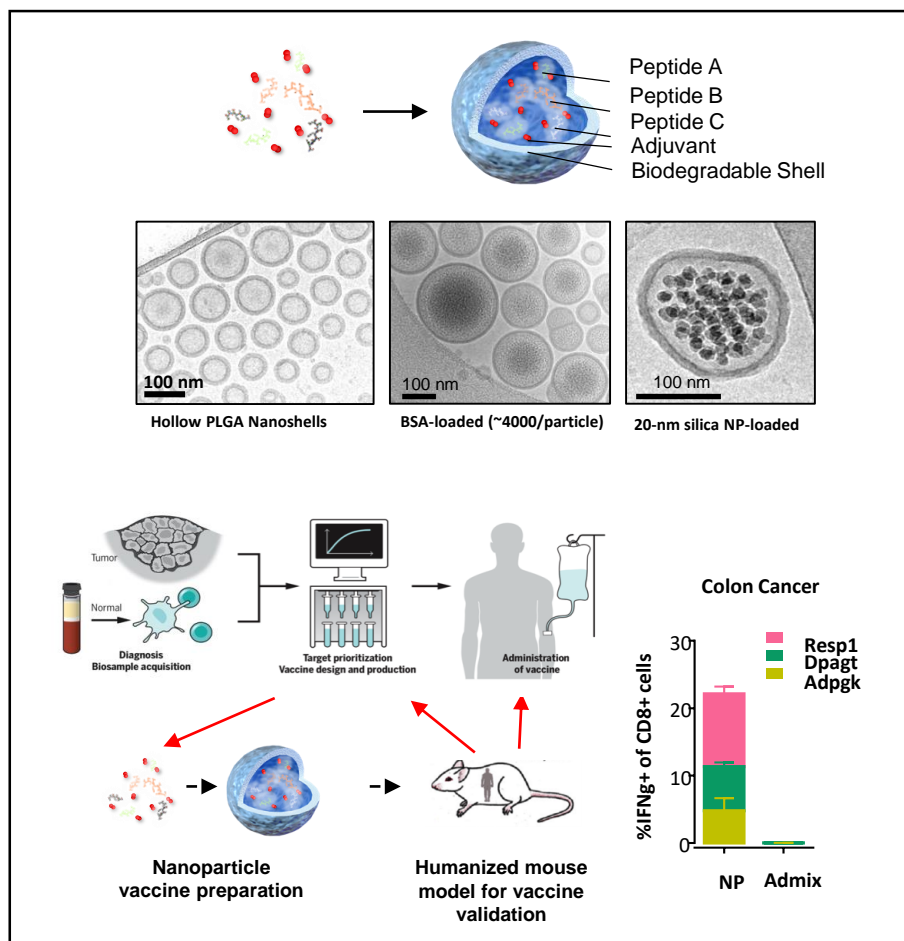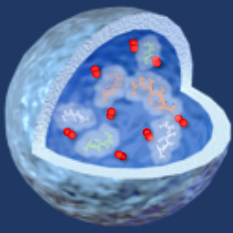# 精準強效奈米癌症疫苗

主要領域 | 精準醫療/癌症治療

- **產品/技術簡介**
  - 結合新穎的奈米疫苗技術與基因定序技術製備強效的抗癌治療性疫苗

- **應用：精準抗癌疫苗技術**
  - 精準強效及可個人化之抗癌疫苗
  - 可應用於任何癌症之治療

- **優勢**
  - 可安全並強效的刺激抗體和 T 細胞增生，其效果大幅超越臨床上所有的 T 細胞疫苗平台
  - 奈米粒子成分完全可生物降解，具極高之安全性

- **專利現況**
  - Taiwan I663991, issued on 2019/7/1;
  - EU EP3432868B1; Spain ES2847249T3 (granted on 2021/08/02)
  - Japan JP2019512551A (granted on 2022/3/10)
  - Pending in US, China

