

## Publications

---

### Publications:

Dutta, S., Gupta, G., Choi, Y.W., Kotaka, M., Fielding, B.C., Song, J., Tan, Y.J. (2012).  
The variable N terminal region of DDX5 contains structural elements and auto-inhibits its  
interaction with NS5B of hepatitis C virus.  
***Biochem J.*** May 28. [Epub ahead of print]

Varshney, B., Agnihothram, S., Tan, Y.J., Baric, R., Lal, S.K. (2012).  
SARS coronavirus 3b accessory protein modulates transcriptional activity of RUNX1b.  
***PLoS One***, 7(1):e29542.

Gunalan, V., Mirazimi, A., **Tan, Y.J.** (2011).  
A putative diacidic motif in the SARS-CoV ORF6 protein influences its subcellular  
localization and suppression of expression of co-transfected expression constructs.  
***BMC Res Notes***, 4(1):446.

Oh, H.L., Chia, A., Chang, C.X.L., Leong, H.N., Ling, K.L., Grotenbreg, G.M., Gehring, A.J.,  
Tan, Y.J., Bertoletti, A. (2011).  
Engineering T cells specific for a dominant SARS CD8 epitope identified in SARS-recovered  
patients.  
***Journal of Virology***, 85, 10464-10671.

Aweya, J.J., Tan, Y.J. (2011).  
Modulation of programmed cell death pathways by the hepatitis C virus.  
***Frontiers in Bioscience***, 16, 608-618.

Keng, C.T., Akerstrom, S., Leung, C.S., Poon, L.L., Peiris, J.S., Mirazimi, A., Tan, Y.J.  
(2011).  
SARS coronavirus 8b reduces viral replication by down-regulating E via an ubiquitin-  
independent proteasome pathway.  
***Microbes and Infection***, 13, 179-188.

Karlberg, H, Tan, Y.J., Mirazimi, A. (2011).  
Induction of caspase activation and cleavage of the viral nucleocapsid protein in different cell  
types during Crimean-Congo hemorrhagic fever virus infection.  
***Journal of Biological Chemistry***, 286, 3227-3234.

Lee, V.J., Tay, J.K., Chen, M.I., Phoon, M.C., Xie, M.L., Wu, Y., Lee, C.X., Yap, J., Sakharkar, K.R., Sakharkar, M.K., Lin, R.T., Cui, L., Kelly, P.M., Leo, Y.S., Tan, Y.J., Chow, V.T. (2010).

Inactivated trivalent seasonal influenza vaccine induces limited cross-reactive neutralizing antibody responses against 2009 pandemic and 1934 PR8 H1N1 strains.

**Vaccine**, 28, 6852-6857.

Oh, H.L., Akerstrom, S., Shen, S., Berezky, S., Karlberg, H., Klingström, J., Lal, S.K., Mirazimi, A., Tan, Y.J. (2010).

An antibody against a novel and conserved epitope in the HA1 subunit neutralizes numerous H5N1 influenza viruses.

**Journal of Virology**, 84, 8275-8286.

Tan, Z., Akerstrom, S., Wee, B.Y., Lal, S.K., Mirazimi, A., Tan, Y.J. (2010).

A new panel of NS1 antibodies for easy detection and titration of influenza A virus.

**Journal of Medical Virology**, 82, 467-475.

Choi, Y.W., Dutta, S., Fielding, B.C., Tan, Y.J. (2010).

Expression, purification and preliminary crystallographic analysis of recombinant human DEAD-box polypeptide 5.

**Acta Crystallogr Sect F Struct Biol Cryst Commun**. 66, 192-194.

Akerström, S., Gunalan, V., Keng, C.T., Tan, Y.J., Mirazimi, A. (2009).

Dual effect of nitric oxide on SARS-CoV replication: viral RNA production and palmitoylation of the S protein are affected.

**Virology**, 395, 1-9.

Mohd-Ismail, N.K., Deng, L., Sukumaran, S.K., Yu, V.C., Hotta, H., Tan, Y.J. (2009).

The hepatitis C virus core protein contains a BH3 domain that regulates apoptosis through specific interaction with human Mcl-1.

