

Other Projects, Publications and Patents

Projects:

- Development of antibody single chain variable fragments for *E.coli* O157:H7 detection.
- Genetic improvement of probiotic yeast *Saccharomyces boulardii* for type II collagen production.
- Genetic modification of conventional bacterial strains with fluorescence tagging for Assimilable Organic Carbon (AOC) rapid detection using Flow Cytometer
- Lactic acid production from starch and Palm Empty Fruit Bunch (EFB) by thermophilic strains.
- Biological production of functional sugars (D-Allulose, L-ribose).
- Biological production of D-Tagatose, a novel drug for treatment of Type 2 diabetes.
- Method for screening of drug target from crude protein mixture.

Publications:

- **Zhou X**, Chow HL, Wu JC. Bioreduction of activated alkenes by a novel 'ene' reductase from the thermophilic strain *Bacillus coagulans* WCP10-4. *Biocatalysis and Biotransformation*. 2014; 32(5): 267-275.
- **Zhou X**, Ye L, Wu JC. Efficient production of L-lactic acid by newly isolated thermophilic *Bacillus coagulans* WCP10-4 with high glucose tolerance. *Appl Microbiol Biotechnol* 2013 May; 97(10):4309-14.
- **Zhou X**, Wu JC. Overexpression of an L-arabinose isomerase from *Bacillus coagulans* in *Escherichia coli* and its characterization. *World. J. Micro. Biol.* 2012 May; 28(5):2205-12
- Ye L, **Zhou X**, Hudari MSB, Li Z, Wu JC. Highly efficient production of L-lactic acid from xylose by newly isolated *Bacillus coagulans* C106. *Bioresour Technol* 2013 Mar; 132: 38-44.
- Ye L, Hudari MSB, **Zhou X**, Zhang D, Li Z, Wu JC. Conversion of acid hydrolysate of oil palm empty fruit bunch to L-lactic acid by newly isolated *Bacillus coagulans* JI12. *Appl Microbiol Biotechnol* 2013 Jun;97(11):4831-8
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- **Zhou X**, Sun QX, Kini RM, Sivaraman J. A universal method for fishing target proteins from mixtures of biomolecules using Isothermal Titration Calorimetry. *Protein Science* 2008, 17(10): 1798-1804.
- **Zhou X**, Tan TC, Valiyaveetil S, Go ML, Velazquez-Campoy A, Kini RM, Sivaraman J. Structure characterization of myotoxic Ecarpholin S from *Echis carinatus* venom. *Biophysical Journal.* 2008, 95(10): 3366-3380.
- **Zhou XD**, Jin Y, Chen RQ, Lu QM, Wu JB, Wang WY, Xiong YL. Purification, cloning and biological characterization of a novel disintegrin from *Trimeresurus jerdonii* venom. *Toxicon* 2004, 43(1):69-75.
- **Zhou XD**, Jin Y, Chen RQ, Lu QM, Wu JB, Wang WY, Xiong YL. Purification, characterization and primary structure of a chymotrypsin inhibitor from *Naja atra* venom. *Comp Biochem Phys B.* 2004, 137(2):219-24.
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Patents:

- Kini RM, Sivaraman J, **Zhou X**. Method for screening of compounds. US patent 61/076,251.
- Wu JC, Ye L, **Zhou X**. Highly Efficient Production of Lactic Acid from Hemicellulose Sugars by Newly Isolated Thermophilic *Bacillus Coagulans* Strains. SG Patent Application No. 201208653-4