SUMMARY

The goal of my thesis was to find out whether it is possible to distinguish among individual dog breeds from the protein analysis of their fur. This knowledge could be used, for example, in forensic science. In this work, there was also a comparison of the similarity of dog breeds with a wolf, which was domesticated and is considered as an ancestor of the dog. For this study, the hair of three representatives of sixteen dog breeds was collected. To analyse these samples enzyme cleavage was used a trypsin, and mass spectra were obtained by MALDI-TOF MS (Matrix-Assisted Laser Desorption/Ionization – Time of Flight Mass Spectrometry) and LC/MS-MS (Liquid Chromatography with Tandem Mass Spectrometry) methods. The obtained data were evaluated by the PCA (Principal Component Analysis) and LDA (Linear Discriminant Analysis) method. It was found, that individual dog breeds cannot be distinguished using both methods.

KEYWORDS

proteomics, coat, dog, breeds, mass spectrometry