



OUR HEALTH IN OUR HANDS (OHIOH) SYMPOSIUM 2020 (ANU GRAND CHALLENGE)

Past, Present and Beyond – Advancing Deep
Personalization of Health across Disciplines and
Sectors

Date and time: **Thursday 26th & Friday 27th November 2020** (9am-5pm)
Poster Exhibition: [Artspaces link](#)
Website: [ANU link](#)
Registration: [Eventbrite](#)
Contact: ohioh.management@anu.edu.au

Day 1 – Thursday 26th of November

OVERVIEW OF THE RESEARCH PROGRAMS AND PROGRESS

Chair: Dr Adam Damry: OHIOH Post Doc
Research School of Chemistry

9.00-9.10

Symposium Opening

Prof Keith Nugent

Deputy Vice-Chancellor Research and Innovation

Prof Russell Gruen

Dean of College of Health and Medicine

9.10-9.20

Introduction to OHIOH

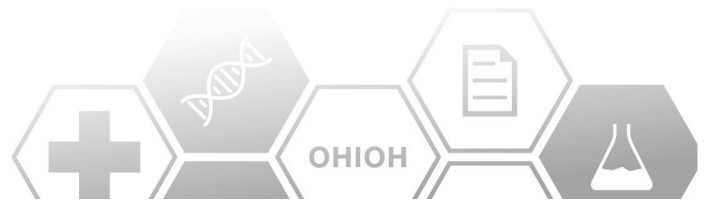
Prof Antonio Tricoli: OHIOH Co-Chair

Nanotechnology Research Lab, Research School of Engineering
College of Engineering and Computer Science

Prof Matthew Cook: OHIOH Co-Chair

ANU Medical School, JCSMR

Director of Immunology, Canberra Hospital

**9.20-10.00****Diabetes Studies**

- **Overview**
Prof Christopher Nolan: OHIOH Clinical Cohort – Diabetes Lead
ANU Medical School
Head of Diabetes Research Laboratory, Canberra Hospital
- **OHIOH Type 1 diabetes cohort recruitment**
Mrs Karen Brown
OHIOH T1D cohort study coordinator, Canberra Hospital
- **Diabetic macular edema**
Prof Ted Maddess
Neuroscience, JCSMR

10.00-10.15

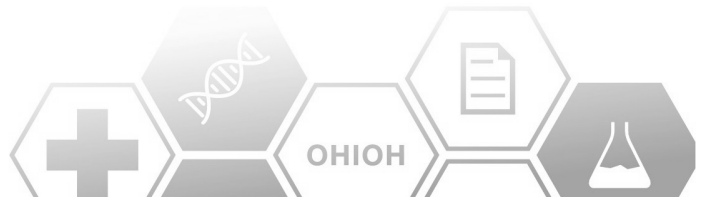
Virtual Coffee Break (Open Discussion)

10.15-11.00**Multiple Sclerosis Studies**

- **Multiple sclerosis cohort overview**
Dr Anne Bruestle: OHIOH Clinical Cohort – MS Lead
Group Leader, JCSMR
Prof Christian Lueck: OHIOH Clinical Cohort – MS
ANU Medical School
Head of Department of Neurology, Canberra Hospital
- **Update on current studies**
Dr Jo Lane: OHIOH Clinical Cohort – MS
Clinical Psychologist
Research School of Population Health
- **Using MfPop in multiple sclerosis – longitudinal study**
Prof Ted Maddess
Neuroscience, JCSMR

11.00-11.45**Health Experience Team (HET)**

- **HET overview**
Dr Jane Desborough: OHIOH HET Lead
Department of Health Services Research and Policy
Research School of Population Health
- **Lived experiences: Type 1 diabetes**
Ms Ellen Brown, Mr Harry Ebbeck, Mr Lachlan Pedley
HET members with lived experience of Type 1 diabetes
- **Breath ketone sensor usability study**
Dr Nicola Brew-Sam: OHIOH Post Doc
Department of Health Services Research and Policy
Research School of Population Health



