OVERVIEW OF POST-INFECTIOUS AUTOIMMUNE NEUROPATHY RESEARCH OPPORTUNITIES

LARGE CLINICAL DATABASES
‘IGOS1000’ is recruiting in 120 centres globally
ONE CENTRE IN AFRICA (Capetown)
(DNA, serum, clinical data, outcome, prognosis, clinimetrics)

BIOMARKER DISCOVERY
AUTOANTIBODIES
MYELIN AND AXONAL INJURY
INFECTIOUS AND GENETIC RISK FACTORS

POST INFECTIOUS ANIMAL MODELS
OF AUTOIMMUNE NEUROPATHY
BEHAVIOUR, PHYSIOLOGY, MORPHOLOGY, TREATMENT

DEVELOPING THERAPIES
AND INITIATING CLINICAL TRIALS
e.g. Complement inhibition

WILLISON LAB:
hugh.willison@glasgow.ac.uk

900 sample neuropathy and case control serology study of lipid antibody markers (with ICDDR, Dhaka, Bangladesh)
GUILLAIN-BARRE SYNDROME IS THE MAJOR POST-INFECTIONOUS NEUROPATHY

Infection

C. Jejuni
LOS

Systemic immune-compartment

2. Class-switching help

IgG Antibodies

1. Direct activation

MZ

DC

FO

IgM Antibodies

blood nerve barrier

Peripheral nerve compartment

Myelin

Axon

Gangliosides

Molecular identity between LOS and ganglioside

B1

IgG Antibodies
Acknowledgements

University of Glasgow - The Willison Lab

Govind Chavada Motoi Kuwahara Denggao Yao
Francesc Galban Joanna Cappell Rhona McGonigal
Jennifer Barrie Angelika Rupp Madeleine Cunningham
Susan Halstead Hugh Willison Simon Rinaldi
Amy Davidson Emilien Delmont Claire Paton