

國立東華大學教師個人基本資料表

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最高學歷/起迄：美國田納西大學微生物學博士/1990-1994

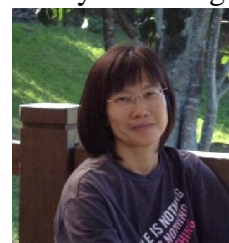
現職/起迄：教授/2014年2月

到任年月份(東華)：1997年8月

研究領域：分子病毒學、分子生物學、微生物學

張瑞宜

Ruey-Yi Chang



研究

近五年研究成果

一、期刊論文：

(若期刊屬於 SCI、EI、SSCI、TSSCI、EconLit 或 A&HCI 等時，請註明)

1. Fan, Y.-C., J.-W. Lin, S.-Y. Liao, J.-M. Chen, Y.-Y. Chen, H.-C. Chiu, C.-C. Shih, C.-M. Chen, **R.-Y. Chang**, C.-C. King, W.-J. Chen, Y.-T. Ko, C.-C. Chang, S.-S. Chiou. 2017. Virulence of Japanese Encephalitis Virus Genotypes I and III, Taiwan. *Emerging Infectious Diseases* 23: 1883-1886.
2. Tien, C.-F. S.-C. Cheng¹, Y.-P. Ho², Y.-S. Chen³, J.-H. Hsu⁴, and **R.-Y. Chang**^{*}. 2014. Inhibition of aldolase A blocks biogenesis of ATP and attenuates Japanese encephalitis virus production. *Biochemical and Biophysical Research Communications* 443: 464-469. [SCI, IF=2.281, Ranking 46/71 in BIOPHYSICS]
3. **Chang, R.-Y.**^{*}, T.-W. Hsu, Y.-L. Chen, S.-F. Liu, Y.-J. Tsai, Y.-T. Lin, Y.-S. Chen, and Y.-H. Fan. 2013. Japanese Encephalitis Virus Non-coding RNA Inhibits Activation of Interferon by Blocking Nuclear Translocation of Interferon Regulatory Factor 3. *Veterinary Microbiology* 166:11-21. [SCI, IF=2.762, Ranking 4/129 in VETERINARY SCIENCES].
4. Lin, C.-N., **R.-Y. Chang**, B.-L. Su, L.-L. Chueh^{*}. 2013. Full genome analysis of a novel type II feline coronavirus NTU156. *Virus genes* 46: 316-322. [SCI, IF=1.837, Ranking 27/32 in VIROLOGY].
5. Chiou, S.-S., Y.-C. Fan, W. D. Crill, **R.-Y. Chang**, and G.-J. J. Chang. 2012. Mutation analysis of the cross reactive epitopes of Japanese encephalitis virus envelope glycoprotein. *Journal of General Virology* 93:1185-1192 [SCI, IF=3.529, Ranking 9/32 in VIROLOGY].
6. Chen, Y.-Y., Y.-C. Fan, W.-C. Tu, **R.-Y. Chang**, C.-C. Shih, I.-H. Lu, M.-S. Chien, W.-C. Lee, T.-H. Chen, G.-J. Chang, and S.-S. Chou. 2011. Japanese encephalitis virus genotype replacement, Taiwan, 2009-2010. *Emerging Infectious Diseases* 17: 2354-2357 [SCI, IF=7.327, Ranking 3/70 in INFECTIOUS DISEASES].

7. Fan, Y.-H., M. Nadar, C.-C. Chen, C.-C. Weng, Y.-T. Lin, and **R.-Y. Chang***. 2011. Small noncoding RNA modulates Japanese encephalitis virus replication and translation *in trans*. *Virology Journal* 8: 492 [SCI, IF=2.089, Ranking 23/32 in VIROLOGY].
8. Wang, R. Y.-L., Y.-R. Huang, K.-M. Chong, C.-Y. Hung, Z.-L. Ke, and **R.-Y. Chang***. 2011. *DnaJ* homolog Hdj2 facilitates Japanese encephalitis virus replication. *Virology Journal* 8: 471 [SCI, IF=2.089, Ranking 23/32 in VIROLOGY].
9. Yang, S.-H., M.-L. Liu, C.-F. Tien, S.-J. Chou, and **R.-Y. Chang***. 2009. Glyceraldehyde-3- phosphate dehydrogenase (GAPDH) interaction with 3' ends of Japanese encephalitis virus RNA and colocalization with the viral NS5 protein. *Journal of Biomedical Science* 16: 40 [SCI, IF=2.736, Ranking 49/122 in MEDICINE, RESEARCH & EXPERIMENTAL]. Highly accessed.
10. Tsai, K.-N., S.-F. Tsang, C.-H. Huang, and **R.-Y. Chang***. 2007. Defective interfering RNAs of Japanese encephalitis virus found in mosquito cells and correlation with persistent infection. *Virus Research* 124: 139-150 [SCI, IF=2.827, Ranking 18/32 in VIROLOGY].
11. Lin, K.-C., H.-L. Chang and **R.-Y. Chang***. 2004. Accumulation of a 3'-terminal genome fragment in Japanese encephalitis virus-infected mammalian and mosquito cells. *Journal of Virology* 78: 5133-5138 [SCI, IF=4.648, Ranking 7/32 in VIROLOGY].

