Yigong Shi

Personal Information:

Mailing address:	Room C331, Medical Science Building Tsinghua University School of Medicine Beijing 100084 China
Phone:	+86 (10) 6279-7560 (lab) +86 183 1088 3352 (administrative assistant)
Internet Address:	ygshi@tsinghua.edu.cn
Date of Birth:	May 5, 1967
Place of Birth:	Zhengzhou, China

Education:

1990 – 1995	Ph.D. candidate in the Inter-campus Program in Molecular Biophysics (IPMB) and the Department of Biophysics and Biophysical Chemistry at Johns Hopkins University School of Medicine, Baltimore, Maryland. Advisor: Dr. Jeremy M. Berg
1985 – 1989	Undergraduate education in the Department of Biological Sciences and Biotechnology, Tsinghua University. Received B.S. Degree with highest honor from Tsinghua University, Beijing, China.

Professional Positions:

2015 – present	Vice President, Tsinghua University, Beijing
2011 – present	Co-Director, Tsinghua-Peking Joint Center for Life Sciences, Beijing
2009 – present	Dean, School of Life Sciences (replacing the Department of Biological Sciences and Biotechnology), Tsinghua University, Beijing
2009 – 2014	Executive Vice Dean, School of Medicine, Tsinghua University, Beijing
2008 – 2009	University Professor and Vice Chair, Department of Biological Sciences and Biotechnology, Tsinghua University, Beijing
2007 – 2008	Warner-Lambert/Parke-Davis Professor, Department of Molecular Biology, Princeton University, Princeton, New Jersey

2003 – 2007	Professor, Department of Molecular Biology, Princeton University, Princeton, New Jersey
2001 – 2003	Associate Professor (tenured), Department of Molecular Biology, Princeton University, Princeton, New Jersey
1998 – 2001	Assistant Professor, Department of Molecular Biology, Princeton University, Princeton, New Jersey
1996 – 1997	Postdoctoral fellow in the *Structural Biology Laboratory of Tumor Suppressors and Oncogenes* at Memorial Sloan-Kettering Cancer Center, New York, NY. Advisor: Dr. Nikola P. Pavletich
1995	Postdoctoral fellow in the Department of Biophysics and Biophysical Chemistry at Johns Hopkins University School of Medicine, Baltimore, Maryland. Advisor: Dr. Jeremy M. Berg

Professional Experience:

2013 – present	Scientific Advisory Board, Institute of Research in Biotechnology, Barcelona, Spain
2013 – present	Scientific Advisory Board, Cold Spring Harbor Conferences Asia
2012 – present	Editorial Board, *Journal of Molecular Biology*
2012 – present	Editorial Board, *Open Biology*
2012 – present	Advisory Board, Qiu Shi Science & Technologies Foundation, Hong Kong
2012 – 2014	Board of Reviewing Editors, *eLife*
2011 – present	Editorial Board, *Protein Science*
2011 – present	Editorial Board, *Cancer Cell*
2011 – present	President, Association of Thousand Talent Program, China
2010 – 2013	Member and Co-Chair, Grant Review Committee, Protein Science Key Projects, Ministry of Science and Technology, China
2010 – 2013	Vice Director, Section of Biology and Medicine, Committee on Science and Technology, Ministry of Education, China
2009 – 2011	Member, Scientific Advisory Board, Institute of Molecular and Cell Biology (IMCB), Singapore
2009 – present	Editorial Board, *Cell Research*
2008 – present	Editorial Board, *Science in China*

2008 – 2011	Member, Scientific Advisory Board, Roche R&D China
2008 – 2013	Editorial Board, *Journal of Biological Chemistry*
2005 – present	Member, Scientific Advisory Board, Tetralogic Pharmaceuticals
2006 – 2009	Advisory Committee, MacCHESS
2005 – 2008	President, Chinese Biological Investigators Society (www.CBISociety.org)
2004	Co-founder of Tetralogic Pharmaceuticals
2003 – 2007	Visiting Chair Professor, Department of Biological Sciences and Biotechnology, Tsinghua University
2003 – 2009	Member, NIH Study Sections BBCB, MSFC
2001 – 2008	Member, *Faculty of 1000*
2000 – 2004	Consultant to Novartis Pharmaceuticals

Awards and Honors:

2015	*Nature* Award for Mentoring in science
2014	Bei Shizhang Achievement Award in Biophysics, China
2014	Gregori Aminoff Prize, Royal Swedish Academy of Sciences
2014	JiePing Wu-Paul Janssen Medical & Pharmaceutical Award, China
2013	Academician, Chinese Academy of Sciences, China
2013	Foreign Associate, European Molecular Biology Organization (EMBO)
2013	Honorary Foreign Member, American Academy of Arts and Sciences
2013	Foreign Associate, National Academy of Sciences, USA
2013	Honorary Doctoral Degree, The University of York, UK
2011	The Ray Wu Award, Chinese Biological Investigators Society
2010	The Raymond and Beverly Sackler International Prize in Biophysics, Tel Aviv University, Israel
2010	Qiu Shi Outstanding Scientist Award, Qiushi Foundation, Hong Kong
2010	CC Tan Life Science Achievement Award, China

2009	Fellow, American Association for the Advancement of Science (AAAS)
2008	Investigator, Howard Hughes Medical Institute (declined)
2003	The 2003 Irving Sigal Young Investigator Award, The Protein Society
2000	The Wilson S. Stone Memorial Award The University of Texas M. D. Anderson Cancer Center
1999 – 2002	Searle Scholar Award Searle Scholars Program, The Chicago Community Trust
1999 – 2002	Rita Allen Scholar Award Rita Allen Foundation, New York
1995	Paul Ehrlich Research Award in Basic Science The Johns Hopkins University School of Medicine, Baltimore, Maryland
1989	Graduation with Highest Honor Tsinghua University, Beijing, China
1984	First Prize, National High School Mathematics Competition, China

Courses taught:

Years	Role	Course
Princeton University (1998-2008):		
2000 – 2006	Co-coursemaster	*Molecular Basis of Cancer*
2002 – 2005	Co-coursemaster	*Structure, Function, and Diseases*
2006 – 2007	Coursemaster	*Structure, Function, and Diseases*
2005	Co-coursemaster	*Biochemistry*
2006 – 2007	Co-coursemaster	*Life and Death of A Cell*
2007 – 2009	Lecturer	*Molecular Basis of Cancer*
Tsinghua University (2008-present):		
2008 – present	Lecturer	*Frontiers in Biophysics*
2010 – present	Co-coursemaster	*Introduction to Structural Biology*
2011 – present	Coursemaster	*Logic and Method of Life Sciences*
2011 – present	Lecturer	*Ethics in Biomedical Research*

Invited Lectures （updated mostly through December 2010）**:**

Johns Hopkins University Oncology Center, Baltimore, Maryland (09/2/1998)

McArdle Colloquium, The McCardle Laboratory for Cancer Research, University of Wisconsin-Madison (10/27/1998)

Biological Seminar Series, Department of Chemistry, Pennsylvania State University-State College (12/14/1999)

Award lecture, Wilson S. Stone Memorial Award, University of Texas MD Anderson Cancer Center (01/09/2000)

Eli Lilly Biological Symposium, American Chemical Society Annual Spring Meeting, San Francisco, California (03/27/2000)

Guilford Pharmaceuticals, Inc. Baltimore, Maryland (09/14/2000)

Kimmel Cancer Center, Philadelphia, Pennsylvania (09/21/2000)

Department of Biophysics and Biophysical Chemistry, Johns Hopkins University School of Medicine, Baltimore, Maryland (10/18/2000)

International Symposium on Functional Genomics, Tsinghua University, Beijing, China (10/24/2000)

National Cancer Institute, Bethesda, Maryland (11/27/2000)

Department of Biology, City University of New York – Queens College, New York City (12/06/2000)

Ben May Institute for Cancer Research, University of Chicago, Chicago, Illinois (01/16/2001).

Department of Microbiology, Rutgers University, Newark, New Jersey (01/30/2001)

Biophysics Seminar Series, Department of Biochemistry and Molecular Biophysics, Columbia University, New York City (02/02/2001)

NCI- Screening Technologies Branch, Frederick, Maryland (02/05/2001)

Biological Chemistry Seminar Series, Department of Chemistry, University of Pennsylvania, Philadelphia, Pennsylvania (02/07/2001)

Norvartis Pharmaceuticals, Summit, New Jersey (02/09/2001)

Frontiers of Biological Sciences in the 21st Century, Beijing, China (06/23/2001)

Department of Biological Chemistry, University of Michigan, Ann Arbor, Michigan (09/11/2001)

Pfizer Pharmaceuticals, Ann Arbor, Michigan (09/12/2001)

Three-dimensional Pharmaceuticals, Exton, Pennsylvania (10/10/2001)

Programmed Cell Death Meeting, Cold Spring Harbor, NY (11/9-11/13/2001). Session co-chair and talk on 11/12/2001.

