## "STATs and SOCSs in Tuberculosis" Martin Rottenberg, Professor (Karolinsta Institute )

Tuberculosis is sometimes perceived as a feared killer of the past but is still a dreadful disease of mankind. Mycobacterium tuberculosis multiplies inside white blood cells known as macrophages. In infected people who don't develop the Tuberculosis, the immune system either the bacteria or impairs bacterial multiplication. The exact mechanisms behind this are not known in detail, hampering the development of effective vaccines and treatments of the disease. Why the disease is manifested in some individual, but not in others, is not completely understood.

The recent study shows that a molecule called SOCS3 is required for control of the infection. The discovery was done using an experimental infection of mice genetically modified so that they do not express SOCS3 in different immune cells. These mice were dramatically susceptible to the infection with Mycobacterium tuberculosis. SOCS3 could be a new target for vaccines to improve the protection against Tuberculosis.