

Post-exposure vaccination with IMVAMUNE® protects against lethal poxvirus infection

In studies with Bavarian Nordic's new and innovative third-generation smallpox vaccine, IMVAMUNE®, scientists from Bavarian Nordic have for the first time demonstrated a therapeutic effect of a smallpox vaccine, days after infection. With the current available first- and second-generation smallpox vaccines no evidence of a therapeutic effect has ever been shown in animal models. This discovery was recently published in the prestigious Journal of Clinical Investigation.

The scientific paper "*Survival of lethal poxvirus infection in mice depends on TLR9 and therapeutic vaccination provides protection*" shows that a single vaccination of IMVAMUNE® could protect a variety of immune suppressed animals on the same day as a lethal challenge with Ectromelia virus; a natural poxvirus infection of mice that closely models smallpox infection in humans. Some of these mice were so immune suppressed that vaccination with a traditional smallpox vaccine (e.g. Dryvax®) led to the death of the animals prior to any challenge with Ectromelia. Not only was IMVAMUNE® therefore shown to be safer than traditional smallpox vaccines, but a single vaccination with IMVAMUNE® given up to 3 days post the lethal challenge with Ectromelia protected the mice. This is the first therapeutic or post-exposure protection, demonstrated for a smallpox vaccine in a relevant animal model.

These data follow Bavarian Nordic's previous observations that IMVAMUNE® induced a faster protective immune response compared to traditional smallpox vaccines. Moreover, IMVAMUNE® is currently in phase two clinical studies and so far more than 1,600 subjects have been vaccinated. IMVAMUNE® has been shown to be well tolerated even in subjects not considered candidates to receive the current first- and second-generation vaccines (e.g. HIV and Atopic Dermatitis patients).

Anders Hedegaard, President & CEO of Bavarian Nordic: "*This is a milestone in the development of our new and safer smallpox vaccine IMVAMUNE®, and it opens up for new and exciting smallpox preparedness possibilities. With IMVAMUNE® we can offer a safer vaccine and a solid protection both before and after exposure. No other smallpox vaccine has shown to offer these important features.*"

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About Bavarian Nordic

Bavarian Nordic (CSE: BAVA) is a leading international biopharmaceutical company developing and producing innovative vaccines to prevent and treat infectious diseases and cancer. With operations in Denmark, Germany, the USA, and Singapore, Bavarian Nordic employs over 260 people. Bavarian Nordic's patented technology, MVA-BN®, is as been demonstrated in clinical studies, one of the world's safest, multivalent vaccine vectors for the development of vaccines against various infectious diseases such as smallpox, HIV/AIDS, as well as against breast and prostate cancer. Several MVA-BN®-based vaccines are in clinical Phase I and Phase II trials. Bavarian Nordic has ongoing development contracts with the US government to develop a third-generation smallpox vaccine, IMVAMUNE®. Bavarian Nordic has supplied several other governments with smallpox vaccines.

For more information please visit www.bavarian-nordic.com