

PLASTICS & HUMAN HEALTH

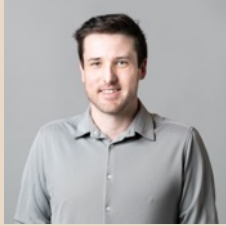
OCTOBER 2021



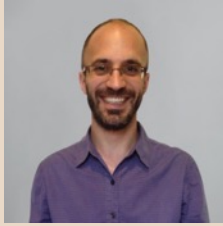
Who are We?



Bhedita Seewoo



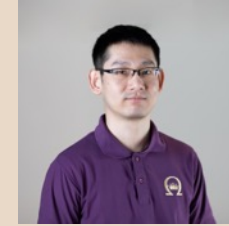
Brady Johnston



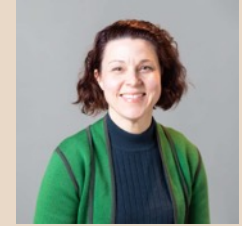
Christos Symeonides



Emily White



Enoch Wong



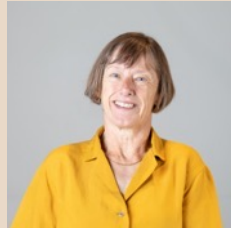
Jo Webb



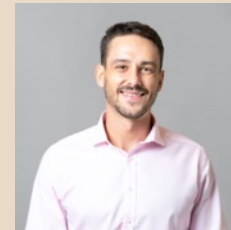
Lisa Hooyer



Louise Goodes



Louise Mofflin



Manuel Brunner



Matthew Cantrell



Meredith Ryland



Omrik Choudry



Priyanka Toshniwal



Sarah Dunlop



Yannick Mulders

What are we doing?

Our Work at Minderoo Foundation

No Plastic Waste	Plastics & Human Health
Visible waste	Invisible
Environment	Body
Plastic production, waste	Plastic polymers and chemicals
Tracking in environment	Tracking in body
Transparency - Finance	Transparency - Chemicals
Recycling, Safe and Sustainable Plastic Design	



HOW? GLOBAL COLLABORATION

EVIDENCE

Scoping and Umbrella Literature Reviews, Minderoo Flagship Campaign Reports

MORE EVIDENCE

Minderoo Laboratory partnership

Research (BIS, PERTH, Neurological disorders)

Plastics Regulation in Australia and Global Comparison

IMPACT

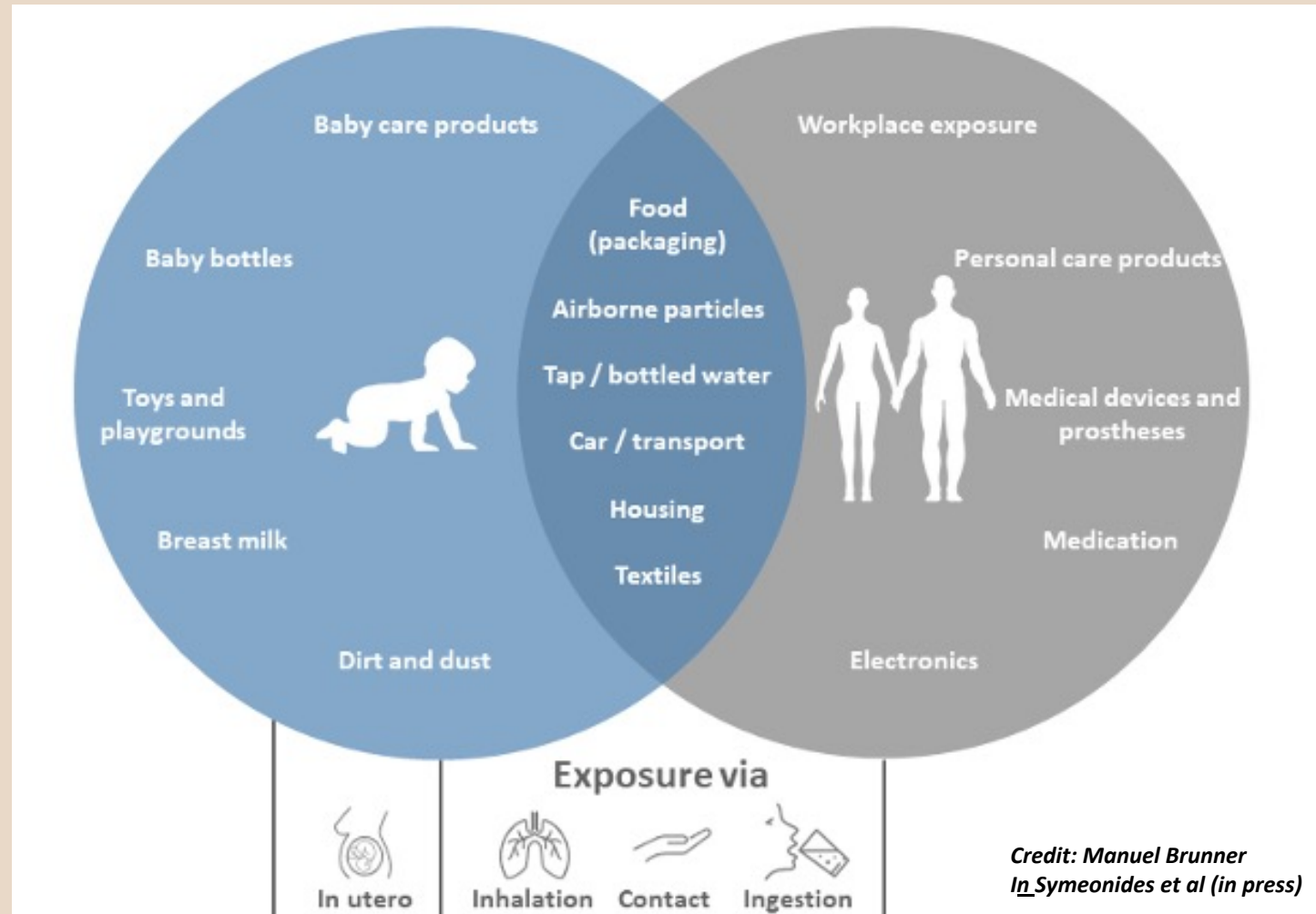
Global Network for Plastics and Human Health