Department of Biochemistry, University of Texas Southwestern Medical Center, Dallas, Texas (11/28/2001)

Symposium on "Structural Biology of Human Diseases", University of Pennsylvania School of Medicine, Philadelphia, PA (1/25/2001)

ImClone, Inc. New York (1/31/2002)

New York Structural Biology Group Seminar, The Rockefeller University, NY (03/06/2002)

Symposium on Apoptosis, NIH (3/21-22/2002)

The Searle Scholars' Annual Meeting, Chicago, IL (4/21-23/2002)

Tufts University, Boston, MA (4/30/2002)

"Structural Biology of Cell Signaling", Life Science Institute Symposium, University of Michigan, Ann Arbor, Michigan (05/09/2002)

Glaxo-Smithkline Pharmaceuticals, Pennsylvania (5/23/2002)

Cell Death Society Annual Meeting, Australia (05/31/2002)

Center for Cancer Research, Zhongshan University, Guangzhou, China (06/05/2002)

Department of Immunology and Pathology, Washington University School of Medicine, St. Louis, MO (8/26/2002)

2nd International Symposium on Apoptosis, Shanghai, China (9/1/2002-9/3/2002)

The 16th annual CABM Symposium "Modeling human diseases", Center for Advanced Biotechnology and Medicine, Rutgers University, NJ (10/02/2002)

"Ubiquitination in Normal and Cancer Cells", AACR Special Conference, Vancouver, British Columbia, Canada (10/31/2002)

Department of Pharmacology and Cancer Biology, Duke University, Durham, NC (12/04/2002)

Session Chair, Keystone Symposium, "Molecular Mechanisms of Apoptosis", Banff, Alberta, Canada (2/8/2003 – 2/12/2003)

Memorial Sloan-Kettering Cancer Center, New York City, NY (2/28/2003)

Program in Chemistry and Chemical Biology, University of California-San Francisco, California (4/17/2003)

Professor Ying-Lai Wang Memorial Lecture (Keynote speech), the Annual Life Science Symposium, University of Texas Medical Branch at Galveston (5/23/2003)

Symposium on Apoptosis, Airplane House, Cape Cod, Massachusetts (6/1-4/2003)

Plenary session speaker (Award recipient), 17th Symposium of the Protein Society, Boston, Massachusetts (7/28/2003)

The Life Science Institute, University of Michigan, Ann Arbor, Michigan (8/7/2003)

Cold Spring Harbor Meeting on Programmed Cell Death, Cold Spring Harbor, NY (9/17-21/2003)

Department of Biology, Johns Hopkins University, Baltimore, Maryland (9/25/2003)

The Samuel Lunenfeld Research Institute, University of Toronto, Toronto, Canada (10/15/2003)

Department of Biophysics and Biochemistry, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania (10/22/2003)

Department of Biological Sciences and Biotechnologies, Tsinghua University, Beijing, China (10/30/2003).

Institute of Biophysics, Chinese Academy of Sciences, Beijing, China (10/31/2003)

Departments of Chemistry and Molecular and Cellular Biology, University of California-Berkeley (2/2/2004).

Organizer, 2004 Keystone Symposium, "Apoptosis in Biochemistry and Structural Biology", Keystone Resort, Keystone, Colorado, February 3 - 8, 2004.

Oncology, Bristol-Myers Squibb Company, Princeton, New Jersey (2/20/2004).

Dana-Farber Cancer Institute, Harvard Medical School, Cambridge, Massachusetts (3/2/2004).

Department of Pharmacology, UMDNJ-Robert Wood Johnson Medical School, Piscataway, New Jersey (4/15/2004).

School of Medicine, Johns Hopkins University, Baltimore, Maryland (4/22/2004).

Gordon Research Conference on Proteolytic Enzymes and Their Inhibitors (7/4/2004–7/9/2004).

Speaker and Session Chair, 10th Symposium of the Society of Chinese Bioscientists in America, Beijing, China (July 18–23, 2004).

Symposium "Signal Transduction: From Development to Disease", The Sidney Kimmel Comprehensive Cancer Center at the Johns Hopkins Medical School, Baltimore, Maryland (11/16/2004)

Division of Biology, California Institute of Technology, Pasadena, California (1/26/2005).

AACR Special Conference "Regulation of Cell Death in Oncogenesis", Waikoloa, Hawaii (January 26–30, 2005).

The Burham Institute, La Jolla, California (2/1/2005).

Merck Research Laboratory, West Point, Pennsylvania (3/9/2005).

Keynote Lecture, Yin-Lai Wang Memorial Symposium, University of Texas Medical Branch at Galveston, Texas (04/01/2005)

Keynote Lecture, Society of Chinese Bioscientists in America Texas Chapter, Houston, Texas (04/02/2005)

The Rockefeller University, New York (4/5/2005)

National Institutes of Health, Bethesda, Maryland (5/2/2005).

GTCBIO Cancer Drug Conference, Philadelphia, Pennsylvania (5/26/2005).

Opening seminar, Department of Molecular Biology, Princeton University, Princeton, NJ (9/14/2005).

Session co-chair, Cold Spring Harbor Meeting on Programmed Cell Death, Cold Spring Harbor, NY (9/21-25/2005).

Structural Biology Symposium, Annual Meeting of the Korean Society for Molecular and Cellular Biology, Seoul, Korea (10/17/2005).

National Institute of Biological Science, Beijing, China (10/20/2005).

Institute of Genetics and Development, Chinese Academy of Sciences, Beijing, China (11/3/2005).

5th International Conference on Protein Science, Beijing, China (11/5/2005).

Hamilton Memorial Lecture, Department of Biochemistry, Temple University, Philadelphia, Pennsylvania (11/11/2005).

Cell Biology Program, Memorial Sloan-Kettering Cancer Center, New York (11/18/2005).

The Cancer Institute of New Jersey, New Brunswick, NJ 08901 (2/1/2006).

Tri-institutional Structural Biology Seminar Program, New York City, NY (3/21/2006).

Postdoc-invited seminar & Departmental Colloquium, Department of Biology, MIT, Boston, MA (4/10/2006).

Students-invited seminar, Department of Biochemistry, Duke University Medical Center, Durham, NC (5/15/2006).

Plenary lecture, 10th Biophysics Society Meeting, Qingdao, China (5/25/2006).

Rita Allen Foundation for Systems Biology Symposium, Institute for Advanced Study, Princeton, NJ (6/21/2006).

Ubiquitin for Drug Discovery and Development Symposium, Strategic Research Institute, Philadelphia, PA (6/26-27/2006).

Department of Biology, Brookhaven National Laboratory, Long Island, NY (10/26/2006)

Special Seminar, Burnham Institute, La Jolla, CA (11/29/2006).

Distinguished Lecture Series, Fox Chase Cancer Center, Philadelphia, PA (12/07/2006).

Skirball Institute Seminar Series, New York University Medical Center, New York (3/16/2007).

Graduate students invited Biophysics colloquium, University of Texas Southwest Medical Center, Dallas, TX (3/19/2007).

Departmental Seminar, Department of Molecular Biophysics and Biochemistry, Yale University, New Haven, CT (3/26/2007).

Seminar Series, Abramson Family Cancer Research Institute, University of Pennsylvania, Philadelphia, PA (3/27/2007).

Institute Seminar Series, Stowers Institute, Kansas City, MO (3/28/2007).

Departmental Seminar, Department of Pharmacology Seminar Series, University of Pittsburgh, Pittsburgh, PA (3/30/2007).

Simmons Institute for System Biology, Institute for Advanced Studies, Princeton, NJ (4/6/2007).

Tri-institutional Structural Biology Seminar Program, New York City, NY (4/17/2007).

Keynote speech, Annual Meeting of the Swedish Structural Biology Network, Tällberg, Sweden (6/18/2007).

Organizer, Frontiers in Biological Sciences Symposium, Beijing, China (7/21-24/2007).

Frontiers in Biological Sciences Symposium, Wuhan, China (7/25-26/2007).

Seminar Program, Department of Chemistry, City University of New York, New York, NY (9/12/2007).

Session co-chair, Cold Spring Harbor Meeting on Programmed Cell Death, Cold Spring Harbor, NY (9/26-30/2007).

Seminar Program, Department of Physiology and Cellular Biophysics, College of Physicians & Surgeons, Columbia University, New York (10/9/2007).

Keynote Speech (Closing Lecture), 7th Asian Crystallographic Association Meeting, Taipei, Taiwan, ROC (11/7/2007).

