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המכון לביוכימיה, מדעי המזון והתזונה

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Title:

The activation of neutrophils by Helicobacter pylori neutrophil activating protein (HPNAP): New approaches using natural products for drug development

המפגש יתקיים
ביום ה', 4 דצמבר 2014, בשעה 11:00
מועדון סגל
(12/4/2014, 11:00, Faculty Club)

Abstract:

Entire Helicobacter Pylori Neutrophil Activated Protein (HPNAP) and its truncated forms NH2-terminal region HPNAP1–57 and C-terminal region HPNAP58–144 after cloning into pET29c vector, purification and removal of LPS traces were subjected to human neutrophil activation. Our results revealed that the C-terminal region of HPNAP is indispensable for human neutrophil stimulation and their further adhesion to endothelial cells – a step necessary to H. pylori inflammation– in a ratio equal to that exhibited by the entire protein. In addition, experiments concerning the implication of Arabino-Galactan-Proteins (AGPs) derived from Chios Mastic Gum (CMG), the natural resin of the Plant Pistacia lentiscus var.Chia revealed the inhibition of neutrophil activation and therefore their adhesion to endothelial cells,in vitro. Both, the involvement of HPNAP C-terminal region in stimulation-adhesion of neutrophils to endothelial cells as well as the inhibition of this process by AGPs have to be further investigated and may be exploited in a future anti-inflammatory therapy for H. pylori patients.

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