

## UQ STRATEGIC FUNDING

### PROGRESS REPORT

Recipients of Strategic Funding are required to provide a short report to the VC and/or DVC(R) on an annual basis unless they are excluded as per the advice below.

#### Notes:

- Payment of any subsequent year's allocation will be subject to VC / DVC(R) approval of the progress report.
- Annual Progress and Final Progress Reports are required for strategic funding allocations of \$100,000 per annum or higher (i.e. after combining both VC & DVC(R) contributions).
- A Final Progress Report is required where total strategic funding allocations of \$50,000 or higher are awarded across the duration of the commitment (i.e. after combining both VC & DVC(R) contributions).
- Reports are not required where the funding commitment forms part of a UQ Internal Scheme listed at <http://www.uq.edu.au/research/research-management/grants-uq-internal>.

### 1. ADMINISTRATIVE SUMMARY

Is this a Progress or a Final Report?	
Report Year:	2018
UniFi Project Number:	610608
Commitment IDs:	
Project Title:	CHILDRENS HEALTH AND ENVIRONMENT PROGRAM (CHEP)
Lead CI / Funding Recipient Name:	PETER D SLY
Administering Unit:	CHRC
Faculty/Institute/Central Area:	MEDICINE
Years of Funding (YYYY - YYYY):	2016-2019
Are you intending to submit a variation request? (Yes/No)	NO

**Note: Dot points are acceptable for the below items**

### 2. SUMMARY OF OBJECTIVES

#### 100 word summary of strategic objectives (as outlined in the original proposal)

**The CHEP vision is healthy and optimally thriving children living in a clean environment.**

The CHEP mission is to protect and promote the health of children by preventing or delaying onset of chronic disease. This will be achieved by building on our success in conducting high-quality research into improving assessment methods (early lung disease and early life environmental exposures), understanding risk factors, and developing and testing intervention strategies for reducing long-term disease risk. CHEP collaborates intensively through national and international networks and has a commitment to training and career development of post-doctoral researchers and research higher degree students

### 3. STATEMENT ON PROGRESS/OUTCOMES

#### How have you progressed towards your stated objectives to date?

Major CHEP achievements since inception include:

- Professor Dr HRH Princess Chulabhorn Mahidol launched CHEP at an International Conference held in Brisbane, 2011.
- The first World Health Organization Collaborating Centre at UQ. The WHO Collaborating Centre for Children's Health and Environment designated in October 2013 and re-designated in October 2017.
- 371 publications (to December 2018), including original research manuscripts, reviews, editorials and invited commentaries, text book and book chapters, research letters and Commission reports.
- \$21.76M in research funding administered by UQ to December 2018.
- Nine successful PhD completions at UQ, 14 currently enrolled RHD students, including 3 currently submitted.
- An Internship program providing students with experience in children's environmental health.
- Major national and international collaborations.
- The WHO Children's Environmental Health network.
- Membership of Lancet Commissions (Pollution and Health, Redefining Asthma, Child Wellbeing).
- Infectious and pollution-related non-communicable disease research programs in Pacific Island countries.
- Development of the Oceania Children's Environmental Health network
- Research collaborations with the Queensland Alliance for Environmental Health Science (QAEHS), Queensland health, UQ's School of Public Health, WHO, The Public Health Foundation of India (PHFI), the National Institute for Environmental Health Sciences USA and the WHO Network in Children's Environmental Health have been strengthened and expanded to include a new alliance with the Environmental Protection Authority Victoria.

#### Specific areas of progression:

##### International Affiliations

- Pacific Basin Consortium for Environment and Health
- WHO Department of Public Health, Environment and Social Determinants of Disease
- WHO Network of Collaborating Centres in Children's Environmental Health
- Fiji National University
- University of Indonesia

##### Affiliated Staff (located part time at CCHR)

- Professor Paul Jagals, Fiji National University, UQ Honorary Professor (Level E)
- Dr Kurt Long, Swiss Tropical Institute, UQ Honorary Level C
- Dr Colleen Lau, ANU, UQ Honorary Level C

##### Closely associated UQ staff

- Professor Jochen Mueller, QAEHS
- Dr Luke Knibbs, SPH
- Dr Riccardo Soares Magalhaes

##### Completed UQ PhD Students

- Dr Claire Shackleton, PhD 2018
- Dr Karin English, MBBS, PhD 2018

### Current UQ RHD Students

- Dr Javier Cortez Ramirez, PhD, submitted Dec 2018
- Thi May Ly Luong, submitted Dec 2018
- Johanna Schagen, PhD, submitted Dec 2018
- Yan Li, PhD, submission due mid 2019
- Dwan Vilcins, PhD, submission due December 2019
- Nina Lazarevic, PhD submission due December 2019
- Claire Brereton, PhD submission due December 2021.

