



Press Release

'Aggressive MRSA strain from the US can spread rapidly'

Leiden 30 June 2010 – In the Netherlands several cases of persons infected with a new MRSA strain, the so-called USA300 strain, have cropped up in recent years. It has come from America, where it rapidly spreads among healthy people in the community. "This representative of the multi-resistant hospital bacteria is more dangerous than those with which we are already familiar, and treatment is difficult", says professor of medical microbiology Jan Maarten van Dijl of the University of Groningen. Van Dijl is currently working with a team of investigators on an effective treatment of infections with all MRSA variants.

MRSA (Methicillin resistant *Staphylococcus aureus*) is a bacterium insensitive to nearly all regularly used antibiotics. Therefore, it is very difficult to fight.

The bacterium is normally found in places where many antibiotics are used, such as in hospitals. However, the American strain quickly spreads among healthy people outside of health care settings, for example, in sports centers and childcare facilities. "This is a worrying fact. If people have a minor injury, for example, or reduced resistance, they run the risk of serious infections which are very difficult to treat", according to van Dijl. Such infections can result in serious skin problems, and in some cases, also in severe pneumonia, meningitis, or heart problems.

Current intensive air traffic between the US and Europe has enabled this aggressive MRSA strain to emerge in the Netherlands. In the Netherlands, MRSA-infected patients are immediately quarantined in the hospital and, through the active "search and destroy" policy, the problems are still relatively minor. Unlike the situation in the US, the incidence of the USA300 lineage in the Netherlands has remained low. Van Dijl: "there is no cause for panic. Merely 3-4% of all MRSA infections in our country currently relate to the USA300 strain. However, the ability of this strain to spread rapidly is worrisome".

In the context of the Top Institute Pharma, van Dijl is currently working on the development of a new medication to effectively treat infections with the continuously mutating MRSA bacteria. "The idea is that one attacks the bacteria on many different fronts, and not only on one", explains van Dijl. "This is being done with human antibodies, which precludes possible side effects of the medicine."

The researchers are currently collecting sufficient antibodies, which will then be cloned. Next, the preclinical testing can begin. In addition to the University Medical Center Groningen, the Erasmus Medical Center in Rotterdam, the University Medical Center of Utrecht and the Dutch biotechnology companies Pepsan Therapeutics and IQ therapeutics are also participating in the research.

About Top Institute Pharma

Top Institute Pharma (TI Pharma) is a public-private cooperation in which scientists and corporate entities work together on innovative, multidisciplinary research targeted towards the improvement of the development of valuable medicines for society. Our project portfolio is based on the clinical areas as described in the "Priority Medicines" report from the World Health Organization (WHO). These projects create knowledge that is important for the better, faster and less expensive development of valuable new medicines. For more information: www.tipharma.com.