

## **Understanding cold atmospheric plasma jet interactions with tissue: challenges and opportunities**

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There is significant optimism that cold atmospheric plasma could play a role in the treatment of diseases and infection, particularly those that are refractory and potentially life-threatening such as non-healing chronic wounds and cancers. The medical benefits from plasma are assigned to reactive oxygen and nitrogen species (RONS) that are generated by plasma upon interaction with air and liquids. However, we still do not have a sufficient understanding of (1) what RONS are delivered by plasma, (2) the rate RONS are delivered, (3) how deep RONS are delivered into tissue and (4) how RONS interact with cellular membranes. This knowledge is essential in order to obtain a mechanistic understanding of plasma in biology and medicine. In this talk, I will focus on current research using models of tissue fluid, tissue and cells to learn more about the plasma delivery of RONS into biological environments. I will argue this research is vital in furnishing an underpinning knowledge required to realise the full potential of plasma in biology and medicine.