6th International Symposium on Protein Science, Shanghai, China (11/9/2007).

Seminar Program, Department of Biochemistry, Brown University, Rhode Island (12/10/2007).

Keynote speech, Protein Society Symposium, Yantai, China (7/20/2008)

Keynote speech, 4th General Assembly of the Chinese Crystallography Society, Huangshan, China (July 28, 2008).

Speaker, Session C "Frontiers in Life Science", Inaugural Symposium "Mapping Frontiers of Science", Institute for Advanced Study, Hong Kong University of Science and Technology, Hong Kong (Jan. 5-6, 2009).

Session Chair and Speaker, Membrane Proteolysis, Biophysical Society Annual Meeting, Boston, MA (March 2, 2009).

Distinguished Lecture Series, NCI, NIH, Frederick, MD (May 18, 2009).

Plenary Lecture (Ying-Lai Wang Lectureship), 21st IUBMB, Shanghai, China (August 3, 2009).

Session Chair and Speaker, Cell Death Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY (October 8, 2009)

Frontiers in Basic Cancer Research, the AACR Conference Series, Boston, MA (October 9, 2009)

Membrane Protein Structure and Function, Asian Crystallographic Association Beijing 2009 Conference, Beijing, China (October 24, 2009)

Keynote lecture, 3rd Chinese Structural Biology Conference, Sanya, China (March 4, 2010)

Speaker, Cold Spring Harbor Suzhou Symposium "James Watson Symposium on Cancer", Suzhou, China (April 6-11, 2010)

Award Lecture for the Sackler Prize, Tel Aviv University, Tel Aviv, Israel (April 26, 2010)

Co-organizer and Speaker, Cold Spring Harbor Suzhou Symposium on "Membrane Protein Structure and Function", Suzhou, China (May 10-14, 2010)

Membrane Protein Symposium, Tsinghua University, Beijing, China (May 25, 2010).

Keynote Speech, Bayer Science Day Symposium, Wuppertal, Germany (September 8, 2010)

Special Symposium in Life Sciences, Institute of Molecular and Cellular Biology, Singapore (September 22, 2010)

Special Seminar, Zhongshan University, Guangzhou, China (October 21, 2010)

Plenary Speaker, The 2nd International and 11th National Symposium on Membrane Biology, Ningbo, China (November 9-12, 2010)

Seminar, School of Life Sciences, China Agricultural University, Beijing, China (December 15, 2010)

Award Lecture, Tan Jia-Zhen Life Science Achievement Award, Shanghai, China (December 20, 2010)

University Lecture, East China Normal University, Shanghai, China (December 20, 2010)

Seminars in 2011 and 2012 are yet to be updated.

Speaker, Cold Spring Harbor Asia Symposium on "Non-apoptotic Cell Death", Suzhou, China (April 15, 2013)

Ada Doisy Lectureship, University of Illinois Urbana-Champaign, Urbana, IL (April 26, 2013, together with Dr. Xiaodong Wang)

Keynote Address, Joint Symposium between University of Pittsburgh School of Medicine and Tsinghua University School of Medicine, Pittsburgh, PA (April 30, 2013)

Seminar, Memorial Sloan-Kettering Cancer Center, New York, USA (May 1, 2013)

Seminar, The Rockefeller University, New York, USA (May 2, 2013)

Keynote Speaker, Cold Spring Harbor Suzhou Symposium on "Membrane Protein Structure and Function", Suzhou, China (May 13-17, 2013)

Plenary lecture, Tsinghua-Rohm Symposium on Research and Development, Tsinghua University, Beijing (May 24, 2013)

Plenary Speaker, Engineering Conference International (ECI)'s Biochemical and Molecular Engineering Conference XVII, Beijing, China（June 16, 2013）

Keynote Lecture, HFSP Meeting, Strasbourg, France (July 7, 2013)

Invited Talk, SCBA International Symposium, Xi'An, China (July 22, 2013)

Special Seminar, Beijing Normal University, Beijing, China (November 27, 2013)

University Lecture Series, Wuhan University, Wuhan, China (December 3, 2013)

University Lecture Series, Harbin Institute of Technology, Harbin, China (March 18, 2014)

University Lecture Series, Harbin Medical University, Harbin, China (March 19, 2014)

Keynote Lecture, The Aminoff Prize Symposium 2014: Structural Biology of Cell Signaling, Karolinska Institute, Stockholm, Sweden (April 1, 2014)

Invited Seminar, Uppsala University, Uppsala, Sweden (April 2, 2014)

Invited Seminar, Bristol-Meyer Squibb, Princeton, USA (April 30, 2014)

Invited Seminar, Department of Molecular Biology, Princeton, USA (May 1, 2014)

Keynote Lecture, The 6th DIA (Drug Information Association) China Annual Meeting, Shanghai, China (May 11, 2014)

Invited Seminar, Institute of Genetics and Developmental Biology, Chinese Academy of Sciences (May 19, 2014)

Co-organizer and speaker, Cold Spring Harbor Asia Symposium on Structural Biology: from Atoms to Cells, Suzhou, China (June 9-13, 2014)

Publications:

(Significant publications are indicated with asterisks "***".)

(1) (***) Xiaochen Bai, Eeson Rajendra, Guanghui Yang, Yigong Shi[#], and Sjors H. W. Scheres[#] (2015). Sampling the conformational space of the catalytic subunit of human γ-secretase.
Elife. pii: e11182. doi: 10.7554/eLife.11182. [Epub ahead of print] (# indicates co-corresponding authors)

(2) (***) Mengying Zhou, Yini Li, Qi Hu, Xiaochen Bai, Weijiao Huang, Chuangye Yan, Sjors H. W. Scheres[#], and Yigong Shi[#] (2015). Atomic structure of the apoptosome: mechanism of cytochrome c- and dATP-mediated activation of Apaf-1. ***Genes Dev***. 29: 2349-61.

(3) (***) Jing Hang, Ruixue Wan, Chuangye Yan, and Yigong Shi (2015). Structural basis of pre-mRNA splicing. ***Science*** 349: 1191-1198.

(4) (***) Chuangye Yan, Jing Hang, Ruixue Wan, Min Huang, Catherine C. L. Wong, Yigong Shi (2015) . Structure of a yeast spliceosome at 3.6-angstrom resolution. ***Science*** 349: 1182-1191.

(5) (***) Xiao-chen Bai[#], Chuangye Yan, Guanghui Yang, Peilong Lu, Dan Ma, Linfeng Sun, Rui Zhou, Sjors H. W. Scheres[#], and Yigong Shi[#] (2015) . An atomic structure of human γ-secretase. ***Nature*** 512(7513): 166-170. Epub: August 17 2015. (# indicates co-corresponding authors)

(6) (***) Linfeng Sun, Lingyun Zhao, Guanghui Yang, Chuangye Yan, Rui Zhou, Xiaoyuan Zhou, Tian Xie, Yanyu Zhao, Shenjie Wu, Xueming Li, and Yigong Shi.(2015) Structural basis of human γ-secretase assembly. ***Proc Natl Acad Sci USA***. 112(19):6003-6008.

(7) (***) Shangyu Dang, Shenjie Wu, Jiawei Wang, Hongbo Li, Min Huang, Wei He, Yue-Ming Li, Catherine C. L. Wong, and Yigong Shi (2015) . Cleavage of amyloid precursor protein by an archaeal presenilin homologue PSH. ***Proc Natl Acad Sci USA***. 112(11):3344-9.

(8) (***) Yuxuan Pang, Xiao-chen Bai, Qi Hao, Chuangye Yan, Zheqin Chen, Jia-Wei Wang, Sjors H.W. Scheres[#], and Yigong Shi[#].(2015) Structure of the apoptosome: mechanistic insights into activation of an initiator caspase from Drosophila. ***Genes Dev.*** 29(3):277-87. (# indicates co-corresponding authors)

(9) Zhen Yan, Xiao-chen Bai, Chuangye Yan, Jianping Wu, Zhangqiang Li, Tian Xie, Wei Peng, Chang-cheng Yin, Xueming Li, Sjors H. W. Scheres[#], Yigong Shi[#], and Nieng Yan[#] (2015) Structure of the rabbit ryanodine receptor RyR1 at near-atomic resolution. ***Nature*** 517(7532):50-5. (# indicates co-corresponding authors)

(10) Yigong Shi (2014). A Glimpse of Structural Biology through X-Ray Crystallography. ***Cell*** 159(5):995-1014

(11) (***) Qi Hu, Di Wu, Wen Chen, Zhen Yan, Chuangye Yan, Tianxi He, Qionglin Liang and Yigong Shi (2014) . Molecular determinants of caspase-9 activation by the Apaf-1 apoptosome. ***Proc Natl Acad Sci USA***. 111(46):16254-61

(12) (***) Tian Xie, Chuangye Yan, Rui Zhou, Yanyu Zhao, Linfeng Sun, Guanghui Yang, Peilong Lu, Dan Ma and Yigong Shi. (2014) Crystal structure of the ¦Ã-secretase component nicastrin. ***Proc Natl Acad Sci USA***.16;111(37):13349-54.

