. She has expertise in the management of patients with a range of acute and chronic liver conditions including:
  - Non-Alcoholic Fatty Liver Disease (NAFLD) & Non-Alcoholic Steatohepatitis
    (NASH)
  - Alcoholic Liver Disease
  - Chronic Viral Hepatitis
  - Autoimmune hepatitis, PSC & PBC
  - Metabolic Inherited Liver Diseases (Haemochromatosis, Wilson's Disease, Alpha1antitrypsin deficiency, LAL-D partial deficiency, Apo-B partial deficiency)
  - Cirrhosis and Portal hypertension, HCC

Prof. Bugianesi is the Director of the Gastro-Hepatology Lab located at the San Giovanni Antica Sede Hospital, in Torino, with both academic and clinical activity in the field of liver disease of various aetiology (metabolic, viral, autoimmune, genetic), Hepatocellular carcinoma (HCC) and Inflammatory Bowel Disease.

SCIENTIFIC GRANTS - Horizon 2020 IMI2 – LITMUS: Liver Investigation: Testing Markers Utility in Steatohepatitis (2017- current) – Country Leader

- Horizon 2020 EPoS: Elucidating the pathways of Steatohepatitis (2015 - 2018) – Workpackage leader and Unit PI

FP7-HEALTH-2009-SINGLE STAGE FLIP: Fatty Liver: Inhibition of Progression (2010
 2013) – Workpackage leader and Unit PI

- Progetto Eccellenza MUR Project n. D15D18000410001 (2018 – current) – Workpackage Leader

- Progetto Ricerca Sanitaria Finalizzata 2008 Ministry of Health Unit PI
- PRIN 2009 MIUR Unit PI
- PRIN 2004 MIUR PI
- Progetto Ricerca Sanitaria Finalizzata 2002 Ministry of Health PI

Editorial activity	<ul> <li>Commissioner and Workpackage leader of the Lancet - EASL commission on Liver Disease in Europe (2018 – current)</li> <li>Associate Editor, Journal of Hepatology (2015 – current)</li> <li>Web Editor, Journal of Hepatology (2012 – 2014)</li> <li>Editorial Board, Nature Gastroenterolgy &amp; Hepatology</li> <li>Editorial Board, Hepatology</li> <li>Editorial Board, Liver International</li> <li>Editorial Board, Digestive and Liver Disease</li> </ul>
Peer Review Activity	International journals including 'Lancet', 'Lancet Gastroenterology & Hepatology', 'Nature Reviews Gastroenterology & Hepatology', 'Nature Communications', 'Gastroenterology', 'Hepatology', 'Journal of Hepatology', 'Gut', 'American Journal of Gastroenterolgy', 'Liver International'.
Membership	<ul> <li>Member of the Italian Association for the Study of the Liver, AISF</li> <li>Member of the Italian Society of Gastroenterology, FISMAD</li> <li>Member of the European Association for the Study of the Liver, EASL</li> <li>Member of the American Association for the Study of the Liver, AASLD</li> </ul>
Teaching Titolarità in Corsi di Laurea	<ul> <li>Gastroenterologia, Corso integrato di CLINICA E PATOLOGIA DELL'ADDOME E ENDOCRINOLOGIA, Scuola di Medicina, Università di Torino 2015-current</li> <li>Gastroenterologia, Laurea Magistrale in Biotecnologie Mediche 2019- current</li> <li>Gastroenterologia, Corso di Laurea in Scienze Infermieristiche, Polo</li> <li>S. Luigi, Università di Torino 2008-2010</li> <li>Gastroenterologia, Corso di Studi in Logopedia Università di Torino 2017- current</li> <li>GASTROENTEROLOGIA, INFERMIERISTICA CLINICA IN AREA MEDICA SEDE ASL TO2 ASL TO4, Università di Torino 2006-current</li> <li>NUTRIZIONE IN GASTROENTEROLOGIA E NEFROLOGIA, Corso di Laurea in Dietistica, Università di Torino 2006-2013</li> <li>Laurea Specialistica in GASTROENTEROLOGIA, Università di Torino 2006- current</li> <li>Tutor for MD and PhD thesis in the above described courses</li> </ul>
Other teaching activities	<ul> <li>Member Collegio dei Docenti, PhD Fellowship in Fisiopatologia Medica, Università di Torino.</li> <li>Fellowship Tutor, Dr. Ingrid Hickman, Diamantina Institute for Cancer, Immunology and Metabolic Medicine, Princess Alexandra Hospital, Brisbane, AUSTRALIA, 2008.</li> <li>Fellowship Tutor, Dr Maria Garcia Blanco,</li> <li>Member Evaluation Board for PhD fellowship in Internal Medicine, Faculty of Health Sciences, TYGERBERG, Republic of South Africa, 2009</li> <li>Member Evaluation Board for PhD fellowship in Hepatology, Westmead Millennium Institute and the Department of Gastroenterology and Hepatology University of Sydney, Australia, 2018</li> <li>Member Evaluation Board for PhD fellowship in Internal Medicine, Faculty of Health Sciences, Copenhagen University Hospital Hvidovre, Denmark, 2021</li> <li>Member Scientific Commette, Master in Epatologia Avanzata, Università di Torino 2009-2010</li> </ul>

