

PERSONAL INFORMATION Simonetta Friso, MD, PhD

PROFESSIONAL ADDRESS  Department of Medicine
University of Verona School of Medicine
Section of Internal Medicine B
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Nationality Italian

POSITION TITLE - ASSOCIATE PROFESSOR OF INTERNAL MEDICINE, SSD MED09 INTERNAL MEDICINE
- FULL PROFESSOR SCIENTIFIC QUALIFICATION, RATIFIED BY THE NATIONAL SCIENTIFIC COMMITTEE (ASN 2016) SECTOR 06/B1, SSD MED09 INTERNAL MEDICINE
- *Director* pro tempore of the **Complex Clinical Unit of Internal Medicine B**, Integrated University Hospital, Policlinic G.B. Rossi, Department of Medicine, University of Verona School of Medicine
- *Director of the Medical School of Specialization in Allergology and Clinical Immunology* (SSD MED/09), at the University of Verona School of Medicine

WORK EXPERIENCES

- 2021 December-present: *Director* pro tempore of the **Complex Clinical Unit of Internal Medicine B**, Integrated University Hospital (**Azienda Ospedaliera Universitaria Integrata Verona**), Policlinic G.B. Rossi, Department of Medicine, University of Verona School of Medicine
- 2022 June-present (Decreto Rettoriale nr. 5936 del 30 giugno 2022): *Director of the Medical School of Specialization in Allergology and Clinical Immunology* (SSD MED/09), at the University of Verona School of Medicine
- 2021 March-2022 June: *Direttore pro tempore della Scuola di Specializzazione in Allergologia ed Immunologia Clinica (SSD MED 09, Medicina Interna)*, Università degli Studi di Verona
- 2021 March-September 2021: *Vice Director* (Prof. O. Olivieri) of the **Complex Clinical Unit of Internal Medicine B**, Integrated University Hospital, Policlinic G.B. Rossi, Department of Medicine, University of Verona School of Medicine
- 2020 December/January and 2021 March-May, **Responsible coordinator of Covid Unit di Unità Covid the Complex Clinical Unit of Internal Medicine B**, Integrated University Hospital, Policlinic G.B. Rossi, Department of Medicine, University of Verona School of Medicine
- 2014-present: **Associate Professor of Internal Medicine**, University of Verona School of Medicine (SSD MED/09)
- 2013-present: Coordinator **High Specialization Unit in "Diagnosis and therapy of nutritional disorders** (Delibera n.452 del 20/6/2013, Prot.n.33637 del 18/7/13).
- 2009-current: Member of the Verona **University Hospital Commission for Scientific Research and Innovation** ("Nucleo Ricerca ed Innovazione", NRI) (n. 585, 11/5/2009, Prot. n. 21240, 19/5/2009)
- 2006-present: **Scientific Chief of the "Epigenomics and gene-nutrient interaction" Laboratory** of the **University Laboratory for Medical Research, LURM** (<http://lurm.it/it/laboratories/>; <http://lurm.it/it/staff/?keywords=none&l=epigenetica-e-studio-delle-interazioni-gene-nutrienti>)
- 2005-present: **Physician, Section of Immunohaematologic and Haemocoagulative Disorders, Section of Internal Medicine** (n. 937, 9.06.05, Prot. N. 22177 Tit. VII/6, 24.6.05), **University Hospital, Azienda Ospedaliera Universitaria Integrata Verona**
- 2005-2014: **Assistant Professor of Internal Medicine**, University of Verona School of Medicine (SSD MED/09)
- 2003-2005: **post-doc Fellowship**, University of Verona School of Medicine (SSD MED/09)
- 1998-2001: **Visiting Scientist**, Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University, Boston, MA, USA
- 2001-2003: **Research Associate**, Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University, Boston, MA, USA
- 1991-1996: Internship and residency in Internal Medicine and postgraduate research fellowship, University of Verona School of Medicine (SSD MED/09)
- 1996-1998: Instructor Internal Medicine and Genetics, University of Verona School of Medicine

