Ying-Ja Chen, Ph.D. (陳映嘉)

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SUMMARY

10+ years biotechnology experience including 2+ years in biotech startup. Broad knowledge in drug discovery and development, and strong experience in research demonstrated by 5 peer-reviewed papers and 10+ oral and poster presentations at conferences. Effective in project management and communication to scientific and general communities on topics in science and intellectual property. Background in bioengineering, specifically in the fields of genomics, systems, and synthetic biology.

PROFESSIONAL EXPERIENCES

Pronutria Biosciences, Cambridge, MA

Patent Scientist, 2015-present

- Manage intellectual property portfolio, including patents and trademarks.
- Conduct analysis on competitive intelligence and freedom to operate for IP recommendations to R&D.

Scientist, Discovery Group, 2013-2015.

- Project: Designed protein products as therapeutic nutrients.
- Designed protein engineering libraries for desired amino acid composition and analytical properties.
- Performed high-throughput expression screens.

University of California, San Francisco and **Massachusetts Institute of Technology**, in collaboration with **Life Technologies, Inc**, Carlsbad, CA.

Postdoctoral Fellow, (synthetic biology), Dr. Christopher A. Voigt's laboratory, 2010-2012.

- Project: Characterization and biophysical modeling of transcription terminators for synthetic biology.
- Cloned and characterized 600 terminators in a high-throughput assay using flow cytometry and qPCR.
- Developed a biophysical model for bacterial terminators.

University of California, San Diego, La Jolla, CA.

Graduate Student Researcher, (genomics), Dr. Xiaohua Huang's laboratory, 2004-2009.

- Project: Developed a next-generation DNA sequencing technology termed sequencing by denaturation.
- Designed and automated a system which integrates temperature, fluidics, and fluorescence imaging.
- Prepared samples by micro-bead manipulations and surface chemistry attachments.
- Developed a base-calling algorithm for DNA sequencing data analysis.

Teaching Assistant, 2003-2005.

- Courses: Introduction to Bioengineering, Biomedical Imaging (twice), and Molecular Physical Chemistry.

EDUCATION

Ph.D. in Bioengineering, 2002-2008
University of California, San Diego, La Jolla, CA. GPA: 3.78
Dissertation title: DNA Sequencing by Denaturation

B.Sc. in Electrical Engineering, 1998-2002
National Taiwan University, Taipei, Taiwan. Major GPA: 3.78

SKILLS

- Experimental: fluorescence imaging, protein engineering, qPCR, molecular cloning, microfabrication, surface chemistry, flow cytometry
- Computational: C++, Python, Perl, MATLAB, LabVIEW
- Language: Mandarin Chinese (fluent), English (fluent)
- Others: patent prosecution

AWARDS & OTHER ACTIVITIES

- (Founding) **Committee Member**, Boston Taiwanese Biotechnology Association, 2012-present.
- **PhRMA Postdoctoral Fellowship** in Informatics, 2011.
- **Poster Awards**, MIT Biophysics Retreat, MA, 2012; UC System-wide Bioengineering Symposium, UCLA, CA, 2006; Bioengineering Graduate Student Symposium, UCSD, CA, 2005 & 2006.
- **Outstanding Students Conference Travel Grant**, Foundation For The Advancement of Outstanding Scholarship, Taiwan, 2002.

PUBLICATIONS

1. Chen Y-J, Liu P, Nielsen AAK, Brophy JAN, Clancy K, Peterson T and Voigt CA, "Characterization of 582 natural and synthetic terminators and quantification of their design constraints", *Nat. Methods*, 10: 659-64, 2013. (News & Views: Mooney RA, and Landick R, "Building a better stop sign: understanding the signals that terminate transcription" *Nat. Methods*, 10: 618-9, 2013.)
2. Lou C, Stanton BC, Chen Y-J, Munsky B and Voigt CA, "Ribozyme-based 'insulator parts' buffer synthetic circuits from genetic context", *Nat. Biotechnol.*, 30, 1137–1142, 2012.
3. Chen Y-J, Clancy K and Voigt CA "Biophysical Models to Predict the Function of Genetic Parts" in *Quantitative Biology From Molecular to Cellular Systems*, ed. Wall ME, Taylor & Francis, 2012.
4. Chen Y-J, Roller EE and Huang X, "DNA sequencing by denaturation: experimental proof of concept with an integrated fluidic device" *Lab Chip*, 10: 1153-1159, 2010. (Featured in *Highlights in ChemicalBiology*, RSC Publishing, February 10, 2010.)
5. Chen Y-J and Huang X, "DNA sequencing by denaturation: Principle and thermodynamic simulations" *Anal. Biochem.*, 384: 170-179, 2009.
6. Chen Y-J, Chen Y-C, Lee C-H and Wang J, "High-aspect-ratio sub-diffraction-limit objects fabricated with two-photon-absorption photopolymerization." Proceedings of Conference on Lasers and Electro-Optics, 1: 252-253, Long Beach, CA, 2002.
7. Li L-A, Chiang F-L, Chen J-C, Hsu N-C, Chen Y-J and Chung B-c, "Function of steroidogenic factor 1 domains in nuclear localization, transactivation, and interaction with transcription factor TFIIB and c-Jun" *Mol. Endocrinol.*13: 1588-1598, 1999.