- Course Director, EASL (European Association for the Study of Liver Disease) Clinical School of Hepatology on Metabolic Liver Diseases, Course 11, Torino 2007

- Course Director, EASL (European Association for the Study of Liver Disease) Clinical School of Hepatology on Metabolic Liver Diseases, Course 14, Torino 2010

- Course Director, AISF (Associazione Italiana per lo Studio del Fegato) Clinical School of Hepatology on NAFLD, Torino 2014

- Course Director, AISF (Associazione Italiana per lo Studio del Fegato) Clinical School of Hepatology on NAFLD, Torino 2016

Invited presentationsMore than 250 invited presentations at national and international meetings since 2002.(last 5 years)Main invited presentations at meetings of International Associations EASL (European<br/>Association for the Study of the Liver), EASD (European Association for the Study of<br/>Diabetes), UEGW (United European Gastroenterology Week), AASLD (American<br/>Association for the Study of Liver Disease), ADA (American Diabetes Association), APASL<br/>(Asia-Pacific Association for the Study of the Liver) and AGA (American Gastroenterology<br/>Association):

- United European Gastroenterology Week, Wien oct 2016: Hepatology: What's new in 2016. Nonalcoholic fatty liver diseases, invited speaker

- EASL International Liver Congress<sup>™</sup> april 2017, Post-graduate Course - A multidisciplinary approach to patients with liver disease: Non alcoholic fatty liver disease: invited speaker

- AASLD Emerging Trends in Non-Alcoholic Fatty Liver Disease Washington DC March 2017: "Will The Epidemic of NAFLD Be Responsible for the Future Burden of HCC?", Invited speaker

- UEGW Barcelona oct 2017 Invited speaker: "Long-term surveillance and management of patients with fatty liver disease"

- EASL International Liver Congress<sup>™</sup> april 2018 Paris Invited Speaker "Which patients will we be treating in 2020 and how will pharmacotherapy be tailored?"

- AASLD EASL NAFLD End Point Conference Alexandria Washington 29 june 2018 invited speaker "Defining a Clinically Meaningful Change in Circulating Biomarker, Imaging and Elastography Based Assessment of Pre-cirrhotic NASH"

- EASL NAFLD Summit, Ginevra september 2018 Scientific Commettee and Invited speaker

UEGW Wien october 2018 "Prognosis: Is it really all about liver?", Invited speaker

- AASLD annual meeting San Francisco nov 2018 Oral presentation Session Parallel 19: Biomarkers and Imaging in Fatty Liver Disease

- Jerusalem Dorothy Nadolny Cardio-Metabolic Disease Research Hub 20 nov 2018 Invited Speaker: "The clinical spectrum of NAFLD"

- American Diabetes Association (ADA) San Francisco june 2019 "Impact of NASH in Type 2 Diabetes—Fact or Fiction? Should We Screen for NASH in Patients with Diabetes? What Is the Magnitude of the Problem/Implications on Cirrhosis, Hepatocellular Carcinoma, Cardiovascular Disease?"

European Association for the Study of Diabetes (EASD) Barcellona sept 2019
 Invited Speaker "NAFL vs NASH, diagnosis and treatment: hepatologist's perspective"
 The Liver Meeting AASLD november 2019 Boston Hepatobiliary Neoplasia SIG:

"Obesity, Metabolic Syndrome and HCC", Invited speaker

- American Gastroenterology Association (AGA ): Symposium NASH A Call to Action july 2020 TC "Future Directions: What Are We Expecting? Screening, Risk Stratification, and Treatment" Chairperson and Invited speaker

- EASL ILC 2020 Virtual Symposium august 2020: "Non-drug management of NAFLD/NASH and underlying disorders" Invited speaker and Chairperson

- UEGW oct 2020 Virtual. Invited Speaker. "Fatty liver disease: What's new in 2020? The NASH pandemic"

- AASLD Annual meeting nov 2020 Virtual. Clinical Practice SIG. Invited speaker: "Current Management of Non-alcoholic Fatty Liver Disease: Pharmacologic and Non-Pharmacologic Approaches"

- Asian Association for the Study of the Liver (APASL) Virtual Meeting February 4-6, 2021, "NAFLD/NASH: Case finding", Invited speaker

AASLD Emerging Topic Conference: Current Challenges in Clinical Management and Drug Development in NASH, June 2021, Virtual

- European Association for the Study of the Liver International Liver Congress, 2021, June 2021, Virtual. Chairperson and invited speaker EASL Post-Graduate Course, Impact of physical activity and diet on liver disease: "Management of co-morbidities of NAFLD/NASH"

- EASL NASH Summit, September 2021, Virtual. Invited speaker: "Update on late phase clinical trials"

- UEG Week 2021, October 2021, Virtual. Invited speaker, Opening lecture: "NAFLD: From basic mechanisms to new therapies"

- European Association for the Study of the Liver International Liver Congress, June 2022, Virtual. Chair - EASL-EASD Symposium: Impact of NASH therapy including new drugs on extra-hepatic manifestations. "Meet the Experts: Treatment of NASH", invited speaker.

