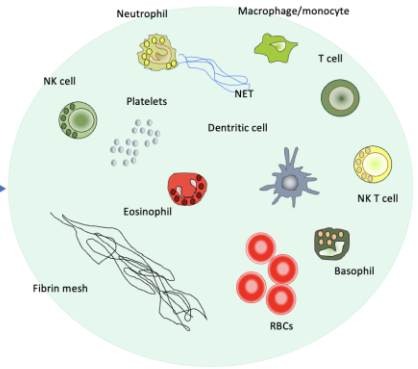
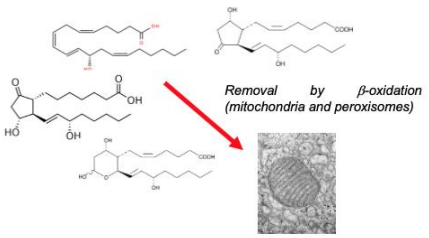
Discovery and characterization of bioactive lipids

Valerie O'Donnell, Cardiff University

Trauma/Injury
Infection
Autoimmunity/inflammatory disorders
Cardiovascular/stroke
Dementia
Cancer



Innate Immunity hub



nature COMMUNICATIONS

ARTICLE

OPEN

Oxylipin metabolism is controlled by mitochondrial β-oxidation during bacterial inflammation

Mariya Misheva[1], Konstantinos Kotzamanis[1,12], Luke C. Davies[1,2], Victoria J. Tyrrell[1], Patricia R. S. Rodrigues[1], Gloria A. Benavidez[3], Christine Hinz[1], Robert C. Murphy[3], Paul Kennedy[4], Philip R. Taylor[1,5], Marcela Rosas[1], Simon A. Jones[1], James E. McLaren[1], Sumukh Deshpande[1], Robert Andrews[1], Nils Helge Schebb[6], Magdalena A. Czubala[1], Mark Gurney[1], Maceler Aldrovandi[7], Sven W. Meckelmann[1], Peter Ghazal[1], Victor Darley-Usmar[3], Daniel A. White[1] & Valerie B. O'Donnell[1]

Precursor scanning

↓

Discovery

↓

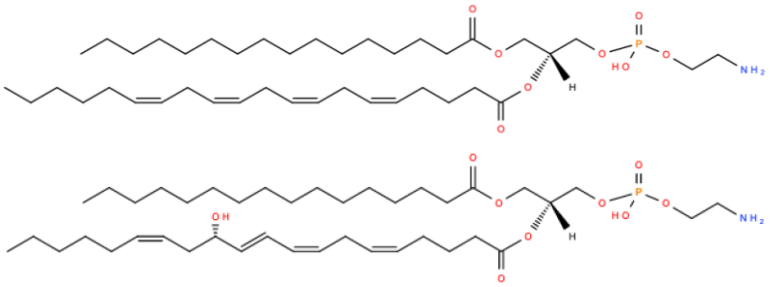
Identification

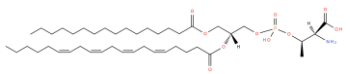
↓

Analytical approaches developed

↓

Characterisation of biological role





JLR JOURNAL OF LIPID RESEARCH

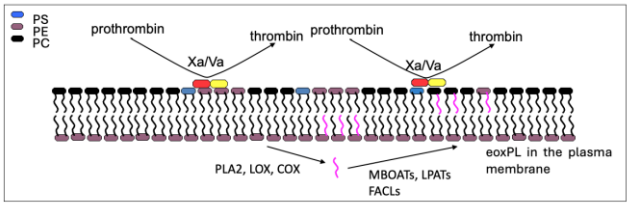
Volume 65, Issue 1, January 2024, 100484

Research Article

Phosphatidylthreonine is a procoagulant lipid detected in human blood and elevated in coronary artery disease

Ali A. Hajeyah[1,2], Majd B. Protty[1], Divyani Paul[3], Daniela Costa[1], Nader Omidvar[1], Bethan Morgan[1], Yugo Iwasaki[4], Beth McGill[1], P. Vincent Jenkins[5], Zaheer Yousef[5], Keith Allen-Redpath[6], Shin Soyama[6], Anirban Choudhury[7], Rita Mitra[5], Parveen Yaqoob[6], James H. Morrissey[3], Peter W. Collins[1,5], Valerie B. O'Donnell[1]

