



Huang, Chienjin

Professor

Professional specialty: Molecular Virology, Molecular Biology, Hybridoma

Courses taught:

Graduate: Advanced Microbiology, Advanced Clinical Virology, Advanced Molecular Biology, Monoclonal Antibody Techniques, Mechanisms in Virus Pathogenesis

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Educational Background

PhD, University of Washington (1993)

MS, National Chung Hsing University (1987)

BS, National Chung Hsing University (1984)

Current Position and Professional Career

Professor, Graduate Institute of Microbiology and Public Health, NCHU (2009-)

Professor, Graduate Institute of Veterinary Microbiology, NCHU (2006-2009)

Associate Professor, Graduate Institute of Veterinary Microbiology, NCHU (1994-2006)

Postdoctoral Fellow, Department of Microbiology, University of Washington (1993-1994)

Research Assistant, School of Fisheries, University of Washington (1989-1993)

Research Study, Department of Pathobiology , University of Washington (1988-1989)

Research Assistant, Agriculture Biotechnology Laboratory, NCHU (1984-1988)

Research Interests

Studies on viral gene regulations and pathogenesis

Development of rapid diagnostic methods and diagnostic reagents

Development of engineering recombinant vaccines

Preparation of monoclonal antibodies

Selected Publications (2004-2021)

1. **Huang*, C.**, J.-J. Hung, C.-Y. Wu, and M. S. Chien. 2004. Multiplex PCR for rapid detection of pseudorabies virus, porcine parvovirus and porcine circoviruses. *Veterinary Microbiology* 101: 209-214.
2. Huang, Y.J., M.S. Chien, C.Y. Wu, and **C. Huang***. 2005. Mapping of functional regions conferring nuclear localization and RNA-binding activity of pseudorabies virus early protein UL54. *Journal of Virological Method* 130: 102-107.
3. **Huang*, C.**, M.S. Chien, C.M. Hu, C.W. Chen, and P.C. Hsieh. 2006. Secreted expression of the classical swine fever virus glycoprotein E^{tns} in yeast and application to a sandwich blocking ELISA. *Journal of Virological Methods* 132: 40-47.
4. Wu, P.C., M.S. Chien, Y.Y. Tseng, J. Lin, W.L. Lin, C.Y. Yang, and **C. Huang***. 2008. Expression of the porcine circovirus type 2 capsid protein subunits and application to an indirect ELISA.

Journal of Biotechnology 133: 58-64.

5. Lin, G.J., T.Y. Liu, Y.Y. Tseng, Z.W. Chen, C.C. You, S.L. Hsuan, M.S. Chien, and **C. Huang***. 2009. Yeast-expressed classical swine fever virus glycoprotein E2 induces a protective immune response. *Veterinary Microbiology* 139:369-374.
6. Wu, C.W., M.S. Chien, T.Y. Liu, G.J. Lin, W.C. Lee, and **C. Huang***. 2011. Characterization of the monoclonal antibody against classical swine fever virus glycoprotein E^{rns} and its application to an indirect sandwich ELISA. *Applied Microbiology and Biotechnology* 92:815-821.
7. Lin, G.J., M.C. Deng, Z.W. Chen, T.Y. Liu, C.W. Wu, C.Y. Cheng, M.S. Chien, and **C. Huang***. 2012. Yeast-expressed classical swine fever E2 subunit candidate provides complete protection against lethal challenge infection and prevents horizontal virus transmission. *Vaccine* 20:2336-2341.
8. Wu, P.C., W.L. Lin, C.M. Wu, J.N. Chi, M.S. Chien, and **C. Huang***. 2012. Characterization of porcine circovirus type 2 (PCV2) capsid particle assembly and its application to virus-like particle vaccine development. *Applied Microbiology and Biotechnology* 95:1501-1507.
9. Wu, C.W., M.S. Chien, and **C. Huang***. 2013. Characterization of the swine U6 promoter for short hairpin RNA expression and its application to inhibition of virus replication. *Journal of Biotechnology* 168:78-84.
10. Cheng, C.Y., C.W. Wu, G.J. Lin, W.C. Lee, M.S. Chien, and **C. Huang***. 2014. Enhancing expression of the classical swine fever virus glycoprotein E2 in yeast and its application to a blocking ELISA. *Journal of Biotechnology* 174: 1-6.
11. Chi, J.N., C.Y. Wu, M.S. Chien, P.C. Wu, C.M. Wu, and **C. Huang***. 2014. The preparation of porcine circovirus type 2 (PCV2) virus-like particles using a recombinant pseudorabies virus and its application to vaccine development. *Journal of Biotechnology* 181: 12-19.
12. Wu, P.C., T.Y. Chen, J.N. Chi, M.S. Chien, and **C. Huang***. 2016. Efficient expression and purification of porcine circovirus type 2 virus-like particles in *Escherichia coli*. *Journal of Biotechnology* 220: 78-85.
13. Wu, C.Y., C.M. Liao, J.N. Chi, M.S. Chien, and **C. Huang***. 2016. Growth properties and vaccine efficacy of recombinant pseudorabies virus defective in glycoprotein E and thymidine kinase gene. *Journal of Biotechnology* 229: 58-64.
14. Chi, J.N., C.Y. Wu, P.C. Wu, M.S. Chien, and **C. Huang***. 2016. Production of porcine circovirus type 2 virus-like particles by an attenuated recombinant pseudorabies virus. *Virology & Immunology Journal* 1(1): 000102.
15. Wu, C.Y., C.W. Wu, C.M. Liao, M.S. Chien, and **C. Huang***. 2017. Enhancing expression of the pseudorabies virus glycoprotein E in yeast and its application in an indirect sandwich ELISA. *Journal of Applied Microbiology* 123: 594-601.
16. Cheng, C.Y., C.W. Wu, M. S. Chien*, and **C. Huang***. 2019. N-terminus of classical swine fever virus strain TD96 glycoprotein E^{rns} contains a potential heparin-binding domain. *Veterinary Microbiology* 232:79-83.
17. Wu, C.W., T.Y. Wu, C.J. Kuo, Y.P. Lu, M.S. Chien, and **C. Huang***. 2020. Characterization of the monoclonal antibody specific to the ORF72 protein of koi herpesvirus and cellular distribution analysis of the viral protein. *Journal of Fish Diseases* 2020;00:1-9.
18. Chang, C.C., C.W. Wu, Y.C. Chang, C.Y. Wu, M.S. Chien, and **C. Huang***. 2021. Detection and phylogenetic analysis of porcine circovirus type 3 in Taiwan. *Archives of Virology* 166:259-263.

Updated:2021/08/01