

## CURRICULUM VITAE



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### Academic qualifications

1968/08-1973/06 MD, Chung-Shan Medical University,  
Taichung, Taiwan  
1989/08-1992/10 PhD, Tokyo Medical University, Japan

### Professional Experience

1. 1973-1975: Military service in air force
2. 1975-1980: Resident and chief resident, department of medicine, CSMU
3. 1980-1981: Fellow, Royal North Shore Hospital Sydney, Australia.
4. 1981-1984: Assistant professor, school of Medicine, CSMU
5. 1984-1986: Fellow, Scripps Clinic and research Foundation
6. 1986-1990: Associate professor, school of Medicine, CSMU
7. 1989-1994: Professor and Dean, School of medicine, CSMU
8. 1994-1995: Dean, student affairs, CSMU
9. 1995-1998: President, CSMU
10. 1998- present: Professor and director, Institute of Immunology, CSMU
11. 2000-2004 : Chairman, Department of Internal Medicine, CSMU

## Editorial reviews

1. reviewer for Rheumatology ( former British J of Rheumatology ) 2005-

## Publications

### *Research papers:*

1. Tsay, G. J., Chao, L., Liu, G., and Lin, C. (1983) Lupus band test in patients with systemic lupus erythematosus. J. Formosan Med. Ass. 82:530-535. (correspondent)
2. Tsay, G. J., Su, C., Chen, T., and Lin, C. (1984) Clinical significance of antibodies to Sm(Smith) and RNP(ribonucleoprotein) in patients with rheumatic diseases. J Formosan Med. Ass. 83:436-443. (correspondent)
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4. Rubin, R.L., Tang, F., Chan, E. K. L., Pollard, K.M., Tsay, G.J. and Tan, E. M. (1986) IgG subclasses of autoantibodies in systemic lupus erythematosus, Sjogren's syndrome, and drug-induced autoimmunity. J.Immunol.137:2528-2534.
5. Suzuki, H., Nakamura, R. M., Tsay, G. J., and Tan, E. M. (1987) Particle agglutination assay for Sm antibodies using purified Sm antigen. J. Clinical.Laboratory Analysis 1:317-321.
6. Tsay, G.J., Chan, E. K. L., Peebles, C. L., Pollard, K. M., and Tan, E. M. (1987).An Immunoassay Differentiating sera with antibodies to Sm alone, to Sm/RNP complexes and to RNP alone. Arthritis Rheum.30:3389-3396.
7. Boey, M. L., Peebles, C. L., Tsay, G. J., Feng, P.H., and Tan E. M. (1988) Clinical and autoantibody correlations in orientals with SLE. Annals of the Rheumatic diseases 47:918-923.
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10. Tsay, G. J. and Chou, M. J., (1989) Molecular characterization of the Sm and RNP nuclear antigens. *Chinese. J. Microbial. Immunol.* 22:21-30. (correspondent)
11. Rubin, R. L., Tang, F., Tsay, G.J., and Pollard, K. M. (1990) Pseudoautoimmunity in normal mice anti-histone antibodies elicited by reaction. *Clinic.Immuno. Immunopathol.*54:320-332.
12. Tsay, G.J., Fann, R.H., and Hwang. J. (1990) Specificity of anti-scl-70 antibodies in scleroderma:increase sensitivity of detection using purified DNA topoisomerase I from calf thymus. *J Rheumatology.*17:1314-9. (correspondent)
13. Wang, P. Y., Leu, T. M., Tsai S. J., and Tsay G. J. (1992) Anticardiolipin antibodies in stroke. *Chin.Med.J(Taipei)* 49:67-71. (correspondent)
14. Chou, M.J., Lai, M. Y., Lee, S.L., and Tsay, G.J. (1992) Reactivity of anti-mitochondria antibodies in primary biliary cirrhosis and systemic. *J. Formosan Med. Assoc.* 91:1075-80.(correspondent)
15. Tsay, G. J., Lan, J.L., and Li. S.Y. (1992) Chromosome studies in systemic sclerosis with consideration of antibodies to topoisomerase I. *Annal of the Rheumatic Disease.* 51:624-6 (correspondent)
16. Lee, S.L., Tsay, G.J., and Tsai, R.T. (1993) Anticentromere antibodies in subjects with no apparent connective tissue disease.*Annal of the Rheumatic Disease.* 52:586-589. (correspondent)
17. Chou, M.J., Lee, S.L., Chen, T. Y., and Tsay, G.J. (1995) Specificity of antinuclear antibodies in primary biliary cirrhosis. *Ann Rheum Dis.* 54:148-151 (correspondent)
18. Tsai, R. T., Chand, T. C., Wang, C. R., Lee, S. L., Wang, C. J., and Tsay G. J. (1995) Thyroid peroxidase autoantibodies and their effects on enzyme activity in patients with systemic lupus erythematosus.*Lupus*; 4:280-285.