### Education and training:

- Involvement in the Children's Environmental Health (PUBH7032) course run by the School of Population Health and coordinated by Dr Luke Knibbs, School of Public Health.
- CHEP continued its Occupational Trainee program and hosted one trainee in 2018.
- CHEP staff are organising training workshops in children's environmental health and integrated environment health impact and risk assessment for presentation at the Kyoto-PBC Conference. Prof Peter Sly, Assoc Prof Colleen Lau, Prof Stephania Cormier and Prof Paul Jagals will provide training.

### Public engagement:

- CHEP staff ran a 'Green Space and birth outcomes' seminar July 4, 2018
- CHEP hosted Dr Mohammad Jobayer Chisti and Dr Abu Sadat Mohammad Sayeem Bin Shahid from the International Centre for Diarrhoeal Disease Research Bangladesh, who presented a seminar 'Childhood Pneumonia Innovation' July 18 2018

### WHO activities. CHEP has continued its active collaboration with WHO through:

- Developing a global training plan to maximize outreach and use of WHO training modules and assisting WHO HQ and WPRO in implementing the global plan through the organization and delivery of training in CEH
- Assisting WHO to build capacity about prevention of environmental exposures and environmentally- related diseases in children by creating and updating children's environmental health (CEH) training materials.
- Creating increased awareness about prevention of environmental exposures and environmentally- related diseases in children through the WHO/UNEP Healthy Environments for Children Alliance (HECA) newsletter
- Strengthening the Network of WHO Collaborating Centres for Children's Environmental Health, with a particular focus on the Western Pacific Region.
- Develop joint research publications with WHO HQ, WPRO and the Network of WHO Collaborating Centres for Children's Environmental Health.

### Research Output/Publications 2018:

- **Vilcins D, Sly, P and Jagals P.** 2018. Environmental Risk Factors Associated with Child Stunting: A Systematic Review of the Literature. *J Annals of Global Health* 84(4).
- Lansbury-Hall N, Ross H, Richards R, Barrington DJ, Dean A, Head BW, **Jagals P**, Reid R and Hill PS. 2018. Implementing the United Nations' sustainable development goals for water and beyond in Australia: A proposed systems approach. *Australasian Journal of Water Resources*, DOI: 10.1080/13241583.2018.1481563.
- Currie DJ, Smith C and **Jagals P.** 2018. The application of system dynamics modelling to environmental health decision-making and policy-a scoping review. *BMC Public Health*, 18, 402.

- Werner AK, Watt K, Cameron C, Vink S, Page A and **Jagals P**. 2018. Examination of child and adolescent hospital admission rates in Queensland, Australia, 1995–2011: A comparison of coal seam gas, coal mining, and rural areas. *Maternal and Child Health Journal*, 1-13.
- Jones AC, Anderson D, Galbraith S, Fantino E, Gutierrez Cardenas D, Read JF, Serralha M, Holt BJ, Strickland DH, **Sly PD**, Bosco A, Holt PG. Personalised Transcriptomics Reveals Heterogeneous Immunophenotypes in Children with Viral Bronchiolitis. *Am J Respir Crit Care Med*. 2018 Dec 18. doi: 10.1164/rccm.201804-0715OC. [Epub ahead of print]
- Carpenter DO, **Sly PD**. Risk factors for poor health in indigenous communities. *Rev Environ Health*. 2018 Dec 19;33(4):319.
- Rafiee A, Delgado-Saborit JM, **Sly PD**, Amiri H, Hoseini M. Lifestyle and occupational factors affecting exposure to BTEX in municipal solid waste composting facility workers. *Sci Total Environ*. 2019 Mar 15;656:540-546. doi: 10.1016/j.scitotenv.2018.11.398. Epub 2018 Nov 27.
- **Luong LMT**, Phung D, **Sly PD**, Dang TN, Morawska L, Thai PK. Effects of temperature on hospitalisation among pre-school children in Hanoi, Vietnam. *Environ Sci Pollut Res Int*. 2019 Jan;26(3):2603-2612. doi: 10.1007/s11356-018-3737-9. Epub 2018 Nov 24.
- **Sly PD**, Carpenter DO. Changing landscape at Reviews on Environmental Health. *Rev Environ Health*. 2018 Sep 25;33(3):229-230. doi: 10.1515/reveh-2018-0050.
- Jung EM, **Jagals P**, **Brereton C**, **Sly PD**, Kim R, Kim EM, Ha EH. Children's Environmental Health Indicators in Context of the Sustainable Development Goals for Small Island Developing States. *Int J Environ Res Public Health*. 2018 Jul 3;15(7)
- **Brereton C**, Turagabeci A, Wilson D, **Sly PD**, **Jagals P**. Children's Environmental Health Indicators for Pacific Island Countries. *Int J Environ Res Public Health*. 2018 Jul 3;15(7).
- Matheson MC, Bowatte G, Perret JL, Lowe AJ, Senaratna CV, Hall GL, de Klerk N, Keogh LA, McDonald CF, Waidyatillake NT, **Sly PD**, Jarvis D, Abramson MJ, Lodge CJ, Dharmage SC. Prediction models for the development of COPD: a systematic review. *Int J Chron Obstruct Pulmon Dis*. 2018 Jun 14;13:1927-1935.
- **Cortes-Ramirez J**, Naish S, **Sly PD**, **Jagals P**. Mortality and morbidity in populations in the vicinity of coal mining: a systematic review.
- He C, **English K**, Baduel C, Thai P, **Jagals P**, Ware RS, Li Y, Wang X, **Sly PD** and Mueller JF. 2018. Concentrations of organophosphate flame retardants and plasticizers in urine from young children in Queensland, Australia and associations with environmental and behavioural factors. *Environmental research*, 164, 262-270.
- Landrigan PJ, Fuller R, Acosta NJR, Adeyi O, Arnold R, Basu NN, Baldé AB, Bertollini R, Bose-O'Reilly S, Boufford JI, Breyse PN, Chiles T, Mahidol C, Coll-Seck AM, Cropper ML, Fobil J, Fuster V, Greenstone M, Haines A, Hanrahan D, Hunter D, Khare M, Krupnick A, Lanphear B, Lohani B, Martin K, Mathiasen KV, McTeer MA, Murray CJL, Ndahimananjara JD, Perera F, Potočnik J, Preker AS, Ramesh J, Rockström J, Salinas C, Samson LD, Sandilya K, **Sly PD**, Smith KR, Steiner A, Stewart RB, Suk WA, van Schayck OCP, Yadama GN, Yumkella K, Zhong M. The Lancet Commission on pollution and health. *Lancet*. 2018 Feb 3;391(10119):462-512.