EDUCATION AND TRAINING

- 1991: **Medical Degree in Medicine and Surgery**, *summa cum laude*, University of Verona School of Medicine
- 1996: **Specialization in Internal Medicine**, *summa cum laude*, University of Verona School of Medicine
- 2002: **PhD in Experimental Haematology**, with *academic mention award*, University of Milan School of Medicine
- 2022: **Healthcare Management Program**, **SDA Bocconi School of Management**, Bocconi University, Milan

AWARDS and HONORS

- 2002, International **Hamish N. Munro** Postdoctoral Fellowship Award for outstanding scientific research "Folate Metabolism, Genetics and DNA methylation", **Boston, MA, USA**.
- 2005, Procacci C. Research Scientist Award "Gene-nutrient interactions and epigenetics", **Italy**
- 2006, Director's International Scientific Recognition Award **for Excellence** in scientific impact in "Gene-nutrient interactions and Epigenetics", **Boston, MA, USA**
- 2015, **Award Diet and Cancer RIS for best scientific presentation at EB Experimental Biology FASEB** Boston, MA USA

PUBLICATIONS AND BIBLIOMETRIC INDEXES

- **Editor of two invited books** by CRC Press, USA) and author of about **20 book chapters** (by CRC Press, Wiley and Sons, Elsevier Inc.), two *special invited issues* on topics related to Epigenetics, nutrition and gene-nutrient interactions published, on *Molecular Aspects of Medicine*; author of **more than 90 scientific publications in extenso** on **International peer-review Journals** classified by ISI Web of Science among which *The New England Journal of Medicine*, *Proceedings of the National Academy of Sciences, USA*; *Circulation*; *Analytical Chemistry*; *BBA*; *Journal of Medical Genetics*, *Hepatology*.
- **H-index**, as follows:
 - ISI Web of Science: 42, citations 6026, without self citations 5738, average citation per item 35,03
 - Scopus: 43, citations 6586, without self citations 5701
 - Google Scholar: 50; citations 9711; i10-index 89
 A paper cited more 1100 times and one more than 600 times; 2 more than 400 times and 15 papers around 300 times.
- Enclosed in the **Top Italian Scientists list** (<http://www.topitalianscientists.org>)

PERSONAL SKILLS

Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Spanish	C2	C2	C2	C1	C1

Main Research interests

- Epigenetics and gene-nutrient interactions with a special focus on the role of one-carbon nutrients as vitamin B9, B6 and B12 that, as donors of methyl groups, serve for methylation reactions including that of DNA and histones, major epigenetic phenomena in mammalian cells.
- Study of the effects of B vitamins and gene-nutrient interactions on epigenetic mechanisms by using different cell culture and animal models as well as studies in humans.

- Expertise in genetic- and epigenetic-focused methods, the latest mainly in the area of DNA methylation by setting up novel methods for to the analysis of DNA methylation patterns both global and gene-specific and also by through high-throughput array-based techniques
- Studies on the interactions between polymorphisms within one-carbon metabolism genes and epigenetic phenomena in humans for studies focused on chronic illnesses including cardiovascular diseases and cancer with an attention to primary liver cancers.

ADDITIONAL INFORMATION

Publications

Selection of scientific publications in extenso on peer-reviewed Journals classified by ISI web of Science:

Molfino A, Ambrosani F, Tambaro F, Belli R, Imbimbo G, Udali S, Moruzzi S, Pattini P, Ramaccini C, Castagna A, Muscaritoli M, **and Friso S**. Changes of gene expression in peripheral blood mononuclear cells of lung cancer patients with or without anorexia. *Clin Nutr*. 2022 Nov 23;42(1):9-17. doi: 10.1016/j.clnu.2022.11.013. Epub ahead of print. PMID: 36473427.

Bortolus R, Filippini F, Chiaffarino F, Udali S, Rinaldi M, Gandini G, Montagnana M, Lippi G, Olivieri O, Parazzini F, **and Friso S**. Lifestyle and dietary factors, iron status and one-carbon metabolism polymorphisms in a sample of Italian women and men attending a Transfusion Medicine Unit: a cross-sectional study. *Br J Nutr*. 2022 Oct 28:1-6. doi: 10.1017/S0007114522003245. Epub ahead of print. PMID: 36305043.