- EASL NASH Summit, September 2022, Dublin Ireland. Chairperson and invited speaker: Clinical trial landscape in 2022: "Elafibranor"

ADDITIONAL INFORMATION	
International Cooperations	<ul> <li>Division of Gastroenterology, Cleveland Clinic Foundation (Prof. AJ McCullough) and Division of Neonatology, Case Western Reserve University (Prof. SC Kalhan), Cleveland (OH), USA</li> <li>Storr Liver Unit, Westmead Millennium Institute and the Department of Gastroenterology and Hepatology(Prof. J George), University of Sydney at Westmead Hospital, NSW, University of Sydney, Australia</li> <li>Newcastle NIHR Biomedical Research Centre, Newcastle upon Tyne Hospitals NHS Trust, Newcastle upon Tyne, United Kingdom (Prof. QM Anstee)</li> <li>Université Pierre et Marie Curie and Assistance Publique, Hôpitaux de Paris, Service d'Hépatogastroentérologie (Prof. V. Ratziu), Groupe Hospitalier Pitié Salpêtrière, Paris, France</li> <li>Department of Hepatology and Gastroenterology, Aarhus University Hospital, Aarhus, Denmark (Prof H. Grønbæk)</li> <li>Department of Medicine, University of Helsinki and Helsinki University Hospital, Finland; Minerva Foundation Institute for Medical Research, Helsinki, Finland (Prof H. Yki-Järvinen )</li> <li>Metabolic Liver Research Program, Department of Medicine, University Medical Center Mainz, 55131, Mainz, Germany (Prof. D. Schuppan and J. Schattenberg)</li> </ul>

	<ul> <li>Mac.Ro UCM Digestive Diseases, Virgen del Rocío University Hospital, Avenida Manuel Siurot s/n, 41013 Sevilla, Spain (Prof M. Romero-Gomez)</li> <li>Department of Gastroenterology Hepatology, Antwerp University Hospital, and Laboratory of Experimental Medicine and Paediatrics, University of Antwerp, Belgium (Prof. S. Francque)</li> <li>Center for Liver Health Faculty of Medicine, The Chinese University of Hong Kong (Prof. V. Wong)</li> <li>Center for Liver Diseases, Department of Medicine, Inova Fairfax Hospital, 3300 Gallows Road, Falls Church, Virginia 22042, USA. (Prof. Z. Younossi)</li> </ul>
National Cooperations	<ul> <li>Unità di Malattie Metaboliche, Università di Bologna (Prof. G. Marchesini)</li> <li>Istituto di Fisiologia Clinica, Centro Nazionale per la Ricerca (CNR), Pisa (Prof. A. Gastaldelli)</li> <li>Dipartimento di Medicina Sperimentale e Clinica and Centro di Ricerca Denothe, Università di Firenze (Prof. F. Marra)</li> <li>Dept. Clinical and Biological Sciences, Unit of Experimental Medicine and Clinical Pathology, University of Torino, Torino (Prof. M. Parola)</li> <li>Dipartimento Scienze Cliniche e Molecolari, Università Politecnica delle Marche, Ancona, Italy . (Prof. A. Benedetti, Prof. G. Svegliati Baroni)</li> <li>Dipartimento di Medicina Interna, Centro Studi Malattie Metaboliche del Fegato , Università degli Studi di Milano, Ospedale Maggiore Policlinico, IRCCS, Fondazione Ca' Granda, Milano (Prof.ssa Fracanzani, Prof. L. Valenti)</li> <li>Sezione di Gastroenterologia, DiBiMIS, University of Palermo (Prof. Craxì, Prof. Petta).</li> </ul>
Working skills and competences	She has founded the "NAFLD research group" of the University of Turin, including both clinical and basic researchers and achieving an international reputation; her excellent leadership and collaborative skills are testified by the scientific production and the national and international scientific collaborations. For her competences in scientific organization and management she has been appointed Scientific Director of the Department of Internal Medicine of the University of Torino.
Personal skills and competences	<ul> <li>Painting</li> <li>Excellent knowledge of the English language (3 yrs spent in US as PhD fellowship)</li> <li>In compliance with the GDPR (UE 2016/679) and Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance with art. 7 of the above-mentioned Decree.</li> </ul>

Elisabetta Bugianesi

22/02/2023