(13) Sheng Wang, Renhong Yan, Xi Zhang, Qi Chu, and Yigong Shi (2014). Molecular mechanism of pH-dependent substrate transport by an arginine-agmatine antiporter. ***Proc Natl Acad Sci USA***.111(35):12734-9.

(14) (***) Peilong Lu, Xiao-chen Bai, Dan Ma, Tian Xie, Chuangye Yan, Linfeng Sun, Guanghui Yang, Yanyu Zhao, Rui Zhou, Sjors H. W. Scheres[#] & Yigong Shi[#] (2014). Three-dimensional structure of human gama-secretase. ***Nature*** 512(7513):166-70. (# indicates co-corresponding authors)

(15) Yigong Shi (2014). Life, career, and structural biology. ***Physica Scripta*** 89: 068004 (Commissioned Article)

(16) Jijie Chai, and Yigong Shi (2014). Apoptosome and inflammasome: conserved machineries for caspase activation. ***National Science Review*** 1(1):101-108 (Commissioned Review)

(17) Lijun Zhou, Yulin Zhou, Jing Hang, Ruixue Wan, Guifeng Lu, Chuangye Yan, Yigong Shi (2014). Crystal structure and biochemical analysis of the heptameric Lsm1-7 complex. ***Cell Res*** 24(4):497-500.

(18) (***) Peilong Lu, Dan Ma, Chuangye Yan, Xinqi Gong, Mingjian Du, Yigong Shi (2014). Structure and mechanism of a eukaryotic transmembrane ascorbate-dependent oxidoreductase. ***Proc Natl Acad Sci USA*** 111(5):1813-8.

(19) (***) Lijun Zhou, Jing Hang, Yulin Zhou, Ruixue Wan, Guifeng Lu, Ping Yin, Chuangye Yan, Yigong Shi (2013). Crystal structures of the Lsm complex bound to the 3' end sequence of U6 small nuclear RNA. ***Nature*** 506(7486):116-120.

(20) Ping Yin, Quanxiu Li, Chuangye Yan, Ying Liu, Junjie Liu, Feng Yu, Zheng Wang, Jiafu Long, Jianhua He, Hong-Wei Wang, Jiawei Wang, Jian-Kang Zhu, Yigong Shi, Nieng Yan (2013). Structural basis for the modular recognition of single-stranded RNA by PPR proteins. ***Nature*** 504(7478):168-71

(21) (***) Tian Xie, Wei Peng, Chuangye Yan, Jianping Wu, Xin Gong, Yigong Shi (2013). Structural insights into RIP3-mediated necroptotic signaling. ***Cell Rep***. 5(1):70-8

(22) (***) Weijiao Huang, Tianyu Jiang, Wooyoung Choi, Shiqian Qi, Yuxuan Pang, Qi Hu, Yanhui Xu, Xinqi Gong, Philip D. Jeffrey, Jiawei Wang, Yigong Shi. (2013). Mechanistic insights into CED-4-mediated activation of CED-3. ***Genes Dev.*** 27(18):2039-48.

(23) Yigong Shi (2013). Common folds and transport mechanisms of secondary active transporters. ***Annu Rev Biophys.*** 42:51-72. (Commissioned Review).

(24) Jing Liu, Ziqing Mei, Ningning Li, Yutao Qi, Yanji Xu, Yigong Shi, Feng Wang, Jianlin Lei, Ning Gao (2013). Structural dynamics of the MecA-ClpC complex: a type II AAA+ protein unfolding machine. ***J Biol Chem.*** 288(21):15148-53.

(25) Dan Ma, Peilong Lu, Yigong Shi (2013) Substrate Selectivity of the Acid-activated Glutamate-GABA Antiporter GadC from E. coli. ***J Biol Chem.*** 288(21):15148-53.

(26) (***) Tingliang Wang, Guobin Fu, Xiaojing Pan, Jianping Wu, Xinqi Gong, Jiawei Wang, Yigong Shi (2013) Structure of a bacterial energy-coupling factor transporter. ***Nature*** 497(7448):272-6.

(27) Qi Hu, Di Wu, Wen Chen, Zhen Yan, Yigong Shi (2013) Proteolytic Processing of Caspase-9 Zymogen Is Required for Apoptosome-mediated Activation of Caspase-9. ***J Biol Chem.*** 288(21):15142-7.

(28) (***) Hanchi Yan, Weiyun Huang, Chuangye Yan, Xinqi Gong, Sirui Jiang, Yu Zhao, Jiawei Wang, Yigong Shi (2013) Structure and mechanism of a nitrate transporter. ***Cell Rep.*** 3(3):716-23

(29) (***) Tian Xie, Wei Peng, Yexing Liu, Chuangye Yan, Jenny Maki, Alexei Degterev, Junying Yuan, Yigong Shi (2013) Structural Basis of RIP1 Inhibition by Necrostatins. ***Structure*** 21(3):493-499.

(30) (***) Weijiao Huang, Wooyoung Choi, Yuling Chen, Qi Zhang, Haiteng Deng, Wei He and Yigong Shi (2013) A proposed role for glutamine in cancer cell growth through acid resistance. ***Cell Res.*** 23(5):724-7 Epub: Jan 29.

(31) (***) Peilong Lu, Dan Ma, Yuling Chen, Yingying Guo, Guo-Qiang Chen, Haiteng Deng1, and Yigong Shi (2013) L-glutamine provides acid resistance for Escherichia coli through enzymatic release of ammonia. ***Cell Res.*** 23(5):635-44. Epub: Jan 22.

(32) (***) Xiaochun Li, Shangyu Dang, Chuangye Yan, Xinqi Gong, Jiawei Wang, and Yigong Shi (2012). Structure of a presenilin family intramembrane aspartate protease. ***Nature***, 493, 56-61. Epub 2012 Dec 19.

(33) Ping Yin, Dong Deng, Chuangye Yan, Xiaojing Pan, Jianzhong Jeff Xi, Nieng Yan, and Yigong Shi (2012). Specific DNA-RNA hybrid recognition by TAL effectors. ***Cell Rep.*** 2, 707-713.

(34) Dong Deng, Ping Yin, Chuangye Yan, Xiaojing Pan, Xin Gong, Siqian Qi, Tian Xie, Magdy Mahfouz, Jiankang Zhu, Nieng Yan, Yigong Shi (2012). Recognition of methylated DNA by TAL effectors. ***Cell Res.*** 22, 1502-1504. 2012 Sep 4. doi: 10.1038/cr.2012.127. [Epub ahead of print]

(35) Ada H. Wong, Chuangye Yan, Yigong Shi (2012). Crystal structure of the yeast metacaspase yca1. ***J Biol Chem.*** 287, 29251-29259. Epub 2012 Jul 2.

(36) (***) Dan Ma, Peilong Lu, Chuangye Yan, Chao Fan, Ping Yin, Jiawei Wang, and Yigong Shi (2012). Structure and mechanism of a glutamate-GABA antiporter. ***Nature*** 483, 632-636. 2012 Mar 11. doi: 10.1038/nature10917. [Epub ahead of print].

(37) (***) Di Wu, Qi Hu, Zhen Yan, Wen Chen, Chuangye Yan, Xi Huang, Jing Zhang, Panyu Yang, Haiteng Deng, Jiawei Wang, Xing Wang Deng, and Yigong Shi (2012). Structural basis of UV-B perception by UVR8. ***Nature***, .doi:10.1038/nature10931. Epub: 2012 Feb 29.

(38) (***) Weijiao Huang, Wooyoung Choi, Wanqiu Hu, Qiang Guo, Peilong Lu, Meisheng Ma, Feng-Liang Wang, Haiteng Deng, Lei Liu, Ning Gao, Li Yu, and Yigong Shi (2012). Beclin 1 is a novel membrane binding protein. ***Cell Research*** 22, 473-489. Epub: 2012 Feb 7.

(39) (***) Dong Deng, Chuangye Yan, Xiaojing Pan, Magdy Mahfouz, Jiawei Wang, Jian-Kang Zhu, Yigong Shi, and Nieng Yan (2012) Structural basis for the specific recognition of DNA by TAL effectors. ***Science*** 335，720-723, Epub: 2012 Jan 5.

(40) Jong W. Yu, Philip D. Jeffrey, Jun Yong Ha, Xiaolu Yang, Yigong Shi (2011). Crystal structure of the mucosa-associated lymphoid tissue lymphoma translocation 1 (MALT1) paracaspase region. ***Proc Natl Acad Sci USA*** 108, 21004-21009. Epub 2011 Dec 7.

