

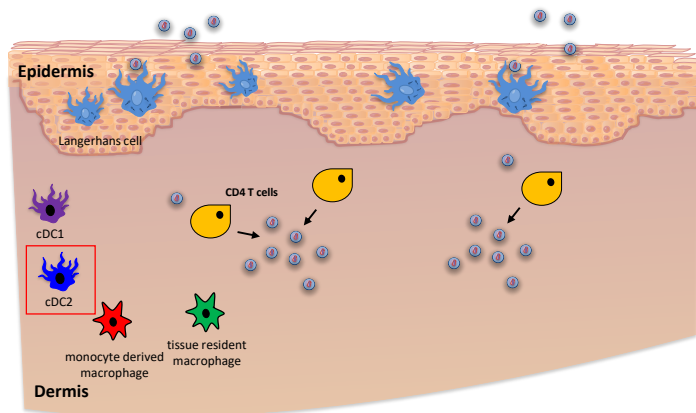
Identification and Characterization of HIV Transmitting CD11c^{hi} Epidermal Dendritic Cells

Kirstie Bertram

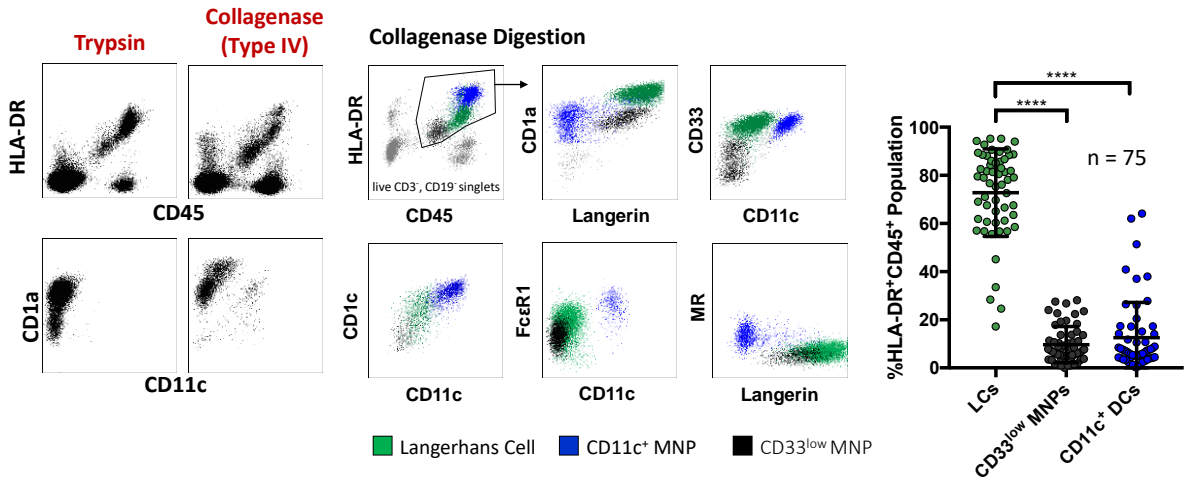
The Westmead Institute for Medical Research
The University of Sydney, Australia



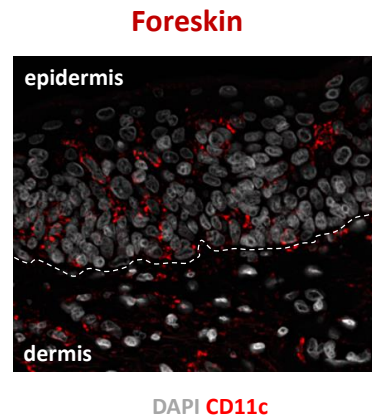
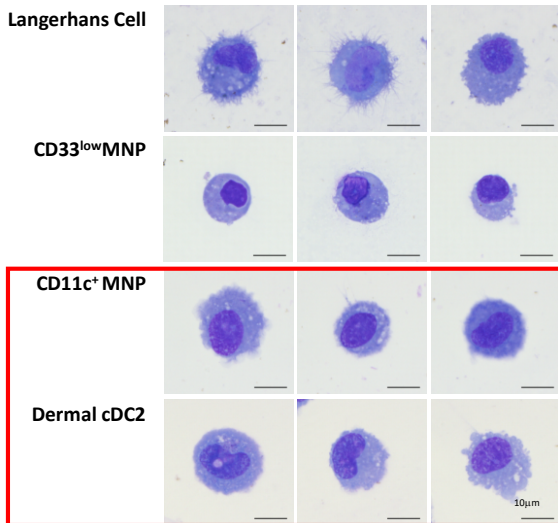
Mononuclear Phagocytes and Sexual Transmission of HIV



