

Prof. I-Son Ng

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Research Interests

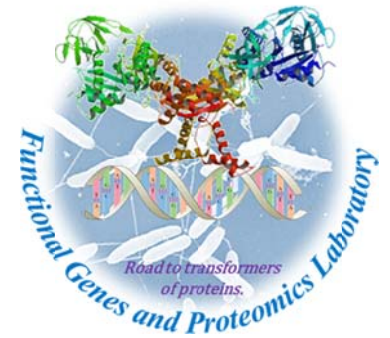
Our research interests focus on development of enzymes on emissions of bioenergy, biorefinery, bioremediation and functional bio-products. Aims to establish and discover the novel genes through proteomics approaches. The platforms are including whole genome sequencing and analysis, high throughput proteomic screening, genetic and protein engineering. Our current research topics include: (1) Biodegradation of cellulose by synergistic cellulases system; (2) Development of high throughput analyzing platform for proteomes; (3) Genetic approach in improving production of valuable bio-products (4) Synthetic and system biology on deciphering the bioremediation process.

Representative Publications

1. Yunli Zhou, **I-Son Ng*** (2016) Explored a cryptic plasmid pSXM33 from marine bacterium *Shewanella xiamenensis* BC01 and construction as the shuttle vector. *Biotechnology and Bioprocess Engineering*, 21:68-78.
2. Xia Zhang, **I-Son Ng***, Jo-Shu Chang (2016) Cloning, expression and characterization of a robust recombinant azoreductase from *Shewanella xiamenensis* BC01. *Journal of the Taiwan Institute of Chemical Engineers*, 61:97-105.
3. Xueping Ling, Jing Guo, Xiaoting Liu, Xia Zhang, Nan Wang, Yinghua Lu, **I-Son Ng*** (2015) Impact of carbon and nitrogen feeding strategy on high production of biomass and docosahexaenoic acid (DHA) by *Schizochytrium* sp. LU310. *Bioresource Technology*, 184:139-147.
4. **I-Son Ng***, Fangxin Xu, Xia Zhang, Chiming Ye (2015) Enzymatic exploration of catalase from a nanoparticle producing and biodecolorizing algae *Shewanella xiamenensis* BC01 *Bioresource Technology*, 184:429-435.
5. **I-Son Ng***, Tingting Chen, Rong Lin, Xia Zhang, Chao Ni, Dongzhe Shun (2014) "Decolorization of textile azo dye and Congo red by an isolated strain of the dissimilatory manganese-reducing bacterium *Shewanella xiamenensis* BC01," *Applied Microbiology and Biotechnology*, 98(5):2297-2308.
6. Chiming Ye, **I-Son Ng***, Keju Jing, Yinghua Lu (2014) "Direct proteomic mapping for *Streptomyces roseosporus* NRRL11379 with precursor and insights into daptomycin biosynthesis," *Journal of Bioscience and Bioengineering*, 117(5):591-597
7. Yu Zhang, **I-Son Ng***, Chuanyi Yao, Yinghua Lu (2014) "An orthogonal array deciphering MRS medium requirements for an isolated *Lactobacillus rhamnosus* ZY with cell properties characterization," *Journal of Bioscience and Bioengineering*, 118(3): 298-304.
8. **I-Son Ng***, Xiaoqin Chi, Xiaomin Wu, Ziwei Bao, Yinghua Lu, Jo-Shu Chang, Xueping Ling (2013) "Cloning and expression of Cel8A from *Klebsiella pneumoniae* in *Escherichia coli* and comparison to cel gene of *Cellulomonas uda*," *Biochemical Engineering Journal*, 78:53-58

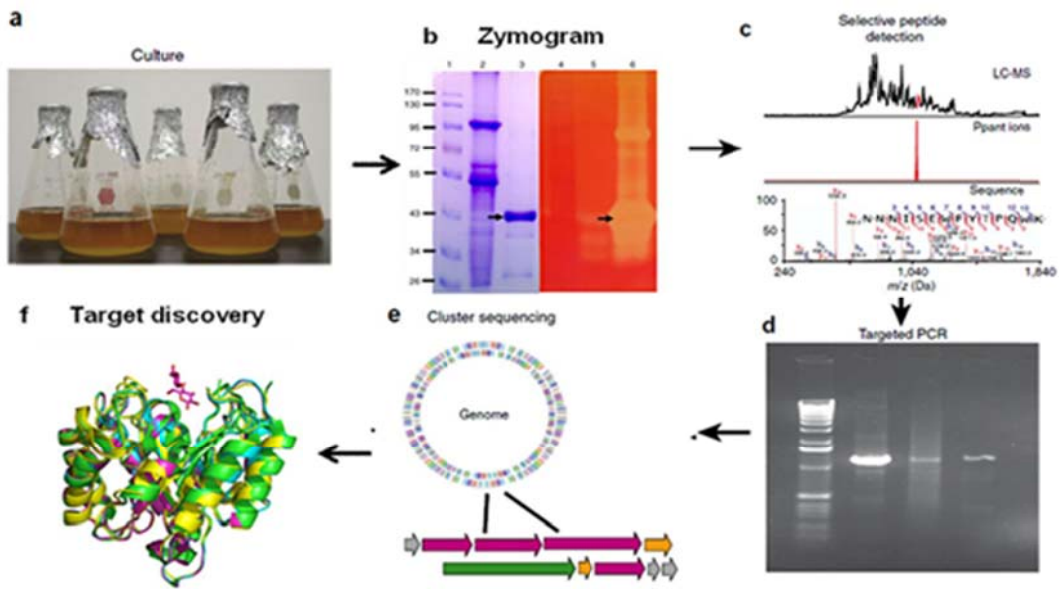
Research platform and further application:

Our lab logo is “road to transformers of proteins”. We are devoting to establish a high throughput platform, especially by proteomic, genetic and protein engineering to achieve the super genes and enzymes.



Web website as:

<https://fungeneprotein.wordpress.com/>



High throughput screening for functional genes by proteomics approach