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20. Tsay, G.J.,Chun-Loong Wang, Tzy-Yen Chen, Chien-Ning Huang, Tsai-Cheng Hsu. (1996) SS-A/Ro antibodies in Chinese patients with systemic lupus erythematosus and sjogren's syndrome. J. Formosan Med. Assoc. 95(12):905-910.(correspondent)
21. Tsai-Cheng Hsu,Tien-Ling Lee,and Gregory J.Tsay (1997) : Autoantigens components recognizable by scleroderma sera are exported via ectocytosis of fibroblasts.British Journal of Rheumatology 36:1038-44. (correspondent) (NSC83-0412-B040-016)
22. Tsay,G.J. (1997) Antineutrophil cytoplasmic antibody. J.Inter.Med.8:184-186. (correspondent)
23. C-N Huang, C-M Lo, T-C Hsu, GJ Tsay.(1999) Sera from scleroderma patients inhibit the fibroblast micromotions monitored electrically. J Rheumatology. (in print) (correspondent) (NSC83-0412-B040-016)
24. Tzang B-S, Chen T-Y, Hsu T-C, Liu Y-C, Tsay GJ. (1999) Presentation of autoantibody to proliferating cell nuclear antigen in patients with chronic hepatitis B and C virus infections. Annals of the rheumatic diseases. 58:630-634. (correspondent) (NSC87-2314-B040-009)
25. Wang M, Tzeng TY, Fung CY, Ou WC, Tsai RT, Lin CK, Tsay GJ, Chang D. (1999). Human anti-JC virus serum reacts with native but not denatured JC virus major capsid protein VP1. J Virol Methods.78(1-2):171-6.
26. T-N Kuo Chou, T-C Hsu, R-M Chen, L-I Lin, and GJ Tsay. (2000) Parvovirus B19 infection associated with the production of anti-neutrophil cytoplasmic antibody (ANCA) and anticardiolipin antibody (aCLA). Lupus. 9;551-554. (correspondent) (NSC89-2314-B040-009)
27. GJ Tsay. (2000) Antinuclear antibodies and the cell biology. Life Sciences Newsletter, NSC.14(5):9-11. (correspondent)
28. Melin Wang, RT Tsay, WC Ou, CK Lin, GJ Tsay, Han Chang, and Deching Chang. (2000) Treatment with cytotoxic immunosuppression agents increases urinary excretion of JCV in patients with autoimmune disease. J Med Virol. 62:505-510.

