CURRICULUM VITAE

310-846-5985 (Office phone)
410-736-2340 (Cell phone)

Name: Yun-Xing Wang, Ph.D.
Citizenship: United States
Education:

1982	B.S., Polymer Science, Jilin University, Changchun, Jilin, China
1994	Ph.D., under David Draper, Chemistry, Johns Hopkins University, Baltimore, MD
1994-1997	Postdoctoral training under Dennis Torchia, NIDCR, NIH, Bethesda, MD

Brief Chronology of Employment:

1982-1986	Assistant Engineer, Zijing Computer Corp., Nanjing, China
1989-1994	Graduate Student, The Johns Hopkins University, Baltimore, MD
1994-1997	IRTA Postdoctoral Fellow, NIDCR, NIH, Bethesda, MD
1997-2000	Research Fellow, NIDCR, NIH, Bethesda, MD
2000-date	Principal Investigator, Structural Biophysics Laboratory, CCR, NCI, NIH, Frederick, MD
2000-date	Chief, Protein-Nucleic Acid Interaction Section, CCR, NCI, NIH, MD, Frederick
20013-date	Head, NCI Small Angle X-ray Scattering, CCR, NIH, MD, Frederick

Personal Statement:

My current research interests are focused on understanding RNA functions. We develop novel tools, methods and technologies to study systems to facilitate our research.

(**2013-2016**)

Awards:

2014:	Award of Merit, National Institute of Health
2014:	Outstanding Basic Science Award, National Heart, Lung, and Blood Institute, National Institutes of Health
2016:	NIH Director Award for Outstanding Achievement in Medical and Science, National Institutes of Health

Competitive Funding Awards:

2014:	Intramural AIDS Targeted Antiviral Program, NIH
2016:	NCI FLEX Award in Technology Development

Professional Activities:

2013:	Chairperson, Dynamics& Flexible Structures in Biomolecules, 2013, Hawaii, USA
2014:	Organizer, The NCI Workshop on XFEL, Frederick, USA
2016:	Organizer, The NIH International Workshop on Application of XFEL for Biomedical

Research, Bethesda, USA

Lectures/talks/presentations:

2013: Lawrence Livermore National Laboratory, Berkeley, CA, 2013 9th International
2013:
2013 Retroviral Nucleocapsid Protein and Assembly Symposium, Montreal, Canada, 2013
2015: The Ringberg Conference on XFEL,Max-Planck Biomedical research Institute, Rinberg, Germany, 2015
2016: RNA meeting, Kyoto, Japan, 2016
2016: International Workshop on Advanced Isotopic Labelling Methods for Integrated Structural Biology, Grenoble, France, 2017
2017: Deutsches Elektronen-Synchrotron, Hamburg, Germany
2017: Universityu of Basel, Department of Biozentrum, Switzerland

US Patent:

2016: Compounds that bind to human immunodeficiency virus Rev response element, Yun-Xing Wang, Ping Yu (**US-2016-0237121**)
2016: Method for synthesizing selectively labeled RNA, Yun-Xing Wang, Rui Sousa, Yu Liu (**US-2016-0160256**)

BIBLIOGRAPHY

Invited book chapters (senior author)

1. Rapid Global Structure Determination and Characterization of RNA in Solution by Combined Use of Small Angle X-ray Scattering and NMR Measurements, Wang, Y-X., Zuo, X., Sam Butcher, Wang, J. In ***RNA: from Sequence to Structure and Dynamics,*** Adrian R. Ferré-D'Amaré (Ed), Elsevier, 2010.
2. A Top-down Approach to Determine Global Structures of RNAs in Solution Using NMR and Small-angle X-ray Scattering Measurements, Wang, X-Y., Wang, J, Schwieters, C.D, Zuo, X. in ***RNA 3D Structure Analysis and Modeling***, E. Westhof and N. Leontis (Eds), Springer, 2010.
3. NMR and SAXS: A Perfect Marriage and New Approach for RNA Structure Determination, Zuo, X, Wang, J. and Wang, Y-X. in ***Advanced in Biological NMR***, A. Dingly and S. Pascal (Eds), IOS Press, 2011

Invited book chapter (co-author)

1. NMR spectroscopy for investigating larger nucleic acids, Clos II, L J. , Butcher, S. E., Wang Y-X. in *Advanced in Biological NMR*, A. Dingly and S. Pascal (Eds), IOS Press, 2011

Selected Journal Articles

1 Wang, Y. X. RNA conformation: Lightening up invisible states. *Nat. Chem. Biol.* **12**, 126-127 (2016).

2 Stagno, J. R. *et al.* Structures of riboswitch RNA reaction states by mix-and-inject XFEL serial crystallography. *Nature* (2016).
3 Liu, Y. *et al.* Synthesis and applications of RNAs with position-selective labelling and mosaic composition. *Nature* **522**, 368-372 (2015).
4 Bhandari, Y. R., Jiang, W., Stahlberg, E. A., Stagno, J. R. & Wang, Y. X. Modeling RNA Topological Structures Using Small Angle X-Ray Scattering. *Methods* (2016).
5 Fang, X., Stagno, J. R., Bhandari, Y. R., Zuo, X. & Wang, Y. X. Small-angle X-ray scattering: a bridge between RNA secondary structures and three-dimensional topological structures. *Curr. Opn. Str. Biol.* **30**, 147-160 (2015).
6 Fang, X. *et al.* An unusual topological structure of the HIV-1 Rev response element. *Cell* **155**, 594-605 (2013).
7 Wang, J. B. *et al.* A Method for Helical RNA Global Structure Determination in Solution Using Small-Angle X-Ray Scattering and NMR Measurements. *J. Mol. Biol.* **393**, 717-734 (2009).
8 Wang, J. *et al.* Determination of multicomponent protein structures in solution using global orientation and shape restraints. *J. Am. Chem. Soc.* **131**, 10507-10515 (2009).
9 Zuo, X. B. *et al.* Global molecular structure and interfaces: Refining an RNA : RNA complex structure using solution X-ray scattering data. *J. Am. Chem. Soc.* **130**, 3292-+ (2008).
10 Wang, J., Walsh, J. D., Kuszewski, J. & Wang, Y. X. Periodicity, planarity, and pixel (3P): a program using the intrinsic residual dipolar coupling periodicity-to-peptide plane correlation and phi/psi angles to derive protein backbone structures. *J. Magn. Res.* **189**, 90-103 (2007).
11 Lee, D. *et al.* RAP uses a histidine switch to regulate its interaction with LRP in the ER and Golgi. *Mol. Cell* **22**, 423-430 (2006).
12 Walsh, J. D., Cabello-Villegas, J. & Wang, Y. X. Periodicity in residual dipolar couplings and nucleic acid structures. *J. Am. Chem. Soc.* **126**, 1938-1939 (2004).