

ICK CHAN KWON, PH.D.



Principal Research Scientist
Biomedical Research Institute
Korea Institute of Science and Technology (KIST)
14-gil 5, Hawrang-ro, Sungbuk-gu
Seoul 02792, Korea

E-mail: ikwon@kist.re.kr
Tel: +82 2 958 5912
Fax: +82 2 958 5909
CP: +82 10 2959 5912
twitter@doubleparr

Updated on Oct 12, 2017

EDUCATION/TRAINING

B.S., Seoul National University, Seoul, Korea, 1982, Textile Engineering
M.S., Seoul National University, Seoul, Korea, 1984, Textile Chemistry
Ph.D., University of Utah, Salt Lake City, Utah, USA, 1993, Pharmaceutics and Pharmaceutical Chemistry
Post-Doctoral Fellow, Center for Controlled Delivery, University of Utah, Salt Lake City, Utah, USA, 1993-1994

DISSERTATION

Ph.D. Thesis; Electric current sensitive polymers for drug delivery
June 1993, Department of Pharmaceutics and Pharmaceutical Chemistry
The University of Utah, Supervisor: Dr. Sung Wan Kim

CARRIER

08/84 - 02/85 Military Service, Reserved Second Lieutenant
09/91 - 12/91 Visiting Scientist in International Center for Biomaterial Science, Institute for Bioscience,
Science University of Tokyo, Chiba, Japan. (Advisors, Prof. T. Okano, & Prof. K. Kataoka)

POSITION

3/84 - 7/87 Research Scientist, Lab of Polymer Chemistry, KIST
2/94 - 2/98 Senior Research Scientist, Biomedical Research Center, KIST
3/98 - 2/11 Principal Research Scientist, Biomedical Research Center, KIST
2/07 - 2/11 Head, Biomedical Research Center, KIST
10/10 - 12/11 Adjunct Professor, Samsung Advanced Institute for Health Sciences and Technology
3/11 - present Principal Research Scientist, Center for Theragnosis, Biomedical Research Institute, KIST
3/11 - 1/12 Head, Center for Theragnosis, Biomedical Research Institute, KIST
1/12 - 12/14 Director, GLOBAL RNAi CARRIER INITIATIVE in KIST
12/12 - 11/17 Project Leader, GLOBAL siRNA CARRIER INITIATIVE, National Research Foundation
9/12 - present Professor, KU-KIST School, Korea University
11/13 - present Affiliated Professor, Department of Bioengineering, University of Washington
1/15 - 3/17 Director-General, Biomedical Research Institute, KIST

AWARDS AND HONORS

Paragon Staff Award, Korea Institute of Science & Technology (1997)
Best Research Team Award, Korea Institute of Science & Technology (1998)
The 3rd Place Eurand Ward Novel Approaches in Oral Drug Delivery Award (Mentoring In Hyun Lee, 2004
Controlled Release Society Annual Meeting)
Best Research Team Award, Korea Institute of Science & Technology (2006)
Prime Minister's Citation Ribbon, The Republic of Korea (2006)
Scientist of the Month, Korea Institute of Science & Technology (Oct 2007)
Vice President, The Korean Society of Molecular Imaging (2005-2006, 2006-2008)
President, The Korean Society of Molecular Imaging (2008-2010)
Journal of Controlled Release, Highest Cited Original Research 2006 Awards, Elsevier (Nov. 2008)
Member, Nomination Committee (2009 Medicine), Ho-am Prize (2008)
Tenured Research Scientist, Korea Institute of Science and Technology (March 2009)
2008 CRS-Elsevier Jorge Heller Journal of Controlled Release Outstanding Paper Award, Elsevier (July 2009)
Excellence in Asia, Lecturer Award in 59th Annual Meeting of The Society of Polymer Science Japan (May 2010)

Program co-chair, The 37th Annual Meeting and Exposition of the Controlled Release Society (2010 Portland)
Journal of Controlled Release top cited article 2008-2010 Award, Elsevier (2010)
Best Research Team Award, Korea Institute of Science & Technology (2011)
Deputy Chair, Annual Meeting Program Committee, Controlled Release Society (2013 Hawaii Meeting)
Chair, Annual Meeting Program Committee, Controlled Release Society (2014 Chicago Meeting)
Samsung Polymer Science Award, The Polymer Society of Korea (April 2013)
Highly Cited Researchers, Thomson Reuter (2014)
Fellow of The Korean Academy of Science & Technology (2014)
Member of The National Academy of Engineering of Korea (2014)
Academy Award, The Korean Academy of Science & Technology (Nov. 2014)
Highly Cited Researchers, Thomson Reuter (2015)
Order of Science and Technology Merit (Ungbi Medal), The Republic of Korea (2016)
Highly Cited Researchers, Thomson Reuter (2016)