Osti N, Beschini G, Goldin M, Guidolin L, Panero E, Sartori A, Parisi A, Cantini M, Pizzolo F, Olivieri O, **and Friso S**. Microangiopathic Hemolytic Anemia With Normal ADAMTS13 Activity. *Front Med* (Lausanne). 2021 Mar 2;8:589423. doi: 10.3389/fmed.2021.589423. PMID: 33738292; PMCID: PMC7960662.

Pizzolo F, Castagna A, Olivieri O, Girelli D, **Friso S**, Stefanoni F, Udali S, Munerotto V, Baroni M, Cetera V, Luciani GB, Faggian G, Bernardi F, Martinelli N. Basophil Blood Cell Count Is Associated With Enhanced Factor II Plasma Coagulant Activity and Increased Risk of Mortality in Patients With Stable Coronary Artery Disease: Not Only Neutrophils as Prognostic Marker in Ischemic Heart Disease. *J Am Heart Assoc*. 2021 Feb;10(5):e018243. doi: 10.1161/JAHA.120.018243. Epub 2021 Feb 24. PMID: 33624506.

Udali S, De Santis D, Mazzi F, Moruzzi S, Ruzzenente A, Castagna A, Pattini P, Beschini G, Franceschi A, Guglielmi A, Martinelli N, Pizzolo F, Ambrosani F, Olivieri O, Choi SW, **and Friso S**. Trace Elements Status and Metallothioneins DNA Methylation Influence Human Hepatocellular Carcinoma Survival Rate. *Front Oncol*. 2021 Jan 28;10:596040. doi: 10.3389/fonc.2020.596040. PMID: 33585212; PMCID: PMC7876470.

Bortolus R, Filippini F, Udali S, Rinaldi M, Genesini S, Gandini G, Montagnana M, Chiaffarino F, Lippi G, Pattini P, De Grandi G, Olivieri O, Parazzini F, **and Friso S**. B vitamin blood concentrations and one-carbon metabolism polymorphisms in a sample of Italian women and men attending a unit of transfusion medicine: a cross-sectional study. *Eur J Nutr*. 2020 Dec 29. doi: 10.1007/s00394-020-02448-1. Epub ahead of print. PMID: 33373019.

Bronte V, Ugel S, Tinazzi E, Vella A, De Sanctis F, Canè S, Batani V, Trovato R, Fiore A, Petrova V, Hofer F, Barouni RM, Musiu C, Caligola S, Pinton L, Torroni L, Polati E, Donadello K, **Friso S**, Pizzolo F, Iezzi M, Facciotti F, Pelicci PG, Righetti D, Bazzoni P, Rampudda M, Comel A, Mosaner W, Lunardi C, Olivieri O. Baricitinib restrains the immune dysregulation in patients with severe COVID-19. *J Clin Invest*. 2020 Dec 1;130(12):6409-6416. doi: 10.1172/JCI141772. PMID: 32809969.

Pizzolo F, Rigoni AM, De Marchi S, **Friso S**, Tinazzi E, Sartori G, Stefanoni F, Nalin F, Montagnana M, Pilotto S, Milella M, Azzini AM, Tacconelli E, Marchi G, Girelli D, Olivieri O, Martinelli N. Deep vein thrombosis in SARS-CoV-2 pneumonia-affected patients within standard care units: Exploring a submerged portion of the iceberg. *Thromb Res*. 2020 Oct;194:216-219. doi: 10.1016/j.thromres.2020.08.008. Epub 2020 Aug 6. PMID: 33074107; PMCID: PMC7409796.

Olivieri O, Speziali G, Castagna A, Pattini P, Udali S, Pizzolo F, Liesinger L, Gindlhuber J, Tomin T, Schittmayer M, Birner-Gruenberger R, Cecconi D, Girelli D, **Friso S**, Martinelli N. The Positive Association between Plasma Myristic Acid and ApoCIII Concentrations in Cardiovascular Disease Patients Is Supported by the Effects of Myristic Acid in HepG2 Cells. *J Nutr*. 2020 Oct 12;150(10):2707-2715. doi: 10.1093/jn/nxaa202. PMID: 32710763.

