| Executive<br>unit   | Department of Chemistry, Department of Physics                    |  |
|---------------------|---|--|
| Project             | Research and development of precision medicine treatment as an    |  |
| name                | innovative teaching resource in 2020 – Project Summary –          |  |
|                     | Development and promotion of using precision-induced targeted dru |  |
|                     | technology as a teaching module                                   |  |
| <b>Project host</b> | Lianhui Hong/Yangwei Lin  |  |

## 1. Project Summary:

The purpose of this project is to improve the national technological literacy of the public in the standard or non-standard education field, to provide rich and enlightening biotechnology and medicine innovation education resources and learning activities, and to enhance the public's understanding of biotechnology and medicine. Therefore, this project will generate interest, appreciation, knowledge, and participation to improve people's technological literacy. Furthermore, we will connect K-12 schools at all levels to create a field for teaching and learning birth technology and medicine. We will also develop curriculum modules to enhance teachers' professional quality for induced target drugs, focus release control drugs, and induced release drugs. Finally, we will organise various biotechnology and medicine promotion and research activities to transform high-end materials into more accessible ones to promote them to the public.

## 2. Achievements:

- (I) Visual teaching aids: Five sets in total. These are MRI diagnostic imaging teaching aids, magnetic guided near-infrared light drug release teaching aids, light and energy teaching aids, light-induced chemical reaction teaching aids, and cancer cell identification teaching aids.
- (II) Science Popularisation Articles: Completed four articles: 'Water knows the secrets of the body!', 'Magnetic resonance imaging and cancer detection', 'All-in-one cancer treatment: a grasp of diagnosis and treatment', 'Light and energy', and 'Gathering energy for master stroke and cell identification'.
- (III) Science Popularisation activities: In total, 1,860 people participated in the 3 sessions.

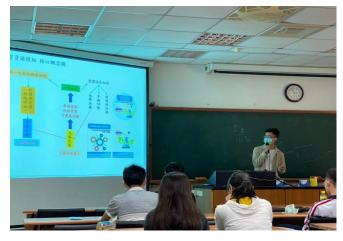
| Date       | Planned events                     | Target<br>groups | session/partic<br>ipants |
|------------|------------------------------------|------------------|--------------------------|
| 2020/03/07 | Science Activities of the National | Senior           | 1/60                     |

|  |            | Changhua University of Education              | High     |        |  |
|--|------------|---|----------|--------|--|
|  |            | College of Science                            | school   |        |  |
|  |            |   | students |        |  |
|  | 2020/10/27 | Science Popularisation                        | Primary  |        |  |
|  |            | Round-the-Island Train Hands-on               | School   | 1/1500 |  |
|  |            | Activities                                    | students |        |  |
|  | 2020/10/31 | College of Science Fun Open Day<br>of Science | Primary  |        |  |
|  |            |   | School   | 1/300  |  |
|  |            |   | students |        |  |

Index corresponding to SDGs

| SDG01 SDG02 SDG03 SDG04 SDG05 SDG06 SDG07 |
|---|
| SDG08SDG09SDG10SDG11SDG12SDG13SDG14       |
| SDG15SDG16SDG017                          |
|   |

Supporting photos





Caption: Explaining the principle of Caption: Science Popularisation light-induced drug release. Round-the-Island Train Hands-on

