

CURRICULUM VITAE

Personal Particulars

Name: Kin, Fan, **On** (Kenneth)
Date of Birth: 15th August 1985
Place of Birth: Hong Kong
Nationality: Chinese
Citizenship: Hong Kong SAR
Correspondence Address: 1 Bungtown Road
Cold Spring Harbor, NY 11724
USA
Permanent Address: Flat K, 11/F, Block 2, Yuet Wu Villa
2 Wu Sau Street, Tuen Mun
New Territories, Hong Kong
Mobile Phone: +1 (917) 385 3067
E-mail: kon@cshl.edu (Work)
kenneth_815@yahoo.com.hk (Personal)

Employment

Mar 2014 – Present **Postdoctoral fellow, Cold Spring Harbor Laboratory**
(Investigating structure-function relationship of nucleic acid-binding, ATPase proteins using X-ray crystallography, cryo-electron microscopy and biochemistry, under the supervision of Dr. Leemor Joshua-Tor)

Education

Sep 2009 – Dec 2013 **Graduate student, University College London, U. K.**
Ph. D. thesis research project under the supervision of Dr. John Diffley. Research work was conducted in Clare Hall Laboratories, Cancer Research UK London Research Institute
Project: “Biochemical characterization of MCM helicase activation *in vitro*”

Sep 2007 – Aug 2009 **M. Phil. in Biochemistry, the Hong Kong University of Science and Technology, Hong Kong**
M. Phil. research project under the supervision of Professor Randy Poon
Project: “The role of MAD2L1BP in the silencing of the spindle-assembly checkpoint and the DNA damage checkpoint”

Sep 2004 – Aug 2007 **B. Sc. in Biochemistry (First-class Honors), the Hong Kong University of Science and Technology, Hong Kong**
Final year research project under the supervision of Professor Randy Poon

Dr. Kin Fan On

Sep 1997 – Aug 2004

St. Mark's School, Hong Kong

Awards, Academic Distinctions and Fellowships

2015 – 2016	CSHL Cancer Gene Discovery and Cancer Biology Postdoctoral Training Program (National Cancer Institute, NIH)
2010 – 2012	Boehringer Ingelheim Fonds PhD Fellowship
2008	The George K Lee Foundation Scholarship
2007 – 2008	Best Teaching Assistant Award (Department of Biochemistry)
2006 – 2007	Dean's List (Fall and Spring Semesters)
2006	Chiap Hua Cheng's Foundation Scholarship
2004 – 2005	Dean's List (Fall and Spring Semesters)

Experience

Ph. D.

Project: Biochemical Characterization of MCM Helicase Activation *In Vitro*

- Devised scientific strategies for the research project with the guidance from my PhD advisor Dr. John Diffley.
- Independently implemented research plans, conducted experiments, analyzed data, performed trouble-shooting, formed and tested hypotheses analytically.
- Wrote a research proposal for the application of the Boehringer Ingelheim Fonds PhD Fellowship award program (successful).
- Generated protein expression constructs, yeast strains (*S. cerevisiae*), bacterial strains (*E. coli*) and baculoviruses (for expression in Sf9 insect cells), and established protein purification and characterization protocols (including yeast protein purification from 10 L and 100 L fermentors).
- Established and characterized a novel biochemical system recapitulating DNA replication *in vivo* (On *et al.*, 2014).
- Examined the role of phosphorylations on replicative helicase in DNA replication initiation with such biochemical system and electron microscopy.
- Experienced in molecular cloning, protein engineering, mutagenesis, manipulation of various column chromatography and operation the AKTA systems; skilled in biochemistry and molecular biology.
- Presented my research as a talk at the Keystone Symposium "DNA Replication and Recombination" conference, Mar 3 – Mar 8, 2013, Banff, Alberta Canada.
- Published results of research work in a peer-reviewed paper.
- Wrote and published a comprehensive review article about the regulation of eukaryotic DNA replication. This article was published as a book chapter in a textbook published by the Cold Spring Harbor Press.

