Curriculum Vitae

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Education

1997-2002	Ph. D. in Biological Chemistry, Johns Hopkins University, School of Medicine
1994-1997	M.S. in Molecular Biology, Institute of Biophysics, Chinese Academy of Science
1989-1994	B.S. in Biochemistry, Tsinghua University, Beijing,
1989-1994	B.E. in Electrical and Computer Techniques, Tsinghua University, Beijing,

Research Experience

09/02-date	Post-doctoral research (Damon Runyon Fellow) in Dr. Chris B. Burge lab of MIT. Studied regulation of splicing with combination of experimental and computational approaches; developed a cell-based approach to screen for exonic splicing silencers (ESS); systematically analyzed the role ESS with statistic approaches and splicing simulator; cloned and analyzed the small RNA in filamentous fungi.
09/97-09/02 (Ph. D. Research)	Developed methods for inducible RNA interference in *Trypanosoma brucei*; used this method to clarify *in vivo* function of a DNA topoisomerase II; found a mechanism by which kDNA maintains the network size; developed an RNAi-based forward genetic screen in trypanosomes to identify genes responsible for certain phenotypes.
1994-1997 (M.S. Research)	Chemically modified Protein Disulfide Isomerase (PDI) to study its role of assisting folding of other proteins; developed programs to predict protein secondary structure.
1992-1994 (B.S. Research)	Using the chemical modification approaches to study the catalytic mechanism of creatine kinase; studied the kinetics of protein unfolding.

Teaching Experience

2001-2002	Tutor of junior graduate student on molecular biology and cell biology, Johns Hopkins University, School of Medicine.
2004	Instructor for advanced undergraduate seminar "RNA splicing and human diseases: molecular and computational approaches", MIT.

Honor and Awards

2003-2006	Damon Runyon Postdoctoral Fellowship, Damon Runyon Cancer Research Foundation
2002	Paul Ehrlich Research Award, Johns Hopkins School of Medicine
1999	Burroughs Wellcome Fellowship, Marine Biological Lab, Woods Hole, MA
1996-1997	DiAo scholarship, Chinese Academy of Science, Beijing
1994	Graduate with highest honor from Tsinghua University, Beijing
1993-1994	Guang Hua scholarship, Tsinghua University, Beijing
1990-1993	Scholarship for Academic Excellence, Tsinghua University, Beijing
1989	Winner, National competition of high school mathematics (No. 1 in Inner Mongolia).

Publications (in peer reviewed journals)

1. **Wang Z,** Zhang J and Burge CB. Systematic identification and analysis of intronic splicing silencers (2005) *in preparation.*

2. **Wang Z**, Nostrand EV, Xiao XS and Burge CB. Exonic splicing silencers regulate the selection of alternative splice sites (2005) *submitted.*

3. **X**iao XS, **Wang Z** and Burge CB. Inferring splicing regulatory mechanisms from comparative genomics (2005) *in preparation.*

4. **Wang Z**, Rolish M, Yeo G, Tung V, Mawson M and Burge CB. Systematic identification and analysis of exonic splicing silencers (2004) ***Cell*** 119 (6): 831-845.

   * Also see the Editorial by Fu XD. Towards a Splicing Code (2004) ***Cell*** 119 (6): 736-738.
   * Highlighted by Michael Eisenstein. Breaking the silence (2005) ***Nature Methods*** 2 (2): 90.

5. Drew ME*, Morris JC*, **Wang Z* (* co-first author)**, Wells L, Sanchez M, Landfear SM, and Englund PT. The adenosine analog tubercidin inhibits glycolysis in trypanosoma brucei as revealed by an RNAi library (2003) ***J. Biol Chem.*** 278(47): 46596-46600.

6. **Wang Z**, Drew ME, Morris JC, and Englund PT. Asymmetrical division of trypanosome's kinetoplast DNA network. (2002) ***EMBO J.*** 21(18): 4998-5005.

7. Morris JC*, **Wang Z***, Drew ME* **(* co-first author)**, and Englund PT. Glycolysis modulates Trypanosome glycoprotein expression as revealed by an RNAi library. (2002) ***EMBO J.*** 21(17):4429-4438.

8. Grahms J, Morris JC, Drew ME, **Wang Z**, Englund PT, Hajduk SL. A trypanosome mitochondrial RNA polymerase is required for transcription and replication. (2002) ***J. Biol. Chem.*** 277 (19): 16952-9.