29. H-L Fu, T-C Hsu, C-C Chang, GJ Tsay. (2001) Antigenic specificity of anti-neutrophil cytoplasmic antibody. *J. Formosan Med. Assoc.* 100(1): 35-39.(correspondent) (NSC87-2314-B040-009;CSMC 86-OM-B-003)
30. T-C Hsu, GJ Tsay. (2001) Human parvovirus B19 infection in patients with systemic lupus erythematosus. *Rheumatology (Oxford)*. 40(2):152-7. (correspondent) (NSC89-2314-B040-009)
31. Shiau MY, Kuo TM, Tsay GJ, Chiou HL, Lee YL, Chang YH. (2002) Absence of anti-p53 antibodies in Chinese patients with rheumatoid arthritis and systemic lupus erythematosus: comment on the concise communication by Kovacs et al. *Arthritis Rheum.*46(1):276-7.
32. Y-Y Wu, T-C Hsu, T-Y Chen, T-C Liu, G-Y Liu, Y-J Lee, GJ Tsay. (2002) "Proteinase 3 is the major autoantigens in hepatitis c virus (HCV) infection." *Clinical and Experimental Immunology*. (SCI) 128:347-352.
33. S-C Yuan, GJ Tsay, Hsien-Wen Kuo. (2003). The effectiveness of a goat education program. *Mid-Taiwan Journal of Medicine*. 8(3) :148-156.
34. C-N Huang, T-C Hsu, H-H Chou, GJ Tsay. (2004). Prevalence of perinuclear anti-neutrophil cytoplasmic antibody (p-ANCA) in patients with Graves' disease treated with propylthiouracil and methimazole in Taiwan. *J. Formosan Med. Assoc.* 103(4): 274-9. (correspondent) (SCI)
35. C-N Huang, T-C Hsu, H-H Chou, GJ Tsay. (2004). ANA, Anti-DNA, and aCL in Graves' Disease Patients treated with Propyluracil or Methimazole. *Lupus* 2004;13(6):450-4(correspondent) (SCI)
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37. T-C Hsu, T-Y Chen, M-C Lin, B-S Tzang, and GJ Tsay. (2005). Human parvovirus B19 infection in patients with chronic hepatitis B or hepatitis C infection. *J Gastro Hepato* 20 : 733-738 (correspondent)(SCI).
38. Y.-F. Liao, Y.-C. Hung, W.-H. Chang, G.J. Tsay, T.-C. Hour, H.-C. Hung and G.-Y. Liu. The PKC delta inhibitor, rottlerin, induces apoptosis of haematopoietic cell lines through mitochondrial membrane depolarization and caspases' cascade. *Life Sci.* 77(6):707-719,

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40. C.-C. Huang, P.-C. Hsu, Y.-C. Hung, Y.-F. Liao, C.-C. Liu, C.-T. Hour, M.-C. Kao, G.J. Tsay, H.-C. Hung and G.-Y. Liu. Ornithine decarboxylase prevents methotrexate-induced apoptosis by reducing intracellular reactive oxygen species production. *Apoptosis* 10(4):895-907, 2005. (SCI: 4.54; 51/261)
41. G.-Y. Liu, Y.-F. Liao, W.-H. Chang, C.-C. Liu, M.-C. Hsieh, P.-C. Hsu, G.J. Tsay and H.-C. Hung. Overexpression of peptidylarginine deiminase IV features in apoptosis of haematopoietic cells. *Apoptosis* 2005, *in press*. (SCI: 4.54; 51/261)
42. P.-C. Hsu, C.-T. Hour, Y.-F. Liao, Y.-C. Hung, C.-C. Liu, W.-H. Chang, M.-C. Kao, G.J. Tsay, H.-C. Hung and G.-Y. Liu. Increasing Ornithine Decarboxylase Activity Is Another Way of Prolactin Preventing Methotrexate-Induced Apoptosis: CROSSTALK BETWEEN ODC AND BCL-2. *Apoptosis* 2005, *in press*. (SCI: 4.54; 51/261)
43. T-C Hsu, C-H Chang, M-C Lin, S-T Liu, Tim J Yen, and GJ Tsay. (2006). Anti-CENP-H antibodies in patients with sjogren's syndrome. *Rheumatol Int.* 2006 Feb;26(4):298-303.(correspondent) (SCI).
44. . T-C Hsu, B-S Tzang, C-N Huang, Y-J Lee, G-Y Liu, M-C Chen and GJ Tsay. (2006) Increased expression and secretion of IL-6 in human parvovirus B19 nonstructural protein (NS1) transfected COS-7 epithelial cells. *Clinical Exp Immunol* 2006;144 ; 152-157 (SCI).
45. T.-C. Hsu, G. J. Tsay, T.-Y. Chen, Y.-C. Liu & B.-S. Tzang Anti-PCNA autoantibodies preferentially recognize C-terminal of PCNA in patients with chronic hepatitis B virus infection. *Clin Exp Immunol.* 2006 Apr;144(1):110-6.
46. Unscrambling the role of human parvovirus B19 signaling in systemic autoimmunity GregoryJ. Tsay , Moncef Zouali. *Biochemical pharmacology* 2006 *in press*.

