

**Yildiz Technical University**

**Scientific Research Projects (SRP) Coordination Unit**

**Call for Projects**

1. **Call Code**

**IRP-FOOD\_SUPPLY\_AND\_SECURITY-2022-1**

1. **Call Title**

**Food Supply and Safety**

**d Climate Change**

**3. Subject of the Call and General Framework**

The Food and Agriculture Organization (FAO) defines food safety as “the ability of all people, at all times, to have physical and economic access to sufficient, healthy, safe and nutritious food to meet their nutritional needs and food preferences for an active and healthy life”. As it can be understood from the definition, food supply and safety is a very comprehensive issue, and there have been serious threats to food supply and security due to the fluctuations in the global economy due to the pandemic, abnormal increases in food prices, disruptions in food production logistics, and countries closing their borders. Nutritional problems such as obesity, which have emerged in recent years, create socio-cultural, economic and social problems, and most importantly, cause health problems. In addition to the global-scale effects of food supply and security, the threats it may pose in our country have been taken into account by the authorized institutions and the execution of activities aimed at ensuring food supply and safety has been determined as the priority area in the Eleventh Development Plan.

Problems affecting the economy such as climate change, migration from village to city, ineffective use of agricultural lands and their fragmentation, drought, decrease in fresh water resources, disruptions in food safety in the production of food products, agricultural input costs and the importation of most of the food industry inputs from abroad, food supply and security emerge as the main threats affecting food supply and security. In addition, cultural changes and consumer expectations show that there is a need for new approaches for individuals to access safe healthy food. Studies show that almost half of the food products produced in the world become unusable or wasted in various ways before they reach the table. From this point of view, the development of innovative preventive strategies against physical, chemical and microbiological factors that threaten food supply and safety and cause loss of food products has become extremely important for the elimination of these threats. In this context, evaluation of food industry residues in the production of qualified products and circular economy are other important issues in terms of food supply and safety. It is expected that the infrastructure and human resources of our university will be strengthened according to the needs of R&D studies in accordance with the subject of the call.

1. **Aims and Goals**

Within the scope of this call, it is planned to support projects that are designed to prevent physical, chemical and microbiological hazards that threaten food safety, ensure sustainability in food supply by developing food for different nutritional needs and develop food products that have functional value, are rich in protein, observe ethical values, meet the demands of vegans and vegetarians along with the elderly and athletes, to make use of residues that come out during food processing in the production of value-added products, to improve shelf life of food products, to detect factors causing food safety risks rapidly and to develop food products’ physiochemical qualities.

* Minimizing and monitoring food safety problems,
* Developing sustainable food systems,
* Minimizing losses that could occur during the shelf life
* Producing functional foods in a way that can be transferred to industrial scale in order to improve public health
* Developing analytical systems for the detection of alteration in foodstuffs (method development)
* Developing rapid diagnosis systems for adulteration and food safety (kit, etc.)
* Developing detection methods and systems for monitoring ethnic, organic and geographically marked foodstuff and confirming their origin.
* Developing systems to examine the formation of food waste including food production and sale multidimensionally and to prevent food waste.

1. **Call Calendar**

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| **Call Opening Date:** | **07/03/2022** |
| **Call Closing Date:** | **15/04/2022** |