- **Access to healthcare during COVID19**
Dr Anne Parkinson: OHIOH Post Doc
 Department of Health Services Research and Policy
 Research School of Population Health
- **Lived experiences: multiple sclerosis**
Ms Katrina Chisholm, Ms Janet Drew, Mr Mark Elisha, Dr Vanessa Fanning
 HET members with lived experience of multiple sclerosis
- **Multiple sclerosis toolkit**
Prof Christine Phillips
 Social Foundations of Medicine, ANU Medical School

11.45-13.15 Lunch Break

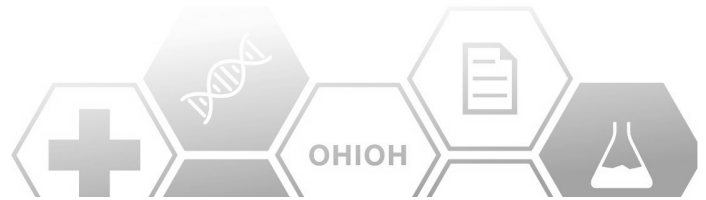
Afternoon Session:

Chair: Dr Nicola Brew-Sam: OHIOH Post Doc
 Department of Health Services Research and Policy, Research School of Population Health

13.15-14.00 Future Personalized Biomedical Sensors

- **Overview/ introduction**
Prof Antonio Tricoli: OHIOH Sensor Program Lead
 Nanotechnology Research Lab, Research School of Engineering
 College of Engineering and Computer Science
Prof Dragomir Neshev: OHIOH Sensor Program Lead
 Research School of Physics
- **Types of bioreceptors**
Dr Adam Damry: OHIOH Post Doc
 Research School of Chemistry
- **Nanopore single molecule sensors**
Dr Buddini Karawdeniya: OHIOH Post Doc
 Research School of Physics
- **Optical and gas sensors**
Dr Krishnan Murugappan: OHIOH Post Doc
 Nanotechnology Research Lab, Research School of Engineering

14.00-14.15 Virtual Coffee Break (Open Discussion)

**14.15-15.00****Machine Learning for Healthcare**○ **Smart sensor systems**A/ Prof Hanna Suominen: OHIOH Big Data Program LeadResearch School of Computer Science
Data61, CSIRO○ **Machine learning for multiple sclerosis**Dr Zakir Hossain: OHIOH Post Doc

Research School of Computer Science

○ **Machine learning for diabetes and disease diagnosis**Dr Eleni Daskalaki: OHIOH Post Doc

School of Computer Science

15.00-15.15

Virtual Coffee Break (Open Discussion)

15.15-16.00**Panel Discussion: Multidisciplinary PhD Studies –Challenges and How to**Dr Will Grant

Australian National Centre for the Public Awareness of Science

A/ Prof Hanna Suominen: OHIOH Big Data Program LeadResearch School of Computer Science
Data61, CSIRODr Adam Damry: OHIOH Post Doc

Research School of Chemistry

Robin Vlieger: OHIOH PhD Student

Research School of Computer Science

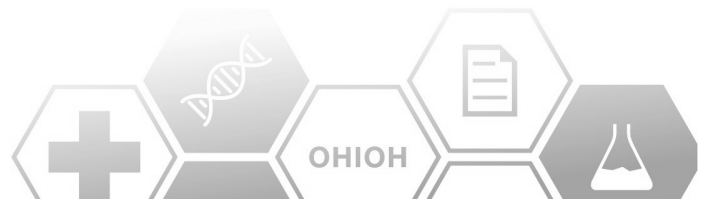
Monalisha Ghosh Dastidar: OHIOH PhD Student

Nanotechnology Research Lab, Research School of Engineering

16.00-16.15

Virtual Coffee Break (Open Discussion)

16.15-17.00**Genomics**○ **Overview**Prof Matthew Cook: OHIOH Genomics LeadANU Medical School, JCSMR
Director of Immunology, Canberra Hospital