二、研討會論文：

1. **Chang, R.-Y.**, R. Y.-L. Wang, C.-W. Huang, K.-N. Tsai, Y.-S. Chen. Elevated Expression of the miR-125b-5p Targeting to Multiple Signaling Pathways Contributes to Japanese Encephalitis Virus Persistent Infection. IUMS 2017 Singapore, 17–21 July, 2017.
2. Chen, Y.-S., Y.-H. Fan, C.-F. Tien, A. Yueh, **R.-Y. Chang**. Accumulation of subgenomic noncoding RNA of Japanese encephalitis virus does not rely on the activity of exoribonuclease XRN1 but does depend on viral replication. IUMS 2017 Singapore, 17–21 July, 2017.
3. **Chang, R.-Y.**, C.-P. Yu, C.-. Huang, and C.-Y. Kan. The 9-nt (AACACGGAC) motif is a hot spot for template switch of reverse transcriptase between Japanese encephalitis viral genome and host 28S rRNA. American Society for Virology Annual Meeting, Virginia Tech, Blacksburg, USA. June 18-22, 2016.
4. **Chang, R.-Y.**, K. Y. Lim, and H.-H. Yang. Proteomics analysis of three cell types infected with genotypes I and III of Japanese encephalitis virus. American Society for Virology Annual Meeting, London, Ontario, Canada. July 11-15, 2015.
5. Chen, Y.-S., Y.-H. Fan, R. Y.-L. Wang, C.-H. Chu, A. Yueh, and **R.-Y. Chang**. Demonstration of the cyclization-like motif at the beginning of 3'-UTR of Japanese encephalitis viral genome functioning as a subgenomic promoter. American Society for Virology Annual Meeting, London, Ontario, Canada. July 11-15, 2015.
6. **Chang, R.-Y.**, H.-H. Xu, and S.-S. Chiou. Characterization of superinfection exclusion between Japanese encephalitis virus genotypes I and III. American

- Society for Virology Annual Meeting, Fort Collins, CO., USA. June 21-25, 2014.
7. Chen, Y.-S., A. Yueh, J.-H. Hsu, and **R.-Y. Chang**. Accumulation of the sfRNA in Japanese encephalitis virus correlates with cell survival. American Society for Virology Annual Meeting, Fort Collins, CO., USA. June 21-25, 2014.
 8. **Chang, R.-Y.**, Y.-H. Fan, C.-F. Tien, Y.-S. Chen and S.-J. Zhou. The 5'-proximal region within 3'-UTR of Japanese encephalitis virus contains cyclization-like sequences that indicating promoter activity. American Society for Virology Annual Meeting, State College, PA., USA. July 20-24, 2013.
 9. Chen, Y.-S., S.-C. Cheng, C.-F. Tien, and **R.-Y. Chang**. Inhibition of aldolase A blocks biogenesis of ATP and attenuates Japanese encephalitis virus production. American Society for Virology Annual Meeting, State College, PA., USA. July 20-24, 2013.
 10. **Chang, R.-Y.**, and Y.-H. Lu. Genetic characterization of Japanese encephalitis virus genotypes isolated from mosquitoes in Taiwan. American Society for Virology Annual Meeting, Madison, WI., USA. July 21-25, 2012.
 11. **Chang, R.-Y.** (Invited speaker). Noncoding RNA identified in Japanese encephalitis virus-infected cells and its role(s) in viral life cycle. The Satellite Mini-Symposium of RNA 2011, "RNA Biology and Medicine: Basics and Clinical Applications", Kyoto, Japan. June 13, 2011.
 12. **Chang, R.-Y.**, T.-W. Hsu, Y.-T. Lin, Y.-J. Tsai, and Y.-L. Chen. The sfRNA of Japanese encephalitis virus inhibits activation of interferon by blocking nuclear translocation of interferon regulatory factor 3. Sixteenth Annual Meeting of the RNA Society, Kyoto, Japan. June 14-18, 2011.
 13. **Chang, R.-Y.**, Y.-R. Huang, and K.-M. Chong. Interaction of DnaJ/Hsp40 homolog with NS5 of Japanese encephalitis virus facilitates viral replication. American Society for Virology Annual Meeting, Bozeman, MT, USA. July 17-21, 2010.
 14. **Chang, R.-Y.**, T.-W. Hsu, and Y.-T. Lin. The small RNA derived from the 3'-terminus of Japanese encephalitis virus genome inhibits activation of interferon regulatory 3. American Society for Virology Annual Meeting, Vancouver, BC, Canada. July 11-15, 2009.
 15. **Chang, R.-Y.**, C.-C. Chen, C.-C. Weng, and Y.-T. Lin. The small RNA derived from the highly conserved region of the 3'-UTR of Japanese encephalitis virus genome modulates viral translation and replication. Thirteenth Annual Meeting of the RNA Society, Berlin, Germany. July 28-August 3, 2008.
 16. Zhou, S-J. C-F. Tsai, **R.-Y. Chang**. Cellular proteins bind to the 3'-long stable hairpin of genome and termini of antigenome of Japanese encephalitis virus. American Society for Virology Annual Meeting, Corvallis, OR., USA. July 14-18, 2007.
 17. **Chang, R.-Y.**, M.-L. Liu, and S.-J. Wang. RanBP9, a Ran binding protein that interacts with the RNA-dependent RNA polymerase of Japanese encephalitis virus. American Society for Virology Annual Meeting, Madison, WI., USA. July 15-19, 2006.
 18. **Chang, R.-Y.**, C.-C. Chen, and C.-C. Weng. Effects of overexpressing minus-strand copies of the small RNA derived from the 3'-terminus of the Japanese encephalitis virus genome. American Society for Virology Annual Meeting, State College, PA.,