Martinelli N, Montagnana M, Pizzolo F, **Friso S**, Salvagno GL, Forni GL, Ganesin B, Morandi M, Lunardi C, Lippi G, Polati E, Olivieri O, De Franceschi L. A relative ADAMTS13 deficiency supports the presence of a secondary microangiopathy in COVID 19. *Thromb Res*. 2020 Sep;193:170-172. doi: 10.1016/j.thromres.2020.07.034. Epub 2020 Jul 18. PMID: 32707276; PMCID: PMC7367811.

Dolcino M, **Friso S**, Selmi C, Lunardi C. Role of Epigenetics in Autoimmune Diseases. *Front Immunol*. 2020 Jun 19;11:1284. doi: 10.3389/fimmu.2020.01284. PMID: 32636847; PMCID: PMC7318872.

Ronis MJ, Mercer KE, Shankar K, Pulliam C, Pedersen K, Ingelman-Sundberg M, **Friso S**, Samuelson D, Del Valle L, Taylor C, Welsh DA. Potential role of gut microbiota, the proto-oncogene PIKE (Agap2) and cytochrome P450 CYP2W1 in promotion of liver cancer by alcoholic and nonalcoholic fatty liver disease and protection by dietary soy protein. *Chem Biol Interact*. 2020 Jul 1;325:109131. doi: 10.1016/j.cbi.2020.109131. Epub 2020 May 14. PMID: 32417163; PMCID: PMC7370542.

Olivieri O, Cappellari M, Turcato G, Bonetti B, Girelli D, Pizzolo F, **Friso S**, Bassi A, Castagna A, Martinelli N. Increased Incidence of Ischemic Cerebrovascular Events in Cardiovascular Patients With Elevated Apolipoprotein CIII. *Stroke*. 2020 Jan;51(1):61-68. doi: 10.1161/STROKEAHA.119.026811. Epub 2019 Dec 4. PMID: 31795904.

Olivieri O, Turcato G, Moruzzi S, Castagna A, Girelli D, Pizzolo F, **Friso S**, Sandri M, Bassi A, Martinelli N. Not Just Arterial Damage: Increased Incidence of Venous Thromboembolic Events in Cardiovascular Patients With Elevated Plasma Levels of Apolipoprotein CIII. *J Am Heart Assoc*. 2019 Jan 22;8(2):e010973. doi: 10.1161/JAHA.118.010973.

Udali S, De Santis D, Ruzzenente A, Moruzzi S, Mazzi F, Beschin G, Tammen SA, Campagnaro T, Pattini P, Olivieri O, Guglielmi A, Choi SW, and **Friso S**. DNA Methylation and Hydroxymethylation in Primary Colon Cancer and Synchronous Hepatic Metastasis. *Front Genet. Epigenetics* 2018 Jan 9;8:229. doi: 10.3389/fgene.2017.00229.

Udali S, Castagna A, Corbella M, Ruzzenente A, Moruzzi S, Mazzi F, Campagnaro T, Santis D, Franceschi A, Pattini P, Gottardo R, Olivieri O, Perbellini L, Guglielmi A, Choi SW, Girelli D, and **Friso S**. Hepcidin and DNA promoter methylation in hepatocellular carcinoma. *Eur J Clin Invest*. 2018 Feb;48(2). doi: 10.1111/eci.12870. Epub 2017 Dec 28.

Moruzzi S, Guarini P, Udali S, Ruzzenente A, Guglielmi A, Conci S, Pattini P, Martinelli N, Olivieri O, Tammen SA, Choi SW, and **Friso S**. One-carbon genetic variants and the role of MTHFD1 1958G>A in liver and colon cancer risk according to global DNA methylation. *PLoS One*. 2017 Oct 2;12(10):e0185792. doi: 10.1371/journal.pone.0185792.

