

Novel inhibitors for the treatment of lupus

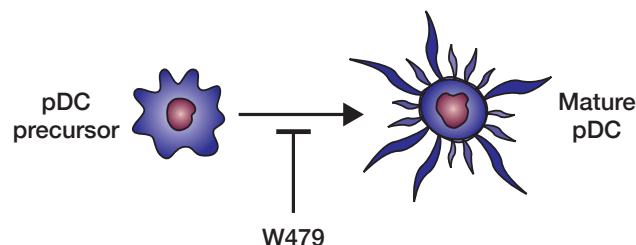
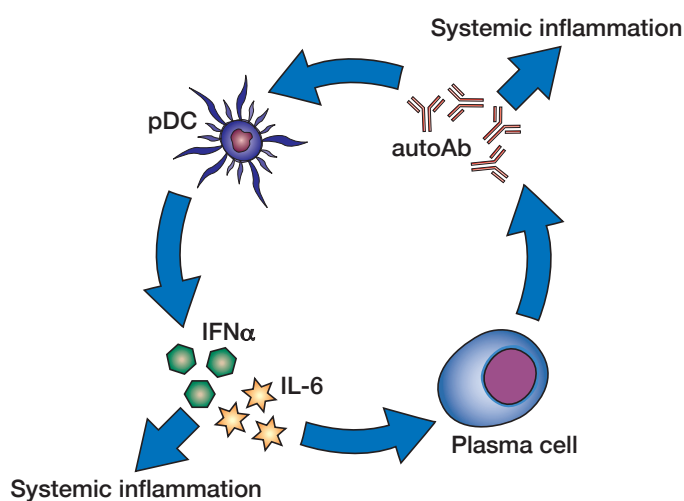
- ▶ There is currently no cure for systemic lupus erythematosus (SLE).
- ▶ Plasmacytoid dendritic cells (pDCs) are over-activated in patients with SLE.
- ▶ Our novel inhibitor selectively inhibits pDC development and is a potential treatment for SLE.

The opportunity

SLE is an immune disorder in which pDCs are over-activated. It is estimated to affect around 20-40 people out of every 100,000. There is currently no cure for SLE and treatments are predominantly aimed at easing symptoms.

The technology

pDCs are a key driver of SLE due to overproduction of interferons. W479 is a novel inhibitor developed at the Walter and Eliza Hall Institute that selectively depletes pDCs. We have completed comprehensive *in vitro* validation in mouse and commenced *in vitro* validation in human models.



Opportunities for partnership

We are seeking a partner to co-invest in the development of novel inhibitors of pDCs.

We have:

- An inhibitor of pDC development with nm potency.
- Conducted medicinal chemistry studies and SAR characterisation.
- Validated an HTS assay.
- World-leading expertise in development of pDC inhibitors.

We are seeking investment to support:

- The development of a lead candidate.
- Demonstration of *in vivo* efficacy and safety.
- Positioning the technology for pre-clinical toxicity program and IND filing.

Scientific team

Dr Shalin Naik















Laboratory head, Molecular Medicine division

Professor Guillaume Lessene

Leader, New Medicines and Advanced Technologies Theme

At the Walter and Eliza Hall Institute our multidisciplinary research teams are focused on solving complex biological questions by integrating expertise in bioinformatics, clinical translation, computational biology, epidemiology, genomics, medicinal chemistry, proteomics, structural biology and systems biology. Our innovative science expands and improves the understanding of human biology and enables the translation of this new knowledge into novel therapies that benefit patients worldwide.

Project pipeline - available for partnering

	Project	Mode of action*	Target validation	Hit discovery	Lead generation	Lead optimisation	Indication
Cancer	Targeting minor class splicing	Inhibitor					Mutant K-Ras, B-Raf tumours
	Targeting EBV malignancies	Inhibitor					Burkitt's lymphoma
	Treating drug resistant cancers	Inhibitor					Cancer
Immune health and infection	pDC therapy for lupus	Inhibitor					Systemic lupus erythematosus
	RIPK2: Intercepting Inflammation	Inhibitor					Inflammatory bowel disease
	Rethinking CD52	Biologic					Autoimmunity
	SOCS mimetic	Inhibitor					Inflammatory bowel disease
	A complete cure for HBV	Inhibitor					Hepatitis B
	Novel malaria vaccine	Vaccine					Malaria
	Toxoplasma vaccine	Vaccine					Animal health: Toxoplasmosis
	Precision prebiotics	Prebiotic					Inflammation
	Healthy development and ageing	Precision epigenetics	Inhibitor				
FSHD epigenetic therapy		Activator					Facioscapulohumeral dystrophy
Improving retinal detachment outcomes		Inhibitor					Ophthalmology

*Activator or Inhibitor refers to small molecule compounds

To discuss partnering opportunities, please contact **Dr Anne-Laure Puaux**, Head of Commercialisation, by email partnering@wehi.edu.au.