

## Robert Anderson CV

### PRESENT POSITION

Professor, Dept Microbiology & Immunology and Pediatrics  
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### EDUCATION & TRAINING

- (i) B.Sc. with Honours (Biochemistry) McGill University  
Montreal, Canada
- (ii) Dr.rer.nat. (Physiological Chemistry) University of Cologne  
Cologne, West Germany

#### Post-doctoral Experience

- (i) Institute for Physiological Chemistry, University of Cologne
- (ii) Department of Biochemistry, University of Ottawa

### AWARDS AND DISTINCTIONS

Alberta Heritage Foundation for Medical Research Scholarship  
Dalhousie Medical Research Foundation Associateship  
National Science Council of Taiwan Visiting Professorship  
John Savage Memorial Award for Global Health

### RECENT PUBLICATIONS

- 63. Mader, D., Huang, Y., Wang, C., Fraser, R., Issekutz, A., Stadnyk, A. and Anderson, R. (2000) Liposome encapsulation of a soluble recombinant fragment of the respiratory syncytial (RSV) G protein enhances immune protection and reduces pulmonary eosinophilia associated with virus challenge. *Vaccine* 18, 1110-1117.
- 64. King, C., Marshall, J.S., Alshurafa, H. and Anderson, R. (2000) Release of vasoactive cytokines by antibody enhanced dengue virus infection of a human mast cell/basophil line. *J. Virol.* 74, 7146-7150.
- 65. King, C., Anderson, R. and Marshall, J.S. (2002) Dengue virus selectively induces human mast cell chemokine production. *J. Virol.* 76, 8408-8419.
- 66. Chang, C.-H., Huang, Y., Issekutz, A.C., Griffith, M., Lin, K.H. and Anderson, R. (2002) IL-1 $\alpha$  released from epithelial cells after adenovirus type 37 infection activates ICAM-1 expression on human vascular endothelial cells. *J. Virol.* 76, 427-431.

67. Huang, Y. and Anderson, R. (2002) Enhanced immune protection of a liposome-encapsulated recombinant respiratory syncytial virus (RSV) vaccine using immunogenic lipids from *Deinococcus radiodurans*. *Vaccine* 20, 1586-1592.
68. Huang, Y. and Anderson (2003) A single amino acid substitution in a recombinant G protein vaccine drastically impairs protective immunity against respiratory syncytial virus (RSV). *Vaccine* 21, 2500-2505.
69. Chang, C.-H., Huang, Y. and Anderson, R. (2003) Activation of vascular endothelial cells by IL-1 $\alpha$  released by epithelial cells infected with respiratory syncytial virus. *Cell. Immunol.* 221, 37-41.
70. Anderson, R. (2003) Manipulation of cell surface molecules by flaviviruses. *Adv. Virus. Res.* 59, 229-274.
71. Chang, C.-H., Lin, K.-H. and Anderson, R. (2004) Towards an in vitro model for acute hemorrhagic conjunctivitis: cytokine-mediated vascular endothelial cell activation triggered by enterovirus type 70 infection. *J. Clin. Virol.* 30, 19-23.
72. Hirsch, P., Gallikowski, C.A., Siebert, J., Peissl, K., Kroppenstedt, R., Schumann, P., Stackebrandt, E. and Anderson, R. (2004) *Deinococcus frigens* sp. nov., *Deinococcus saxicola* sp. nov., and *Deinococcus marmoris* sp. nov., low temperature and drought-tolerating, UV-resistant bacteria from continental antarctica. *System. Appl. Microbiol.* 27, 636-645.
73. Huang, Y. and Anderson, R. (2005) Modulation of protective immunity, eosinophilia and cytokine responses by selective mutagenesis of a recombinant G protein vaccine against Respiratory Syncytial Virus (RSV). *J. Virol.* 79, 4527-4532.
74. Benoit, A., Huang, Y., Proctor, J., Rowden, G. and Anderson, R. (2006) Effects of alveolar macrophage depletion on liposomal vaccine protection against respiratory syncytial virus (RSV). *Clin. Exp. Immunol.* 145, 147-154.
75. Knight, J.B., Huang, Y.Y., Halperin, S.A., Anderson, R., Morris, A., MacMillan, A., Jones, T., Burt, D.S., Van Nest, G. and Lee, S.F. (2006) Immunogenicity and protective efficacy of a recombinant filamentous hemagglutinin from *Bordetella pertussis*. *Clin. Exp. Immunol.* 144, 543-551.
76. Brown, M.G., King, C.A., Sherren, C., Marshall, J.S. and Anderson, R. (2006) A dominant role for Fc $\gamma$ R2 in antibody-enhanced dengue virus infection of human mast cells and associated CCL5 release. *J. Leuk. Biol.* 80, 1242-1250.
77. Chan, S.Y.V., Hilchie, A.L., Brown, M.G., Anderson, R. and Hoskin, D.W. (2007) Apoptosis induced by intracellular ceramide accumulation in MDA-MB-435 breast carcinoma cells is dependent on the generation of reactive oxygen species. *Exp. Mol. Pathol.* 82, 1-11