(41) (***) Xiaochun Li, Jiawei Wang, and Yigong Shi (2011). Structural mechanisms of DIAP1 auto-inhibition and DIAP1-mediated inhibition of drICE. ***Nature Communications*** 2, 408. doi: 10.1038/ncomms1418.

(42) (***) Feng Wang, Ziqing Mei, Yutao Qi, Chuangye Yan, Qi Hu, Jiawei Wang, and Yigong Shi (2011). Structure and mechanism of the hexameric MecA-ClpC molecular machine. ***Nature*** 471, 331-335. Epub 2011 Mar 2.

(43) (***) Peng Zhang, Jiawei Wang, and Yigong Shi (2010). Structure and mechanism of the S component of a bacterial ECF transporter. ***Nature*** 468, 717-720. Epub 2010 Oct 24.

(44) (***) Shiqian Qi, Yuxun Pang, Qi Hu, Qun Liu, Hua Li, Yulian Zhou, Tianxi He, Qionglin Liang, Yexing Liu, Xiaoqiu Yuan, Guoan Luo, Huilin Li, Jiawei Wang, Nieng Yan, and Yigong Shi (2010). Crystal structure of the *Caenorhabditis elegans* apoptosome reveals an octameric assembly of CED-4. ***Cell*** 141, 446-457.

(45) Yide Mei, Jeongsik Yong, Hongtu Liu, Yigong Shi, Judy Meinkoth, Gideon Dreyfuss, and Xiaolu Yang (2010). tRNA binds to cytochrome c and inhibits caspase activation. ***Mol Cell*** 37, 668-678.

(46) (***) Xiang Gao, Lijun Zhou, Xuyao Jiao, Feiran Lu, Chuangye Yan, Xin Zeng, Jiawei Wang, and Yigong Shi (2010). Mechanism of substrate recognition and transport by an amino acid antiporter. ***Nature*** 463, 828-832. Epub 2010 Jan 20.

(47) David A Gell, Liang Feng, Suiping Zhou, Philip D. Jeffrey, William d'Avigdor, Andrew Gow, Mitchell J. Weiss, Yigong Shi and Joel P Mackay (2009). Alpha Haemoglobin Stabilizing Protein sets a conformational trap to stabilize alpha haemoglobin. ***J. Biol. Chem.*** 284, 29462-29469. Epub 2009 Aug 25..

(48) Yigong Shi (2009). Structure and Mechanism of Protein Serine/Threonine Phosphatases. ***Cell*** 139, 468-484.

(49) (***) Yi Wang, Yongjian Huang, Jiawei Wang, Chao Cheng, Weijiao Huang, Peilong Lu, Ya-Nan Xu, Pengye Wang, Nieng Yan, and Yigong Shi (2009). Structure of the formate transporter FocA reveals a pentameric aquaporin-like channel. ***Nature*** 462, 467-472.

(50) Huhn J, Jeffrey PD, Larsen K, Rundberget T, Rise F, Cox NR, Arcus V, Yigong Shi, Miles CO (2009). A structural basis for the reduced toxicity of dinophysistoxin-2. ***Chem Res Toxicol.*** 22, 1782-1786.

(51) Roelofs J, Park S, Haas W, Tian G, McAllister FE, Huo Y, Lee BH, Zhang F, Yigong Shi, Gygi SP, Finley D (2009). Chaperone-mediated pathway of proteasome regulatory particle assembly. ***Nature*** 459, 861-865.

(52) Feng Wang, Ziqing Mei, Yutao Qi, Chuangye Yan, Siheng Xiang, Zhiyuan Zhou, Qi Hu, Jiawei Wang, and Yigong Shi. (2009). Crystal structure of the MecA degradation tag. ***J. Biol. Chem.*** 284, 34376-81 [Epub ahead of print: Oct 2, 2009]

(53) Ziqing Mei, Feng Wang, Yutao Qi, Zhiyuan Zhou, Qi Hu,, Han Li, Jiawei Wu, and Yigong Shi. (2009). Molecular determinants of MecA as a degradation tag for the ClpCP protease. ***J. Biol. Chem.*** 284, 34366-75 [Epub ahead of print: Sep 18, 2009]

(54) (***) Xiaochun Li, Boyuan Wang, Lihui Feng, Hui Kang, Yang Qi, Jiawei Wang, and Yigong Shi (2009). Cleavage of RseA by RseP requires a carboxyl-terminal hydrophobic amino acid following DegS cleavage. ***Proc. Natl. Acad. Sci. USA*** 106, 14837-42 [Epub 2009 August 18].

(55) (***) Xiang Gao, Feiran Lu, Lijun Zhou, Shangyu Dang, Linfeng Sun, Xiaochun Li, Jiawei Wang, and Yigong Shi (2009). Structure and Mechanism of an Amino Acid Antiporter. ***Science*** 324, 1565-1568. Epub 2009 May 28.

(56) (***) Fan Zhang , Zhuoru Wu, Ping Zhang, Geng Tian, Daniel Finley, and Yigong Shi (2009). Mechanism of substrate unfolding and translocation by the regulatory particle of the proteasome from *Methanocaldococcus jannaschii*. ***Mol Cell*** 34, 485-496.

(57) (***) Fan Zhang , Min Hu, Geng Tian, Ping Zhang, Daniel Finley, Philip D. Jeffrey, and Yigong Shi (2009). Structural insights into the regulatory particle of the proteasome from *Methanocaldococcus jannaschii*. ***Mol Cell*** 34, 473-484.

(58) David C. Clarke, Meredith L. Brown, Richard A. Erickson, Yigong Shi, and Xuedong Liu (2009) Transforming growth factor β depletion is the primary determinant of Smad signaling kinetics. ***Mol Cell Biol.*** 29(9):2443-55. Epub 2009 Feb 17.

(59) (***) Jong W. Yu, Philip D. Jeffrey, and Yigong Shi (2009). Mechanism of procaspase-8 activation by c-FLIPL. ***Proc Natl Acad Sci USA*** 106, 8169-8174. Epub 2009 May 4.

(60) Yigong Shi (2009). Assembly and structure of protein phosphatase 2A. ***Sci China C Life Sci.*** 2009 Feb;52(2):135-46. Epub 2009 Mar 11.

(61) Xu Zhang, Jiawei Wang, Chao Fan, Hubo Li, Honghong Sun, Shunyou Gong, Youhai H. Chen, and Yigong Shi (2008). Crystal structure of TIPE2 reveals insights into immune homeostasis. ***Nature Struct Mol Biol.*** 16, 89-90. Epub 2008 Dec 14.

(62) Jong W. Yu and Yigong Shi (2008). FLIP and the death effector domain family. ***Oncogene*** 27, 6216-6227.

(63) (***) Yanhui Xu, Yu Chen, Ping Zhang, Philip D. Jeffrey, Yigong Shi (2008). Structure of a protein phosphatase 2A holoenzyme: insights into B55-mediated Tau dephosphorylation. ***Mol Cell*** 31, 873-885.

(64) Yigong Shi (2008). Apoptosome assembly. ***Methods Enzymol.*** 442, 141-156.

(65) Sinisa Urban and Yigong Shi (2008). Core principles of intramembrane proteolysis: comparison of rhomboid and site-2 family proteases. ***Curr Opin Struct Biol.*** 18, 432-441. 2008 Apr 26. [Epub ahead of print]

(66) (***) Yongna Xing, Zhu Li, Yu Chen, Philip D. Jeffery, and Yigong Shi (2008). Structural Mechanism of Demethylation and Inaction of Protein Phosphatase 2A. ***Cell*** 133, 154-163.

(67) Yigong Shi (2008). Deubiquitination of Lys63-linkage by a CYLD UBP. ***Structure*** 16, 338-340.

(68) (***) Yan Xu, Liang Feng, Philip D. Jeffrey, Yigong Shi*, and Francois M. M. Morel* (2008). Structure and metal exchange in the cadmium–carbonic anhydrase of marine diatoms. ***Nature*** 452, 56-61. (*co-corresponding authors)

(69) (***) Liang Feng, Hanchi Yan, Zhuoru Wu, Nieng Yan, Zhe Wang, Philip D. Jeffrey, and Yigong Shi (2007). Structure of a Site-2 Protease Family Intramembrane Metalloprotease. ***Science*** 318, 1608-1612.

(70) Nieng Yan and Yigong Shi (2007). Allosteric Activation of a Bacterial Stress Sensor. ***Cell*** 131, 441-443.