Identification of Novel Epidermal Mononuclear Phagocytes



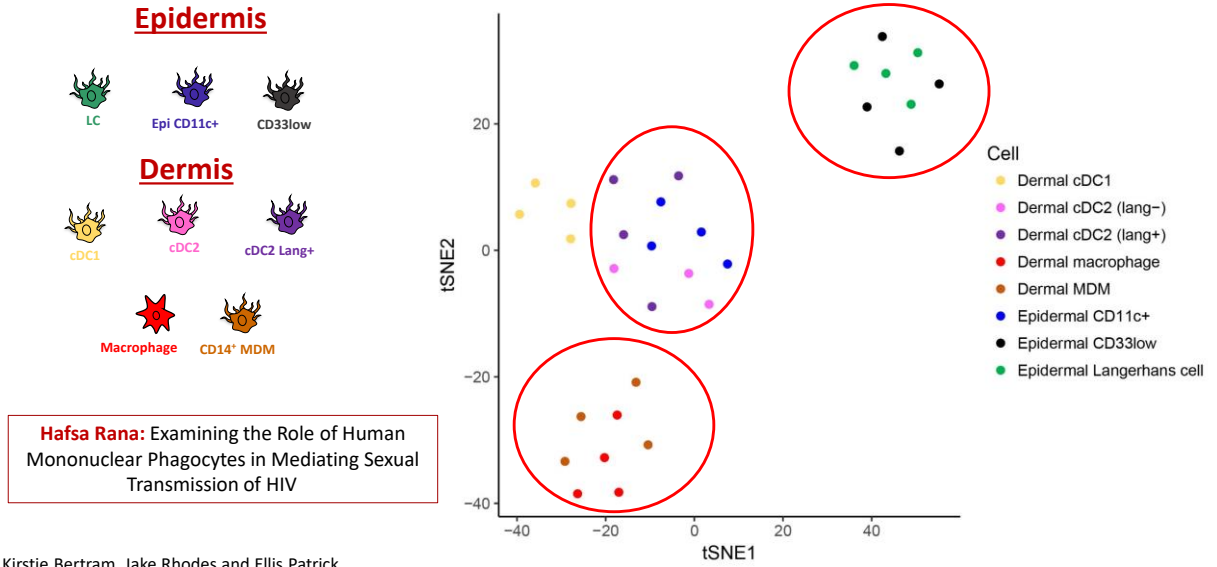
Epidermal Mononuclear Phagocyte Morphology



