



張佳瑜 Chia-Yu Chang

助理教授

研究領域：病毒學、免疫與疫苗學、分子生物學

教授課程：醫用生物化學、高等生物化學、獸醫免疫學、獸醫疫苗學、獸醫傳染病學

Email: chiayuchang@nchu.edu.tw

Tel: 04-22840368 ex 49

學歷

2016-2020	國立臺灣大學獸醫所	博士
2015-2016	國立臺灣大學分子暨比較病理學研究所	碩士直升博士
2010-2015	國立臺灣大學獸醫學系	學士

工作經歷

2022-2022	美國約翰霍普金斯大學醫學院 病理所	博士後研究員
2021-2022	西班牙農業食品科學研究所 動物健康中心 (IRTA-CreSA)	博士後研究員
2020-2021	中央研究院 生物化學所	博士後研究員

榮譽與其他經歷

2020、2018	衛福部傳染病防治研究及教育中心 優秀著作獎
2019	科技部補助赴國外從事博士後研究獎學金 (博後千里馬計畫)

過去研究主題

■ 豬流行性下痢

搜索新型豬流行性下痢之中和抗原決定位、桿狀病毒表現系統疫苗研發與測試、豬流行性下痢免疫吸附試驗套組開發、抗病毒抗體生產、病毒表面超微結構之分析

■ 非洲豬瘟

CRISPR 基因編輯重組減毒病毒製造、DIVA 檢測方式研發

■ 乳突瘤病毒

犬貓乳突瘤病毒與惡性皮膚病變調查、犬貓乳突瘤病毒基因分析、人類乳突瘤病毒腫瘤誘導模式、人類病毒相關頭頸癌之機制探討

目前研究主題

■ 非洲豬瘟

病毒相關蛋白質體研究、病毒蛋白質與免疫調控機制探討、診斷性抗體產製

■ 乳突瘤病毒

台灣牛隻乳突瘤病毒分析

研究與教學計畫

2025- 2026	國科會	解析非洲豬瘟病毒 CD2v 之聚糖屏蔽效應並使用噬菌體展示技術輔助產製高親和力之抗體 [計畫主持人]
2024- 2025	財團法人中央畜產會	辦理屠宰衛生檢查病理診斷工作及畜禽屠宰衛生檢查判定結果現場教學及考核工作 [共同計畫主持人]
2024	中興大學工程技術與 農業生技創新中心	使用機器學習設計親和度最佳化之重組抗體及應用其開發疾病診斷試劑 [計畫主持人]
2023- 2025	國科會	非洲豬瘟病毒外套膜上血液吸附蛋白 CD2v 之醣基化研究與參與調控細胞與體液免疫反應之關聯 [計畫主持人]
2023	中興大學獸醫學院	獸醫學院與教學醫院研究合作計畫－臺灣牛隻乳突瘤病毒疾病調查與本土病毒株分離 [計畫主持人]
2023	中興大學教發中心	總整課程計畫－動物疫苗之理論與實際 [計畫主持人]

代表著作

豬病相關

1. Danaya Nammuang, Yi-Wen Shen, Chiao-Hsu Ke, Nan-Ling Kuan, Chao-Nan Lin, Kuang-Sheng Yeh, Yen-Chen Chang, **Chia-Yu Chang**, Hui-Wen Chang. Isolation and Evaluation of the Pathogenicity of a Hybrid Shiga Toxin-producing and Enterotoxigenic *Escherichia coli* in Pigs. **BMC Veterinary Research** 21;20(1):480. (2024)
2. Marín-Moraleda D, Muñoz-Basagoiti J, Tort-Miró A, Navas MJ, Muñoz M, Vidal E, Cobos À, Martín-Mur B, Meas S, Motuzova V, **Chia-Yu Chang**, Marta Gut, Francesc Accensi, Sonia Pina-Pedrero, José Ignacio Núñez, Anna Esteve-Codina, Boris Gavrilov, Fernando Rodriguez, Lihong Liu, Jordi Argilaguet. Elucidating the Onset of Cross-Protective Immunity after Intranasal Vaccination with the Attenuated African Swine Fever Vaccine Candidate BA71ΔCD2. **Vaccines**, 12(5):517. (2024)