三、其他著作或專利：

四、三年內之研究計畫：

起迄年月	研究計畫名稱	主持人/共同主持人	補助單位
2014/8~2018/1	日本腦炎病毒非編碼 sfRNA 結構分析與其持續性感染機制之研究	主持人	科技部
2013/8~2014/7	日本腦炎病毒非編碼小 RNA 功能性分析	主持人	國科會



教學

五、三年內開授課程：

學年度	課程名稱(必/選)	選修人數
103(上)	病毒學(選修)	76
	高等細胞分子生物學(必修、合開、英語授課)	3
103(下)	分子生物學實驗	52
	生物技術研究方法(必修、合開、英語授課)	5
104(上)	病毒學(選修)	59
	專題演講(一)	13
104(下)	分子生物學實驗	51
	專題演講(二)	12
105(上)	病毒學(選修)	53
	專題演講(一)	20
105(下)	分子生物學實驗	43
	專題演講(二)	30
	台灣生技產業現況	15

學年度	碩士班(人)	博士班(人)	畢業人數	
			碩士	博士
103	2	2	1	0
104	2	3	1	0

105

3

3

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服務

七、三年內校內校、院、系(所、科及中心)各級公共事務參與：

學年度	校/院/系級	項 目
103	校級	本校實驗室安全委員會委員
103	院級	院務會議代表
103	系級	本系所教評會委員
104	校級	本校 104 年度專利及技術移轉權益委員會
104	校級	本校實驗室安全委員會委員
104	校級	教務規章暨成績更正委員會
104	校級	生物安全委員會
104	院級	院務會議代表
104	院級	理工學院教評會委員
104	系級	本系所教評會委員
105	校級	本校性別平等教育委員會委員
105	校級	本校 105 年度專利及技術移轉權益委員會
105	校級	本校實驗室安全委員會委員
105	校級	教務規章暨成績更正委員會
105	校級	生物安全委員會
105	院級	院務會議代表
105	院級	理工學院教評會委員
105	系級	本系所教評會委員

八、三年內專業學術服務工作項目：

年/月	校內/校外	項 目
103/1	校外	Journal of General Virology 期刊論文審查。
103/5/30	校外	慈濟東華兩校三系研討會專題演講
103/10/31	校外	馬偕醫院專題演講
103/10	校外	Viruses 期刊審論文審查
103-5 學年	校外	慈濟大學生科系課規會校外委員
103-5 學年	校外	慈濟大學醫學院課規會校外委員



教學與研究獎勵

九、三年內之教學與研究獎勵事蹟：

學年度	校內/校外	項 目
103	校內/外	國科會及東華大學補助出席國際會議
104	校內/外	科技部補助出席國際會議
105	校內/外	科技部及東華大學補助出席國際會議
105	校內	理工學院教學優良教師