

## **Abstract**

Plants are daily exposed to stress, biotic or abiotic. Both of these types can be divided into several subgroups. This work is focused on plant cuticle, its formation and function in respect to abiotic stress resistance. The main factors, mentioned in this work, are drought, heat, UV radiation, excessive salinity or ozone exposure. The individual chapters focus on the composition, biosynthesis and changes in the build-up construction caused by certain types of stressors. A significant part is also devoted to cutin and cuticular waxes, which play an important role in plant protection and whose structure is also affected by abiotic stress. Phytohormones, especially abscisic acid, which had its application here, are also not omitted. In the final phase of the thesis, cuticular mutants are mentioned in connection with abiotic stress types illustrating the role and the importance of the cuticle layer.

**Key words:** plants, cuticle, osmotic stress, abscisic acid, cutin, waxes