3. Joan Pujols, Elena Blázquez, Joaquim Segalés, Fernando Rodríguez, **Chia-Yu Chang**, Jordi Argilagué, Laia Bosch-Camós, Rosa Rosell, Lola Pailler-García, Boris Gavrilov, Joy Campbell, Javier Polo. Feeding Spray-Dried Porcine Plasma to Pigs Improves the Protection Afforded by the African Swine Fever Virus (ASFV) BA71ΔCD2 Vaccine Prototype against Experimental Challenge with the Pandemic ASFV—Study 2. **Vaccines**, 11(4), 825. (2023)
4. Laia Bosch-Camos, Uxia Alonso, Anna Esteve-Codina, **Chia-Yu Chang**, Beatriz Martin-Mur, Francesc Accensi, Marta Muñoz, Maria J. Navas, Marc Dabad, Enric Vidal, Sonia Pina-Pedrero, Patricia Pleguezuelos, Ginevra Caratu, Maria L. Salas, Lihong Liu, Stanimira Bataklieva, Boris Gavrilov, Fernando Rodriguez, Jordi Argilagué. Cross-protection against African Swine Fever Virus upon Intranasal Vaccination is Associated with an Adaptive-innate Immune Crosstalk. **PLOS Pathogens** 18(11): e1010931. (2022)
5. Cheng-Yu Huang*, Piotr Draczkowski*, Yong-Sheng Wang*, **Chia-Yu Chang***, Yu-Chun Chien, Yun-Han Cheng, Yi-Min Wu, Chun-Hsiung Wang, Yuan-Chih Chang, Yen-Chen Chang, Tzu-Jing Yang, Yu-Xi Tsai, Kay-Hooi Khoo, Hui-Wen Chang, Shang-Te Danny Hsu. In Situ Structure and Dynamics of an Alphacoronavirus Spike Protein by Cryo-ET and Cryo-EM. **Nature Communications** 13, 4877. (*co-first author) (2022)
6. **Chia-Yu Chang**, Yong-Sheng Wang, Jou-Fei Wu, Tzu-Jing Yang, Yen-Chen Chang, Chanhee Chae, Hui-Wen Chang, Shang-Te Danny Hsu. Generation and Characterization of a Spike Glycoprotein Domain A-Specific Neutralizing Single-Chain Variable Fragment against Porcine Epidemic Diarrhea Virus. **Vaccines**, 9(8), 833. (2021)
7. Wei-Ting Hsu, **Chia-Yu Chang**, Chih-Hsuan Tsai, Sung-Chan Wei, Huei-Ru Lo, Robert John S. Lamis, Hui-Wen Chang, Yu-Chan Chao. PEDV Infection Generates Conformation-Specific Antibodies That Can Be Effectively Detected by a Cell-Based ELISA. **Viruses**, 13(2), 303. (2021)
8. **Chia-Yu Chang**, Wei-Ting Hsu, Pei-Shiue Tsai, Chi-Min Chen, Ivan-Chen Cheng, Yu-Chan Chao, Hui-Wen Chang. Oral Administration of Porcine Epidemic Diarrhea Virus Spike Protein Expressing in Silkworm Pupae Failed to Elicit Immune Responses in Pigs. **AMB Express**, Jan 28;10(1):20. (2020)
9. **Chia-Yu Chang**, Ju-Yi Peng, Yun-Han Cheng, Yen-Chen Chang, Yen-Tse Wu, Pei-Shiue Tsai, Hue-Ying Chiou, Chian-Ren Jeng, Hui-Wen Chang. Development and Comparison of Enzyme-linked Immunosorbent Assays Based on Recombinant Trimeric Full-length and Truncated Spike Proteins for Detecting Antibodies against Porcine Epidemic Diarrhea Virus. **BMC Veterinary Research**, 15:421. (2019)
10. Ju-Yi Peng, Yi-Bing Horng, Ching-Ho Wu, **Chia-Yu Chang**, Yen-Chen Chang, Pei-Shiue Tsai, Chian-Ren Jeng, Yeong-Hsiang Cheng, Hui-Wen Chang. Evaluation of Antiviral Activity of *Bacillus licheniformis*-fermented Products against Porcine Epidemic Diarrhea Virus. **AMB Express**, 9:191. (2019)
11. Fu-Chun Hsueh, Chao-Nan Lin, Hue-Ying Chiou, Min-Yuan Chia, Ming-Tang Chiou, Takashi Haga, Chi-Fei Kao, Yen-Chen Chang, **Chia-Yu Chang**, Chian-Ren Jeng, Hui-Wen Chang. Updated Phylogenetic

