

# Curriculum Vitae-Chengqi Yi

## Address

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**Born** 1983, in P. R. China

## Education

- 09/2005 – 07/2010, University of Chicago, Ph.D. in Chemistry (with Prof. Chuan He)
- 09/2001 – 07/2005, University of Science and Technology of China, B.S. in Chemistry (with Prof. Yi Xie)

## Employment

- 08/2017 – present, Associate Professor with tenure, School of Life Sciences, Peking University
- 08/2013 – present, Principle Investigator, Synthetic and Functional Biomolecules Center (SFBC), Peking University
- 01/2012 – present, Principle Investigator, Peking-Tsinghua Center for Life Sciences
- 01/2012 – 07/2017, Assistant Professor, School of Life Sciences, Peking University
- 08/2010 – 12/2011, Postdoctoral Fellow (with Prof. Tao Pan), University of Chicago

## Honors and Awards

- 2017, Wang Xuan Young Scholar Award
- 2016, WuXi PharmaTech Life Science and Chemistry Award
- 2016, Chinese Chemical Society Young Investigator Award
- 2016, Our work cited by Method of the Year 2016 by Nature Methods
- 2015, The National Science Fund for Excellent Young Scholars (No. 21522201)
- 2014, Luye Eminent Young Scholar Award
- 2012, Nation Youth 1000 Plan Program
- 2011, IUPAC Prize for Young Chemists, International Union of Pure and Applied Chemistry
- 2009, Chemistry Alumni Graduate Fellowship, University of Chicago
- 2002, Zhang Zongzhi Sci-Tech Fellowship, University of Science and Technology of China

## Professional Society Affiliations

- 2017 – present, the Chinese Society of Cell Biology
- 2013 – present, the RNA society
- 2013 – present, the Chinese Society of Biochemistry and Molecular Biology
- 2012 – present, the Chinese Crystallographic Society
- 2012 – present, the Chinese Chemical Society

## Research Interests

DNA&RNA epigenetics • Chemical Biology • Sequencing Technologies • Diseases and Biomarkers

## Invited speakers

- 11/2017, Cold Spring Harbor Asia Conference, RNA Modifications and Epitranscriptomics, Suzhou, China
- 11/2017, Sino-German Symposium on RNA Biology, Shanghai, China
- 10/2017, International Symposium on Frontiers of Natural and Biomimetic Drugs, Beijing, China
- 10/2017, Annual Conference of the International Chemical Biology Society, Shanghai, China

- 09/2017, The Second International Epigenomics Conference, Shanghai, China
- 09/2017, The 10th National Congress of the Chinese Chemical Biology Society, Wuhan, China
- 08/2017, The 12th National Congress of Gene Function and Epigenetic Regulation, Beijing, China
- 03/2017, Trends in Nucleic Acid, Tianjin, China
- 11/2016, The 39th Annual Meeting of the Molecular Biology Society of Japan, Yokohama, Japan
- 09/2016, Asian 3 Roundtable on Nucleic Acids and Chemical Probe Research Hub, Fukuoka, Japan
- 09/2016, RNA Modifications and Epitranscriptomics, Chicago, USA
- 07/2016, Meeting of the GDCh-Division Biochemistry: Shaping the Molecules of Life, Frankfurt, Germany
- 04/2016, 2016 Frontier in NGS Technologies, Beijing, China
- 08/2015, The 9th National Congress of the Chinese Chemical Biology Society, Tianjin, China
- 09/2014, The Sino-German Workshop on Chemical Biology, Berlin, Germany
- 08/2014, The 11th National Conference on Biochemistry and Molecular Biology, Xiamen, China
- 06/2013, RNAi China 2013, Kunshan, China
- 04/2012, Sino-US "10 +10" Forum on Chemical Biology, Chengdu, China