PROFESSIONAL ACTIVITIES

Editorial Board, *Journal of Biomaterials Science, Polymer Edition* (2006-present)
Editorial Board, *Advanced Drug Delivery Reviews* (2010-present)
Editorial Board, *Biomaterials Science* (2012-present)
Associate Editor, *Journal of Controlled Release* (2006-2009)
Editor, *Journal of Controlled Release* (2009-present, 2016 impact factor by Thomson Reuters 7.786)

RESEARCH AREA

Drug delivery (ranked 22 in Google Scholar)
Molecular imaging (ranked 8 in Google Scholar)
Nanomedicine (ranked 25 in Google Scholar)
Theranagnosis, Theranostics (ranked 1 in Google Scholar)
Biomaterials (ranked 36 in Google Scholar)

SELECTED PUBLICATIONS: AMONG 400 PEER REVIEWED ARTICLES

(Total citation 19,500, *h*-index = 79 by Scopus)

1. I.C. Kwon, Y.H. Bae, S.W. Kim, "Electric erodible polymer gel for controlled release of drugs," *Nature*, 354, 291-293 (1991)
2. Jong-Ho Kim, Kyeongsoon Park, Hae Yun Nam, Seulki Lee, Kwangmeyung Kim, Ick Chan Kwon, "Polymers for bioimaging," *Prog. Polym. Sci.*, 32, 1031-1053 (2007)
3. Jong-Ho Kim, Seulki Lee, Kyeongsoon Park, Hae Yun Nam, Soon Young Jang, Inchan Youn, Kwangmeyung Kim, Hyesung Jeon, Rang-Woon Park, In-San Kim, Kuiwon Choi, and Ick Chan Kwon, "Protein-Phosphorylation-Responsive Polymeric Nanoparticles for Imaging Protein Kinase Activities in Single Living Cells," *Angew. Chem. Int. Ed.*, 46, 5779-5782 (2007)
4. Jae Hyung Park, Seulki Lee, Jong-Ho Kim, Kyeongsoon Park, Kwangmeyung Kim, Ick Chan Kwon, "Polymeric nanomedicine for cancer therapy," *Prog. Polym. Sci.*, 33, 113-137 (2008)
5. Seulki Lee, Ju Hee Ryu, Kyeongsoon Park, Aeju Lee, Seung-Young Lee, In-Chan Youn, Cheol-Hee Ahn, Soon Man Yoon, Seung-Jae Myung, Dae Hyuk Moon, Xiaoyuan Chen, Kuiwon Choi, Ick Chan Kwon, Kwangmeyung Kim, "Polymeric Nanoparticle-Based Activatable Near-Infrared Nanosensor for Protease Determination In Vivo," *Nano Lett*, 9(12) 4412-4416 (2009)
6. Eunah Kang, Hyun Su Min, Jaeyoung Lee, Moon Hee Han, Hyung Jun Ahn, In-Chan Yoon, Kuiwon Choi, Kwangmeyoung Kim, Kinam Park, Ick Chan Kwon, "Nanobubbles from Gas-Generating Polymeric Nanoparticles: Ultrasound Imaging of Living Subjects," *Angew. Chem. Int. Ed.*, 49(3) 524-528 (2010)
7. Jae Hyung Park, Gurusamy Saravanakumar, Kwangmeyung Kim, Ick Chan Kwon, "Targeted delivery of low molecular drugs using chitosan and its derivatives," *Adv. Drug Deliv. Rev.*, 62(1) 28-41 (2010)
8. Heebeom Koo, Myung Sook Huh, Ju Hee Ryu, Dong-Eun Lee, In-Cheol Sun, Kuiwon Choi, Kwangmeyung Kim, Ick Chan Kwon, "Nanoprobes for biomedical imaging in living systems", *Nano Today*, 6(2) 204-220 (2011)
9. Koo, Heebeom, Huh, Myung Sook, Sun, In-Cheol, Yuk, Soon Hong, Kim, Kwangmeyung, Kwon, Ick Chan, "In vivo targeted delivery of nanoparticles for theragnosis", *Accounts Chem. Res.*, 44(10) 1018-1028 (2011)
10. Dong-Eun Lee, Heebeom Koo, In-Cheol Sun, Ju Hee Ryu, Kwangmeyung Kim and Ick Chan Kwon, "Multifunctional nanoparticles for multimodal imaging and theragnosis", *Chem. Soc. Rev.*, 41, 2656-2672