Triple quadrupole instrument

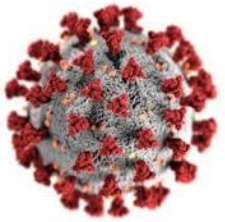


RESEARCH ARTICLE | BIOLOGICAL SCIENCES

Phospholipid membranes drive abdominal aortic aneurysm development through stimulating coagulation factor activity

Keith Allen-Redpath, Maceler Aldrovandi, Sarah N. Lauder, ..., and Valerie B. O'Donnell | Authors Info & Affiliations

PNAS



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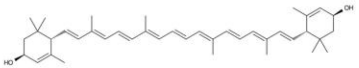
Lipid of the Month

May, 2025



Tunaxanthin A

Lipid Matters

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UKRI Medical Research Council

Other local biomedical research at Cardiff

School of Medicine

Neurosciences and mental health

Population medicine

Infection and immunity

Cancer and genetics

Inflammation

Immunity....T cells, cancer

Infection.....virology, AMR

Coagulation

Macrophage biology

Cytokines

Complement

Innate sensing

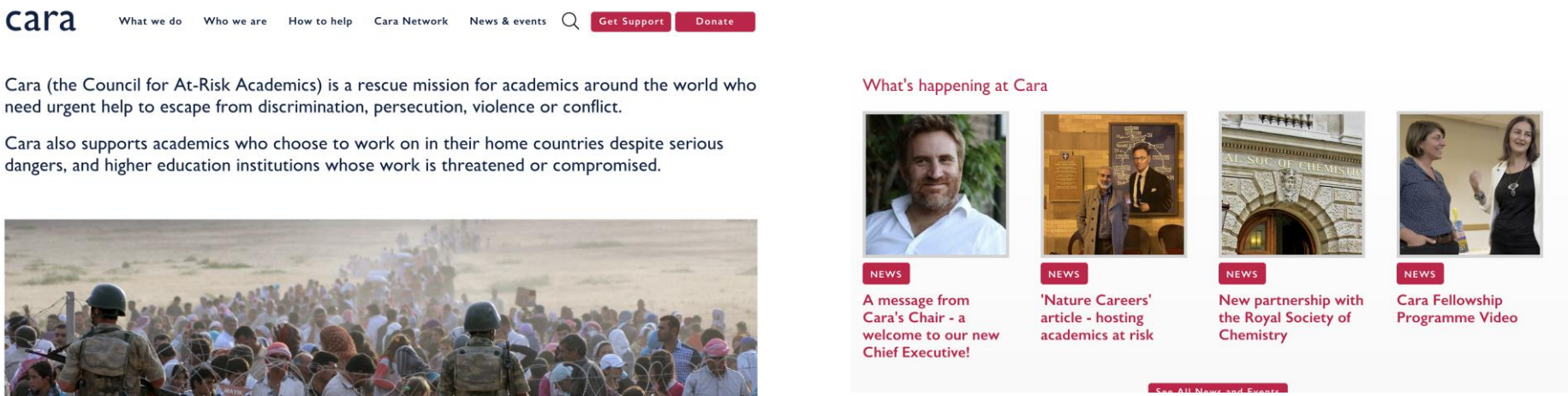
Arthritis

Lipids

Cardiovascular

Renal disease

CARA Fellows Scheme



Among the displaced are many university academics; among the buildings, many universities and research institutes. We have received, and continue to receive, generous offers of support from our UK university partners for their Ukrainian colleagues. While most men in Ukraine between the ages of 18 and 60 are expected to stay to support their country's defence, and many women are also choosing to stay, others – particularly women with young children – have needed help to escape to a place where they can be safe. So far (February 2025) we have helped over 45 Ukrainian academics to begin placements at UK universities as Cara Fellows, with more on the way. We have also been participating fully in the British Academy-led 'Researchers at Risk' Programme, which provided awards at UK institutions for 180 researchers who were previously based in Ukraine; the awards were initially for two years but funding for a third year was later secured. 175 of the original 180 Fellows are now either in, or will soon be beginning, their third year.

Ukrainian academics who are already in the UK may also wish to look through our Funding Directory for Ukrainian researchers.

We also recognise the bravery of the Russian academics who, in the early stages of the conflict, signed online open letters criticising the war, or who have since voiced their opposition in other ways or are at risk because of their past engagement with civil society groups which are now banned in Putin's increasingly isolated Russia. Over 18 Russian academics have secured placements at institutions in the UK, with Cara's help. Others who need to escape are also welcome to seek our support.