Abstract

Huntington´s disease is a serious hereditary disorder that causes mortification of neurons. The disease affects individuals around the age of 40. Its characteristics are involuntary movement of the limbs and a progressive dementia. This disorder is currently without any treatment and always ends with patient dying within a period of 15 years after the first symptoms are discovered. Special relation between Huntington´s disease and malign neoplasia was observed at the end of the 20th century. This relation shows lower degree of cancer among the patients with this neurodegenerative disorder compared to the general population. An expanded sequence of a CAG section probably protects these persons against advancement of cancer. Creation of an applicable experimental model with characteristic highly resembling human body was necessary for superior research of this disease. This model can be represented by a transgene mini pig carrying a mutated protein huntingtin - tgHD pig. Another model of a mini-pig showing hereditary occurrence of malign lesions - MeLiM pig was created to research cancer. These two specific lines of mini-pigs were crossbred resulting in not only piglets with melanoma and transgene piglets with mtHTT but also transgene piglets having melanoma at the same time. Furthermore the same farrow had also no-transgene animals and animals without melanoma. These can be used as a cross-check regarding experimental animals. It is possible that a research of the tgHD and MeLiM cross-breeds would reveal obvious relation between mtHTT and cancer.