M. Phil.

Project: The Role of MAD2L1BP in the Silencing of the Spindle-assembly Checkpoint and the DNA Damage Checkpoint

- Discuss research strategies for the project with my MPhil advisor Prof. Randy Poon.
- Established protocols for studying mammalian cell cycle checkpoints interplay *in vivo* (e.g. live-cell imaging, immunofluorescence microscopy, cell viability, colony formation assays, etc.).
- Performed molecular cloning of various expression constructs of target proteins after mutagenesis.
- Generated mammalian stable cell-lines for cell cycle experiments.
- Examined the role of spindle-assembly checkpoint in safeguarding genomic integrity in mammalian cells after DNA damage checkpoint bypass.
- Experienced in molecular cloning, mutagenesis, Western blotting, immunofluorescence studies, protein expression and purification from bacteria (*E. coli*) and operation of flow cytometer.
- Published results of research work in peer-reviewed papers.

Skills

Scientific Techniques:

Molecular cloning, protein engineering and site-directed mutagenesis;
Protein expression and purification from expression systems including *Saccharomyces cerevisiae*, *Escherichia coli*, baculovirus-infected insect cells (Sf9 and Hi5) and human cells (HEK);

Column chromatography manipulation and AKTA systems operation;
Biochemical and biophysical techniques for protein quality and activity characterization;

Cell biological techniques including immunofluorescence microscopy, live-cell imaging and operation of flow cytometer.

Molecular biological techniques.

Computer Literacy:

Adobe: Illustrator and Photoshop;

Microsoft Office: Excel, Outlook, PowerPoint, Word;

Apple iWork: Keynote, Numbers, Pages;

Scientific data analyzer: GraphPad Prism;

Molecular visualization system: PyMOL.

Languages:

English (Professional working proficiency)

Cantonese (Native)

Mandarin (Elementary proficiency)

Publications

On, K. F., Jaremko, M., Stillman, B. and Joshua-Tor, L.
A Structural View of the Initiators for Chromosome Replication.
Current Opinion in Structural Biology 53: 131-139 (2018)

Tocilj, A., **On, K.F.**, Yuan, Z., Sun, J., Elkayam, E., Li, H., Stillman, B., Joshua-Tor, L.
Structure of the active form of human origin recognition complex and its ATPase motor module.
eLife 2017;6:e20818 (2017)

On, K.F., Beuron, F., Frith, D., Snijders, A.P., Morris, E.P., and Diffley, J.F.X.
Prereplicative complexes assembled *in vitro* support origin-dependent and independent DNA replication.
EMBO Journal 33(6): 605-20 (2014)

Siddiqui, K., **On, K.F.**, and Diffley, J.F.X.
Regulation of eukaryotic DNA replication. (Book chapter)
Cold Spring Harbor Perspectives in Biology 2013;5:a012930 (2013)

Ma, H.T., Chan, Y.Y., Chen, X., **On, K.F.**, and Poon, R.Y.C.
Depletion of p31comet protein promotes sensitivity to antimetabolic drugs.
Journal of Biological Chemistry 287(25): 21561-9 (2012)

On, K.F., Chen, Y., Ma, H.T., Chow, J.P.H., and Poon, R.Y.C.
Determinants of mitotic catastrophes upon abrogation of the G2 DNA damage checkpoint by UCN-01.
Molecular Cancer Therapeutics 10(5): 784-94 (2011)

Chan, Y.W., **On, K.F.**, Chan, W.M., Wong, W., Siu, H.O., Hau, P.M., and Poon, R.Y.C.
The kinetics of p53 activation versus cyclin E accumulation underlies the relationship between the spindle-assembly checkpoint and the postmitotic checkpoint.
Journal of Biological Chemistry 283(23): 15716-23 (2008)

Chan, Y.W., Ma, H.T., Wong, W., Ho, C.C., **On, K.F.**, and Poon, R.Y.C.
CDK1 inhibitors antagonize the immediate apoptosis triggered by spindle disruption but promote apoptosis following the subsequent rereplication and abnormal mitosis.
Cell Cycle 7(10): 1149-61 (2008)

Ma, H.T., **On, K.F.**, Tsang, Y.H., and Poon, R.Y.C.
An inducible system for expression and validation of the specificity of short hairpin RNA in mammalian cells.
Nucleic Acids Research 35(4): e22 (2007)