Day 2 – Friday 27th of November

WHAT IS TO COME? FUTURE PERSPECTIVES AND PLANS

Chair: Dr Buddini Karawdeniya: OHIOH Post Doc
Research School of Physics

9.00-9.30	<p>Day 2 Opening – OHIOH Management <u>Mr Chris Pugmire</u>: OHIOH Director</p>
9.30-9.50	<p>Diabetes: Linking Cohorts with Research Programs <u>Prof Christopher Nolan</u>: OHIOH Clinical Cohort – Diabetes Lead ANU Medical School Head of Diabetes Research Laboratory, Canberra Hospital</p>
9.50-10.00	Virtual Coffee Break (Open Discussion)
10.00-10.45	<p>Panel Discussion: To Go Wide or to Go Deep in Research? <u>Prof Helen Sullivan</u> Director of Crawford School of Public Policy <u>Prof Antonio Tricoli</u>: OHIOH Sensor Program Lead Nanotechnology Research Lab, Research School of Engineering College of Engineering and Computer Science <u>Dr Eleni Daskalaki</u>: OHIOH Post Doc Research School of Computer Science <u>Chirath Hettiarachchi</u>: OHIOH PhD Student Research School of Computer Science <u>Alishba John</u>: OHIOH PhD Student Nanotechnology Research Lab, Research School of Engineering</p>
10.45-11.00	Virtual Coffee Break (Open Discussion)
11.00-11.20	<p>Multiple Sclerosis: Linking Cohorts with Research Programs <u>Dr Anne Bruestle</u>: OHIOH Clinical Cohort – MS Lead Group Leader, JCSMR <u>Prof Christian Lueck</u>: OHIOH Clinical Cohort – MS ANU Medical School Head of Department of Neurology, Canberra Hospital</p>
11.20-11.30	Virtual Coffee Break (Open Discussion)
11.30-12.00	<p>ACT Health – Future Perspectives <u>A/ Prof Rohan Essex</u> Medical School Staff Specialist, Canberra Hospital</p>



12.00-13.30 Lunch Break

Afternoon Session:

Chair: Dr Eleni Daskalaki: OHIOH Post Doc
Research School of Computer Science

13.30-13.50

Health Experience Team

- **Patient and public involvement in research**

Dr Jane Desborough: OHIOH HET Lead

Department of Health Services Research and Policy
Research School of Population Health

- **Collection and use of personal health information**

Dr Adam Henschke

Senior Lecturer, National Security College

13.50-14.10

Recent Advances in Biomedical Sensors In OHIOH

- **Future perspectives – integrated healthcare solutions**

Prof Antonio Tricoli: OHIOH Sensor Program Lead

Nanotechnology Research Lab, Research School of Engineering
College of Engineering and Computer Science

Prof Dragomir Neshev: OHIOH Sensor Program Lead

Research School of Physics

- **Miniaturization of sensors with LEDs**

Prof Lan Fu

Research School of Physics

14.10-14.20

Virtual Coffee Break (Open Discussion)



Afternoon Session (part 2):

Chair: Dr Krishnan Murugappan: OHIOH Post Doc
Nanotechnology Research Lab, Research School of Engineering

14.20-14.40

Machine Learning for Healthcare

- **Collaborating towards trustworthy technologies**
A/ Prof Hanna Suominen: OHIOH Big Data Program Lead
Research School of Computer Science, Data61, CSIRO
- **Homomorphic encryption with applications to healthcare**
Dr Artem Lenskiy: OHIOH Post Doc
Research School of Computer Science

14.40-15.00

Genomics

- **Overview**
Prof Matthew Cook: OHIOH Genomics Lead
ANU Medical School, JCSMR
Director of Immunology, Canberra Hospital

15.00-16.15

Virtual Coffee Break (Open Discussion)

15.15-16.45

PhD Student Poster Pitches and Discussion (5 min each)

16.45-17.00

Symposium Closing

Prof Antonio Tricoli: OHIOH Co-Chair
Nanotechnology Research Lab, Research School of Engineering
College of Engineering and Computer Science

Prof Matthew Cook: OHIOH Co-Chair
ANU Medical School, JCSMR
Director of Immunology, Canberra Hospital