**Journal of Virology**, 83, 9993-10006.

Mayrhofer, J., Coulibaly, S., Hessel, A., Holzer, G.W., Schwendinger, M., Brühl, P., Gerencer, M., Crowe, B.A., Shuo, S., Hong, W., Tan, Y.J., Dietrich, B., Sabarth, N., Savidis-Dacho, H., Kistner, O., Barrett, P.N., Falkner, F.G. (2009).

Nonreplicating vaccinia virus vectors expressing the H5 influenza virus hemagglutinin produced in modified Vero cells induce robust protection.

**Journal of Virology**, 83, 5192-5203.

Dutta, S. and Tan, Y.-J. (2008).

Structural and functional characterization of human SGT and its interaction with Vpu of the human immunodeficiency virus type 1.

**Biochemistry**, 47, 10123-10131.

Shen, S., Mahadevappa, G., Oh, H.-L.J., Wee, B.Y., Choi, Y.W., L.A., Lim, S.G., Hong, W. Lal, S.K. and Tan, Y.-J. (2008).

Comparing the antibody responses against recombinant hemagglutinin proteins of avian influenza A (H5N1) virus expressed in insect cells and bacteria.

**Journal of Medical Virology**, 80, 1972-1983.

Dutta, S., Kotaka, M. and Tan, Y.-J. (2008).

Expression, purification and preliminary crystallographic analysis of recombinant human small glutamine-rich tetratricopeptide-repeat protein.

**Acta Crystallogr Sect F Struct Biol Cryst Commun.** 64, 602-604.

Tan, Y.-J, Lim, S.G., and Hong, W. (2007).

Regulation of cell-death during infection by the severe acute respiratory syndrome coronavirus and other coronaviruses.

**Cellular Microbiology**, 9, 2552–2561.

Le, T.M., Wong, H.H., Tay, F.P., Fang, S., Keng, C.T., Tan, Y.-J., and Liu, D.X. (2007).

Expression, post-translational modification and biochemical characterization of proteins encoded by subgenomic mRNA8 of the severe acute respiratory syndrome coronavirus.

**FEBS Journal**, 274, 4211-4222.

Chou, C.F., Shen, S., Mahadevappa, G., Lim, S.G., Hong, W., Tan, Y.-J. (2007).

The use of hepatitis C virus NS3/4A and secreted alkaline phosphatase to quantitate cell-cell membrane fusion mediated by severe acute respiratory syndrome coronavirus S protein and the receptor angiotensin-converting enzyme 2.

**Analytical Biochemistry**, 366, 190-196.

Kumar, P., Gunalan, V., Liu, B., Chow, V.T., Druce, J., Birch, C., Catton, M., Fielding, B.C., Tan, Y.-J, and Lal, S.K. (2007).

The nonstructural protein 8 (nsp8) of the SARS coronavirus interacts with its ORF6 accessory protein.

**Virology**, 366, 293-303.

Tan, Y.X., Tan, T.H., Lee, M.J., Tham, P.Y., Gunalan, V., Druce, J., Birch, C., Catton, M., Fu, N.Y., Yu, V.C., and Tan, Y.-J. (2007).

Induction of apoptosis by the severe acute respiratory syndrome coronavirus 7a protein is dependent on its interaction with the Bcl-XL protein.

***Journal of Virology***, 81, 6346-6355.

Åkerström, S., Mirazimi, A., and Tan, Y.-J. (2007).

Inhibition of SARS-CoV replication cycle by small interference RNAs silencing specific SARS proteins, 7a/7b, 3a/3b and S.

***Antiviral Research***, 73, 219-227.

Keng, C. T., Choi, Y. -W., Welkers, M. R. A., Chan, D. Z. L., Shen, S., Lim, S.G., Hong, W. Tan, Y.-J. (2006).

The human severe acute respiratory syndrome coronavirus (SARS-CoV) 8b protein is distinct from its counterpart in animal SARS-CoV and down-regulates the expression of the envelope protein in infected cells.

***Virology***, 354, 132–142.

\*Åkerström, S., \*Tan, Y.-J, and Mirazimi, A. (2006).

Amino acids 15 to 28 in the ectodomain of SARS coronavirus 3a protein induces neutralizing antibodies.

***FEBS letters***, 580, 3799-3803. (\* equal contributing authors)

Khan, S., Fielding, B.C., Tan, T.H.P., Chou, C.-F., Shen, S., Lim, S.G., Hong, W. Tan, Y.-J. (2006).

