

CURRICULUM VITAE

Han-Wen Chang

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SUMMARY

I have 10+years research experience. I am professional in chromatin biology and analysis of chromatin related enzymes. I am professional in basic molecular biology experimental skills, such as protein purification and structural footprinting (both DNase I and hydroxyl radical). I have experience to establish novel *in vitro* system, which can apply in structural and kinetic analyses. I also familiar the Kinetic and structural software, such as KinTek and PyMoL. I also a pioneer in our lab to analyze the therapeutic compounds in our *in vitro* transcription system. During my research experiences in Taiwan, I have experience in cancer cell biology, cell biology and related experimental skills, such as yeast two hybrid, flow cytometry and cell addition assay and xenograft system. I am currently interested in the developments of target therapies or preventions in human health and disease therapy in terms of my researching experiences.

EDUCATION

Rutgers the state University, Piscataway, NJ, USA 2014
Ph.D. in Cellular and Molecular Pharmacology Graduate Program

National Taiwan University, Taipei, Taiwan 2006
Master of Science in Microbiology

National Taiwan University, Taipei, Taiwan 2003
Bachelor of Science in Botany

RESEARCH EXPERIENCE

Fox Chase Cancer Center, Philadelphia 2014-present
Postdoctoral Associate with Dr. Vasily M. Studitsky
Projects:

- Analysis of the mechanisms of transcription factors.
- Determination of maintenance of parental nucleosomes during replication.
- Analysis of sequencing affinity to histones for further applying to determine nucleosome positioning in yeast genome.

Rutgers University, Piscataway, NJ 2008-2014
Doctoral dissertation research with Dr. Vasily M. Studitsky
Title of thesis: Mechanisms of Transcription& Replication through Chromatin
Projects:

- Identification of the histone interacting-Pol II surface, which stabilizes the key intermediate during transcription through chromatin.
- Determination of low efficiency of key intermediate formation, which likely causes the nucleosome translocation in RNA polymerase III transcription.
- Determination of the mechanism of replication through chromatin. Establishment of *in vitro* replication system through chromatin in our lab.

National Taiwan University, Taipei, Taiwan 2006-2008
Research Assistant with Dr. Tsai-Kun Li

- Analysis of the tumor development of hTop3 α knockdown cells.

National Taiwan University, Taipei, Taiwan

Master degree dissertation research with Dr. Tsai-Kun Li

2003-2006

Title of thesis: Functional Study on Human DNA Topoisomerase III

Projects:

- Identification of interacting proteins of hTop3 α or hTop3 β .
- Analysis of the roles of hTop3 α in cancer development, cell cycle regulation and DNA damage repair.

AWARDS AND FELLOWSHIPS

- Young Investigation Award, Pharmacology Program, Rutgers GSBS, 2010&2011
- Rutgers GSBS Student Travel Awards 2013 & 2014
- The Holowczak Memorial Fund 2013
- Fox Chase Cancer Center Postdoc travel award 2015

PUBLICATIONS

1. **Chang H. -W.**, Kulaeva O. I., Pandey M., Patel S. S., Studitsky V. M. **Mechanism of DNA replication through chromatin** (In preparation)
2. **Chang H. -W.**, Shaytan A. K., Hsieh F.-K., Kulaeva O. I. Kirpichnikov M.P., Studitsky V. M. **Structural Analysis of the Key Intermediate Formed during Transcription through a Nucleosome** *Trends in Cell& Mol. Bio.* 2013, 8:13-23
3. **Chang H. -W.**, Kulaeva O. I., Shaytan A. K., Kibanov M., Kuznedelov K., Severinov K. V., Kirpichnikov M.P., Clark D. J. & Studitsky V. M. **Analysis of the Mechanism of Nucleosome Survival during Pol II Transcription** *Nucleic Acids Res.* 2014, 42(3):1619-27
4. Kulaeva O.I., Hsieh F. -K., **Chang H.-W.**, Luse D.S., Studitsky V.M. **Mechanism of transcription through a nucleosome by RNA polymerase II.** *Biochim Biophys Acta.* 2013, 1:76-83.
5. Hsieh M.-Y., Fang J.-R., **Chang H. -W.**, Chen H.-C., Shen T.-L., Teng S.-C., and Li T.-K. **DNA topoisomerase III alpha regulates p53-mediated tumor suppression.** *Clin. Cancer. Res.* 2014, 20(6):1489-501

CONFERENCE PRESENTATIONS&ABSTRACTS

- **Han-Wen Chang**, Manjula Pandey, Olga I. Kulaeva, Smita S. Patel and Vasily M. Studitsky **Mechanism of DNA replication through chromatin** Poster at the *Chromatin Biology: Chromatin, ncRNA, Methylation & Disease, NIH, Maryland, USA* 2015
- **Chang H. -W.**, Kulaeva O. I., Shaytan A. K., Clark D. J. & Studitsky V. M. **Mechanisms of Transcription through Chromatin** Poster at the *Epigenetics & Chromatin Conference Cold Spring Harbor Laboratory, NY, USA* 2014
- **Chang H. -W.**, Kulaeva O. I., Shaytan A. K., Kibanov M., Kuznedelov K., Severinov K. V., Kirpichnikov M.P., Clark D. J. & Studitsky V. M. **Pausing as a mechanism of nucleosome recovery** Poster at the *Epigenetics & Chromatin: Interactions and processes, Boston, MA, USA* 2013
- Hsieh M. -Y., Lee C. -H., **Chang H. -W.** and Li T. -K. **Genome-wide analysis of TOP3 α -targeting genes: action on transcriptional programs related to tumorigenesis** 46th, 47th ASCB (the American Society for Cell Biology) 2006& 2007
- **Chang H. -W.**, Li T. -K. Functional studies on two isozymes of DNA topoisomerase III. Poster at the International Biotech Conference & Exhibition, Taiwan 2004

PROFESSIONAL ACTIVITIES

- Volunteering Judge for the North Jersey Regional Science Fair

2009

PROFESSIONAL ORGANIZATIONS

- Membership of New York Academy of Sciences
- Membership of AAAS

2009-2014

2011

REFERENCES

1. Dr. Vasily M. Studitsky (Ph.D. Thesis advisor)

Professor and Co-Chair of Cancer Epigenetics Program

Fox Chase Cancer Center

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2. Dr. Tsai-Kun Li (MS. Advisor)

Assistant Dean of College of Medicine

Professor of Department and Graduate Institute of Microbiology

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