I studied Biology in the University of Navarra (1982-1987). In 1994, I received my Ph.D.in Biology from the University of Navarra. I started my research in 1987, studying the water status, the photosynthetic capacity and the endogenous levels of abscisic acid and cytokinins of three potato cultivars, with different rates of transplant survival, in order to optimize their acclimatization. We found that cytokinin levels were determinant for survival. In 1994 I started working as an Associate Professor in the Department of Plant Production of the Public University of Navarra. Between 1994 and 1997, my research focused on the optimization of nitrogenous fertilization in cereals. From 1998 I started working at the Institute of Agrobiotechnology (IdAB) of Navarra (www.agrobiotecnologia.es), in the Carbohydrate Metabolism group. In 2002 I obtained a IP contract, in 2004 I obtained a "Ramón y Cajal" contract and in 2007 I got a permanent position as Tenured Scientist (CSIC). Our group described for the first time the existence in bacteria and plants of an enzymatic activity (called ADPG pyrophosphatase) highly regulated, which catalyzes the hydrolysis of ADPG linked to the synthesis of glycogen and starch. During our investigations, we have provided numerous evidences of the existence both in bacteria and in plants of several sources that produce ADPG (the AGP and enzyme (s) still unidentified), linked to the synthesis of glycogen and starch in bacteria and plants respectively. In 2009 we reported that enhancing Sucrose Synthase activity in transgenic Potato plants was a useful strategy for increasing starch accumulation and yield in potato tubers. This technology was protected by a patent (PCT / ES2005 / 070010) and is one of the pillars of the Iden Biotechnology, a biotechnological company that was created by our research group in 2005. We recently demonstrated that volatile substances emitted by a wide range of microorganisms (both bacteria and fungi, including pathogens and microorganisms that do not interact with plants) promote the growth of plants, induce the accumulation of exceptionally high levels of reserve substances such as starch, increase resistance to drought stress and activate flowering and fruiting (patent WO 2011/135121 A2). This phenomenon (initially designated by the name of MIVOISAP (Mycrobial VOlatiles Induced Starch Accumulation Process)), first described by our group, involves drastic changes in the transcriptome and in the metabolome of plants exposed to the action of microbial volatiles. The stimulating effect exerted by small amounts of volatile microbial compounds in the growth and productivity of horticultural crops is comparable and even superior to those observed using conventional chemical fertilizers. Our scientific/technical objectives in the medium/long term are focused to understand the physiological and molecular mechanisms involved in this process and to obtain new biostimulants that could act on diverse metabolic processes, promoting growth and flowering and increasing the final yield of crops.