Over-expression of severe acute respiratory syndrome coronavirus 3b protein induces both apoptosis and necrosis in Vero E6 cells.

***Virus Research***, 122, 20-27.

Tan, Y.-J, Lim, S.G., and Hong, W. (2006).

Understanding the accessory viral proteins unique to the severe acute respiratory syndrome coronavirus.

***Antiviral Research***, 72, 78-88.

Chou, C.-F., Loh, C. B., Foo, Y. K., Shen, S., Fielding, B.C., Tan, T.H.P., Wang, Y., Lim, S.G., Hong, W. Tan, Y.-J., and Fu, J. (2006).

ACE2 in non-mammalian vertebrates (Danio, Gallus, Fugu, Tetraodon and Xenopus).

**Gene**, 377, 46-55.

Fielding, B.C., Vithiagarán, G., Tan, T.H.P., Chou, C.-F., Shen, S., Khan, S., Lim, S.G., Hong, W. and Tan, Y.-J. (2006).

Severe acute respiratory syndrome coronavirus protein 7a interacts with hSGT.

**Biochemical and Biophysical Research Communications**, 343, 1201-1208.

Lip, K.-M., Shen, S., Yang, X., Keng, C.-T., Zhang, A., Oh, H.-L.J., Li, Z.-H., Hwang, L.A., Chou, C.-F., Fielding, B.C., Tan, T.H.P., Mayrhofer, J., Falkner, F.G., Fu, J., Lim, S.G., Hong, W. and Tan, Y.-J. (2006).

Monoclonal antibodies targeting the HR2 domain and the region immediately upstream of the HR2 of the S protein neutralize *in vitro* infection of severe acute respiratory syndrome coronavirus.

**Journal of Virology**, 80, 941-950.

Tan, Y.-J., Lim, S.G., and Hong, W. (2006).

Understanding human immunodeficiency virus type 1 and hepatitis C virus coinfection.

**Current HIV Research**, 4, 21-30.

Lim, S.G., Tan, Y.-J., Goh, P.Y., Lim, S.P., and Hong, W. (2006).

Use of an *in vitro* model and yeast two-hybrid system to investigate the pathogenesis of Hepatitis C.

**Intervirology**, 49, 44-50.

Tan, Y.-J. (2005).

The severe acute respiratory syndrome (SARS)-coronavirus 3a protein may function as a modulator of the trafficking properties of the spike protein.

**Virology Journal**, 2:5.

Tan, Y.-J., Lim, S.G., and Hong, W. (2005).

Characterization of viral proteins encoded by the SARS-Coronavirus genome.

**Antiviral Research**, 65, 69-78.

Tan, Y.-J., Tham, P.Y., Chan, D.Z.L., Chou, C.-F., Shen, S., Fielding, B.C., Tan, T.H.P., Lim, S.G., and Hong, W. (2005).

The severe acute respiratory syndrome coronavirus 3a protein up-regulates the expression of fibrinogen in lung epithelial cells.

**Journal of Virology**, 79, 10083-10087

Tan, T.H.P., Barkham, T., Fielding, B.C., Chou, C.-F., Shen, S., Lim, S.G., Hong, W. and Tan, Y.-J. (2005).

Genetic lesions within the 3a gene of SARS-CoV.

***Virology Journal***, 2:51.

Shen, S., Lin, P.S., Chao, Y.C., Zhang, A., Yang, X., Lim, S.G., Hong, W. and Tan, Y.-J. (2005).

The severe acute respiratory syndrome coronavirus 3a is a novel structural protein.

***Biochemical and Biophysical Research Communications***, 330, 286-292.

Keng, C.-T., Zhang, A., Shen S., Lip, K.M., Fielding, B.C., Tan, T.H.P., Chou, C.-F., Loh, C.B., Wang, S., Fu, J., Yang, X., Lim, S.G., Hong, W. and Tan, Y.-J. (2005).

Amino acids 1055 to 1192 in the S2 region of SARS coronavirus S protein induces neutralizing antibodies: implications for the development of vaccine and anti-viral agent.

***Journal of Virology***, 79, 3289-3296.

Chou C.-F., Shen S., Tan, Y.-J., Fielding, B.C., Tan, T.H.P., Fu J.-L., Xu, X., Lim, S.G., and Hong, W. (2005).

A novel cell-based binding assay system reconstituting interaction between SARS-CoV S protein and its cellular receptor.

