

Dr. Roberto Frairia M.D.



Curriculum vitae

<p><b>Privacy:</b></p>	<p>Birth: December 13<sup>th</sup>, 1946 in Cuneo, Italy.                  Married with Laura Berta                  Special interests: music, sailing, skiing.                  Addresses:                  Private: Corso Peschiera 300, 10139 Torino, Italy                   Office: Department of Medical Sciences                  University of Torino, School of Medicine                  Via Genova 3, 10126 Torino, Italy      roberto.frairia@unito.it</p>
<p><b>Education and career:</b></p>	<p>Medicine and Surgery Degree, University of Torino School of Medicine (1971)                  Certification Board in Endocrinology, University of Torino (1973)                  Certification Board in Internal Medicine, University of Torino (1978)                  National qualification as Head of Endocrinology (1984)                  National qualification as Head of Internal Medicine (1990)                  University Research Contract from 1974 to 1980 (University of Torino). University Researcher from 1980 to 1984.                  Present position (since 1984): Associate Professor of Internal Medicine, University of Torino School of Medicine, Department of Medical Sciences  <b>Teaching Activities:</b>                  University of Torino School of Medicine:                  Degree of Medicine) from 1994 up to date (Discipline: Internal Medicine),                  School of Specialization in Endocrinology from 1974 up to 2010 (Discipline: Internal Medicine);                  Degree in Dental Hygiene from 2005 up to date (Discipline: Internal Medicine); Degree in Physiotherapy from 2013 up to date (Discipline: Internal Medicine)                  Health Care Activity:                  After the degree in Medicine (1971), uninterrupted active assistance (from November 1974 at University of Torino as a contractor, then as a researcher, actually as Associate Professor of Internal Medicine) and Head (since 1986) of the Laboratory of Endocrinology and Radiobiology, Department of Medical Sciences, University of Turin.  <b>Main Research Subjects:</b>                  - mechanisms underlying the circadian rhythm of ACTH-adrenocortical axis (1970 to 1975).                  - interaction between glucocorticoids and transcortin (1976 to 1988) and between sex steroids and plasma sex steroid-binding globulin (1978 to 1990).                  - validation of methods for quality control of receptor determinations in neoplastic tissues (1980 to 1989), as a member of the Italian Committee for Quality Control of Receptor Assaying in neoplastic tissues.                  - isolation and characterization of membrane receptor for the Sex Steroid Binding Protein in estrogen-dependent tissues (1990 to 1998).                  - characterization of androgen receptor in colon cancer (1997 to 1999).                  - evaluation of the role of SHBG as an antiestrogen in estrogen-dependent breast cancer and molecular characterization of SHBG variant in human breast cancer (1996 to 2000).</p>

	<ul style="list-style-type: none"> <li>- 1999 - up to date: studies on the biological effects of Extracorporeal Shock Waves (ESW) in skeletal-muscle disease.</li> <li>- 2001 - up to date: mechanisms of action of High Energy Shock Waves (HESW) on cell lines <i>in vitro</i> and on neoplasia induced in laboratory animals.</li> <li>- 2003 - up to date: prospects of sonodynamic cancer therapy by combining HESW associated with antineoplastic drugs and/or aminolevulinic acid and/or nanobubbles.</li> <li>- 2006 - up to date: studies on the effect of Shock Waves on the proliferation and differentiation of osteoblasts and fibroblasts.</li> <li>- 2010 - up to date: studies on osteogenic- and tenogenic differentiation of human adipose derived stem cells by extracorporeal Shock Waves.</li> </ul>
<b>Personal skills and competence</b>	<ul style="list-style-type: none"> <li>- Internal Medicine</li> <li>- Endocrinology</li> <li>- Laboratory Medicine</li> <li>- Biological effects of Extracorporeal Shock Waves</li> </ul>

<b>Scientific work:</b>	<p>Head, from 1980 to date, of research projects funded by: the Italian Ministry of Education and later by the Ministry of University and Scientific Research and Technology and by University of Torino as well as by scientific and/or private Foundations.</p> <p>More than 150 presentations at national and international meetings and conventions. Most relevant scientific publications in international peer-reviewed journals are listed in PUBMED.</p> <ul style="list-style-type: none"> <li>- 1997- up to date: National Corresponding Member of the Academy of Medicine of Torino.</li> <li>- 2010 to 2012: President of the Italian Society for Shockwave Therapy (SITOD).</li> <li>- 2012 to date: Member of the Advisory Board of the International Society for Medical Shock Wave Therapy (ISMST).</li> </ul>
<b>Extracorporeal shockwave therapy:</b>	<p>Since 1998 experienced in the study of the mechanisms of action of extracorporeal shock waves through experiments <i>in vitro</i> and <i>in vivo</i> in laboratory animals.</p>

## Disclosure

<b>Conflict of interest statement</b>	<ul style="list-style-type: none"> <li>▪ <b>Roberto Frairia has at the moment no other current financial interests or conflicts with any company producing and trading devices for shockwave therapy.</b></li> </ul>
<b>Used orthopaedic shockwave devices:</b>	<ul style="list-style-type: none"> <li>▪ Piezoston 100 (Richard Wolf)</li> <li>▪ Minilith SL1 (Soraz Medical)</li> </ul>