Friso S, Udali S, De Santis D, Choi S-W "One carbon metabolism and epigenetics" [Epub ahead of print]: *Mol Aspects Med*. 2017 Apr;54:28-36. doi: 10.1016/j.mam.2016.11.007. Epub 2016 Nov 19. pii: S0098-2997(16)30093-0. doi: 10.1016/j.mam.2016.11.007. PMID: 27876555

Lee J, Kim Y, **Friso S**, Choi S-W. "Epigenetics in non alcoholic fatty liver disease" *Mol Aspects Med*. 2017 Apr;54:78-88. doi: 10.1016/j.mam.2016.11.008. Epub 2016 Nov 23. pii: S0098-2997(16)30090-5. doi: 10.1016/j.mam.2016.11.008. PMID: 27889327

Tammen SA, Park LK, Dolnikowski GG, Ausman LM, Friso S, Choi SW. Hepatic DNA hydroxymethylation is site-specifically altered by chronic alcohol consumption and aging. *Eur J Nutr*. 2017 Mar;56(2):535-544. doi: 10.1007/s00394-015-1098-4.

Friso S, Pizzolo F, Udali S, Guarini P, Castagna A, Consoli L, Salvagno G, Tinazzi E, Pattini P, Choi S-W, Lunardi C, Olivieri O. "Epigenetic Regulation of HSD11B2 Gene by Promoter Methylation in Glucocorticoid-Treated Patients" 2016 *Journal of Clinical Epigenetics*, Vol.2, No: 1:1-12<http://clinical-epigenetics.imedpub.com/epigenetic-regulation-of-hsd11b2-gene-by-promoter-methylation-in-glucocorticoid-treated-patients.php?aid=8369>

Tammen SA, Park JE, Shin PK, **Friso S**, Chung J, Choi SW. Iron Supplementation Reverses the Reduction of Hydroxymethylcytosine in Hepatic DNA Associated With Chronic Alcohol Consumption in Rats. *J Cancer Prev*. 2016 Dec;21(4):264-270. doi: 10.15430/JCP.2016.21.4.264.

Moruzzi S, Udali S, Ruzzenente A, Guglielmi A, Guarini P, Martinelli N, Conci S, Mazzi F, Pattini P, Tammen SA, Olivieri O, Pizzolo F, Choi SW, and **Friso S**. The RFC1 80G>A, among Common One-Carbon Polymorphisms, Relates to Survival Rate According to DNA Global Methylation in Primary Liver Cancers. *PLoS One*. 2016 Dec 9;11(12):e0167534. doi:10.1371/journal.pone.0167534

Pizzolo F*, **Friso S***, Morandini F, Antoniazzi F, Zaltron C, Udali S, Gandini A, Cavarzere P, Salvagno G, Giorgetti A, Speziali G, Choi SW, Olivieri O. Apparent Mineralocorticoid Excess by a Novel Mutation and Epigenetic Modulation by HSD11B2 Promoter Methylation. *J Clin Endocrinol Metab*. 2015 Sep;100(9):E1234-41. doi: 10.1210/jc.2015-1760. Epub 2015 Jun 30. PMID:26126204. *First coauthorship

Udali S, Moruzzi S, Ruzzenente A, Choi SW, and **Friso S**. Hypomethylation and hypohydroxymethylation of DNA in

hepatocellular carcinoma and cholangiocarcinoma" Reply to Li, Zhi et al. *Hepatology*. 2015 Oct 5. doi: 10.1002/hep.28271. PMID: 26439221

Udali S, Guarini P, Moruzzi S, Ruzzenente A, Tammen S, Guglielmi A, Pattini P, Campagnaro T, Conci S, Olivieri O, Corrocher R, Choi S-W, and Friso S "Global DNA methylation and hydroxymethylation status differ in hepatocellular- and cholangiocarcinoma and relate to survival rate" *Hepatology*. Aug;62(2):496-504. doi: 10.1002/hep.27823. Epub 2015 Apr 28.

Udali S, Guarini P, Ruzzenente A, Ferrarini A, Guglielmi A, Lotto V, Tononi P, Pattini P, Moruzzi S, Campagnaro T, Conci S, Olivieri O, Corrocher R, Delledonne M, Choi S-W, and Friso S. DNA methylation and gene expression profiles show novel regulatory pathways in hepatocellular carcinoma. *Clinical Epigenetics*, 2015, 7:43 DOI: 10.1186/s13148-015-0077-1. PMID: 25945129.