Collaborate with global communities to reduce exposure

Partner with industry to design safe and sustainable plastics, without harmful chemicals

Global policy and law to protect human health (fertility, chronic disease, brain health)

Daily contact with plastic products



Plastic particles

Particles *per se*

Free ride

- Heavy metals
- Persistent organic pollutants
- Pathogens



Microplastics

- Lung & lung disease
- Colectomy, stools
- Inflammation, oxidative stress

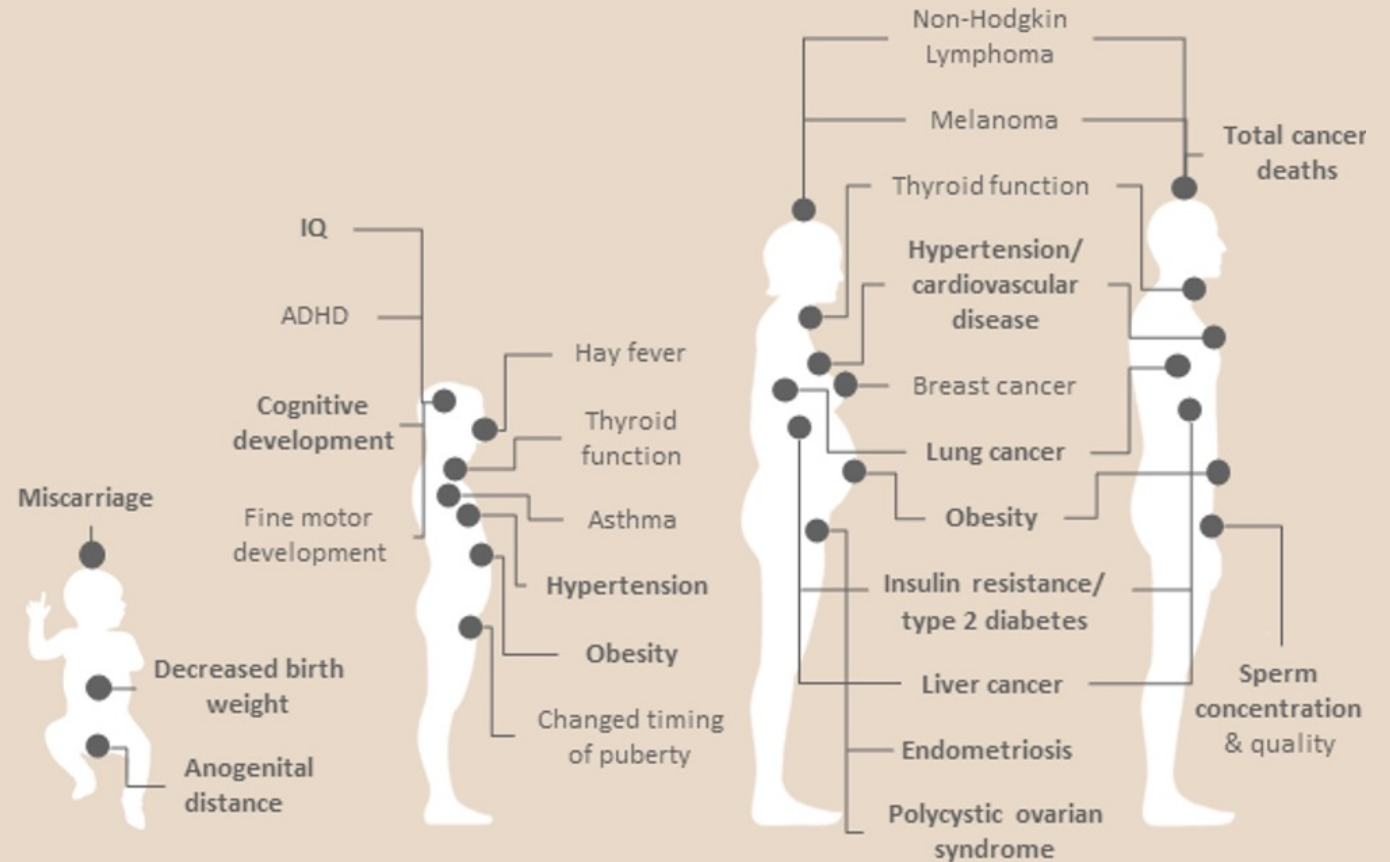
Nanoplastics?