(71) Guozhou Chen, Philip D. Jeffrey, Clay Fuqua, Yigong Shi, and Lingling Chen (2007). Structural basis for antiactivation in bacterial quorum sensing. ***Proc Natl Acad Sci USA*** 104, 16474-9. Epub 2007 Oct 5.

(72) Rosanna P Baker, Keith Young, Liang Feng, Yigong Shi, Sinisa Urban (2007). Enzymatic analysis of a rhomboid intramembrane protease implicates transmembrane helix 5 as the lateral substrate gate. ***Proc Natl Acad Sci U S A.*** 104, 8257-8262. Epub 2007 Apr 26.

(73) Brooks CL, Muyang Li, Min Hu, Yigong Shi, Wei Gu (2007). The p53--Mdm2--HAUSP complex is involved in p53 stabilization by HAUSP. ***Oncogene*** 26(51), 7262-7266. Epub 2007 May 21.

(74) (***) Yu Chen*, Yanhui Xu*, Qing Bao, Yongna Xing, Zhu Li, Zheng Lin, Jeffry Stock, Philip P. Jeffrey, Yigong Shi (2007) Structural and biochemical insights into the regulation of protein phosphatase 2A by small t antigen of SV40. ***Nature Struct Mol Biol.*** 14(6), 527-34. Epub 2007 May 27.

(75) Aislyn D. Wist, Lichuan Gu, Stefan J. Riedl, Yigong Shi, George L. McLendon (2007). Structure-activity based study of the Smac-binding pocket within the BIR3 domain of XIAP. ***Bioorg Med Chem.*** 15(8), 2935-2943. Epub 2007 Feb 11.

(76) Adam Oberstein, Philip D. Jeffrey, Yigong Shi (2007). Crystal structure of the BCL-X_L-Beclin 1 peptide complex: Beclin 1 is a novel BH3-only protein. ***J. Biol. Chem.*** 2007 Mar 2; [Epub ahead of print].

(77) (***) Qing Bao, Wenyun Lu, Joshua D. Rabinowitz, and Yigong Shi (2007). Calcium blocks formation of apoptosome by blocking nucleotide exchange in Apaf-1. ***Mol. Cell*** 25, 181–191.

(78) (***) Yanhui Xu, Xing Yongna, Yu Chen, Yang Chao, Zheng Lin, Eugene Fan, Jong W. Yu, Stefan Strack, Philip D. Jeffrey, and Yigong Shi (2006). Structure of the Protein Phosphatase 2A Holoenzyme. ***Cell*** 127, 1239–1251.

(79) (***) Zhuoru Wu, Nieng Yan, Liang Feng, Adam Oberstein, Hanchi Yan, Rosanna P. Baker, Lichuan Gu, Philip D. Jeffrey, Sinisa Urban, and Yigong Shi (2006). Structural analysis of a rhomboid family intramembrane protease reveals a gating mechanism for substrate entry. ***Nature Structural & Molecular Biology*** 13, 1084-1091. 2006 Nov 10; [Epub ahead of print].

(80) (***) Xing Yongna, Yanhui Xu, Yu Chen, Philip D. Jeffrey, Yang Chao, Zheng Lin, Zhu Li, Stefan Strack, Jeffry B Stock, and Yigong Shi (2006). Structure of Protein Phosphatase 2A Bound to Tumor-inducing Toxins. ***Cell*** 127, 341-352.

(81) Qing Bao and Yigong Shi (2006) Apoptosome: a platform for the activation of initiator caspases. ***Cell Death Differ.*** 14, 56-65. [Epub 2006, Sep 15] (Commissioned Review)

(82) Yigong Shi (2006). Mechanical aspects of apoptosome assembly. ***Curr Opin Cell Biol.*** 18, 677-684.

(83) (***) Yang Chao, Yongna Xing, Yu Chen, Yanhui Xu, Zheng Lin, Zhu Li, Philip D. Jeffrey, Jeffry B. Stock and Yigong Shi (2006). Structure and Mechanism of the Phosphotyrosyl Phosphatase Activator. ***Mol. Cell*** 23, 535-546.

(84) Chonglin Yang, Nieng Yan, Jay Parish, Xiaochen Wang, Yigong Shi and Ding Xue (2006). RNA aptamers targeting the cell death inhibitor CED-9 induce cell killing in *C. elegans*. ***J. Biol. Chem.*** 281, 9137-9144. Epub 2006 Feb 8.

(85) Yigong Shi (2006). Structural Insights into Smad Function and Specificity (Book chapter). in ***Smad Signal Transduction: Smads in Proliferation, Differentiation, and Disease***, Edited by Peter ten Dijke and Carl-Henrik Heldin. Springer Press, pages 215-233. Springer publisher.

(86) Xia Lin, Xueyan Duan, Yao-Yun Liang, Ying Su, Katharine H. Wrighton, Jianyin Long, Min Hu, Candi M. Davis, Jinrong Wang, F. Charles Brunicardi, Yigong Shi, Ye-Guang Chen, Anming Meng, and Xin-Hua Feng (2006). PPM1A functions as a Smad phosphatase to terminate TGFβ signaling. ***Cell*** 125, 915-28.

(87) Nieng Yan, Jun R. Huh, Vrigil Schirf, Borries Demeler, Bruce A. Hay, and Yigong Shi (2006) Structure and activation mechanism of the *Drosophila* initiator caspase Dronc. ***J. Biol. Chem.*** 281, 8667-8674. Epub 2006 Jan 30.

(88) Nieng Yan, Yanhui Xu, and Yigong Shi (2006). 2:1 stoichiometry of the CED4–CED9 complex and the tetrameric CED-4: Insights into the regulation of CED-3 activation. ***Cell Cycle*** 5, 31-34. Epub 2006 Jan 18.

(89) (***) Min Hu, Lichuan Gu, Muyang Li, Philip D. Jeffrey, Wei Gu, and Yigong Shi (2006). Structural Basis of Competitive Recognition of p53 and MDM2 by HAUSP/USP7: Implications for the Regulation of the p53/MDM2 Pathway. ***PloS Biology*** 4, e27.

(90) Mitchell J. Weiss, Suiping Zhou, Liang Feng, David A. Gell, Joel P. Mackay, Yigong Shi and Andrew J. Gow (2005). The role of alpha hemoglobin stabilizing protein (AHSP) in normal erythropoiesis and β thalassemia. ***Ann N Y Acad Sci.*** 1054, 103-17.

(91) Feng-Yen Li, Philip D. Jeffrey, Jong W. Yu, and Yigong Shi (2005). Crystal Structure of a Viral FLIP: Insights into FLIP-mediated inhibition of death receptor signaling. ***J. Biol. Chem.*** 281, 2960-2968. Epub 2005 Nov 29.

(92) Xinchao Yu, Devrim Acehan, Jean-François Ménétret, Christopher R. Booth, Steven J. Ludtke, Stefan J. Riedl, Yigong Shi, Xiaodong Wang, and Christopher W. Akey (2005). A structure of the human apoptosome at 12.8 Å resolution provides insights into this cell death platform. ***Structure*** 13(11):1725-35.

(93) Yigong Shi (2005). Activation of Initiator Caspases: History, Hypotheses, and Perspectives. ***J. Cancer Mol.*** 1, 9–18.

(94) (***) Min Hu*, Pingwei Li*, Ling Song, Philip D. Jeffrey, Tatiana A. Chenova, Keith D. Wilkinson, Robert E. Cohen, and Yigong Shi (2005). Structure and mechanisms of the proteasome-associated deubiquitinating enzyme USP14. ***EMBO J***. 24, 3747-3756. Epub 2005 Oct. 6. (*equal contributions)

(95) (***) Nieng Yan, Jijie Chai, Eui Seung Lee, Lichuan Gu, Qun Liu, Jiaqing He, Jia-Wei Wu, David Kokel, Huilin Li, Quan Hao, Ding Xue, and Yigong Shi (2005). Structure of the CED-4/CED-9 complex provides insights into programmed cell death in *Caenorhabditis elegans.* ***Nature*** 437, 831–837.

(96) Nieng Yan and Yigong Shi (2005). Mechanisms of Apoptosis through Structural Biology. ***Annu. Rev. Cell Dev. Biol.*** 21, 35–56.

(97) (***) Yang Chao*, Eric N. Shiozaki*, Srinivasa M. Srinivasula, Daniel J. Rigotti, Robert Fairman, and Yigong Shi (2005). Engineering a Dimeric Caspase-9: A Re-evaluation of the Induced Proximity Model for Caspase Activation. ***PloS Biology*** 3 (6): e183. Epub 2005 May 10. (*equal contributions)

(98) **(***)** Liang Feng*, Suiping Zhou*, Lichuan Gu*, David A. Gell, Joel P. Mackay, Mitchell J. Weiss, Andrew J. Gow, and Yigong Shi (2005). Structure of the oxidized α hemoglobin bound to AHSP reveals a protective mechanism for heme. ***Nature*** 435, 697–701. (*equal contributions)

(99) Qing Bao, Stefan J. Riedl, and Yigong Shi (2005). Structure of Apaf-1 in the Auto-inhibited Form: A Critical Role for ADP. ***Cell Cycle*** 4 (8), 1001–1003.