Choi S-W, Tammen SA, Liu Z, and Friso S. A lifelong exposure to a Western style diet, but not aging, alters global DNA methylation in mouse colon. *Nutrition Research and Practice*, 2015 Aug;9(4):358-63. doi: 10.4162/nrp.2015.9.4.358. PMID: 26244073

Marchetti G, Girelli D, Zerbini C, Lunghi B, Friso S, Meneghetti S, Coen M, Gagliano T, Guastella G, Bochaton-Piallat ML, Pizzolo F, Mascoli F, Malerba G, Bovolenta M, Ferracin M, Olivieri O, Bernardi F, Martinelli N. "An integrated genomic-transcriptomic approach supports a role for the proto-oncogene BCL3 in atherosclerosis". *Thromb Haemost*. 2015 Mar;113(3):655-63. doi: 10.1160/TH14-05-0466. PMID: 25374339.

Tammen SA, Dolnikowski GG, Ausman LM, Liu Z, Kim KC, Friso S, Choi SW. "Aging alters hepatic DNA hydroxymethylation, as measured by liquid chromatography/mass spectrometry". *Journal of Cancer Prevention* (pISSN: 2288-3649; eISSN: 2288-3657; website: <http://www.jcpjournal.org>) J Cancer Prev. 2014 Dec;19(4):301-8. doi: 10.15430/JCP.2014.19.2.301. PMID: 25574465

Lee JH, Friso S, Choi S-W. "Epigenetic mechanisms underlying the link between non-alcoholic fatty liver diseases and nutrition" *Nutrients* 2014, 6, 3303-3325; doi:10.3390/nu6083303

Tammen, S., Dolnikowski, G., Ausman, L., Liu, Z., Sauer, J., Friso, S., and Choi, S-W. "Aging and alcohol interact to alter hepatic DNA hydroxymethylation" *Alcohol Clin Exp Res*. 2014 Jul 28. doi: 10.1111/acer.12477. [Epub ahead of print] PMID: 25070523

Friso S., Carvajal C.A., Fardella C.E., Olivieri O. "Epigenetics and arterial hypertension: the challenge of emerging evidence. *Translational Research* 2014 Jun 25. pii: S1931-5244(14)00214-X. doi: 10.1016/j.trsl.2014.06.007. PMID:25035152

Bacalini MG, Friso S, Olivieri F, Pirazzini C, Giuliani C, Capri M, Santoro A, Franceschi C, Garagnani P. "Present and future of ageing epigenetic diets". *Mech Ageing Dev*. 2014 Jan 2. 2014 Mar-Apr;136-137:101-15. pii: S0047-6374(13)00136-X. doi: 10.1016/j.mad.2013.12.006. Epub 2014 Jan 2.

Moruzzi S, Girelli D, Olivieri O. and Friso S. "An Unusual Case of Acute Abdominal Pain," Volume 2013 (2013), Article ID 7488' *International Journal of Case Reports in Medicine* (ISSN: 2327-3542).

Olivieri O, Martinelli N, Baroni M, Branchini A, Girelli D, Friso S, Pizzolo F, and Bernardi F. Factor II activity is similarly increased in patients with elevated apolipoprotein CIII and in carriers of the factor II 20210A allele. *J Am Heart Assoc*. 2013 Nov 15;2(6):e000440. doi: 10.1161/JAHA.113.000440.

Friso S, Udali S, Guarini P, Pellegrini C, Pattini P, Moruzzi S, Girelli D, Pizzolo F, Martinelli N, Corrocher R, Olivieri O, and Choi S "Global DNA hypomethylation in peripheral blood mononuclear cells as a biomarker of cancer risk" *in press, Cancer Epidemiol Biomarkers and Prevention* 2013 Jan 8. [Epub ahead of print, Published OnlineFirst January 8, 2013] *Cancer Epidemiol Biomarkers Prev* 2013;22(1):85-92. doi:10.1158/1055-9965.EPI-12-0859 PMID: 23300023

Choi SW, Claycombe KJ, Martinez JA, Friso S, Schalinske KL. Nutritional epigenomics: a portal to disease prevention. *Adv Nu* 2013 Sep 1;4(5):530-2. doi: 10.3945/an.113.004168.