***Journal of Virological Methods***, 123, 41-48.

Goh, P.Y., Choi, Y.-W., Shen S., Tan, Y.-J., Fielding, B.C., Tan, T.H.P., Ooi, E.-E., Lim, S.G., and Hong, W. (2004). Cellular characterization of SARS coronavirus nucleocapsid.

***EXCLI Journal***, 3, 91-104.

Guan, M., Chen, H. Y., Tan, P. H., Shen, S., Goh, P.-Y., Tan, Y.-J., Pang, P. H., Lu Y., Fong, P. Y., and Chin, D. (2004).

Use of viral lysate antigen combined with recombinant protein in Western immunoblot assay as confirmatory test for serodiagnosis of severe acute respiratory syndrome.

***Clinical and Diagnostic Laboratory Immunology***, 11, 1148-1153.

Tan, Y.-J., Fielding, B.C., Goh, P.Y., Shen S., Tan, T.H.P., Lim, S.G., and Hong, W. (2004).

Over-expression of 7a, a protein specifically encoded by the severe acute respiratory syndrome (SARS)-coronavirus, induces apoptosis via a caspase-dependent pathway.

***Journal of Virology***, 78, 14043-14047.

Khu Y.L., Tan, Y.-J., Lim S.G., Hong W., and Goh P.Y. (2004).  
Hepatitis C virus nonstructural protein NS3 interacts with LMP7, a component of immunoproteasome, and affects its proteasome activity.

***Biochemical Journal***, 384, 401-409.

Fielding, B.C., Tan, Y.-J., Shen S., Tan, T.H.P., Ooi, E.E., Lim, S.G., Hong, W. and Goh, P.Y. (2004). Characterization of a unique group-specific protein (U122) of the severe acute respiratory syndrome (SARS) coronavirus.

***Journal of Virology***, 78, 7311-7318.

Tan, Y.-J., Teng, E., Shen S., Tan, T.H.P., Goh, P.Y., Fielding, B.C., Ooi, E.E., Tan, H.C., Lim, S.G., and Hong, W. (2004).

A novel SARS coronavirus protein, U274, is transported to the cell surface and undergoes endocytosis.

***Journal of Virology***, 78, 6723-6734.

Goh, P.Y., Tan, Y.-J., Lim, S.P., Tan, Y.H., Lim, S.G., Fuller-Pace, F., and Hong, W. (2004). The hepatitis C virus NS5B protein recruits p68, a cellular RNA helicase, for its RNA replication.

***Journal of Virology***, 78, 5288-5298.

Choi, Y.W., Tan, Y.-J., Lim, S.G., Hong, W. and Goh, P.Y. (2004).

Proteomic approach identifies HSP27 as an interacting partner of the hepatitis C virus NS5A protein.

***Biochemical and Biophysical Research Communications***, 318, 514-519.

Guan, M., Chen, H.Y., Foo, S.Y., Tan, Y.-J., Goh P.Y., and Wee S.H. (2004).

Recombinant protein-based enzyme-linked immunosorbent assay and immunochromatographic tests for detection of immunoglobulin G antibodies to severe acute respiratory syndrome (SARS) coronavirus in SARS patients.

***Clinical and Diagnostic Laboratory Immunology***, 11, 287-291.

\*Tan, Y.-J., \*Goh, P.Y., Fielding, B., Shen, S., Chou C.-F., Fu J.-L., Leong, H.N., Leo, Y.S., Ooi, E.E., Ling, A.E., Lim, S.G., and Hong, W. (2004).

Profile of antibody responses against SARS-Coronavirus recombinant proteins and their potential use as diagnostic markers.

***Clinical and Diagnostic Laboratory Immunology***, 11, 362-371.

(\* equal contributing authors)

Tan, Y.-J., Lim, S.P., Ting, A.E., Goh, P.Y., Tan, Y.H., Lim, S.G, and Hong, W. (2003).  
An anti-HIV-1 gp120 antibody expressed as an endocytotic transmembrane protein mediates internalization of HIV-1.  
***Virology***, 315, 80-92.

Tan, Y.-J., Teng, E. and Ting, A.E. (2003).  
A small inhibitor of the interaction between Bax and Bcl-XL can synergize with methylprednisolone to induce apoptosis in Bcl-XL-overexpressing breast cancer cells.  
***Journal of Cancer Research and Clinical Oncology***, 129, 437-448.

