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## How the Human Immune System Reacts to Stress Such as Drowning

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## How the Human Immune System Reacts to Stress such as Drowning

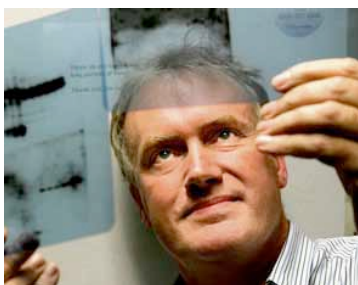
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*“Science is trying to find stuff out. You can call it exploration, you can call it pioneering, frontier stuff because it’s all about making discoveries. We are explorers, that’s our job, that’s what attracted me to it. I wanted to see something nobody’s seen before. And in my case, luckily enough in my lab we probably had three big discoveries that made a big difference: we explored the immune system and saw things there for the first time. The next step is there’s a whole new pathway or process discovered – and of course the thrill would be if that was a dysfunction or a disease because then you might try and correct it. Once you find the enemy, you might be able to design a new medicine that might beat it.” (Interview in Dublin, 2018)*

Professor O'Neill presented an informative general overview on the human immune system, inflammatory response, and on hypoxia. He was eager to discuss this question with those present.



Luke O'Neill is Professor of Biochemistry in the School of Biochemistry and Immunology at Trinity College Dublin and a Fellow of the Royal Society. His research team investigates inflammation provoked in the body during infection by bacteria and viruses but also in response to trauma and injury. He has worked on the innate immune system which lies at the heart of inflammation. He has uncovered new

molecules and biochemical processes that are triggered by sensors of infection and tissue injury. He was awarded the Robert Boyle Medal for scientific excellence in 2009, the Royal Irish Academy Gold Medal for Life Sciences in 2012 and the European Federation of Immunology Societies (EFIS) Medal in 2014 (Wikipedia). He was elected a Fellow of the Royal Society (FRS) in 2016 and is listed in the top one percent of cited researchers in his field worldwide. Recently Professor O'Neill's team discovered a new metabolic process in the body that can switch off inflammation. The discovery opens up a strong possibility of more effective treatment of inflammatory diseases such as arthritis, inflammatory bowel disease and heart disease. It is hoped the discovery will lead to much-needed new drugs to treat people living with inflammatory and infectious diseases by switching off over-active immune cells which arise with these conditions.

