Research Assessment Exercise 2020
Impact Overview Statement

University: City University of Hong Kong
Unit of Assessment (UoA): 01 - Biological Sciences (incl. environmental biology, biotechnology, agriculture & food science, veterinary studies)
Total number of eligible staff of the university in the UoA: 19

(1) Context

There are two impact cases to be reported under the UoA.

Impact Case Study 1: Estrogenic Endocrine Disrupting Chemicals (EDDCs) are a global public health concern. A cheap and fast test for EDDCs, developed at City University of Hong Kong, continues to impact customer safety and animal welfare locally, regionally and internationally. Based on transgenic fish embryos the Glowing Medaka Test has identified previously unknown toxicities in consumer products ranging cosmetics to baby nutrition. Today, the test is used by international corporations, government agencies and NGOs to detect EDDC toxicity and test results are being made available to customers on publicly accessible platforms.

Impact Case Study 2: A DNA chip technology developed at City University of Hong Kong has been licensed to City University spinoff company [redacted]. This novel method for detection and genotyping of human papilloma virus (HPV) was approved by the Chinese Food and Drug Administration of China and is used by hundreds of hospitals throughout China, where hundreds of thousands of women have been screened for cervical cancer. As early detection of HPV is paramount for the prevention of cervical cancer, thousands of lives have likely been saved as a consequence.

(2) Approach to impact

In impact case 1, the original research publication was reported in 2006-2008. The related staff in City University of Hong Kong later commercialized the technology by founding a startup company in 2010. Today the test is used by government departments and academic research institutions in Hong Kong, mainland China and Europe, as well as multinational cosmetics and food groups.

(3) Strategy and plans

The university has provided instrumental support on both impact cases from research to commercialization. Both teams have collaborators from the university to perform original research. The Knowledge Transfer Office from the university also supported the team on the patent application, commercialization and investment in the later on stage.

(4) Relationship to case studies

Impact case 1 (the Glowing Medaka Test) was performed chiefly by the research group of Professor Shuk Han Cheng at the Department of Biomedical Sciences at City University of Hong Kong. The original research publication was reported in 2006-2008. A spin-off company was also founded by the graduates of the university.

Impact case 2 (Development and Commercialisation of a DNA Chip Technology for Analysis of Mutations and Viral Genotyping) was performed chiefly by the research group of Professor

Michael Yang at the Department of Biomedical Sciences at City University of Hong Kong. A series of patents were granted for the DNA chip applications for detection of DNA mutations.