Custom Anticancer Vaccination with Precision Nanoparticle Vaccine

Research Area — **Custom Anticancer Vaccine/Precision Medicine**
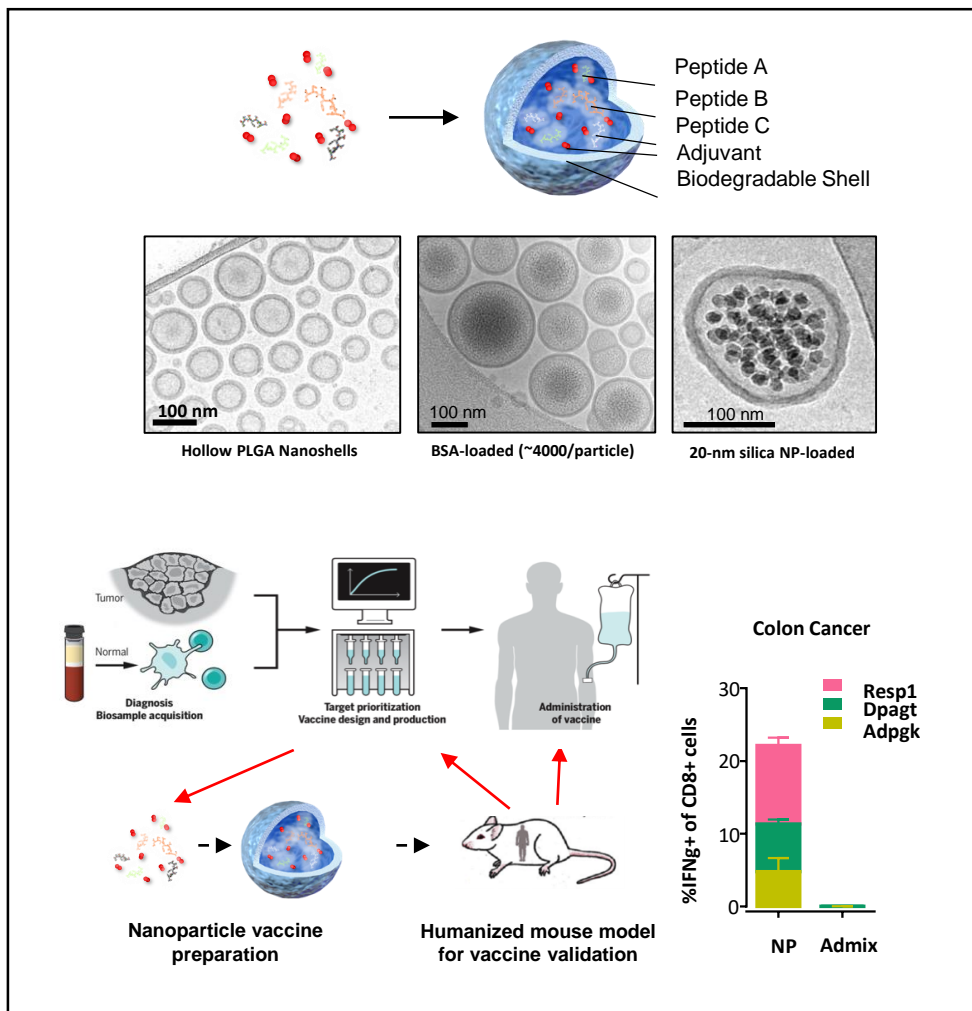
- **Technical statement**
  - Proprietary polymeric nanoshells for safe, precise, and multivalent T cell induction.

- **Applications: *Precision Anticancer Vaccination!***
  - To enable precision vaccination for custom anticancer vaccine.
  - Vastly expand induced T cell breadth and magnitude over alternative vaccination systems.
  - The material is entirely biocompatible and biodegradable.
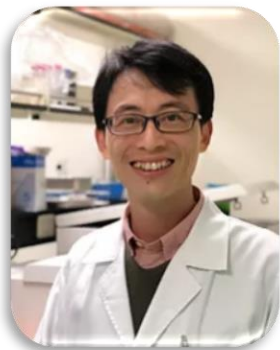
- **Patent status**
  - Taiwan I663991, issued on 2019/7/1;
  - EU EP3432868B1; Spain ES2847249T3 (granted on 2021/08/02)
  - Japan JP2019512551A (granted on 2022/3/10)
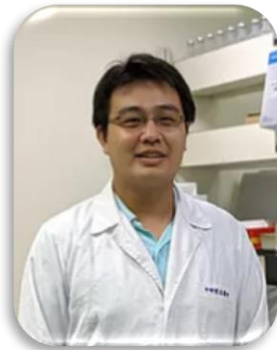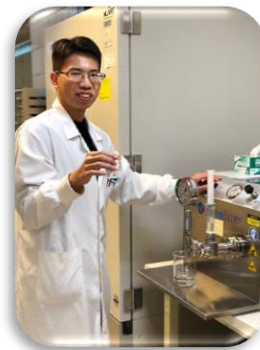 - Pending in US, China

Peptide A
Peptide B
Peptide C
Adjuvant
Biodegradable Shell

100 nm — **Hollow PLGA Nanoshells**

100 nm — **BSA-loaded (~4000/particle)**

100 nm — **20-nm silica NP-loaded**

Tumor
Normal
Diagnosis Biosample acquisition
Target prioritization Vaccine design and production
Administration of vaccine

Nanoparticle vaccine preparation

Humanized mouse model for vaccine validation

Colon Cancer

%IFNg+ of CD8+ cells

Resp1
Dpagt
Adpgk

NP   Admix

計畫主持人 **Project PI** 胡哲銘

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| 林建緯 | 白振學 | 姚秉瑜 |

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