Tan, Y.-J., Lim, S.-P., Ng, P., Goh, P.-Y., Lim, S.G., Tan, Y.H. and Hong, W. (2003).  
CD81 engineered with endocytotic signals mediates HCV cell entry: implications for receptor usage by HCV in vivo.  
***Virology***, 308, 250-269.

Soo, H.M., Garzino-Demo, A., Hong W., Tan, Y.H., Tan, Y.-J., Goh, P.-Y., Lim, S.G. and Lim, S.P. (2002).  
Expression of a full length Hepatitis C virus cDNA up-regulates the expression of CC chemokines MCP-1 and RANTES.  
***Virology***, 303, 253-77.

Goh, P.-Y., Tan, Y.-J., Lim, S.-P., Lim, S.G., Tan, Y.H. and Hong, W. (2001).  
The Hepatitis C virus core protein interacts with NS5A, and activates its caspase-mediated proteolytic cleavage. ***Virology***, 290, 224-236.

Kazmirski, S.L., Wong, K.-B., Freund, S.M., Tan, Y.-J., Fersht, A.R., and Daggett, V. (2001).  
Protein folding from a highly disordered denatured state: the folding pathway of chymotrypsin inhibitor 2 at atomic resolution.  
***Proceedings of the National Academy of Sciences, USA***, 98, 4349-4354.

Tan, Y.-J. and Ting, A.E. (2000).  
Non-ionic detergent affects the conformation of a functionally active mutant of Bcl-XL.  
***Protein Engineering***, 13, 887-892.

Beerheide, W., Sim, M.-M., Tan, Y.-J., Bernard, H.-U. and Ting, A.E. (2000).  
Inactivation of the human papillomavirus-16 E6 oncoprotein by organic disulfides.



***Bioorganic & Medicinal Chemistry***, 8, 2549-2560.

\*Beerheide, W., \*Tan, Y.-J., Teng, E., Ting, A.E., Jedpiyawongse, A. and Srivatanakul, P. (2000)

Downregulation of pro-apoptotic proteins Bax and Bcl-XS in p53 overexpressing hepatocellular carcinomas.

***Biochemical and Biophysical Research Communications***, 273, 54-61. (\* equal contributing authors)

Tan, Y.-J., Beerheide, W. and Ting, A.E. (1999).

Biophysical characterization of the oligomeric state of Bax and its complex formation with Bcl-XL.

***Biochemical and Biophysical Research Communications***, 255, 334-339.

Beerheide, W., Bernard, H.-U., Tan, Y.-J., Ganesan, A., Rice, W.G. and Ting, A.E. (1999). Potential drugs against cervical cancer: zinc-ejecting inhibitors of the human papillomavirus type 16 E6 oncoprotein.

***Journal of the National Cancer Institute***, 91, 1211-1220.

Silow, M., Tan, Y.-J., Fersht, A.R. and Oliveberg, M. (1999).

Formation of short-lived protein aggregates directly from the coil in two-state folding.

***Biochemistry***, 38, 13006-13012.

Oliveberg, M., Tan, Y.-J., Silow, M. and Fersht, A.R. (1998).

The changing nature of the protein folding transition state: implications for the shape of the free-energy profile for folding.

***Journal of Molecular Biology***, 277, 933-943.

Tan, Y.-J., Oliveberg, M., Otzen, D.E. and Fersht, A.R. (1997).

The rate of isomerisation of peptidyl-proline bonds as a probe for interactions in the physiological denatured state of chymotrypsin inhibitor 2.

***Journal of Molecular Biology***, 269, 611-622.

Tan, Y.-J., Oliveberg, M. and Fersht, A.R. (1996).

Titration properties and thermodynamics of the transition state for folding: comparison of two-state and multi-state folding pathways.

***Journal of Molecular Biology***, 264, 377-389.

Tan, Y.-J., Oliveberg, M., Davis, B, and Fersht, A.R. (1995).  
Perturbed pKA-values in the denatured states of proteins.  
***Journal of Molecular Biology***, 254, 980-992.

Oliveberg, M., Tan, Y.-J. and Fersht, A.R. (1995).  
Negative activation enthalpies in the kinetics of protein folding.  
***Proceedings of the National Academy of Sciences, USA***, 92, 8926-8929.