

### Appendix – PolyU research projects funded by HMRF in 2022 Exercise

| Principal Investigator  | Project Title  | Amount Awarded (HKD) |
|---|--|----------------------|
| <b>Faculty of Engineering</b>   |  |                      |
| Dr CHEUNG James Chung-wai, Research Assistant Professor of the Department of Biomedical Engineering | Integrated acoustic and carbon nanotube biosensors with deep-learning algorithms for dysphagia screening: a pilot study  | \$495,900            |
| <b>Faculty of Health and Social Sciences</b>  |  |                      |
| Dr CHENG King Yip, Associate Professor of the Department of Health Technology and Informatics       | Circulating plasmalogens and their metabolism as biomarkers and therapeutic targets for pancreatic $\beta$ -cell dysfunction in type 2 diabetes  | \$1,499,000          |
| Dr LEE Cheuk Lun, Assistant Professor of the Department of Health Technology and Informatics        | Early-pregnancy prediction of preeclampsia using maternal serum levels of sialylated S100 calcium-binding protein A9 and alpha-2 Heremans-Schmid glycoprotein  | \$946,888            |
| Dr LI Hoi Yee, Assistant Professor of the Department of Health Technology and Informatics           | Association of TSH and FT4 levels, thyroid dysfunctions, and treatments of hyperthyroidism with incident dementia: a population- based cohort study  | \$488,600            |
| Dr REN Ge, Research Assistant Professor of the Department of Health Technology and Informatics      | Investigation of a novel AI-empowered pulmonary perfusion imaging technique based on cone beam computed tomography for functional image-guided adaptive radiotherapy of lung cancer  | \$1,500,000          |
| Prof. SIU Kit Hang, Gilman, Professor of the Department of Health Technology and Informatics        | Risk assessment and surveillance of the transmission of foodborne antimicrobial resistance in Hong Kong  | \$1,499,500          |
| Dr WONG Arnold Yu Lok, Associate Professor of the Department of Rehabilitation Sciences             | Feasibility, effectiveness, and patient experience of an online acceptance and commitment therapy plus exercises versus online education plus exercises for older people with chronic low back pain: a pilot randomized controlled trial | \$499,530            |
| Dr WONG Thomson Wai-lung, Associate Professor of the Department of Rehabilitation Sciences          | The efficacy of a specific dance intervention to improve the balance and reduce the risks of falls (SDIIBRF) in  | \$892,214            |

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|  | older adults: a randomised controlled trial   |             |
| Dr XIN Meiqi, Assistant Professor of the Department of Rehabilitation Sciences                           | Understanding professional help-seeking behaviors for insomnia and the associated factors in the community-dwelling older population having insomnia symptoms   | \$499,512   |
| Dr XU Huan, Assistant Professor of the Department of Rehabilitation Sciences                             | Estimation of a Valuation Function for the Health and Self- Management in Diabetes Questionnaire in Hong Kong   | \$500,000   |
| Dr CHUNG Joyce Oi-kwan, Assistant Professor of the School of Nursing                                     | Efficacy of mountain craft training at improving resilience and psychological well-being and reducing fatigue in childhood cancer survivors: a pilot randomised controlled trial                                  | \$462,260   |
| Dr KOR Patrick Pui-kin, Assistant Professor of the School of Nursing                                     | Effects of a single-session mindfulness-based intervention for reducing stress in family caregivers of people with dementia: a randomized controlled trial  | \$1,021,000 |
| Prof. LIU Justina Yat-wa, Associate Head (Postgraduate Education) and Professor of the School of Nursing | The effects of music-with-movement (simultaneous cognitive-motor dual-task training) on cognitive and physical performance of people with potentially reversible cognitive frailty: a randomized controlled trial | \$1,478,766 |
| Dr ZHAO Ivy Yan, Assistant Professor of the School of Nursing  | Supporting current home care services with a robot-mediated interactive intervention (RMII) to reduce loneliness in older adults: a feasibility and pilot randomized controlled trial                             | \$500,000   |
| Dr CHUN Ka Man, Assistant Professor of the School of Optometry   | Investigating the predictive capabilities of choroidal parameters for the effectiveness of myopia control in schoolchildren   | \$1,493,290 |
| <b>Faculty of Science</b>  |   |             |
| Dr CHUA Song-lin, Assistant Professor of the Department of Applied Biology and Chemical Technology       | Developing Juglone as a novel antivirulence agent to eliminate biofilm infections   | \$500,000   |