University of Gdańsk
Technology Transfer Office

Bio-tech

Nucleotide sequence for detection of newcastle disease virus (NDV)

About technology

Union, such as Germany, France, Poland and Italy are particularly vulnerable to economic losses caused by outbreaks of diseases such as Newcastle Disease (ND). The ND virus exhibits very high transmission rates among birds, and in case of particularly virulent strains its mortality rate may reach 100%. This in turn results in signifficant economic losses among poultry producers in the entire European Union, as well as globally. Consequently, costly prevention programs aimed at limiting or eradicating outbreaks of Newcastle Disease were introduced in many European countries. The incidence of the disease has been reduced preventive vaccination of poultry, but available vaccines do not counteract infections n birds, which are a natural reservoir of the virus, and only alleviate or eliminate symptoms.

Newcastle Disease virus is prone to mutation, due to the nature of its RNA-based genetic material, which in turn promotes the formation of new, more virulent strains against which existing vaccines are ineffective. Consequently, development of new, effective method of detecting ND virus in non-laboratory conditions is becoming increasingly important, in order to prevent potential outbreaks in poultry and avoid related financial losses.

Technology described herein can be used to detect the ND virus under its natural conditions, i.e. in the respiratory tract of domestic and wild birds. Novell detection method may be used to investigate the presence of the virus in throat or cloaca swabs from poultry (ducks, hens) as well as wild birds (eg pigeons). The invention may be used as screening test in prevention programs aimed to curtail epidemics in poultry farms.

Technology related to offer no. 035/2017/1

Research Team

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Implementation progress

TRL 4 –Technology validated in laboratory conditions

Cooperation opportunities

- Licensing agreement
- Transfer of ownership
- Spin off

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