#### **Abstracts**

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2. Chan, E. K. L., Tsay, G. J., Pollard, K. M., Rubin, R. L., and Tan, E. M. (1987) Conserved nuclear antigens are targets of monoclonal autoantibodies derived from murine lupus-like graft versus host (GVH) disease.
3. Tsay, G. J., Chan, E. K. L., and Tan, E. M. (1987) Identification of a nuclear RNP associated 82 kD protein with a murine monoclonal antibody. *Arthritis Rheuma*. 30:4,s47
4. Tsay, G. J., Chou, M. J., Lin, K. L., Lue, K. H., Chen, T. Y., and Lee, M. S. (1988) Anticardiolipin antibodies: different isotype distribution in systemic lupus erythematosus and syphilis. The 6th SEAPAL Congress of Rheumatology. F 19-4, Tokyo, Japan.
5. Tsay, G. J., Fann, R.H., and Hwang, J. (1989) Specificity of anti-Scl-70 antibodies in scleroderma: increased sensitivity of detection using purified DNA topoisomerase I from calfthymus. The 7<sup>th</sup> International Congress of Immunology in West Berlin W-85-24.
6. Tsay, G. J., Lee, S.L., and Juan, Chung-Ching. (1991) Recombinant topoisomerase I from protein used for determination of autoepitope recognized by sera from patients with scleroderma.
7. Tsay, G.J., Lan, J.L., and Li, S.Y. (1993) Chromosome studies in systemic sclerosis with consideration of antibodies to topoisomerase I on the biography of world literature of Current Opinion in Dermatology. In December.
8. Huang, Chien-Ning, Lo, Chun-Min, Hsu, Tsai-Cheng, and Tsay, G.J. (1995) Electrically monitoring fibroblast micromotion cultured with sear from systemic sclerosis patients and the effects of interferon a-2b treatment. The second asian pacific congress of allergology and clinical immunology. Nov.18-20.
9. Tsay, G.J. (1995) Autoantibodies from patients with scleroderma. The second asian pacific congress of allergology and clinical immunology. Nov.18-20.
10. Tzang, Bor-show, Lin Keh Ling, Chua, Kaw-Yan, Hsieh Kue-Hsiung, Tsay, GJ. (1995). The second asian pacific congress of allergology and clinical immunology. Nov.18-20.

11. Tsay, G. J., Lee, T. L., and Hsu, T.C. (1996) Autoantigens from ectocytosis of skin fibroblasts recognized by scleroderma sera. 8th APLAR Congress of Rheumatology, April 21-26, Melbourne, Australia..
12. Cheng-Long Ho, Ling-Yun Chen, Bor-show Tzang, Tsai-Cheng Hsu, Gregory J Tsay. (1996) Nov.11. Purification and characterization of a 70 kDa autoantigen from rat liver cell nuclear extract. Annual meeting of the Chinese society of immunology and 14th annual meeting of rheumatology association, R.O.C.
13. Gregory J. Tsay, Chun-Loong Wang, Tzy-Yen Chen, Chien-Ning Huang, Tsai-Cheng Hsu. 1996, Nov 11. Detection of anti-60-kD and anti-52 kD SSA/Ro antibodies in patients with SLE and Sjogren's syndrome. Annual meeting of the Chinese society of immunology and 14th annual meeting of rheumatology association, R.O.C.
14. Tsai-Cheng Hsu, Bor-show Tzang, TE-Chung Liu, Gregory J Tsay. 1996, Nov.11. Autoantibody against dihydrolipoamide dehydrogenase (E3) in autoimmune diseases. Annual meeting of the Chinese society of immunology and 14th annual meeting of rheumatology association, R.O.C.
15. Tsay G. J. 1997, Nov.8-12. Anti-phospholipid syndrome. Scientific congress & annual meeting, 1997 Society of internal medicine of Taiwan (Chairman)
16. Haey-Ling Fu, Gregory J Tsay, Chia-chu Chang, Tsai-cheng Hsu, Bor-Show Tzang. 1997. Dec.6-7. The specificity antigen of ANCA. 20th Annual meeting of the Chinese society of immunology and 15th annual meeting of rheumatology association, R.O.C.
17. Cheng-Long Ho, Gregory J. Tsay, Ling-Yun Chen, Tsai-Cheng Hsu, Bor-show Tzang. 1997. Dec.6-7. Calreticulin is an autoantigen in sarcoidosis associated with nuclear dots. 20th Annual meeting of the Chinese society of immunology and 15th annual meeting of rheumatology association, R.O.C.
18. Tzy-Yen Chen, Tsai-Cheng Hsu, Bor-Show Tzang, Gregory J. Tsay. 1997. Dec. 6-7. Frequency and significance of antibodies to cytochrome P450IID6 protein in patients with rheumatic diseases and chronic hepatitis C. 20th Annual meeting of the Chinese society of immunology and 15th annual meeting of rheumatology association, R.O.C.



