(PresseBox) **ARTES Biotechnology and Burnet Institute announce they have joined forces to develop a novel, effective vaccine to prevent transmission of hepatitis C virus (HCV).**

An HCV vaccine is urgently needed to prevent re-infection in people treated through antiviral therapies and reverse the high global mortality rates from infection-related liver cirrhosis or liver cancer, estimated by the World Health Organization (WHO) to be more than 500,000 people each year. More than 130 million people globally are carriers of HCV, a blood-borne virus.

The innovative hepatitis C vaccine project will combine Burnets' proprietary HepSeeVaxDelta3™ technology, developed by Associate Professor Heidi Drummer and colleagues, with ARTES' proprietary METAVAX® technology for the development of chimeric virus-like particle (VLP) based vaccines. The project aims to develop a VLP based vaccine that efficiently presents HCV antigens to prevent hepatitis C infection. The VLPs will present the novel, modified envelope protein (E2) on its surface, thereby targeting the vaccine to dendritic cells to prime and prepare the immune system to fight against hepatitis C infection.

Deputy Head of Burnet's Centre for Biomedical Research and HCV vaccine team leader, Associate Professor Drummer said HepSeeVaxDelta3™ technology overcomes a critical limitation to HCV vaccine development. "The virus that causes HCV has evolved to avoid the immune system so that in natural infection, key immune responses are delayed or distracted by irrelevant targets on the virus. The same is true for conventional vaccine platforms tested previously. The HepSeeVaxDelta3™ component of the vaccine redirects the immune response to make antibodies on the most important targets that prevent infection against the seven circulating HCV genotypes."

Managing Director of ARTES, Dr Michael Piontek said his company was excited to join forces with Burnet Institute to develop a much-needed vaccine against hepatitis C, which is endemic in many countries where treatment costs are high and HCV poses a significant burden on healthcare systems. "Access to diagnosis and treatment is limited, especially in endemic countries in Africa and Asia, so there is a strong demand for a safe and low-cost vaccine to prevent hepatitis C infection. This is in-line with the aim of the WHO to realize their hepatitis C elimination targets. After out-licensing processes for hepatitis B vaccine production worldwide, ARTES is proud to take the next step together with Burnet Institute in fighting another

life-threatening hepatitis infection.”

The vaccine development platform

ARTES’ vaccine development platform METAVAX® in combination with the expression host Hansenula polymorpha (recommended by the WHO for hepatitis B vaccine production) is the preferred tool for the development of affordable vaccines. ARTES’ development platform is a unique and very economical approach to low-cost mass production of safe and effective vaccines.

Burnet Institute’s HepSeeVaxDelta3™ technology is developed by re-engineering the major HCV viral surface protein E2 to produce the novel HepSeeVaxDelta3™ vaccine. HepSeeVaxDelta3™ can generate high levels of antibodies that can block replication of all seven genotypes of HCV in laboratory tests. This major scientific advance offers the prospect of a simple, universal vaccine to prevent HCV infection worldwide.