#### 4. EXPECTATIONS FOR COMING YEAR (not applicable for Final Reports)

##### How do you expect to use your funding allocation for the coming year?

CHEP activities closely align with strategic focus areas 1,2,3,4, 5, and 6 of UQ's Strategic Plan 2018-21. Specifically:

**Focus area 1:** CHEP's national and international partnerships provide students with opportunities for industry placements and active collaborations within environmental health, including the Health Protection Branch, Queensland Health; the Environment Protection Authority, Victoria; the Oceania Children's Environmental Health Network; the Pacific Basin Consortium for Environment and Health; and the WHO Network of Collaborating Centres for Children's Environmental Health.

**Focus area 2:** CHEP national and international partnerships encourage active collaboration between researchers and students from member institutions, including academia, industry, and Government agencies.

**Focus area 3:** CHEP national and international partnerships strengthen and grow research collaborations to make significant contributions to global research activity. In particular, the WHO networks and Oceania network ensure that UQ students and researchers have a global reach through CHEP.

**Focus area 4:** CHEP currently has students from low-income and disadvantaged countries including Bangladesh, Columbia, and Vietnam. Students from Bhutan, Iran, and Vietnam have applied to join CHEP during 2019.

**Focus area 5:** The CHEP program in career development of early career researchers and post-doctoral fellows aims to build their capacity and capability to meet CHEP and UQ strategic goals. This program includes individual mentoring sessions with senior researchers, support to present at conferences and assistance in setting and meeting career goals. Early career researchers and post-doctoral fellows are included in student advisory teams and given senior authorship positions on publications, where appropriate.

**Focus area 6:** CHEP has attracted \$21.76 M in research funds administered through UQ since inception. These include funds from the National Institutes of Health, USA; the Cystic Fibrosis Foundation, USA; Gilead Biosciences, USA; and Corbus Pharmaceuticals, USA.

**Proposed CHEP activities 2019-2023**


Activity	2019	2020	2021	2022	2023
Pacific Basin Consortium International Conference	█				█
NHMRC APP1138723: POWER RCT	█	█	█		
SLY18KO: Early life origins of CF lung disease	█	█	█	█	█
Innate immune responses in airway epithelium	█	█	█	█	█
Macrophage biology and bacterial killing in cystic fibrosis	█	█	█	█	█
Infectious and pollution-related non-communicable diseases in the Pacific Island Nations	█	█	█	█	█
Impact of environmental exposures in early life on life-long risk of chronic disease	█	█	█	█	█
The Oceania Children’s Environmental Health Network	█	█	█	█	█
WHO Collaborating Centre for Children’s Health and Environment	█	█	█	█	█
Protecting children from traffic-related pollution in Vietnam	█	█	█	█	█
Respiratory diseases in children in Bangladesh	█	█	█	█	█
Research Higher Degree student completions	█	█	█	█	█
Early career Researchers and post-doctoral fellow mentoring	█	█	█	█	█

**CERTIFICATIONS**

*Note: Approvals by email are acceptable.*

**Annual Report:**

**Lead CI or Funding Recipient:**

Name	Signature	Date
SLY, Peter D		30/01/2019

**Head of School/Centre/Institute:**

*I have read and endorse the annual report.*

Name	Signature	Date

**SUBMISSION OF THE REPORT**

Please email the completed form to [strategicfunding@uq.edu.au](mailto:strategicfunding@uq.edu.au)

**Submission requirements:**

- Send a separate email for each annual report submitted
- Attach a single PDF document containing all approvals
- Use descriptive subject lines to help categorise emails  
e.g. {Project number} Annual Report