(100) (***) Stefan J. Riedl, Wenyu Li, Yang Chao, Robert Schwarzenbacher, and Yigong Shi (2005). Structure of the apoptotic protease activating factor 1 (Apaf-1) bound to ADP. ***Nature*** 434, 926–933.

(101) Michael D. Tibbetts, Eric N. Shiozaki, Lichuan Gu, E. Robert McDonald III, Wafik S. El-Deiry and Yigong Shi (2004). Crystal Structure of a Novel FYVE-type Zinc Finger Domain from the Caspase Regulator CARP2. ***Structure*** 12, 2257–2263.

(102) **(***)** Liang Feng*, David A. Gell*, Suiping Zhou*, Lichuan Gu, Yi Kong, Jianqing Li, Min Hu, Nieng Yan, Christopher Lee, Anne M. Rich, Robert S. Armstrong, Peter A. Lay, Andrew J. Gow, Mitchell J. Weiss, Joel P. Mackay, and Yigong Shi (2004). Molecular Mechanism of AHSP-mediated Stabilization of α-hemoglobin. ***Cell*** 119, 629–640. (*equal contributions)

(103) Ping La, Albert C. Silva, Zhaoyuan Hou, Haoren Wang, Robert W. Schnepp, Nieng Yan, Yigong Shi, and Xianxin Hua (2004). Direct Binding of DNA by Tumor Suppressor Menin. ***J. Biol. Chem.*** 279, 49045–49054.

(104) Stefan J. Riedl and Yigong Shi (2004). Molecular mechanisms of caspase regulation during apoptosis. ***Nature Review – Mol. Cell. Biol.*** 5, 897–907.

(105) **(***)** Nieng Yan*, Lichuan Gu*, David Kokel, Jijie Chai, Wenyu Li, Aidong Han, Lin Chen, Ding Xue, and Yigong Shi (2004). Structural, Biochemical and Functional Analyses of CED-9 Recognition by the Pro-apoptotic Proteins EGL-1 and CED-4. ***Mol. Cell*** 15, 999–1006. (*equal contributions)

(106) Eric N. Shiozaki and Yigong Shi (2004). Caspases, IAPs, and Smac/DIABLO: Mechanisms from Structural Biology. ***Trends Biochem. Sci.*** 29 (9), 486–494.

(107) Yigong Shi (2004). Caspase Activation, Inhibition, and Re-activation: A Mechanistic View. ***Protein Science*** 13,1979-1987.

(108) Yigong Shi (2004). Caspase Activation: Revisiting the Induced Proximity model. ***Cell*** 117, 855–858 (Mini-review).

(109) **(***)** Eric N. Shiozaki, Lichuan Gu, Nieng Yan, and Yigong Shi (2004). Structure of the BRCT Repeats of BRCA1 bound to a BACH1 Phosphopeptide: Implications for Signaling. ***Mol. Cell*** 14, 405–412.

(110) **(***)** Nieng Yan, Jia-Wei Wu, Jun R. Huh, Jijie Chai, Wenyu Li, Bruce A. Hay, and Yigong Shi (2004). Molecular mechanisms of DrICE inhibition by DIAP1 and removal of inhibition by Reaper, Hid, and Grim. ***Nature-Structural & Molecular Biology*** 11 (5), 420–428.

(111) Joshua P. Frederick, Nicole T. Liberati, David S. Waddel, Yigong Shi, and Xiao-Fan Wang (2004). Transforming Growth Factor ß-Mediated Transcriptional Repression of c-*myc* Is Dependent on Direct Binding of Smad3 to a Novel Repressive Smad Binding Element. ***Mol. Cell. Biol.*** 24 (6), 2546–2559.

(112) Jun R. Huh, Stephanie Y. Vernooy, Hong Yu, Nieng Yan, Yigong Shi, Ming Guo, Bruce A. Hay (2004). Multiple apoptotic caspase cascades are required in non-apoptotic roles for *Drosophila* spermatid individualization. ***PLoS Biology*** 2, 43–53.

(113) Nieng Yan and Yigong Shi (2003). Histone H1.2 as a trigger for apoptosis (News and Views). ***Nature-Structural Biology*** 10, 983-985.

(114) **(***)** Jijie Chai*, Nieng Yan*, Jun R. Huh, Jia-Wei Wu, Wenyu Li, Bruce A. Hay, and Yigong Shi (2003). Molecular mechanism of Reaper/Grim/Hid-mediated suppression of DIAP1-dependent Dronc ubiquitination. ***Nature-Structural Biology*** 10, 892-898 (The single asterisk indicates equal contributions.)

(115) Constance J. Glover, Karen Hite, Renee DeLosh, Dominic A. Scudiero, Matthew J. Fivash, Lindsey R. Smith, Robert J. Fisher, Jia-Wei Wu, Yigong Shi, Rachael A. Kipp, George L. McLendon, Edward A. Sausville and Robert H. Shoemaker (2003). A high-throughput screen for identification of molecular mimics of Smac/DIABLO utilizing a fluorescence polarization assay. ***Analytical Biochemistry*** 320, 157-169.

(116) Yigong Shi and Joan Massagué (2003). Mechanisms of TGF-β signaling from Cell Membrane to the Nucleus. (commissioned review article) ***Cell*** 113, 685-700.

(117) Jijie Chai, Jia-Wu Wu, Nieng Yan, Joan Massagué, Nikola P. Pavletich, Yigong Shi (2003). Features of a Smad3 MH1-DNA complex: Roles of water and zinc in DNA binding. ***J. Biol. Chem.*** 278, 20327-20331.

(118) Yigong Shi (2003). Structural Biology of Programmed Cell Death. (Book chapter). in ***Essentials of Apoptosis: A Guide for Basic and Clinical Research***, Humana Press, pages 47-66.

(119) **(***)** Eric N. Shiozaki, Jijie Chai, Daniel J. Rigotti, Stefan J. Riedl, Pingwei Li, Srinivasa M. Srinivasula, Emad S. Alnemri, Robert Fairman, and Yigong Shi (2003). Mechanism of XIAP-mediated Inhibition of Caspase-9. ***Mol. Cell*** 11, 519-527. (COVER of the February issue).

(120) **(***)** Min Hu, Pingwei Li, Muyang Li, Wenyu Li, Tingting Yao, Jia-Wei Wu, Wei Gu, Robert E. Cohen, and Yigong Shi (2002). Crystal Structure of a UBP-family Deubiquitinating Enzyme in Isolation and in Complex with Ubiquitin Aldehyde. ***Cell*** 111, 1041-1054.

(121) Xiaochen Wang, Chonglin Yang, Jijie Chai, Yigong Shi, Ding Xue (2002). Mechanisms of AIF-mediated apoptotic DNA degradation in *Caenorhabditis elegans.* ***Science*** 298, 1587-1592.

(122) **(***)** Jia-Wei Wu, Ariel R. Krawitz, Jijie Chai, Wenyu Li, Fangjiu Zhang, Kunxin Luo, and Yigong Shi (2002). Structural Mechanism of Smad4 Recognition by the Nuclear Oncoprotein Ski: Insight on Ski-Mediated Repression of TGF-β Signaling. ***Cell*** 111, 357-367.

(123) Rachael A. Kipp, Martin A. Case, Aislyn D. Wist, Catherine M. Cresson, Maria Carrell, Erin Griner, Arun Wiita, Philip A. Albiniak, Yigong Shi, Martin F. Semmelhack, and George L. McLendon (2002). Molecular Targeting of Inhibitor of Apoptosis Proteins Based on Small Molecule Mimics of Natural Binding Partners. ***Biochem*** 41, 7344-7349.

(124) (***) Wenyu Li, Jijie Chai, Srinivasa M. Srinivasula, Emad S. Alnemri, and Yigong Shi (2002). Structure of the Mitochondrial Serine Portease Omi/HtrA2: Insights for Its Proapoptotic Function. ***Nature Struct. Biol.*** 9, 436-441.

(125) (***) Eric Shiozaki, Jijie Chai, and Yigong Shi (2002). Oligomerization and Activation of Caspase-9 Induced by the CARD Domain of Apaf-1. ***Proc. Natl. Acad. Sci. USA*** 99, 4197-4202.

(126) Yigong Shi (2002). Mechanisms of Caspase Activation and Inhibition During Apoptosis (commissioned review article). ***Mol Cell*** 9, 459-470.

