

# Kawasaki Disease Research Collaboration

## The Gordon and Marilyn Macklin Foundation Challenge Grant for Kawasaki Disease Research

### The Vision

An intercontinental and interdisciplinary collaborative of researchers has come together at a critical juncture to solve the mystery of Kawasaki disease.

*Our vision: a future free of this debilitating childhood illness.*

This unique team, led by Professor Jane C. Burns, MD (Rady Children's Hospital San Diego USA) and Professor Michael Levin (Imperial College London) have combined the research expertise of two world leading research groups with long term commitment to research on Kawasaki disease. By combining the expertise of researchers in the USA and UK they aim improve the diagnosis, treatment and prevention of this terrible disease. The research teams at Imperial College and San Diego have already collaborated for over a decade on research to understand Kawasaki disease.

Through a collaborative program of work they aim to:

- **Discover the cause** of Kawasaki disease by identifying the environmental factor(s) or infectious agent that triggers the disease
- **Develop a diagnostic test** that can be used worldwide to enable earlier diagnosis and treatment. They already have exciting pilot data that a diagnostic test is possible.
- **Understand the Genetic basis of Kawasaki disease** - to explain why some families are affected, and why only some patients develop Coronary artery aneurysms.
- **Develop new treatments** to protect the heart through clinical trials

### The Need

The most common cause of acquired heart disease in children, and an emerging health threat in the developing world, Kawasaki disease causes inflammation of the coronary arteries. Left untreated, the disease leads to the formation of aneurysms (ballooning of the arterial wall) in 25 percent of affected children. Major complications associated with aneurysms include blood clot formation, which can result in heart attacks, poor heart muscle function, and death.

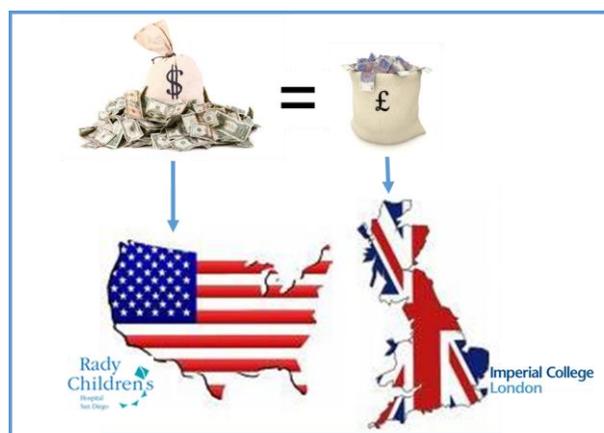
Decades of research have yielded an increasingly detailed description of many aspects of Kawasaki disease, including evidence of genetic susceptibility to the disease. Shockingly, however, despite all of this effort, the cause remains unknown. An ongoing challenge is the lack of a specific diagnostic test for Kawasaki disease. On the surface, many illnesses with rash and fever can resemble Kawasaki disease, making it difficult to diagnose. In developed countries, children are treated with high doses of intravenous immunoglobulin (IVIG), but this therapy is expensive and is simply unavailable in many regions of the world. A diagnostic test would enable affected children to be diagnosed sooner thus enabling earlier treatment to prevent coronary artery injury.

## How combining transatlantic expertise can speed up research

The research teams at Imperial College and San Diego have collaborated for several years to understand Kawasaki disease. Through this collaboration has come the realization that by combining the research strength, scientific and clinical expertise of the two teams headed by prof Jane Burns and Prof Michael Levin the pace of progress can be accelerated. By sharing data, patient samples and scientific resources, research can be moved forward more rapidly than by either team functioning alone. The Imperial College and Rady Children's hospital teams also collaborate with clinicians across the UK and Europe to enable large numbers of patients to be entered into studies and trials.

## The Opportunity

Efforts to advance Kawasaki Disease research will now go twice as far thanks to the Gordon and Marilyn Macklin Foundation. The Macklin Foundation has given The Kawasaki research collaboration between Rady Children's Hospital and Imperial College London an incredible opportunity to rapidly advance Kawasaki Disease research by matching gifts dollar for dollar up to \$2.5 million!



## How Funding can be optimized.

The Challenge from the Macklin foundation- to match dollar for dollar or pound for pound any funds raised for this collaborative program of research on either side of the Atlantic provides an opportunity to maximize the research funding. Any funds raised in the UK for the Kawasaki Disease research program at Imperial College will be matched by an equal donation for the USA collaborating team at Rady Children's Hospital.

## How to contribute in the UK

COSMIC (Children of St Mary's Intensive Care) is an established UK charity (registered charity 1043697) which has supported both patient services and research based at Imperial College NHS trust and St Mary's Hospital- and has agreed to coordinate the Kawasaki specific fund raising for this exciting project.

To give donations in the UK contact COSMIC- Kawasaki Research Co-ordinator Chloe Oliver on [chloe.oliver1@nhs.net](mailto:chloe.oliver1@nhs.net) or 02033126179 or at Chloe Oliver, St Mary's Hospital, Acrow West Unit 20E, South Wharf Road, London, W2 1BL.

Alternatively visit the Kawasaki Research Fund page - [www.cosmiccharity.org.uk/how-we-help/research/kawasaki-disease-research-fund/](http://www.cosmiccharity.org.uk/how-we-help/research/kawasaki-disease-research-fund/)

**COSMIC - Children of St Mary's Intensive Care**, Registered charity no. 1043697, [www.cosmiccharity.org.uk](http://www.cosmiccharity.org.uk)