**Israel-Italia Bilateral Workshop**

June 21-22, Tel Aviv University

***From healthy plants to healthy food: disease management of Mediterranean crops in a changing environment***

**Organizers:**

Prof. Alessandra Gentile, University of Catania, Italy

Prof. Guido Sessa, Tel Aviv University, Israel

Plant diseases represent a major challenge to agriculture and food production globally and specifically in the Mediterranean area, accounting for an estimated 10% of crop yield loss each year. The outcome of plant-pathogen interactions is dictated by the genotypes of host and pathogen, as well as environmental conditions, and these factors determine whether a plant survives or succumbs to disease. Climate change increases the incidence of extreme weather events that may affect plant-pathogen interaction and disease appearance. The development of varieties that are naturally more resistant to diseases in a changing environment will assure crop yields during extreme weather events, provide food for consumers, avoid dependence on chemical pesticides, improve working conditions for farm workers, and produce economic benefits for growers. The overall objective of the proposed workshop is to facilitate the exchange of information among Italian and Israeli leading scientists investigating the interplay between pathogens and varieties of important Mediterranean crops with different behavior towards the diseases. A major goal of the workshop is to provide an interactive platform to share new technology, establish and strengthen international collaboration, and develop innovative strategies to improve crops health and productivity.

During the proposed workshop, the following four specific objectives will be accomplished:

1. Critically review the current status of the field with emphasis on microbial virulence strategies and plant sources and mechanisms of resistance in a changing environment.
2. Address the agricultural impacts of current biotechnology aimed to improve plant disease resistance in Italy and Israel.
3. Assess research technology and needs to set priorities for future studies in the field of plant-pathogen interactions.
4. Assemble integrated teams to establish collaborative efforts aimed to develop novel research approaches and technology to combat plant pathogens in the field.

The organizers of this workshop share common research priorities to understand the genetics of plant disease resistance, signaling of plant immunity, biochemistry and cell biology of pathogen virulence. The necessity to share emerging concepts, tools and technology to reach programmatic goals and develop innovative control strategies in a collaborative, timely manner was the major inspiration for this specific Italy-Israel workshop. Our objective is to organize a small group of established and young scholars with the desire to network and initiate new collaborative projects. Intensive communication is a necessary step towards developing productive, successful international research programs. We see this workshop as a critical venue to integrate and strengthen ties between scientists of Italy and Israel. The ultimate goal is to foster new collaborations and develop innovative strategies to combat disease while promoting durable plant resistance in a changing environment.