

PRESS RELEASE

Funding of €6.9 Million for Sepsis Research

The European Union is providing funding for research on this lethal medical condition

Bonn, September 11 – Every year some 75,000 people die from bacterial blood poisoning, or sepsis, in Germany alone. Survivors of sepsis often have to struggle with secondary and concomitant conditions due to resulting impairment of the immune system, the so called “Immunesuppression”. The International Center for Clinical Research (ICRC) at St. Anne’s University Hospital (FNUSA) Brno (Czech Republic) has founded the research consortium “BEATSep”. HORIZON EUROPA is funding it with around 6,9 million euros over the next five years. The project purpose is to study the cellular and molecular mechanisms causing this immune suppression occurring in sepsis survivors. Prof. Dr. Bernardo S. Franklin, Institute for Innate Immunity of the University Hospital Bonn and member of the ImmunoSensation² Cluster of Excellence of the University of Bonn, is involved in the project. He receives about 800,000 euros from the EU funding.

When the immune system is unable to contain an infection, or “overshoots”, and mounts an excessive inflammatory response against an infection, organ and tissue damage can occur. Known as septicemia or sepsis, this phenomenon has grave consequences, including multiple organ failure and potentially fatal septic circulatory shock, if not effectively treated in time. Worldwide, nearly 50 million people suffer from sepsis annually. In Germany alone, some 75,000 people die from the condition each year. “

Surviving sepsis patients often go on to suffer from a compromised immune system in consequence, leading to secondary illness and impaired health. “The molecular mechanisms that cause immunosuppression in the wake of sepsis are still largely unknown, nor is it currently possible to predict which patients will survive or develop immunosuppression,” explains Prof. Dr. Bernardo S. Franklin, who works at the Institute of Innate Immunity of the University Hospital Bonn and conducts research also as a member of the University of Bonn’s ImmunoSensation² Cluster of Excellence.

This is the focus of “BEATSep – International Consortium for Sepsis Survivorship”. Scientists from the Czech Republic, Ireland, Austria, France and Germany have joined to study the long-term immunological impact of septic shock as members of this consortium led by the Cellular and Molecular Immunoregulation (CMI) research team at the International Clinical Research Centre (ICRC) based in the Czech Republic. “The project has the chance to understand better and fundamentally change the recovery of pediatric and adult patients who have suffered septic shock,” says Dr. Jan Frič, head of the CMI team at ICRC. The ICRC is a joint facility of St. Anne’s University Hospital in Brno and the Faculty of Medicine of Masaryk University.

The consortium’s project is to receive approximately €6.9 million in European Union funding over the next five years, roughly €800,000 of which will flow to Professor Franklin’s research

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group at the Institute for Innate Immunity of the University Hospital Bonn. “We hypothesize that the post-sepsis immune suppression may be caused by antibodies raised against pathogens, but that cross-react with components of our own immune system, and neutralize the activities of immune cells. This ‘cross-fire’ may cause the immune dysfunction,” the scientist says. Using one of the biggest longitudinal cohort of sepsis patients in Europe, he and his team will investigate whether these “autoantibodies”, and dysregulation of inflammasomes, key signaling hubs of the innate immune system are causing the post-sepsis immunosuppression.

Institutions involved:

In addition to the Institute for Innate Immunity of the University Hospital Bonn and the ImmunoSensation² Cluster of Excellence of the University of Bonn, the following institutions are involved in the project led by the International Clinical Research Center (ICRC), based in the Czech Republic: Ludwig Boltzman Institute (Austria), BioVariance GmbH in Tirschenreuth (Bavaria), Centre d’Immunologie de Marseille-Luminy (France), Comenius University Bratislava (Slovakia), National University of Ireland and the Lung Biology Cluster (Ireland), Masaryk University Brno (Czech Republic), Assistance Publique – Hôpitaux de Marseille (France) and the National Institute of Health (Czech Republic).

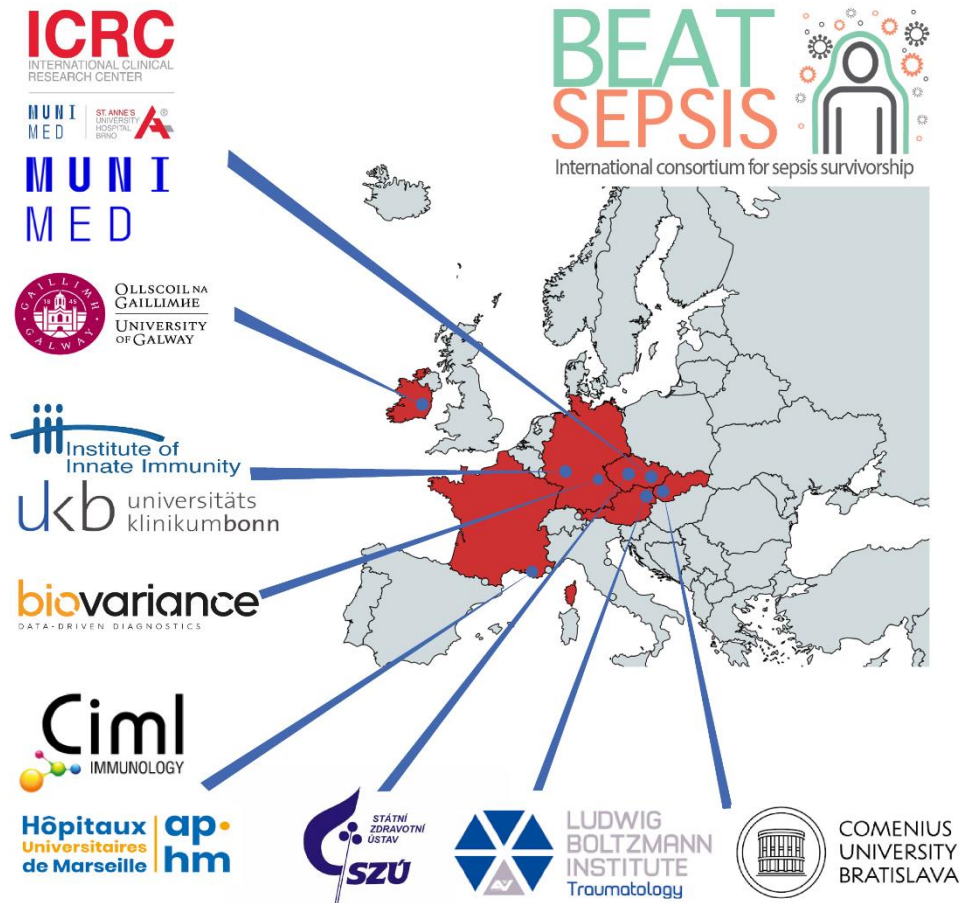
For more information visit: <https://www.beatsepsis.eu/>

Image line:



Caption: Prof. Dr. Bernardo S. Franklin of the Institute of Innate Immunity.

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The members of the BEATSep consortium. Figure: BEATSep

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About the University Hospital Bonn: The UKB cares for about 500,000 patients per year, employs 8,800 people and has a balance sheet total of 1.5 billion euros. In addition to the more than 3,300 medical and dental students, a further 580 people are trained each year in numerous healthcare professions. The UKB is ranked first among university hospitals in NRW in the science ranking and in the Focus clinic list and has the third highest case mix index in Germany.