

The thesis is focused on in vitro testing of biological activities related to inflammation, such as inhibition of nitric oxide production and inhibition of reactive oxygen species formation in activated cells. 65 triterpenoid derivatives were tested in experimental section of the thesis for nitric oxide synthesis inhibition in B10R cells stimulated with lipopolysaccharide. 15 compounds showed therapeutic index value higher than 4, including three compounds which showed IC<sub>50</sub> value lower than 10 μmol/l. 115 triterpenoid compounds were tested for inhibition of reactive oxygen species formation in RAW 264.7 cells stimulated with opsonized zymosan. Two compounds showed IC<sub>50</sub> value lower than 10 μmol/l. None of 115 tested compounds showed NO·-scavenging activity. Four compounds showed a moderate O<sub>2</sub>·-scavenging activity.