Analysis of the Spike Gene and Identification of a Novel Recombinant Porcine Epidemic Diarrhoea Virus Strain in Taiwan. **Transboundary Emerging Diseases**, 00:1–14. (2019)

12. **Chia-Yu Chang**, Ivan-Chen Cheng, Yen-Chen Chang, Pei-Shiue Tsai, Seiu-Yu Lai, Yu-Liang Huang, Chian-Ren Jeng, Victor Fei Pang, Hui-Wen Chang. Identification of Neutralizing Monoclonal Antibodies Targeting Novel Conformational Epitopes of the Porcine Epidemic Diarrhoea Virus Spike Protein. **Scientific Reports**, 9(1):2529. (2019)
13. **Chia-Yu Chang**, Wei-Ting Hsu, Yu-Chan Chao, Hui-Wen Chang. Display of Porcine Epidemic Diarrhea Virus Spike Protein on Baculovirus to Improve Immunogenicity and Protective Efficacy. **Viruses**, 10, 346. (2018)
14. Ju-Yi Peng, **Chia-Yu Chang**, Chi-Fei Kao, Yen-Chen Chang, Cheng-Shun Hsueh, Chian-Ren Jeng, Ivan-Chen Cheng, Victor Fei Pang, Pei-Shiue Tsai, Hui-Wen Chang. Different Intestinal Tropism of the G2b Taiwan Porcine Epidemic Diarrhea Virus-Pintung 52 Strain in Conventional 7-Day-Old Piglets. **The Veterinary Journal**; 237: 69-75. (2018)
15. Yen-Chen Chang, **Chia-Yu Chang**, Pei-Shiue Tsai, Hue-Ying Chiou, Chian-Ren Jeng, Victor Fei Pang, Hui-Wen Chang. Efficacy of Heat-Labile Enterotoxin B Subunit-adjuvanted Parenteral Porcine Epidemic Diarrhea Virus Trimeric Spike Subunit Vaccine in Piglets. **Applied Microbiology and Biotechnology**, Sep, 102(17):7499-7507. (2018)
16. Yen-Chen Chang, Chi-Fei Kao, **Chia-Yu Chang**, Chian-Ren Jeng, Pei-Shiue Tsai, Victor Fei Pang, Hue-Ying Chiou, Ju-Yi Peng, Ivan-Chen Cheng and Hui-Wen Chang. Evaluation and Comparison of the Pathogenicity and Host Immune Responses Induced by a G2b Taiwan Porcine Epidemic Diarrhea Virus (Strain Pintung 52) and Its Highly Cell-Culture Passaged Strain in Conventional 5-Week- Old Pigs. **Viruses**, 9, 121. (2017)
17. Ju-Yi Peng, Cai-Zhen Jian, **Chia-Yu Chang**, Hui-Wen Chang. Porcine Epidemic Diarrhea. Jagadeesh Bayry (Ed), Emerging and Re-emerging Infectious Diseases of Livestock. Springer. p.273-283 (2017)

