

Curriculum Vitae**Kim, Youngchang, Ph.D.**

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EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Seoul National University	B.S.	1978-82	Chemical Ed.
Seoul National University	M.S.	1982-84	Chemistry
University of Pittsburgh	Ph.D.	1984-90	Crystallography

PROFESSIONAL EXPERIENCE:

7/90 - 7/91	Research Associate, Department of Biological Sciences, University of Pittsburgh
8/91 - 9/94	Postdoctoral Associate/Fellow, Department of Molecular Biophysics and Biochemistry, Yale University, New Haven, Connecticut
10/94 - 7/01	Assistant Professor, Department of Biochemistry, Vanderbilt University, Nashville, Tennessee
10/94- 7/01	Member, The Vanderbilt Cancer Center, Vanderbilt University Medical Center, Nashville, Tennessee
10/94- 4/99	Advisory Member, The Molecular Biophysics, Vanderbilt University, Nashville, Tennessee
4/99 - 7/01	Member, The Molecular Biophysics, Vanderbilt University, Nashville, Tennessee
7/00 - 7/01	Sabbatical, Biosciences/Structural Biology, Argonne National Laboratory, Argonne, Illinois
7/01 -	Scientist (Protein Crystallographer), Biosciences/Structural Biology, Argonne National Laboratory, Argonne, Illinois
12/10-	Adjunct Professor, Division of Molecular and Life Sciences, Pohang University of Science and Technology

AWARDS

3/92 - 3/94	Postdoctoral Fellowship, The National Institutes of Health, Yale University
6/95- 6/96	University Research Council, Vanderbilt University
1/96-12/96	American Cancer Society Institutional Award
12/96-11/98	DRTC/Pilot and Feasibility Project
4/97-3/98	Center in Molecular Toxicology Pilot Project
5/99-4/00	Vanderbilt Cancer Center Pilot Project
7/99-6/02	American Cancer Society Research Project Grant

