

An Israeli Phyto-Lipid Biotech Lab (PLBL) research group from [Ben Gurion University of the Negev](#) is searching for partners for setting up a consortium and submitting a proposal under two open BBI JU call topics, where their innovative technology and scientific expertise and experience can be of great contribution:

1. [BBI-2020-SO1-F3 Produce ingredients with high nutritional value from aquatic sources.](#)

Where they can contribute to side streams from the fish processing industry in aspects of novel non-oxidized delivery system based of quality controlled PUFA-rich natural nano-emulsified linseed product encapsulating fish oil.

The oxidation stability of this short and essential long chain fish oil non-oxidized delivery system is monitored by an advanced ^1H LF-NMR energy relaxation time sensorial application recently released by PLBL, BGU. The ability of this new application in rapid and accurate monitoring of complex chemical and morphological nano- and micro-aggregate time domains, with emphasis of oxidation processes, was demonstrated in a list of scientific publications (Energy & Fuel 2018, JAOCS 2019, EJLST 2002). This technology is able to characterize and monitor PUFA oxidation stability and antioxidant efficacy. It has potential application in many fields such as food quality and stability during production and shelf storage and also in human digestion system in the body.

2. [BBI-2020-SO2-R1 Use enabling technologies to improve feedstock availability and sustainability for the bio –based industry.](#)

Where they can contribute with developing an innovative sensor capable of monitoring of lingo-cellulose biomass degradation and releasing free sugars, polyphenols and other bioactive compounds.

The ^1H LF-NMR energy relaxation time technology is a novel and facile sensor for monitoring of lingo-cellulose biomass degradation, with potential for improving biomass conversion efficiency.

The intelligent biosensor system was already registered as a patent, and was published in leading scientific journals.

Phyto-Lipid Biotechnology Lab (PLBL) at Department of Biotechnology Engineering, Ben Gurion University of the Negev (BGU) is fully equipped with all facilities needed for the biosensor system. The team of BGU is well experience in operating and running the biosensor in versatile and changing conditions, etc. This lab backed with the analytical unit of BGU is also fully equipped with wide range of supporting analytical tools and methodologies that may be needed.

To express your interest, please contact

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