

МАТЕРИАЛЫ КОНФЕРЕНЦИИ  
И ШКОЛЫ

**NADPH CONTAINING PROTEIN COMPONENT FROM FRUITS AND PLANT:  
STIMULATION OF NADPH OXIDASES OF IMMUNE CELLS**

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The universal and simple method for isolation and purification of superoxide producing, NADPH containing protein (NCP) complex with Fe (III) from fruits (blackberry, cherry, peach, fig) and foods of plant origin (carrot, melon, water melon, potato, maize and millet flour) was elaborated for the first time. Using this method, complexes were precipitated at pH 4.8 (isoelectric point) and solubilized at pH 9.5 (slightly opalescent solutions). The mechanism of production of superoxide radicals ( $O_2^-$ ) by these NCP–Fe (III) complexes is conditioned with transfer of electrons from NADPH of NPC by Fe (III) to molecular oxygen, reducing it to  $O_2$ .

Without Fe (III) the NCP component shows only reducing effect and stimulates the  $O_2^-$ -producing activity of the isoforms of NADPH oxidases (Nox) from immune cells (leukocytes, erythrocytes) membranes in heterogeneous phase (on membranes) and in homogeneous phase (in solution). It is concluded that in mentioned fruits and plant origin foods the isoforms of  $O_2^-$ -producing complexes of NCP–Fe (III) were presented. These isolated and purified complexes can be used as new natural antimicrobial and antiviral agents and NCP from these complexes, as a natural immunomodulatory agent.