Udali S, Guarini P, Moruzzi S, Choi S-W, and Friso S. "Cardiovascular epigenetics: from DNA methylation to microRNAs" *Invited Special Issue on Epigenetic mechanisms in Nutrition, Cancer and Cardiovascular Diseases in Molecular Aspects of Medicine* Mol Aspects Med. 2013 Jul-Aug;34(4):883-901. doi: 10.1016/j.mam.2012.08.001. Epub 2012 Sep 6. PMID: 22981780

Tammen SA, Friso S, and Choi S-W. "Epigenetics: the link between nature and nurture", *Invited Special Issue on Epigenetic mechanisms in Nutrition, Cancer and Cardiovascular Diseases in Molecular Aspects of Medicine*, 2013 Jul-Aug;34(4):753-64 10.1016/j.mam.2012.07.018. Epub 2012 Aug 10. PMID:22906839 (*Molecular Aspects of Medicine's top 5 most cited article 2014*: <http://www.journals.elsevier.com/molecular-aspects-of-medicine/special-issues>) (citations 424)

Friso S, Choi SW, Girelli D, Mason JB, Dolnikowski GG, Bagley PJ, Olivieri O, Jacques PF, Rosenberg IH, Corrocher R, Selhub J. A common mutation in the 5,10-methylenetetrahydrofolate reductase gene affects genomic DNA methylation through an interaction with folate status. *Proc Natl Acad Sci U S A*. 2002 Apr 16;99(8):5606-11. doi: 10.1073/pnas.062066299. Epub 2002 Apr 2. PMID: 11929966; PMCID: PMC122817. (citations 1105)

Friso S, Jacques PF, Wilson PW, Rosenberg IH, Selhub J. Low circulating vitamin B(6) is associated with elevation of the inflammation marker C-reactive protein independently of plasma homocysteine levels. *Circulation*. 2001 Jun 12;103(23):2788-91. doi: 10.1161/01.cir.103.23.2788. PMID: 11401933. (citations 301)

Girelli D, Russo C, Ferraresi P, Olivieri O, Pinotti M, **Friso S**, Manzato F, Mazzucco A, Bernardi F, Corrocher R. Polymorphisms in the factor VII gene and the risk of myocardial infarction in patients with coronary artery disease. *N Engl J Med*. 2000 Sep 14;343(11):774-80. doi: 10.1056/NEJM200009143431104. PMID: 10984565. (citations 338)

Choi SW, and **Friso S**. Epigenetics: A New Bridge between Nutrition and Health. *Adv Nutr*. 2010 Nov;1(1):8-16. doi: 10.3945/an.110.1004. Epub 2010 Nov 16. PMID: 22043447; PMCID: PMC3042783. (citations 615)

Girelli D, **Friso S**, Trabetti E, Olivieri O, Russo C, Pessotto R, Faccini G, Pignatti PF, Mazzucco A, Corrocher R. Methylenetetrahydrofolate reductase C677T mutation, plasma homocysteine, and folate in subjects from northern Italy with or without angiographically documented severe coronary atherosclerotic disease: evidence for an important genetic-environmental interaction. *Blood*. 1998 Jun 1;91(11):4158-63. PMID: 9596662. (citations 289)

Projects

- **PI and co-PI for research projects by International Institutions granted after a peer-reviewed process:**

- **NIH** (Bethesda, USA: NIH/NIAAA, R21- AA016681-01; R01-AG025834-01A2),
- **Fondecyt & Conicyt** (EMBC/EMBO co-operation partner, Chile: grant#1130427, 1150437, 1160695),
- **SOCHED** Chile
- Bayer Healthcare
- PI and co-PI as well as collaborator for several National project funded by **and National Institutions** including Italian Ministry as PRIN, Cariverona Foundation (PI), Joint Project (PI), Basic Science (coPI);
- **Scientific director** of research projects including teaching within post-graduate PhD courses at the International center Jean Mayer, HNRC at Tufts University **Boston, MA, USA** e Friedman School of Nutrition Science and Policy Boston, MA USA;
- Several ongoing collaborative projects with International research groups in USA, Korea, Chile, Germany, the Netherlands.

