

## Appendix

### Awarded CUHK projects at the Silicon Valley International Inventions Festival 2024

	Awards	Principal investigator and team members (Department)	Project title	Project description
1	Gold Medal, Prize of the International Federation of Inventors' Association (IFIA)	Professor Francis K.L. Chan, Professor Siew C. Ng, Professor Su Qi, Dr Raphaela Iris Lau (Department of Medicine and Therapeutics)	A synbiotic preparation (SIM01) for post-COVID conditions	SIM01 can alleviate multiple post-COVID conditions, including fatigue, difficulty concentrating, gastrointestinal upset and general unwellness.
2	Gold Medal, Prize of the China Association of Inventions (CAI), Prize of the United Inventors Association of America (UIA)	Professor Raymond Tong Kai-yu, Dr Fanny Tong, Mr Xie Disheng, Mr Su Yujie, Mr David Shi Xiangqian (Department of Biomedical Engineering)	Transforming Rehabilitation with Wearable Soft Robotics: XoMuscle Empowering Movement in Patients with Disabilities	The biceps-size XoMuscle is a bionic artificial muscle capable lifting a 20kg water bucket. Compact, flexible and highly efficient, it can be quickly produced using 3D printing.
3	Gold Medal,	Professor Raymond Tong Kai-yu, Dr Lu Hsuan-yu, Mr Ye Zhongping, Mr Zhu Kun, Miss Cathy Lau Choi-yin (Department of Biomedical Engineering)	Hope4Care's Markerless Augmented Reality Training System: An Interactive Platform with Real-time Gait Analysis and Visual Feedback	This platform offers a new level of personalised rehabilitation, with ground reaction force measurement on each side. Interactive feedback promotes engagement and motivation to exercise.
4	Gold Medal	Professor Liona Poon Chiu-ye, Professor Judy Zhang Tao, Professor Ronald Wang Chi-chiu, Dr Gene Man Chi-wai, Dr Hung Sze-wan, Ms Loucia Chan Kit-ying (Department of Obstetrics and Gynaecology)	ProEGCG: A Prodrug to Relieve Menstrual Discomfort and Prevent Endometriosis	A prodrug of EGCG extracted from green tea, this can relieve menstrual discomfort and prevent endometriosis, with high levels of stability and bioavailability.
5	Gold Medal	Professor Pauline Lui Po-ye, Professor Patrick Yung Shu-hang, Mr Ma Zebin (Department of Orthopaedics and Traumatology)	A Breakthrough Discovery in Tendinopathy Treatment: the World's First Injectable Fatty Acid-binding Protein 4 Inhibitor-loaded Hydrogel	This BMS309403-loaded hydrogel treats tendinopathy by targeting fatty acid-binding protein 4 (FABP4), inflammation and pain. It restores the regenerative capacity of tendon stem cells. Slow release ensures sustained effectiveness.

6	Silver Medal	Professor Connie Chong Yuen-yu, Professor Chien Wai-tong (The Nethersole School of Nursing)	Pai.ACT: AI-driven Acceptance and Commitment Therapy for Tailored Mental Health	The first NLP system that simulates ACT specialists in assessing mental health during user-AI chatbot interactions, providing empathetic responses and customising ACT psychotherapy.
7	Silver Medal	Professor Elvis Chui Chun-sing, Professor Louis Cheung Wing-hoi, Professor Patrick Yung Shu-hang, Professor Qin Ling (Department of Orthopaedics and Traumatology)	Artificial Intelligence-assisted Orthopaedic Prosthesis Design and Surgical Planning System	This system quickly detects bone defects, removing them efficiently with accurate bone filling. It simplifies procedures and sets new standards in orthopaedics.
8	Silver Medal	Professor Jerry Xu Jiankun, Professor Qin Ling, Professor Patrick Yung Shu-hang, Professor Tong Wenxue, Professor Michael Ong Tim-yun Mr Zhang Haozhi (Department of Orthopaedics and Traumatology)	Mag Med Solutions Boost Endogenous Regeneration	Start-up Mag Med makes a series of innovative magnesium-containing products that have multiple functions to stimulate the regenerative capacity of their host.