

Education

Graduation in Medicinal Chemistry, University of Torino, Italy in 1992

Ph.D. in Medicinal Chemistry, University of Torino, Italy in 1997

Professional

1993-1994 Fellow at the State University of New York at Stony Brook in the field of Medicinal Chemistry (Prof. Iwao Ojima's research group).

1998-2001 Postdoctoral associate at the University of Torino in the field of Inorganic Chemistry (Prof. Bice Fubini's research group).

Currently researcher at the Faculty of Pharmacy, University of Torino

Research areas

I started my research activities in the field of medicinal chemistry. My first bibliographic production concern the synthesis and S.A.R. of Taxol analogues anticancer drugs.

The current research covers the chemical aspects in the toxicity of inorganic particulates (e.g. asbestos, asbestos substitutes, crystalline silicas, particulate matter and nanoparticles) and in the biocompatibility of materials. The study of the surface properties, the reactivity of the different surfaces toward organic molecules or biomolecules (e.g. antioxidants and proteins) and the occurrence of radical reactions studied by means of the ESR technique are the main topic of my research.

Publications

Currently I am coauthor of more than 50 papers. My bibliographic production is characterized by an high degree of multidisciplinary and cover the following fields: organic chemistry, medicinal chemistry, inorganic chemistry, chemistry of materials, toxicology, biochemistry, environmental chemistry.

A selected list of publications:

Fenoglio I., Greco G., Tomatis M., Muller J., Raymundo-Pinero E., Beguin F., Fonseca A., Nagy J. B. Lison D., Fubini B. Structural defects play a major role in the acute lung toxicity of multi-wall carbon nanotubes: physico-chemical aspects *Chem. Res. Toxicol.* (2008) 21, 1690-1697.

Fubini B., Fenoglio I. Toxic potential of mineral dusts (2007) *Elements*, 3, 407-414.

Fenoglio I., Tomatis M., Lison D., Muller J., Fonseca A., Nagy J.B., Fubini B. (2006). Reactivity of carbon nanotubes: Free radical generation or scavenging activity? *Free Radical Biology and Medicine* 40 1227-1233.

Governa, M., Amati, M., Fenoglio, I., Valentino, M., Coloccini, S. Bolognini, L., Botta, G. C., Emanuelli, M., Pierella, F., Volpe, A. R., Astolfi, P., Carmignani M., Fubini B. (2005). Variability of biological effects of silicas: Different degrees of activation of the fifth component of complement by amorphous silicas. *Toxicology and Applied Pharmacology* 208 68-77.

Daghino, S. Martino, E. Fenoglio, I. Tomatis, M. Perotto S. and Fubini B. (2005). Inorganic materials and living organisms: Surface modifications and fungal responses to various asbestos forms. *Chemistry-a European Journal* 11 5611-5618.

Fubini, B. Fenoglio, I. Ceschino, R. Ghiazza, M. Martra, G. Tomatis, M. Borm, P. Schins R. and Bruch J. (2004). Relationship between the state of the surface of four commercial quartz flours and their biological activity in vitro and in vivo. *International Journal of Hygiene and Environmental Health* 207 89-104.

Penna, A. Magnani, M. Fenoglio, I. Fubini, B. Cerrano, C. Giovine M. and Bavestrello G. (2003). Marine diatom growth on different forms of particulate silica: evidence of cell/particle interaction. *Aquatic Microbial Ecology* 32 299-306.

Horwell, C. J. Fenoglio, I. Ragnarsdottir, K. V. Sparks R. S. J. and Fubini B. (2003). Surface reactivity of volcanic ash from the eruption of Soufriere Hills volcano, Montserrat, West Indies with implications for health hazards. *Environmental Research* 93 202-215.

Martino E., Prandi L., Fenoglio I., Bonfante P., Perotto S. and Fubini B. (2003). Soil fungal hyphae bind and attack asbestos fibers. *Angewandte Chemie-International Edition* 42 219-+.

- Fenoglio I., Fonsato S. and Fubini B. (2003). Reaction of cysteine and glutathione (GSH) at the freshly fractured quartz surface: A possible role in silica-related diseases?. *Free Radical Biology and Medicine* 35 752-762.
- Arcan C. O., Barcelo F., Fenoglio I., Fubini B., Xamena Li. and Tomatis M. (2001). Free radical activity of natural and heat treated amphibole asbestos. *Journal of Inorganic Biochemistry* 83 211-216.
- Fenoglio I., Tomatis M. and Fubini B. (2001). Spontaneous polymerisation on amphibole asbestos: relevance to asbestos removal. *Chemical Communications* 2182-2183.
- Stratta P., Canavese C., Messuerotti A., Fenoglio I. and Fubini B. (2001). Silica and renal diseases: no longer a problem in the 21st century? *Journal of Nephrology* 14 228-247.
- Ojima I., Lin S., Chakravarty S., Fenoglio I., Park Y. H., Sun C. M., Appendino G., Pera P., Veith J. M., Bernacki R. J. (1998) Synthesis and structure-activity relationships of novel nor-seco taxoids *Journal of Organic Chemistry* 63, 1637-1654.
- Fenoglio I., Nano G.M., Vander Velde D. G., Appendino G. Synthesis of azetidione-type taxanes (1996) *Tetrahedron Letters* 37, 3203-3206.
- Ojima I., Park Y. H., Fenoglio I., Duclos O., Sun C. M., Kuduk S., Zucco M, Appendino G., Pera P., Veith J. M., Bernacki R. J., Bissery M. C., Combeau C., Vrignaud P, Riou J.F., Lavelle F., "Synthesis and Structure-activity Relationships of New Taxoids", "*Taxane Anticancer Agents: Basic Science and Current Status*" ACS Symp. Series # 583, American Chemical Society, Washington D.C., 1995, p. 262-275.