- New measurement techniques

Plastic chemicals AND human health

Umbrella Review (*In prep*)

- Bisphenol-A
- Phthalates
- Brominated flame retardants
- Per- and polyfluorinated alkyl substances



Symeonides et al. Buy-now-pay-later: Hazards to human and planetary health from plastics production, use and waste.
J Paediatric & Child Health (*in press*)

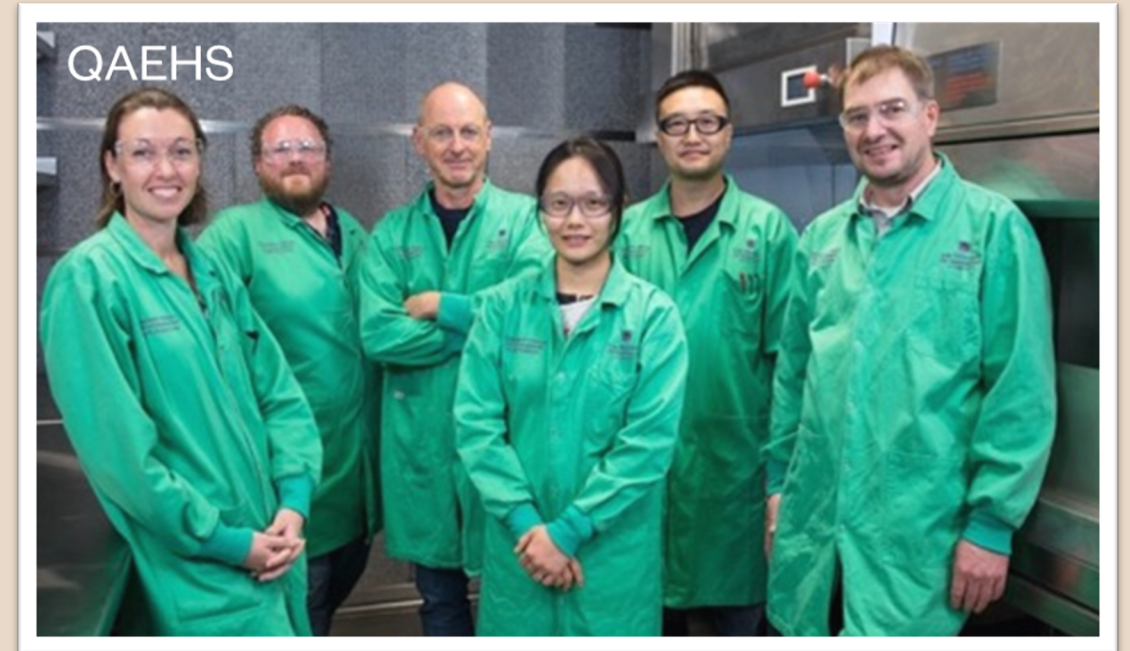
NEW MEASUREMENT TECHNIQUES

We are creating and advocating for global standards for detection and measurement of plastic (micro and nano) inside humans

- University of Queensland
- NeuRA: Neuroscience Research Australia
- Sydney Brain Bank

Human health risk data

- Quality, credible, authoritative science
- Integrated with law and policy
- Translated for communication
- Global standards (safe and sustainable design, plastic alternatives, plastic treaty)



Queensland Alliance for Environmental Health Sciences

COLLABORATING FOR GLOBAL CITIZENS CHANGE

Later this year, and in 2022 we will:

- Bring human health risks to light to create a movement with global governments and industry to protect people and planet from harmful plastic chemicals
- Create global economic demand for safe and sustainable plastic (or alternatives)
- Help people reduce exposure and “detox” from harmful plastic
- Choose to refuse food products without clearly labelled packaging that identifies what it is made of and how it is re-used, recycled or disposed of



2021