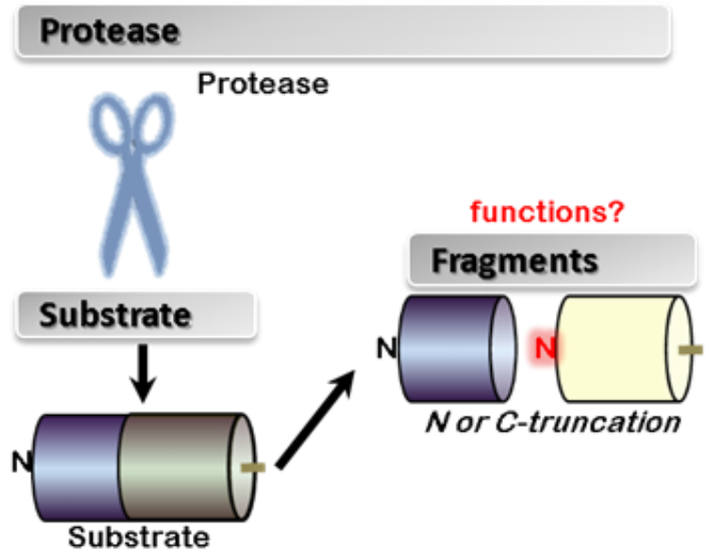
ΕΛ.Ι.Δ.Ε.Κ.
Ελληνικό Ίδρυμα Έρευνας & Καινοτομίας

ΙΣΝ/SNF ΙΔΡΥΜΑ ΣΤΑΥΡΟΣ ΝΙΑΡΧΟΣ
STAVROS NIARCHOS FOUNDATION

Description of Funded Research Programmes

2nd Call «Science and Society»

«Always be Excellent– Theodoros Papazoglou»



Research programme: New methodologies for the spaciotemporal analysis of proteolysis

PI: Panagiotis Moschou

Reader friendly title: Nestor

Scientific field: Biology

Body's Origin and Country: Institute of Molecular Biology and Biotechnology (IMBB)/University of Crete, Greece

Host Body: Institute of Molecular Biology and Biotechnology (IMBB)/

Research programme website:
https://pmoschoulab.blog/home/

Funding amount: 250.000

Funding duration: 24 months

Research Work Summary

It is essential to find new biological pathways which could be used in biotechnological applications, due to population increase, the potential food and raw biobased material shortage or even the harsh bursts of human, animal and plant pathogens. These pathways could constitute special targets for drug design, help in the production of improved biobased products or even the creation of synthetic materials. A pathway as such, is limited proteolysis, which has not been exploited so far, as this pathway has been difficult to study. Limited proteolysis resembles general proteolysis, but it results in new smaller proteins instead of destroying them. Previously, we found that many of these new smaller proteins may have new, unknown functions.

Our goal is to develop technologies, through which we can identify proteins that undergo limited proteolysis and make use of their new functions or even build new drugs affecting production of these proteins.

Expected Results & Work Impact

Results of the Novel Endocellular Spatial and Temporal Oligo/polypeptide Recognition (NESTOR) program will contribute to the production of new, basic knowledge, allowing our research team to its way in “uncharted research waters”. Technologies that will emerge from our studies can be exploited by investigators working in medicine, biology, chemistry and agronomy. Furthermore, through NESTOR we will be able to examine the applicability of our results in producing improved biological systems and, especially, in agricultural biotechnology. Hence, Nestor can benefit the society in the long-term by creating opportunities in the development of new drugs and biological systems with new properties.

Funding Importance

The NESTOR programme gives our research team the opportunity to move into the highest scientific standards at an international level, training also a new generation of researchers in cutting edge research. It allows us to do research driven by scientific curiosity and basic biological questions. Although curiosity-driven research is considered essential, it is very challenging to find funding resources for such research nowadays.

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