

This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platform			
Incorporating a pNO ₂ -modified phenylalanine amino acid into an antigen to produce a more immunogenic protein for vaccine development	Site-specific incorporation of a chemically altered amino acid into an immunogenic protein may be a useful strategy for producing vaccines against cancer, infectious diseases and other disorders. In a proof-of-concept study, mice treated with a murine tumor necrosis factor- α (TNF- α) that had a tyrosine residue at position 86 replaced by a pNO ₂ -modified phenylalanine residue had higher survival rates in response to lipopolysaccharide challenge than mice receiving phosphate buffered saline (PBS) or wild-type murine TNF- α . Serum titers from mice injected with the modified immunogenic TNF- α showed better antibody response against both wild-type and modified TNF- α proteins than serum from mice injected with PBS, wild-type TNF- α or TNF- α modified with natural phenylalanine at residue 86. Next steps include extending the experiments to other TNF- α -dependent disease models.	Patent and licensing status undisclosed	Grünewald, J. <i>et al. Proc. Natl. Acad. Sci. USA</i> ; published online July 21, 2008; doi:10.1073/pnas.0804157105 Contact: Peter G. Schultz, The Scripps Research Institute, La Jolla, Calif. e-mail: schultz@scripps.edu