## Representative Publications

### a) Research papers since the appointment:

- 1 **Yi, C.Q.**, Chen, B.E, Qi, B., Zhang, W., Jia, G.F., Zhang, L., Li, C.J., Dinner, A.R., Yang, C.G.\* and He, C.\* (2012). Duplex interrogation by a direct DNA repair protein in search of base damage. *Nat. Struct. Mol. Biol.*, **19**, 671-676.
- 2# Zhu, C.X. and **Yi, C.Q.\*** (2014). Switching demethylation activities between AlkB family RNA/DNA demethylases through exchange of active-site residues. *Angew. Chem. Int. Ed.*, **53**, 3659-3662.
- 3 Zhang, X., Zhu, Z.Q., An, F.Y., Hao, D.D., Li, P., Song J.H., **Yi, C.Q.** and Guo, H.W.\* (2014). Jasmonate-activated MYC2 represses ETHYLENE INSENSITIVE3 activity to antagonize ethylene-promoted apical hook formation in Arabidopsis. *Plant Cell*, **26**, 1105-1117.
- 4 Yin, Y.D., Yang, L.J., Zheng G.Q., Gu, C., **Yi, C.Q.**, He, C. Gao Y.Q.\* and Zhao, X.S.\* (2014). Dynamics of spontaneous flipping of a mismatched base in DNA duplex. *Proc. Natl. Acad. Sci. USA.*, **111**, 8043-8048.
- 5# Li, X.Y., Zhu, P., Ma, S.Q., Song, J.H., Bai, J.Y., Sun, F.F. and **Yi, C.Q.\*** (2015). Chemical pulldown reveals dynamic pseudouridylation of the mammalian transcriptome. *Nat. Chem. Biol.*, **11**, 592-597.
- 6# Xia, B., Han, D.L., Lu, X.Y., Sun, Z.Z., Zhou, A.K., Yin, Q.Z., Zeng, H., Liu, M.H., Jiang, X., Xie, W., He, C.\* and **Yi C.Q.\*** (2015). Bisulfite-free, base-resolution analysis of 5-formylcytosine at the genome scale. *Nat. Methods*, **12**, 1047-1050.
- 7 Song, J.H., Zhu, C.X., Zhang, X., Wen, X., Liu, L.L., Peng, J.Y., Guo, H.W.\* and **Yi, C.Q.\*** (2015). Biochemical and structural insights into the mechanism of DNA recognition by Arabidopsis ETHYLENE INSENSITIVE3. *PLoS One*, **10**, e0137439.
- 8 Zheng, G.Q., Qin, Y.D., Clark, W.C., Dai, Q., **Yi, C.Q.**, He, C., Lambowitz, A.M. and Pan, T.\* (2015). Efficient and quantitative high-throughput tRNA sequencing. *Nat. Methods*. **12**, 835-837.
- 9# Li, X.Y., Xiong, X.S., Wang, K., Wang, L.X., Shu, X.T., Ma S.Q. and **Yi, C.Q.\*** (2016). Transcriptome-wide mapping reveals reversible and dynamic N (1)-methyladenosine methylome. *Nat. Chem. Biol.*, **12**, 311-316.
- 10# Zhu, C.X., Lu, L.N., Zhang, J., Yue, Z.W., Song, J.H., Zong, S., Liu, M.H., Stovicek, O., Gao, Y.Q.\* and **Yi, C.Q.\*** (2016). Tautomerization-dependent recognition and excision of oxidation damage in base-excision DNA repair. *Proc. Natl. Acad. Sci. USA.*, **113**, 7792-7797.
- 11# Shu, X.T., Xiong, X.S., Song, J.H., He, C.\* and **Yi, C.Q.\*** (2016). Base-Resolution Analysis of Cisplatin-DNA Adducts at the Genome Scale. *Angew. Chem. Int. Ed.*, **55**, 14246-14249.
- 12# Zhu, C.X., Gao, Y., Guo, H.S., Xia, B., Song, J.H., Wu, X.L., Zeng, H., Kee, K.K., Tang, F.C.\* and **Yi, C.Q.\*** (2017). *Cell Stem Cell*, **20**, 720-731.

- 13# Lei, Z.X., **Yi, C.Q.\*** (2017). A radiolabeling-free, qPCR-based method for locus-specific pseudouridine detection. *Angew. Chem. Int. Ed.*, **56**, 14878-14882.
- 14# Zhang, Y., Liu, L.L., Guo, S.J., Song, J.H., Zhu, C.X., Yue, Z.W., Wei, W.S.\*, **Yi, C.Q.\*** (2017). Deciphering TAL effectors for 5-methylcytosine and 5-hydroxymethylcytosine recognition. *Nat. Commun.*, **8**, 901.
- 15# Li, X.Y., Xiong, X.S., Zhang, M.L., Wang, K., Chen, Y., Zhou, J., Mao, Y.H., Lv, J., Yi, D.Y., Chen, X.W., Wang, C., Qian, S.-B., **Yi, C.Q.\*** (2017). Base-resolution mapping reveals distinct m<sup>1</sup>A methylome in nuclear- and mitochondrial-encoded transcripts. *Mol. Cell*, **68**, 993-1005.

b) Invited reviews since the appointment:

- 16 Song, C.X., **Yi, C.Q.** and He, C.\* (2012). Mapping new nucleotide variants in the genome and transcriptome. *Nat. Biotechnol.*, **30**, 1107-1116.
- 17 **Yi, C.Q.\*** and He, C.\* (2013). DNA repair by reversal of DNA damage. *Cold Spring Harb. Perspect. Biol.*, **5**, a0125.
- 18 Li, X.Y., Song J.H. and **Yi, C.Q.\*** (2014). Genome-wide mapping of cellular protein-RNA interactions enabled by chemical crosslinking. *Geno. Proteo. Bioinform.*, **12**, 72-78.
- 19 Lu, L.N., Zhu, C.X., Xia, B. and **Yi, C.Q.\*** (2014). Oxidative demethylation of DNA and RNA mediated by non-heme iron-dependent dioxygenases. *Chem. Asian. J.*, **9**, 2018-2029.
- 20 Karijolic, J., **Yi, C.Q.** and Yu, Y.T.\* (2015). Transcriptome-wide dynamics of RNA pseudouridylation. *Nat. Rev. Mol. Cell Biol.*, **16**, 581-585.
- 21 Peng, J.Y., Xia, B. and **Yi, C.Q.\*** (2016). Single-base resolution analysis of DNA epigenome via high-throughput sequencing. *Sci. China Life Sci.*, **59**, 219-226.
- 22# Li, X.Y., Ma, S.Q. and **Yi, C.Q.\*** (2016). Pseudouridine: the fifth RNA nucleotide with renewed interests. *Curr. Opin. Chem. Biol.*, **33**, 108-116.
- 23# Li, X.Y., Xiong, X.S., and **Yi, C.Q.\***. (2016). Epitranscriptome sequencing technologies: decoding RNA modifications. *Nat. Methods*, **14**, 23-31.
- 24 Song, J.H., and **Yi, C.Q.\*** (2017). Chemical Modifications to RNA: A New Layer of Gene Expression Regulation. *ACS Chem. Biol.*, **12**, 316-325.

c) Books and chapters since the appointment:

- 25 Li, X.Y., Ma, S.Q. and **Yi, C.Q.\*** (2015). Pseudouridine chemical labeling and profiling. In the special issue "RNA Modification" of *Methods Enzymol.* (ed. C. He), pp. 247-272. Elsevier Inc.
- 26 Li, X.Y., Peng, J.Y., and **Yi, C.Q.\*** (2017). Transcriptome-Wide Mapping of N1-Methyladenosine Methylome. *Methods Mol. Biol.*, **1562**, 245-255.