腫瘤與乳突瘤病毒相關

1. Guan-Shiun Chen, Hue-Ying Chiou, Yen-Chen Chang, Hao-Ping Liu, Yu-I Pan, Ming-Yun Chan, Tsung-Ching Liu, Ming-Yuan Chia, Chienjin Huang, Jacky Peng-Wen Chan, **Chia-Yu Chang**. Molecular and Histological Identification of Bovine Papillomavirus 1, 2 and a Novel Genotype in Cutaneous Papillomas of Dairy Cattle in Taiwan. **Transboundary and Emerging Diseases**, 2025 Jun 25; 2025:5586786. (2025)
2. Chih-Ching Wu, **Chia-Yu Chang**, Pei-Yi Chou, Xiu-Ya Chan, Chun-Chueh Huang, Youngsen Yang, Hao-Ping Liu. Multiplexed Immunoassay for a Serum Autoantibody Biomarker Panel in Diagnostic and Prognostic Prediction of Canine Mammary Tumors. **Veterinary Quarterly**, 2025 Dec; 45(1):1-12. (2025)
3. Suyang Wang, Michelle Cheng, Chao-Cheng Chen, **Chia-Yu Chang**, Ya-Chea Tsai, Jr-Ming Yang, TC Wu, Chuan-Hsiang Huang, and Chien-Fu Hung. *Salmonella* Immunotherapy Engineered with Highly

Efficient Tumor Antigen Coating Establishes Antigen-Specific CD8⁺ T Cell Immunity and Increases in Antitumor Efficacy with Type I Interferon Combination Therapy. **Oncoimmunology**, 13:1. (2024)

4. Nanako Yamashita-Kawanishi, **Chia-Yu Chang**, James K Chambers, Kazuyuki Uchida, Katsuaki Sugiura, Iwao Kukimoto, Hui-Wen Chang, Takeshi Haga. Comparison of Prevalence of *Felis catus* Papillomavirus Type 2 in Squamous Cell Carcinomas in Cats between Taiwan and Japan. **The Journal of Veterinary Medical Science**, Aug 6;83(8):1229-1233. (2021)
5. Nanako Yamashita-Kawanishi, Yuka Gushino, **Chia-Yu Chang**, Hui-Wen Chang, James K. Chambers, Kazuyuki Uchida, Takeshi Haga. Full-genome Characterization of a Novel *Felis catus* Papillomavirus 4 Subtype Identified in a Cutaneous Squamous Cell Carcinoma of a Domestic Cat. **Virus Genes**, Aug; 57(4):380-384. (2021)
6. **Chia-Yu Chang**, Nanako Yamashita-Kawanishi, Sonoka Tomizawa, I-Li Liu, Wei-Tao Chen, Yen-Chen Chang, Wei-Hsiang Huang; Pei-Shiue Tsai, Kinji Shirota, James K Chambers, Kazuyuki Uchida, Takeshi Haga, Hui-Wen Chang. Whole Genomic Analysis and Comparison of Two Canine Papillomavirus Type 9 Strains in Malignant and Benign Skin Lesions. **Viruses**, 12, 736. (2020)
7. **Chia-Yu Chang**, Wei-Tao Chen, Takeshi Haga, Nanako Yamashita, Chi-Fen Lee, Masano Tsuzuki, Hui-Wen Chang. The Detection and Association of Canine Papillomavirus with Benign and Malignant Skin Lesions in Dogs. **Viruses**, 12(2), 170. (2020)
8. Yamashita-Kawanishi N, Sawanobori R, Matsumiya K, Uema A, Chambers JK, Uchida K, Shimakura H, Tsuzuki M, **Chia-Yu Chang**, Hui-Wen Chang, Takeshi Haga. Detection of *Felis catus* Papillomavirus Type 3 and 4 DNA from Squamous Cell Carcinoma Cases of Cats in Japan. **The Journal of Veterinary Medical Science**, 80(8):1236-1240. (2018)

其他領域

1. Yun-Han Cheng, Yen-Chen Chang, **Chia-Yu Chang**, Hui-Wen Chang. Identification and Genomic Characterization of *Baculovirus Penaei* in *Litopenaeus vannamei* in Taiwan. **Journal of Fish Diseases** 46(6):611-617. (2023)

更新日期 2025.07.31