

The work leading to the submission of this thesis was carried out under the supervision of Dr. Michael Way at the European Molecular Biology Laboratory in Heidelberg from December 1996 to August 1999. Parts of this thesis have been published in the following scientific papers:

Sanderson, C. M., **Frischknecht, F.**, Way, M., Hollinshead, M., and G. L. Smith. Roles of vaccinia virus EEV-specific proteins in intracellular actin tail formation and low pH-induced cell-cell fusion. *Journal of General Virology* 79:1415-1425 (1998).

Frischknecht, F., Cudmore, S., Moreau, V., Reckmann, I., Röttger, S., and M. Way. Tyrosine phosphorylation is required for actin-based motility of vaccinia but not *Listeria* or *Shigella*. *Current Biology* 9, 89-92 (1999).

Röttger, S., **Frischknecht, F.**, Reckmann, I., Smith, G.L. and M. Way. Interactions between vaccinia virus IEV membrane proteins and their roles in IEV assembly and actin tail formation. *Journal of Virology* 73, 2863-2875 (1999).

Frischknecht, F., Moreau, V., Röttger, S., Gonfloni, S., Reckmann, I., Superti-Furga, G., and M. Way. Actin-based motility of vaccinia virus mimics receptor tyrosine kinase signalling. *Nature*, 401, 926-929 (1999).

I have further presented parts of this work on posters at meetings of the American Society for Cell Biology in San Francisco (1998) and Washington (1999), the European Cell Biology Organizations in Bologna (1999), as well as on the Cytoskeletal Dynamics meeting in Munich (1999).

Additional projects included a collaboration about the activation mechanisms of c-Src: Gonfloni, S., **Frischknecht, F.**, Way, M., and G. Superti-Furga. Leucine 255 of Src couples intramolecular interactions to inhibition of catalysis. *Nature Structural Biology*, 6, 760-764 (1999).