12/19/05 Pacesetter, Argonne National Laboratory

Publications selected from 63 peer-reviewed

1. Podust, L., Krezel, A. M., and **Kim, Y.**, (2001) "Crystal Structure of C/EBP β -ATF4 bZIP Heterodimer in the Absence of DNA: α -Helix in the Basic Region of ATF4 bZIP Forms Prior to Binding to DNA", *J. Biol.Chem.*, 276,1, 505-513. PMID: 11018027
2. Zhang, R-G, **Kim, Y.**, Skarina, T., Beasley, S., Laskowski, R., Arrowsmith, C. H., Edwards, A.M., Joachimiak, A., and Savchenko, A. (2002) "Crystal Structure of Thermotoga *maritima* 0065 – a member of IclR transcriptional factor family", *J. Biol. Chem.*, 277, 21, 19183-19190. PMID: 11877432
3. Jacobs, S. A., Harp, J. M., Devarakonda, S., **Kim, Y.**, Rastinejad, F., and Khorasanizadeh, S. (2002), "The active site of the SET family of histone methyltransferase is constructed on a knot", *Nat Struct Biol.* 9(11):833-8. PMID: 12389038
4. Lee, C., Hong, B., Choi, J.M., Kim, Y., Watanabe, S., Ishimi, Y., Enomoto, T., Tada, S., **Kim, Y.**, Cho, Y. (2004), Structural basis for inhibition of the replication licensing factor Cdt1 by geminin. *Nature.* 430(7002):913-7. PMID: 15286659
5. J. F. Flanagan, L.-Z. Mi, M. Chruszcz, M. Cymborowski, K. L. Clines, **Y. Kim**, W. Minor., F. Rastinejad & S. Khorasanizadeh, (2005)," Cooperation of Double Chromodomains for the Recognition of the Methylated Histone H3 Tail", *Nature*, 438(7071):1181-5. PMID: 16372014
6. Jain D, **Kim Y**, Maxwell KL, Beasley S, Zhang R, Gussin GN, Edwards AM, Darst SA, (2005), "Crystal structure of bacteriophage lambda cII and its DNA complex", *Mol Cell.*;19(2):259-69 PMID: 16039594
7. Sherman DH, Li S, Yermalitskaya LV, **Kim Y**, Smith JA, Waterman MR, Podust LM. "The structural basis for substrate anchoring, active site selectivity, and product formation by P450 PikC from *Streptomyces venezuelae*.", (2006) *J Biol Chem.* 281(36):26289-26297 PMID: 16825192
8. Yeo HJ, Yokoyama T, Walkiewicz K, **Kim Y**, Grass S, Geme JW 3rd., "The structure of the Haemophilus influenzae HMW1 pro-piece reveals a structural domain essential for bacterial two-partner secretion", (2007), *J. Biol Chem.* 282(42):31076-84. PMID: 17699157
9. Pflieger BF, **Kim Y**, Nusca TD, Lee JY, Rath CM, Scaglione JL, Janes B, Bergman N, Hanna P, Joachimiak A, and Sherman DH, (2008), "Structural and Functional Analysis of AsbF: Origin of the Stealth 3,4-Dihydroxybenzoic Acid Subunit for Petrobactin Biosynthesis", *Proc Natl Acad Sci USA*, 105(44) 17133-17138. (PMCID: 18955706).
10. Nettles KW, Bruning JB, Gil G, Nowak J, Sharma SK, Hahm JB, Kulp K, Hochberg RB, Zhou H, Katzenellenbogen JA, Katzenellenbogen BS, **Kim Y**, Joachimiak A, Greene GL. (2008), "NFkappaB selectivity of estrogen receptor ligands revealed by comparative crystallographic analyses.", *Nat Chem Biol.* 4(4):241-247. (PMID: 18344977)
11. **Kim Y.**, et al., "Large-scale evaluation of protein reductive methylation for improving protein crystallization", *Nat Methods.* 2008; 5(10), 853-854. (PMID: 18825126)
12. Zawadzka A.M, **Kim Y.**, Maltseva N, Nichiporuk R, Fan Y, Joachimiak A, Raymond K.N. Characterization of a *Bacillus subtilis* transporter for petrobactin, an anthrax stealth siderophore (2009) *Proc. Nat. Acad. Sci USA*, 106(51) 21854-21859. (PMID: 19955416)
13. **Kim Y**, Zhou M, Moy S, Morales J, Cunningham MA, Joachimiak A. (2010) High-Resolution Structure of the Nitrile Reductase QueF Combined with Molecular Simulations Provide Insight into Enzyme Mechanism., *J Mol Biol.*, 404(1):127-37 (PMID: 20875425)
14. **Kim Y**, Joachimiak G, Ye Z, Binkowski TA, Zhang R, Gornicki P, Callahan SM, Hess WR, Haselkorn R, Joachimiak A. (2011) Structure of transcription factor HetR required for heterocyst differentiation in cyanobacteria. *Proc Natl Acad Sci U S A.* 108(25):10109-14 (PMID: 21628585).
15. **Kim Y**, Tesar C, Mire J, Jedrzejczak R, Binkowski A, et al. (2011) Structure of Apo- and

- Monometalated Forms of NDM-1—A Highly Potent Carbapenem-Hydrolyzing Metallo- β -Lactamase. PLoS ONE 6(9): e24621. doi:10.1371/journal.pone.0024621
16. Makowska-Grzyska M, **Kim Y**, Wu R, Wilton R, Gollapalli DR, Wang XK, Zhang R, Jedrzejczak R, Mack JC, Maltseva N, Mulligan R, Binkowski TA, Gornicki P, Kuhn ML, Anderson WF, Hedstrom L, **Joachimiak A.**, Bacillus anthracis Inosine 5'-Monophosphate Dehydrogenase in Action: The First Bacterial Series of Structures of Phosphate Ion-, Substrate-, and Product-Bound Complexes., Biochemistry. 2012, 51 (31), 6148-6163 PMID: 22788966
 17. Tyler D. Nusca, **Youngchang Kim**, Natalia Maltseva, William Eschenfeldt, Lucy Stols, Michael M. Schofield, Jamie B. Scaglione, Shandee D. Dixon, Daniel Oves-Costales, Gregory L. Challis, Philip C. Hanna, Brian F. Pflieger Andrzej Joachimiak, and David H. Sherman. (2012), Functional and Structural Analysis of Siderophore Synthetase AsbB through Reconstitution of Petrobactin Biosynthetic Pathway from *Bacillus anthracis.*, J Biol Chem. 287 (19), 16058-16072, PMC3346087