

Institute of Molecular Medicine and Bioengineering and Department of Biological Science,
College of Biological Science, National Yang Ming Chiao Tung University



Title: Development of an inflammatory tissue-selective pro-CTLA-4Ig

Name: Shey-Cherng Tzou

Position and Affiliation: Associate Professor, Institute of Molecular Medicine and Bioengineering, NYCU

Abstract:

Autoimmune diseases such as rheumatoid arthritis have no cure thus far but require long term medical managements, which often lead to adverse effects. A selective inhibition of inflammation in lesion sites is therefore desirable yet largely unattained. To this aim, we linked a masking protein to the CTLA-4Ig by a matrix metalloproteinase (MMP) cleavage sequence. The binding activity and biological activity of non-digested pro-CTLA-4Ig were at least 10,000-fold lesser than the MMP-digested pro-CTLA-4Ig. Importantly, the pro-CTLA-4Ig was indeed digested in synovial fluids of mice developed collagen-induced arthritis (CIA). These data indicate that pro-CTLA-4Ig may be an inflammatory tissue-selective T cell inhibitor.

Biography:

I obtained my Bachelor degree from the National Taiwan University, Taiwan and PhD degree the Johns Hopkins University School of Medicine, U.S.A. After completing my post-doctoral fellowship training in Johns Hopkins University School of Medicine, I joined National Chiao Tung University College of Biological Science. I am interested in developing novel therapeutic proteins for autoimmune diseases. I am also interested in the pathogenesis and exploring potential therapies for nonalcoholic fatty liver diseases.