

Atmospheric-pressure plasma application on intra-cellular biochemistry

Byung Keun Na¹, Youbin Seol¹, and Hong Young Chang¹

¹ *Department of Physics, Korea Advanced Institute of Science and Technology, Daejeon,
305-701 Korea*

E-mail: nabkn@kaist.ac.kr

Recently, atmospheric-pressure plasma (APP) becomes one of the most promising biomedical tools. APP shows a remarkable performance in various applications from sterilization to tissue recovery or surgery. The APP bio-medical application, called bio-plasma works through the cell membranes and causes various effects on cell organs. In this presentation, non-thermal plasma effects on intra-cellular molecules were investigated. Electrons, ions, and radicals were generated by radio frequency power, and the particles were inserted into the cells by electroporation. The plasma effects in the cells are presented by changing the plasma characteristics and the cell species.