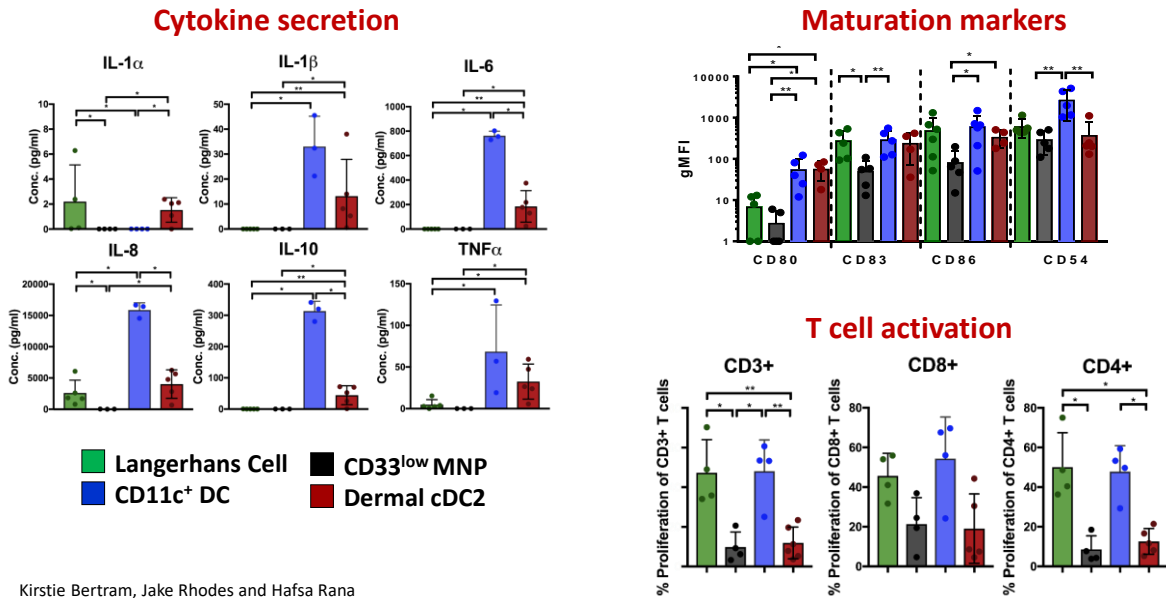
Data generated by Haniffa group

Heeva Baharlou

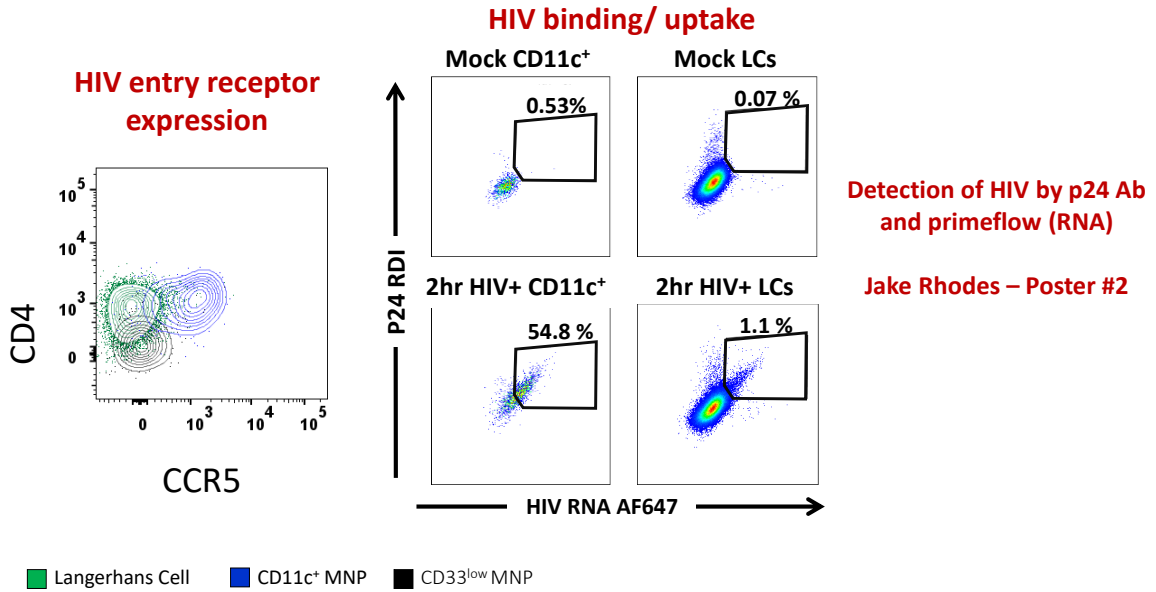
Transcriptional Profiling of Epidermal Mononuclear Phagocytes



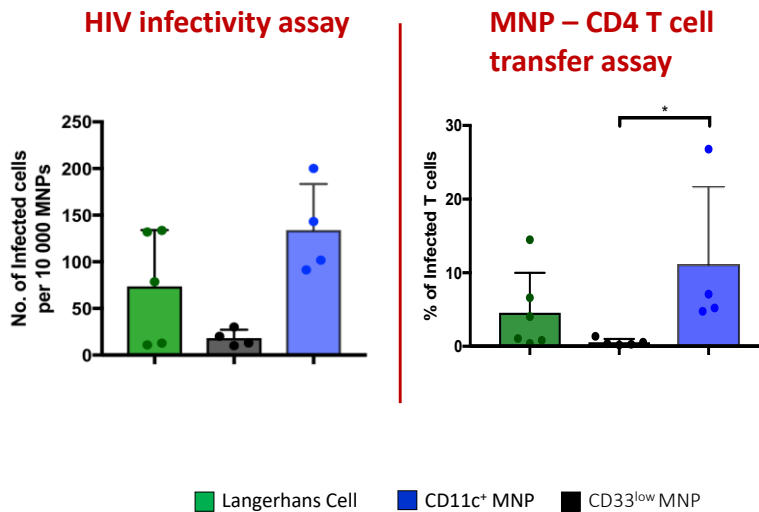
Antigen Presenting Cell Functional Assays



