

Abstract

Heavy metals are among the substances commonly found on earth's surface, where they have been naturally deposited from the crust over millions of years. However, with the advent of man and especially the industrial age, anthropogenic sources of these often-toxic elements increased and their concentration, especially in the human environment, increased sharply. These elements subsequently began to accumulate to a greater extent in the bodies of organisms, where they are involved in the development of various diseases, autoimmune reactions and other health problems. Bioindicators, organisms commonly found in the studied areas which are able to respond to these changes in an observable manner, are used to study such changes in the environment. Birds were selected as a suitable bioindicator for this work. The changes were observed both at the cellular level, including oxidative stress and disruption of cellular structures, as well as at the histological level. In tissues, heavy metals cause various morphological abnormalities and thus disrupt their functionality, leading to the failure of entire animal systems. As a result, there is a need to continue to focus on reducing anthropogenic pollution of the planet by these elements