19. B-S Tzang, T-Y Chen, T-C HSU, GJ Tsay. December 28-29,1998." Presentation of autoantibody to proliferating cell nuclear antigen in patients with hepatitis B and C virus infection." The 21th Annual Meeting of the Chinese Society of Rheumatology. Taipei, Taiwan, R.O.C.
20. GJ Tsay, T-C Hsu, B-S Tzang, C-C Kao, R-M Chen, C-T Hsu, L-Y Lin, D-C Chuang. December 28-29,1998." Parvovirus B19 infection induces the production of anti-neutrophil cytoplasmic antibody(ANCA) and anticardiolipin antibody." The 21th Annual Meeting of the Chinese Society of Rheumatology. Taipei, Taiwan, R.O.C.
21. GJ Tsay, H-L Fu, C-C Chang, T-C Hsu, B-S Tzang, R-M Chen, C-T Hsu. November 27-28,1999. "Diversity of classic anti-neutrophil cytoplasmic antibody (c-ANCA) and perinuclear anti-neutrophil cytoplasmic antibody (p-ANCA) in vasculitides and autoimmune diseases." The 9th Annual Meeting of the Chinese Society of Immunology and 8th annual meeting of rheumatology association, Taipei, Taiwan, R.O.C.
22. T-C Hsu, B-S Tzang, C-T Hsu, G J Tsay. November 27-28,1999. "Sequence variability of human parvovirus b19 found in patients with parvovirus B19 infection and systemic lupus erythematosus. " The 9th Annual Meeting of the Chinese Society of Immunology and 8th annual meeting of rheumatology association, Taipei, Taiwan, R.O.C.
23. R-M Chen, T-C Hsu, C-T Hsu, B-S Tzang, GJ Tsay. November 27-28,1999." Evaluation of parvovirus B19 infection using a synthetic peptide and non-structure protein as antigens by ELISA." The 9th Annual Meeting of the Chinese Society of Immunology and 8th annual meeting of rheumatology association, Taipei, Taiwan, R.O.C.
24. T-C Hsu, T-Y Chen, B-S Tzang, P-I Liang, YJ Lee, Y-Y Wu, C-H C, GJ Tsay. November 25-26, 2000. "Sequence variability of human parvovirus B19 in patients with systemic lupus erythematosus, hepatitis B and hepatitis C infection." The 10th Annual Meeting of the Chinese Society of Immunology and 8th annual meeting of rheumatology association, Taipei, Taiwan, R.O.C.
25. C-N Huang, T-C Hsu, H-H Chou, YJ Lee, GJ Tsay. November 25-26, 2000. " Anti-cardiolipin antibodies in autoimmune thyroid diseases." The 10th Annual Meeting of the Chinese Society of Immunology and 8th annual meeting of rheumatology association, Taipei, Taiwan, R.O.C.

26. Y-Y Wu, T-C Hsu, T-C Liu, T-Y Chen, P-Y Liu, J Chen, YJ Lee, GJ Tsay. November 25-26, 2000. "Autoantibody to dihydrolipoamide dehydrogenase (E3) in hepatitis C infection." The 10th Annual Meeting of the Chinese Society of Immunology and 8th annual meeting of rheumatology association, Taipei, Taiwan, R.O.C.
  
