



BloodCounts! an early warning system for infections outbreaks

Available Technologies

An AI tool able to detect disease outbreaks in the population using routine full blood count data.

The loss of 6.9 million lives in the ongoing COVID-19 pandemic has highlighted that there is a critical need for simple, affordable, and scalable tools to detect new emerging infectious disease outbreaks as early as possible.

Bloodcounts! is a novel tool that uses artificial intelligence to detect such outbreaks. A “Tsunami-like” early warning system which uses the world’s most common medical laboratory test, routine full blood count, this tool scans for abnormal changes in the blood of large populations alerting public health agencies to potential outbreaks of infections without prior knowledge of the pathogen.

Technology overview

We have developed an artificial intelligence tool that uses routine full blood counts to detect new disease outbreaks in a population.

Benefits

- The tool uses the world’s most common medical laboratory test
- Early warning to public health agencies to support rapid response



- Unlike many current test methods, Bloodcounts! does not require any prior knowledge of a specific disease pathogen to work
- Potential detection of other health threats

Applications

BloodCounts! can be used as a monitoring tool of infectious diseases outbreaks. It can send warnings as soon as anomalies in the population blood count data are detected. This will allow healthcare providers and agencies to intervene rapidly.

In addition, the tool is currently being developed to detect various health conditions that might manifest in a population exposed to toxic agents and could have additional applications in monitoring known threats in the workplace and other settings (e.g. exposure to radiation or toxic substances, etc.). The team is also testing whether BloodCounts! can be used for early diagnosis of haematological disorders, of risk of serious complications during pregnancy, of cardiovascular diseases and of renal cancer in individuals.

Opportunity

We are looking for licensees, investors and co-development partners.

Inventors

Dr Michael Roberts

Dr Nicholas Gleadall