Editorial Board memberships

- Associate Editor per Journal "Frontiers in Nutrition",
- Editorial Board Member di Journal of Cancer Prevention (indexed in the PubMed Central archive, National Library of Medicine (NLM), and Google Scholar),
- Editorial Board member della sezione di Nutrigenomics di "Frontiers in Genetics" (censito in Scopus);
- Board of Reviewers' Member of "BioFactors" Journal (censito in Scopus e WOS);
- Editorial Advisory Board of the Journal "Epigenetics of Diabetes and Obesity",
- Editorial Board Member, Review Editor di "Frontiers in Cell and Developmental Biology" Section Epigenomics and Epigenetics

Teaching activities in National and International PhD programs

Teaching colleges permanent member for **PhD programs in Italy:**

- Member PhD programs of the Italian Ministry of the University and Scientific research:
 - *Biomolecular Medicine* DOT1340243 (University of Verona) from 2013-at present; course program: 3 years
 - *Clinical Proteomics* DOT0340337 (University of Verona) from 2006-2012 including Cycles: from XXII to XXVIII- course program: 3 years
 - *Experimental Haematology* DOT06C6974 (National University of Milan Bicocca) from 2007-2012. Cycles: from XXIII to XXVIII. course program 4 years
- Professor at PhD course at Friedman School of Nutrition Science and Policy, Tufts University, **Boston, MA, USA** (2009 -)

Invited speaker

Invited speaker at a large number of national and International Conferences either in Italy, other European countries as France, Germany, UK, Ireland) as well as in the USA, Korea, Chile.

Professional memberships

2000-2012 Member, the *American Heart Association*, Council on Atherosclerosis, thrombosis and vascular biology, U.S.A.
 2001-present Member, the *Epigenetics Society* (formerly *DNA Methylation Society*), U.S.A.
 2007-present Member, *Italian Society of Internal Medicine*, Italy
 2009-present Member, College of the *University Professors of Internal Medicine Italian Society*, Italy
 2011-present Member, the *American Society for Nutrition*, Diet and Cancer and Gene-Nutrient Interactions group member, U.S.A.
 2012-present Member of the *Biochemical Society Advancing Molecular Bioscience*, UK

Reviewer for Journals and for International Scientific evaluation Committees for grant assignment of research project applications

- reviewer for an ample number of major International peer-review Journal indexed by ISI Web of Science among which: The New England Journal of Medicine, The Lancet, Circulation, Adv Nutr, American Journal of Clinical Nutrition, Cell proliferation.
- reviewer ad hoc for research project for grant applications:
2004-present: MIUR, Italian Ministry for University and Scientific Research
2006- : INSERM ("Institut national de la santé et de la recherche médicale")
2008-: The Technology Foundation STW (Utrecht, The Netherlands)
2013-: BBSRC (Biotechnology and Biological Sciences Research Council), UK
2013- European Science Foundation EMBO
2014-: The Netherlands Organisation for Scientific Research, (Div. Earth and Life Sciences)
2014- : Wellcome Trust, London, UK
2014- : National Science Centre, (Narodowe Centrum Nauki), Poland
2015-: ESRC (Economic and Social Research Council), UK
2017 and 2022- present: La Sapienza University Rome
2018-present: European Joint project Horizon 2020, International Scientific Evaluation Committee for the JPI HDHL
2018 and 2015 - present : MRC, Medical Research Council, UK

Organisational/managerial/job-related skills

Experience of coordinator of several research projects either at a National and International level
Use of Office software packages in Windows system and Apple Mac, Statistical package by using IBM SPSS software.

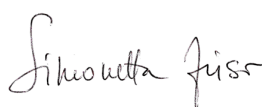
PATENTS

Inventor and owner of **INTERNATIONAL PATENT** for the invention of "A method to assess genomic DNA methylation using high-performance Liquid Chromatography-Electrospray Ionization Mass Spectrometry" (Priority data: 60/400,756; Pub. No.: WO/2004/013284 International Application No: PCT/US2003/023212 Publication Date:12.02.2004; International Filing Date:25.07.2003,USA).

Patent application for European and Italian ownership and ongoing International for the invention n. 102021000002387 entitled: "Composition and method for biofortification of food plant and food plant obtained by this method" (Italia, 3/2/2021).

I authorize the treatment of personal data according to Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali (facoltativo)"

Signature



Verona, November 2022