Epidermal CD11c⁺ Mononuclear Phagocytes are Preferential Targets for HIV

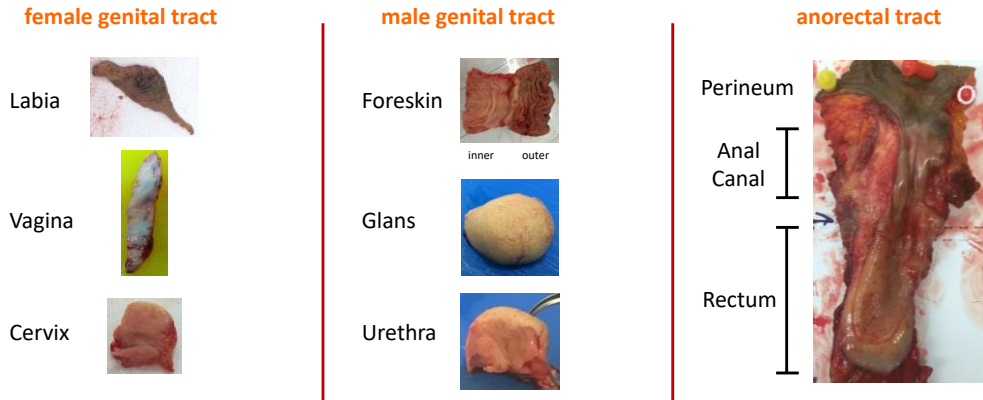


Epidermal CD11c⁺ Mononuclear Phagocytes are Preferential Targets for HIV

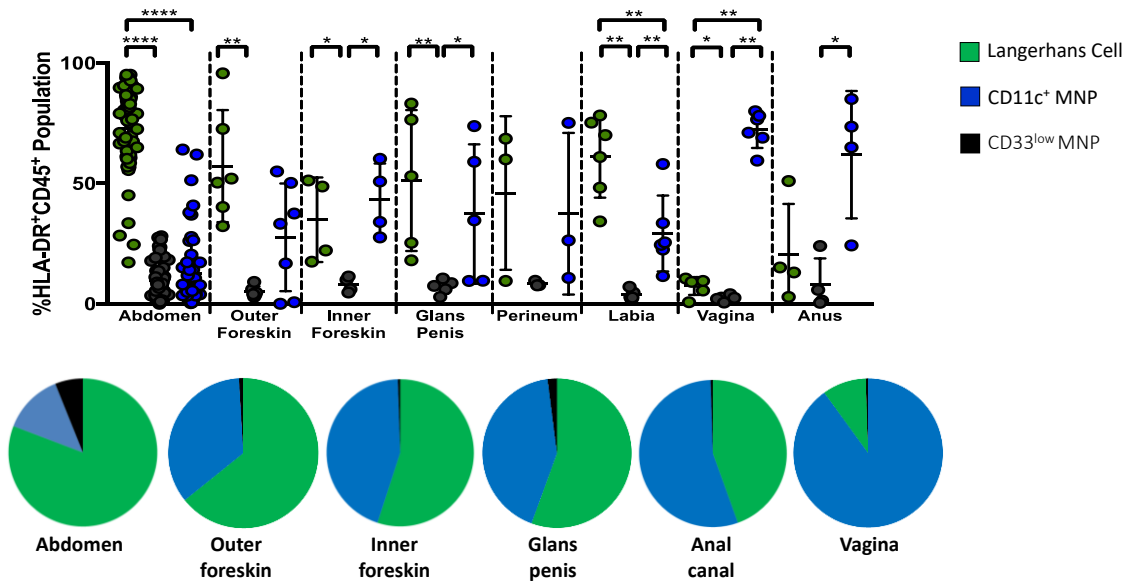


Access to Human Anogenital Tissue

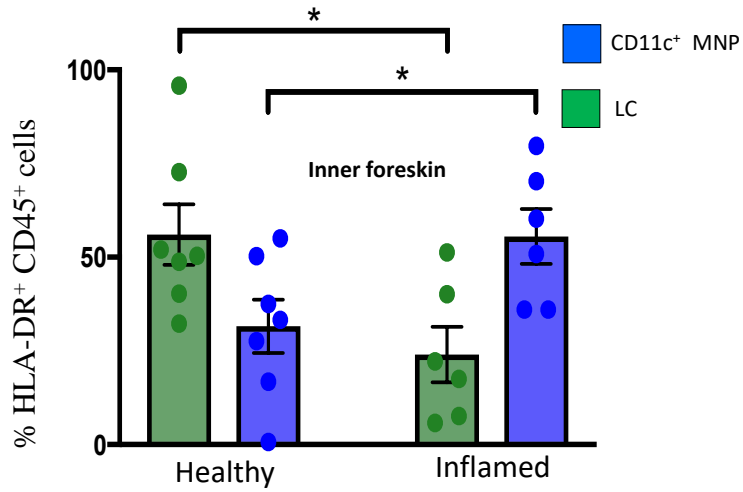
extensive collaborations with surgeons at Westmead for access to all human anogenital tissue types



Epidermal CD11c⁺ Mononuclear Phagocytes are Enriched in Anogenital Tissues

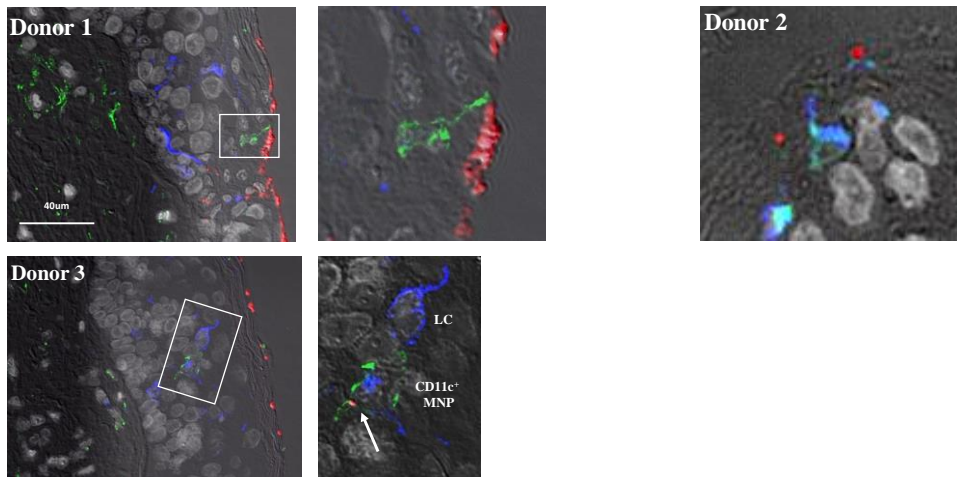


CD11c⁺ Mononuclear Phagocytes are Enriched in Inflamed Tissue



Jake Rhodes, PhD

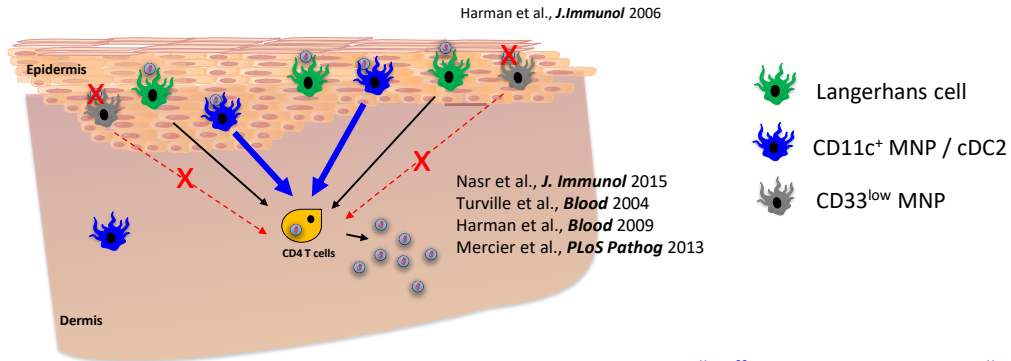
Epidermal CD11c⁺ Mononuclear Phagocytes Capture HIV *in situ*



DAPI CD11c HIV RNA Langerin DIC

Heeva Baharlou, PhD
Toby Plasto, AMED Honours 2017

Overall Summary



- Functionally inefficient antigen presenting cells
- A Langerhans cell precursor?
- Do not bind HIV or transfer it CD4 T cells
- Functionally efficient antigen presenting cells
- Are a cDC2 subset
- Enriched in anogenital tissues
- Sample HIV at the epithelial surface
- Express higher HIV entry receptor levels (CCR5)
- Support higher level of HIV infection
- Most efficient at transfer HIV to CD4 T cells

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