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Viral cooption and amplification of pro-inflammatory and IFN mediated reprogramming of macrophage's metabolism

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Viruses are obligatory parasites that both exploit and counter selective host pathways, including metabolism, to effectively propagate. Recent studies from our group and others have revealed a central connection between infection and metabolism in regulating the host response. In particular macrophages, among other immune cells, reprogram and tightly regulate their metabolism upon activation from IFN and/or TLRs. Here, we employ transcriptomics and metabolomics analyses of wild type and mutant *Cytomegalovirus* infection of wild type and IFNB-/- or IFNAR-/- macrophages. These investigations enable the unraveling of host directed versus virus driven responses and we find unexpectedly that *Cytomegalovirus* opportunistically co-opts early pro-inflammatory changes in glycolysis for establishing infection of macrophages.

Biography

Konstantinos Kotzamanis has completed his Bachelor's studies in Chemistry/Biochemistry at the Aristotle University of Thessaloniki. He was awarded a scholarship from IKY/EU (Greek State Scholarship Foundation) for his MSc at the University of Edinburgh, which he received in 2012. He was, in addition, awarded a scholarship from IKY/EU and the University of Edinburgh for his PhD studies in the lab of Professor Peter Ghazal. He has one publication and has been awarded a prize for best poster at the BSI summer school in 2014.

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