27. T-N Kuo Chou, T-C Hsu, J Chen, YJ Lee, GJ Tsay. November 25-26, 2000. "Human parvovirus B19 associated with severe thrombocytopenia. The 10th Annual Meeting of the Chinese Society of Immunology and 8th annual meeting of rheumatology association, Taipei, Taiwan, R.O.C.
  
28. GJ Tsay, T-C Hsu. July 22-27, 2001. "Human parvovirus B19 infection in patients with systemic lupus erythematosus." The 11th international congress of Immunology. STOCKHOLM. "
  
29. Y-Y Wu, T-C Hsu, T-Y Chen, T-C Liu, G-Y Liu, Y-J Lee, GJ Tsay. November 24-25, 2001. "Proteinase 3 and dihydrolipoamide dehydrogenase (E3) are the major autoantigens in hepatitis c virus (HCV) infection." The 11th Annual Meeting of the Chinese Society of Immunology and 9th annual meeting of rheumatology association, Taipei, Taiwan.
  
30. D-Z Liu, T-C Hsu, C-C Lin, G-Y Liu, Y-J Lee, GJ Tsay. November 24-25, 2001. "Autoantibodies to chromosomal proteins of the Indian Muntjac (IM) in rheumatic diseases." The 11th Annual Meeting of the Chinese Society of Immunology and 9th annual meeting of rheumatology association, Taipei, Taiwan.
  
31. Y-Y Wu, T-C Hsu, T-Y Chen, T-C Liu, G-Y Liu, Y-J Lee, GJ Tsay. April 25-28, 2002. "Proteinase 3 is the major autoantigens in hepatitis c virus (HCV) infection." The 10th International Vasculitis and ANCA Workshop, Cleveland, Ohio, USA.
  
32. GJ Tsay, C-S Chang, T-C Hsu, Y-J Lee, G-Y Liu, M-C Chen. December 14-15, 2002. "Anti-centromere and anti-CENP-H antibodies in patients with rheumatic diseases." The 12th Annual Meeting of the Chinese Society of Immunology and 10th annual meeting of rheumatology association, Taipei, Taiwan.
  
33. T-C Hsu, W-J Wu, M-C Chen, and GJ Tsay. November 22-23, 2003. "Human parvovirus B19 nonstructural protein (NS1) induces apoptosis through mitochondria cell death pathway in monkey epithelial COS-7 cells." The 11th Annual Meeting of the Chinese Society of

Immunology and 9th annual meeting of rheumatology association, Taipei, Taiwan.

34. Y-F Hsieh, T-C Hsu, Y-L Lee, M-C Chen, G-Y Liu, C-M Shih, C-F Lu, S-H Chiu, C-C Wei, GJ Tsay. November 22-23, 2003. "Serological studies of Lyme disease and other autoimmune diseases in Taiwan." The 11th Annual Meeting of the Chinese Society of Immunology and 9th annual meeting of rheumatology association, Taipei, Taiwan.
35. GJ Tsay, T-C Hsu, W-J Wu, and M-C Chen. July 18-23, 2004. "Human parvovirus B19 nonstructural protein (NS1) induces apoptosis through mitochondria cell death pathway in monkey epithelial COS-7 cells." (M6.63) Montreal, Canada.
36. T-C Hsu, B-S Tzang, C-H Chang and GJ Tsay. December 11-12, 2004. "Increased expression of IL-6 in human parvovirus b19 nonstructural protein (ns1) transfected COS-7 cells." The 3<sup>rd</sup> Huaxia Congress on Diagnosis and Management of Rheumatic Diseases, Taipei International Convention Center, Taipei, Taiwan, R.O.C.
37. Y-F Hsieh, T-C Hsu, H-W Liu, Y-L Lee, M-C Chen, G-Y Liu, C-F Lu, C-C Wei, GJ Tsay. December 11-12, 2004. "Falsepositive seroreactivity to Borrelia burgdorferi in systemic lupus erythematosus." The 3<sup>rd</sup> Huaxia Congress on Diagnosis and Management of Rheumatic Diseases, Taipei International Convention Center, Taipei, Taiwan, R.O.C.