



Contribution ID : 87

Type : Oral

The Death Kiss: understanding how the zombie protein, MLKL, is triggered to kill cells by necroptosis

Wednesday, 24 November 2021 11:00 (20)

In 2012, Mixed lineage kinase domain-like (MLKL), a catalytically-dead (“zombie”) cousin of conventional protein kinases, termed a pseudokinase, was implicated as the key effector in the programmed necrosis (or necroptosis) cell death pathway. This pathway has been implicated in innate immunity, the pathogenesis of inflammatory diseases, and tissue injury arising from ischemia-reperfusion. As a result, an improved fundamental knowledge of MLKL’s activation mechanism is of enormous interest as we and others look to target the pathway therapeutically.

Here, I will describe our recent work dissecting the chronology of events in this pathway using novel tools, biochemistry, microscopy, proteomics and structural biology methods. Our structural studies were enabled by the MX and SAXS beamlines at the Australian Synchrotron and isotopic protein labelling at the National Deuterium Facility.

Level of Expertise

Expert

Presenter Gender

Man

Pronouns

He/Him

Which facility did you use for your research

Australian Synchrotron

Students Only - Are you interested in AINSE student funding

Do you wish to take part in the Student Poster Slam

Condition of submission

Yes

Primary author(s) : Dr MURPHY, James (Walter and Eliza Hall Institute of Medical Research)

Presenter(s) : Dr MURPHY, James (Walter and Eliza Hall Institute of Medical Research)

Session Classification : Biomedicine, Life science & Food Science

Track Classification : Biomedicine, Life science & Food Science