9. **Wang Z** and Englund PT. RNA interference of a trypanosome topoisomerase II causes progressive loss of mitochondrial DNA (2001) ***EMBO J.*** 20(17): 4674-83

10. Morris JC*, **Wang Z***, Drew ME*, Paul KS* **(* co-first author)**, and Englund PT. Inhibition of bloodstream form *Trypanosoma brucei* gene expression by RNA interference using the pZJM dual T7 vector. (2001) ***Mol Biochem Parasitol.*** 117(1):111-3.

11. Klingbeil MM, Drew ME, Liu Y, Morris JC, Motyka SA, Saxowsky TT, **Wang Z**, and Englund PT. Unlocking the secret of Trypanosome kinetoplast DNA network replication. (2001) ***Protist*** 152: 255-262. Review.

12. Morris JC, Drew ME, Klingbeil MM, Motyka SA, Saxowsky TT, **Wang Z**, and Englund PT. Replication of kinetoplast DNA: an update for the new millennium. (2001) ***Int J Parasitol.*** 31(5-6):453-8. Review.

13. **Wang Z***, Morris JC*, Drew ME* **(* co-first author)**, and Englund PT. Inhibition of *Trypanosoma brucei* gene expression by RNA Interference: A survey using an integratable vector with opposing T7 Promoters. (2000) ***J Biol Chem.*** 275: 40174-40179.

14. Mair G, Shi H, Li H, Djikeng A, Aviles HO, Bishop JR, Falcone FH, Gavrilescu C, Montgomery JL, Santori MI, Stern LS, **Wang Z**, Ullu E, Tschudi C. A new twist in trypanosome RNA metabolism: cis-splicing of pre-mRNA. (2000) ***RNA.*** 6(2):163-9.

15. Wang HR, **Wang ZF**, Zhang T, and Zhou HM. Kinetics of irreversible inhibition of aminoacylase by MNP. (1996) ***Progress in Natural Science*** 6: 84-90.

16. Wang HR, Zhang T, **Wang ZF**, Wang XC, and Zhou HM. Aminoacylase from pig kidney contains no disulfide bonds. (1995) ***Scince in China*** **(Series B)** 38(12): 1448-1454.

17. **Wang ZF**, Yang Y, Zhou HM. Conformational changes of active sites during refolding of urea-denatured creatine kinase. (1995) ***Biochimie*** 77:953-956.

18. **Wang ZF**, Huang MQ, Zou XM, Zhou HM. Unfolding, conformational change of active sites and inactivation of creatine kinase in SDS solutions. (1995) ***Biochim. Biophys. Acta.*** 1251: 109-114.

19. Tang ZY, Yu JY, Zhou Q, He B, **Wang ZF**, Zhou HM. Secondary structure of Holo- and Apo-aminoacylase from prediction, circular dichroism, and FT-Raman spectroscopy.(1995) ***J. Biochem.*** 118:706-709.

20. **Wang ZF**, Xu YK, Zhou HM: Kinetics of irreversible inhibition of creatine kinase during modification by *o*-phthaldehyde. (1994) ***Enzyme Protein.*** 48:1-9.

Publications (book chapter)

Morris, JC, **Wang, Z,** Motyka, SA, Drew, ME, and Englund, PT. An RNAi-based genomic library for forward genetics in the African trypanosome. In: Sohail, M, editor. Gene Silencing by RNA Interference: Technology and Application. Boca Raton: CRC Press LLC.

Drew, ME, Motyka, SA, Morris, JC, **Wang, Z**, and Englund, PT. Inducible RNAi as a forward genetic tool in *Trypanosoma brucei*. In: Appasani, K, editor. RNA Interference Technology: From Basic Science to Drug Development. Cambridge University Press (In press)

Presentation

Wang Z , Nostrand EV, Yeo G and Burge CB. Splice Site Definition by Exonic Splicing Silencers (2005) Tenth Annual Meeting of the RNA Society. Banff, Canada. **Talk**

Wang Z , Tung V, Mawson M and Burge CB. Systematic Identification of Exonic Splicing Silencers (2004) Ninth Annual Meeting of the RNA Society. Madison, WI. **Poster**

Wang Z and Englund PT. RNA Interference of a Trypanosome Topoisomerase II (2002) Keystone Meeting of RNA Interference, Cosuppression and Related Phenomena. Taos, NM. **Poster**

Wang Z and Englund PT. RNA Interference of a Trypanosome Topoisomerase II Causes Progressive Loss of Mitochondrial DNA (2001) Molecular Parasitology Meeting XII. Woods Hole, MA. **Talk.**

Wang Z and Englund PT. Use of double-strained RNA inteference to study kinetoplast DNA replication in *Trypanosoma brucei* (2000) Molecular Parasitology Meeting XI. Woods Hole, MA. **Talk.**

References

Dr. Chris B. Burge,
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Dr. Paul T. Englund
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