78. Benoit, A.C., Huang, Y., Maneewatchararangsri, S., Tapchaisri, P. and Anderson, R. (2007) Regulation of airway eosinophil and neutrophil infiltration by  $\alpha$ -galactosylceramide in a mouse model for respiratory syncytial virus (RSV) vaccine-augmented disease. *Vaccine* 25, 7754-7762.
79. Lin, C.-F., Lei, H.-Y., Liu, C.-C., Liu, H.-S., Yeh, T.-M., Anderson, R. and Lin, Y.-S. (2008) Patient and Mouse Antibodies against Dengue Virus Nonstructural Protein 1 Cross-React with Platelets and Cause Their Dysfunction or Depletion. *Am. J. Infect. Dis.* 4, 69-74.
80. Brown, M.G., Huang, Y., Marshall, J.S., King, C.A., Hoskin, D.W., and Anderson, R. (2009) Dramatic caspase-dependent apoptosis in antibody-enhanced dengue-virus infection of human mast cells. *J. Leuk. Biol.* 85, 71-80
81. Chen, M.C., Lin, C.-F., Lei, H.-Y., Lin, S.-C., Liu, H.-S., Yeh, T.-M., Anderson, R. and Lin, Y.-S. (2009) Deletion of the C-terminal region of dengue virus nonstructural protein 1 (NS1) abolishes anti-NS1-mediated platelet dysfunction and bleeding tendency. *J. Immunol.* 183, 1797-1803.
82. Huang, Y., Cyr, S., Burt, D. and Anderson, R. (2009) Murine host responses to respiratory syncytial virus following administration of a Protollin-adjuvanted, epitope-enhanced recombinant G protein vaccine. *J. Clin. Virol.*, 44, 287-291.
83. Tsai, C.-C., Kai, J.-I., Huang, W.-C., Wang, C.-Y., Wang, Y., Chen, C.-L., Fang, Y.-T., Lin, Y.-S., Anderson, R., Chen, S.-H., and Lin, C.-F. (2009) Glycogen Synthase Kinase-3 $\beta$  Facilitates IFN- $\gamma$  Signaling by Regulating Src Homology Region 2 Domain-containing Phosphatase 2. *J. Immunol.* 183, 856-864.
84. Anderson, R., Huang, Y. and Langley, J. (2010) Prospects for defined epitope vaccines for respiratory syncytial virus. *Future Microbiol.* 5, 585-602.
85. Brown, M.G., Hermann, L., Issekutz, A.C., Marshall, J.S., Rowter, D., Al-Afif, A. and Anderson, R. (2011) Dengue virus infection of mast cells triggers endothelial cell activation. *J. Virol.* 85, 1145-1150.
86. Xu, Z., Anderson, R. and Hobman T. (2011) The capsid-binding nucleolar helicase DDX56 is important for infectivity of West Nile Virus. *J. Virol.* 85, 5571-5580.
87. Lin, Y.-S., Yeh, T.-M., Lin, C.-F., Wan, S.-W., Chuang, Y.-C., Hsu, T.-K., Liu, H.-S., Liu, C.-C., Anderson, R. and Lei, H.-Y. (2011) Molecular mimicry between virus and host and its implications for dengue disease pathogenesis. *Exp. Biol. Med.* 236, 515-523.

88. Fang, Y.T., Lin, C.F., Wang, C.Y., Anderson, R. and Lin, Y.S. (2012) Interferon- $\gamma$  stimulates p11-dependent surface expression of annexin A2 in lung epithelial cells to enhance phagocytosis. *J. Cell Physiol.* 227, 2775-2787.
89. Wan, S.-W., Lin, C.-F., Lu, Y.-T., Lei, H.-Y., Anderson, R. and Lin, Y.-S. (2012) Endothelial cell surface expression of protein disulfide isomerase activates  $\beta$ 1 and  $\beta$ 3 integrins and facilitates dengue virus infection. *J Cell. Biochem.* 113, 1681-1691.
90. Brown, M.G., McAlpine, S.M., Huang, Y.Y., Haidl, I., Al-Afif, A., Marshall, J.S. and Anderson, R. (2012) RNA sensors enable human mast cell anti-viral chemokine production and IFN-mediated protection in response to antibody-enhanced dengue virus infection. *PLoS One* 7, e34055.
91. Puangpetch, A., Anderson, R., Huang, Y., Sermswan, R., Chaicumpa, W., Sirisinha, S. and Wongratanacheewin, S. (2012) Cationic liposomes extend the immunostimulatory effect of CpG ODN against *Burkholderia pseudomallei* infection in BALB/c mice. *Clin. Vaccine Immunol.* 19, 675-683.