(127) Yigong Shi (2002). Apoptosome: the cellular engine for the activation of caspase-9. (Mini-review). ***Structure*** 10, 285-288.

(128) Srinivasa M. Srinivasula, Pinaki Datta, Masatomo Kobayashi, Miki Fujioka, Jia-Wei Wu†, Ramesh Hegde, ZhiJia Zhang, Rula Mukattash, Teresa Fernandes-Alnemri, Yigong Shi, James B. Jaynes and Emad S. Alnemri (2002). *Sickle*, a novel *Drosophila* death gene in the *reaper/hid/grim* region encodes an IAP-inhibitory protein. ***Curr. Biol.*** 12, 125-130.

(129) Yigong Shi (2002). A conserved tetrapeptide motif: Potentiating apoptosis through IAP-binding. ***Cell Death Differ.*** 9, 93-95.

(130) **(***)** Jia-Wei Wu, Min Hu, Jijie Chai, Morgan Huse, Carey Li, Saw Kyin, Robert Fairman, Tom Muir, Joan Massagué, and Yigong Shi (2001). Crystal Structure of a Phosphorylated Smad2: Recognition of Phosphoserine Motif and Insights on Smad Function in TGF-β Signaling. ***Mol. Cell*** 8, 1277-1289. (COVER of the December issue)

(131) Stephen W. Fesik and Yigong Shi (2001). Controlling the Caspases. (Perspectives) ***Science*** 294, 1477-1478.

(132) (***) Jijie Chai Qi Wu, Eric Shiozaki, Srinivasa M. Srinivasula, Emad S. Alnemri, and Yigong Shi (2001). Crystal Structure of a Caspase Zymogen: Mechanisms of Activation and Substrate Binding. ***Cell*** 107, 399-407.

(133) **(***)** Jia-Wei Wu, Amy Cocina, Jijie Chai, Bruce Hay, and Yigong Shi (2001). Structural Analysis of a Functional DIAP1 Fragment Bound to Grim and Hid Peptides. ***Mol. Cell*** 8, 95-104.

(134) Jia-Wei Wu, Jack Penry, Robert Fairman, and Yigong Shi (2001). Formation of a Stable Heterodimer between Smad2 and Smad4. ***J. Biol. Chem.*** 276, 20688-20694.

(135) Yigong Shi (2001). A Structural View of the Mitochondria-mediated Apoptosis. (Commissioned review article) ***Nature-Structural Biology***. 8, 394-401.

(136) **(***)** Jijie Chai, Eric Shiozaki, Srinivasa M. Srinivasula, Qi Wu, Pinaki Datta, Emad S. Alnemri, and Yigong Shi (2001). Structural Basis of Caspase-7 Inhibition by XIAP. ***Cell*** 104, 769-780.

(137) Srinivasa M. Srinivasula, Ayman Saleh, Ramesh Hedge, Pinaki Datta, Eric Shiozaki, Paul D. Robbins, Teresa Fernandes-Alnemri, Yigong Shi, and Emad S. Alnemri (2001). A conserved XIAP-interaction motif in caspase-9 and Smac/DIABLO mediates opposing effects on caspase activity and apoptosis. ***Nature*** 409, 112-116 (2001)**.**

(138) Yigong Shi (2001). Structural Insights on Smad Function in TGF-β signaling. (Commissioned review article) ***BioEssays*** 23, 223-232 (2001).

(139) **(***)** Geng Wu*, Jijie Chai*, Tomeka Suber, Jia-Wei Wu, Chunying Du, Xiaodong Wang, and Yigong Shi (2000). Structural Basis of IAP Recognition by Smac/DIABLO. ***Nature*** 408, 1008-1012. (*These authors contributed equally.)

(140) **(***)** Jijie Chai, Chunying Du, Jia-Wei Wu, Saw Kyin, Xiaodong Wang, and Yigong Shi (2000). Structural and Biochemical Basis of Apoptotic Activation by Smac/DIABLO. ***Nature*** 406, 855-862. (COVER of the August 24th issue.)

(141) Yigong Shi (2000). Survivin structure: crystal unclear. ***Nature-Structural Biology*** 7, 620-623. (News and Views article)

(142) Sha Ha, Debbie Walker, Yigong Shi, and Suzanne Walker (2000). The 1.9 Å crystal structure of Escherichia coli MurG, a membrane-associated glycosyltransferase involved in peptidoglycan biosynthesis.. ***Portein Sci.*** 9, 1045-1052.

(143) **(***)** Geng Wu, Ye-Guang Chen, Barish Ozdamar, Cassie Gyuricza, P. Andrew Chong, Jeffrey L. Wrana, Joan Massagué, and Yigong Shi (2000). Structural Basis of Smad2 Recruitment by the Smad Anchor for Receptor Activation (SARA). ***Science*** 287, 92-97.

(144) Xianxin Hua, Zachary Miller, Geng Wu, Yigong Shi, Harvey F. Lodish (1999). Specificity in TGF-β-induced Transcription: Interactions of Promoter DNA, Smad3 and TFE3. ***Proc. Natl. Acad. Sci.*** 96, 13130-13135.

(145) (***) Hongxu Qin, Srinivasa M. Srinivasula, Geng Wu, Emad S. Alnemri, Yigong Shi (1999). Structural Basis of Procaspase-9 Recruitment by the Apoptotic Protease Activating Factor 1. ***Nature*** 399, 549-557.

(146) Shi-Du Yan, Yigong Shi, et al. (1999). Role of ERAB/L-3-hydroxyacyl-coenzyme A dehydrogenase type II activity in β-Amyloid-induced cytotoxicity. ***J. Biol. Chem.*** 274, 2145-2156.

(147) **(***)** Yigong Shi, Yan-Fei Wang, Lata Jayaraman, Haijuan Yang, Joan Massagué, and Nikola Pavletich (1998). Crystal Structure of A Smad MH1 Domain Bound to DNA: Insights on DNA-binding in TGF-β Signaling. ***Cell***, 94, 585-594.

(148) Jie-Oh Lee, Haijuan Yang, Maria-Magdalena, Antonio Di Cristofano, Tomohiko Maehama, Yigong Shi, Jack E. Dixon, Pier P. Pandolfi, and Nikola P. Pavletich (1999). Crystal Structure of the PTEN Tumor Suppressor: Implications for Its Phosphoinositide Phosphatase Activity and Membrane Association. ***Cell*** 99, 323-334.

(149) Akiko Hata, Yigong Shi, and Joan Massagué (1998). TGF-β Signaling and Cancer: Structural and Functional Consequences of Mutations in Smads. ***Molecular Medicine Today***, 4, 257-262.

(150) Ye-Guang Chen, Akiko Hata, Roger S. Lo, David Wotton, Yigong Shi, Nikola P.Pavletich, and , Joan Massagué (1998). Determinants of Specificity in TGF-β Signal Transduction. ***Genes and Development***, 12, 2144-2152.

(151) Roger S. Lo, Ye-Guang Chen, Yigong Shi, Nikola P. Pavletich, and Joan Massagué (1997) The L3 loop: a structural motif determining specific interactions between SMAD proteins and TGF-β receptors. ***EMBO J.,*** 17, 996-1005.

(152) **(***)** Yigong Shi, Akiko Hata, Joan Massagué and Nikola P. Pavletich (1997) A structural basis for mutational inactivation of the tumour suppressor Smad4. ***Nature*** 388, 87-93.

(153) Yang-Gyun Kim, Yigong Shi, Jeremy M. Berg, and Srinivasan Chandrasegaran (1997) Site-specific cleavage of DNA-RNA hybrids by zinc finger/Fok I cleavage domain fusions. ***Gene***,.203, 43-49.

(154) Yigong Shi and Jeremy M. Berg (1996) DNA unwinding induced by zinc finger protein binding. ***Biochemistry*** 35, 3845-3848.

(155) Jeremy M. Berg and Yigong Shi (1996) The Galvanization of Biology: A Growing Appreciation for the Roles of Zinc. ***Science*** 271, 1081-1085.

(156) **(***)** Yigong Shi and Jeremy M. Berg (1995) Specific DNA-RNA Hybrid Binding by Zinc Finger Proteins. ***Science*** 268, 282-284.

(157) Yigong Shi and Jeremy M. Berg (1995) A Direct Comparison of the Properties of Natural and Designed Zinc Finger Proteins. ***Chemistry and Biology,*** 2, 83-89.

(158) Yigong Shi, Richard D. Berger and Jeremy M. Berg (1993) Metal Binding Properties of Single Amino Acid Deletion Mutants of Zinc Finger Peptides: Studies Using Cobalt(II) as a Spectroscopic Probe. ***Biophysical J.*** 64, 749-753.