

# **Bioactive Molecules from Plants: Extraction, Nanoencapsulation and Applications**

D. De Vita

*Department of Environmental Biology, Sapienza University of Rome*

For decades, phytochemicals have been used in medicine for the treatment of human diseases. Continuously growing interest in natural compounds has led to the development of innovative extraction techniques, for the extraction of highly valued compounds. In contrast to conventional methods, the innovative ones are more sustainable and eco-friendly allowing higher yields in a shorter time and significant reduction in solvent and energy consumption. Application of phytochemicals in the pharmaceutical field needs to overcome their major drawbacks consisting in instability, low solubility and poor absorption: a way to formulate phytochemicals in order to enhance the therapeutic efficacy exploits nanoencapsulation, using biodegradable and biocompatible materials.