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ON-GOING RESEARCH PROJECTS

1. Development of vaccines:

- Development of vaccine against EV71 using attenuated *B. pertussis* as nasal delivery system
- Development of vaccine against influenza A viruses using attenuated *B. pertussis* as nasal delivery system
- Development of a Dengue vaccine using *L. lactis* as mucosal delivery system

2. Host-pathogen interactions

- Modulation of CD137 expression upon *B. pertussis* infection
- Role of Annexin1 during *B. pertussis* and *M. tuberculosis* infection
- Survival of *M. tuberculosis* within macrophages
- Interaction of *M. tuberculosis* with dendritic cells
- Molecular mechanisms of the bio-activation of the antitubercular drug ethionamide

SELECTED PUBLICATIONS

1. Tan, G. and Alonso, S. Pathogenesis and prevention of dengue virus infection: state of the art. (2009). **Curr. Opin. Infect. Dis.** In press. (IF 4.75)
2. Rao, S.P.S., Alonso, S., Rand, L., Dick, T. and Pethe, K. (2008). The protonmotive force is required for maintaining ATP homeostasis and viability of hypoxic, non-replicating *Mycobacterium tuberculosis*. **Proc. Natl. Acad. Sci. USA.** 105(33):11945-50 (Tier 1 – IF 10.231)
3. Sim*, A.C.N., Lin*, W., Tan, G.K.X., Sim, M.S.T., Chow, V.T.K. and Alonso, S. (2008). Induction of neutralizing antibodies against dengue virus type 2 upon mucosal administration of a recombinant *Lactococcus lactis* strain expressing envelope domain III antigen. **Vaccine** 26(9):1145-54. * Equal contribution. (Tier 2 – IF 2.822)
4. Ho, S.Y., Chua, S.Q., Foo, G.W.D., Loch, C., Chow, V.T.C., Poh, C.L. and Alonso, S. (2008). The highly attenuated *Bordetella pertussis* BPZE1 strain as a potential live vehicle for the delivery of heterologous vaccine candidates. **Infect. Immun.** 76, 111-9. (Tier 1 – IF 3.933)
5. Alonso, S., Pethe, K., Russell, D. G. and Purdy, G. E. (2007). Lysosomal killing of *Mycobacterium* by ubiquitin-derived peptides is enhanced by autophagy. **Proc. Natl. Acad. Sci. USA.** 104 (14), 6031-6. (Tier 1 – IF 10.231)
6. Alonso*, S., Coutte*, L., Reveneau, N., Willery, E., Quatannens, B., Loch, C. and Jacob-Dubuisson F. (2003). Role of adhesin release for mucosal colonization by a bacterial pathogen. **J. Exp. Med.** 197, 735-742. *Equal contribution. (Tier 1 – IF 13.965).