- (2012)
11. So Jin Lee, Myung Sook Huh, Seung Young Lee, Solki Min, Seulki Lee, Heebeom Koo, Jun-Uk Chu, Kyung Eun Lee, Hyesung Jeon, Yongseok Choi, Kuiwon Choi, Youngro Byun, Seo Young Jeong, Kinam Park, Kwangmeyung Kim, Ick Chan Kwon, "Tumor-Homing Poly-siRNA/Glycol Chitosan Self-Cross-Linked Nanoparticles for Systemic siRNA Delivery in Cancer Treatment", *Angew. Chem. Int. Ed.*, 51(29), 7203-7207 (2012)
 12. Ju Hee Ryu, Heebeom Koo, In-Cheol Sun, Soon Hong Yuk, Kuiwon Choi, Kwangmeyung Kim, Ick Chan Kwon, "Tumor-targeting multi-functional nanoparticles for theragnosis: New paradigm for cancer therapy", *Adv. Drug Deliv. Rev.*, 64(13), 1447-1458 (2012)
 13. Hyun Su Min, Sejin Son, Tae Woong Lee, Heebeom Koo, Hong Yeol Yoon, Jin Hee Na, Yongseok Choi, Jae Hyung Park, Jaeyoung Lee, Moon Hee Han, Rang-Woon Park, In-San Kim, Seo Young Jeong, Kyehan Rhee, Sun Hwa Kim, Ick Chan Kwon, Kwangmeyung Kim, "Liver-Specific and Echogenic Hyaluronic Acid Nanoparticles Facilitating Liver Cancer Discrimination", *Adv. Funct. Mater.*, 23(44), 5518-5529 (2013).
 14. Sangmin Lee, Heebeom Koo, Jin Hee Na, Kyung Eun Lee, Seo Young Jeong, Kuiwon Choi, Sun Hwa Kim, Ick Chan Kwon, and Kwangmeyung Kim, "DNA Amplification in Neutral Liposomes for Safe and Efficient Gene Delivery", *ACS Nano*, 8(5), 4257-4267 (2014)
 15. Sejin Son, Hyun Su Min, Dong Gil You, Beob Soo Kim, Ick Chan Kwon, "Echogenic nanoparticles for ultrasound technologies: Evolution from diagnostic imaging modality to multimodal theranostic agent", *Nano Today*, 9(4), 525-540 (2014)
 16. Kyung Hyun Min, Hyun Su Min, Hong Jae Lee, Dong Jin Park, Ji Young Yhee, Kwangmeyung Kim, Ick Chan Kwon, Seo Young Jeong, Oscar F Silvestre, Xiaoyuan Chen, "pH-Controlled Gas-Generating Mineralized Nanoparticles: A Theranostic Agent for Ultrasound Imaging and Therapy of Cancers", *ACS Nano*, 9(1) 134-145 (2015)
 17. Beom Suk Lee, Yong Woo Cho, Gui Chul Kim, Do Hee Lee, Chang Jin Kim, Hee Seup Kil, Dae Yoon Chi, Youngro Byun, Soon Hong Yuk, Kwangmeyung Kim, "Induced Phenotype Targeted Therapy: Radiation-Induced Apoptosis-Targeted Chemotherapy", *J Natl Cancer Inst*, 107(2), dju403 (2015)
 18. Mihue Jang, Jong Hwan Kim, Hae Yun Nam, Ick Chan Kwon, Hyung Jun Ahn, "Design of a platform technology for systemic delivery of siRNA to tumours using rolling circle transcription", *Nature Commun*, 6, 7930 (2015)
 19. Man Kyu Shim, Hong Yeol Yoon, Ju Hee Ryu, Heebeom Koo, Sangmin Lee, Jae Hyung Park, Jong-Ho Kim, Seulki Lee, Martin G. Pomper, Ick Chan Kwon, and Kwangmeyung Kim, "Cathepsin B-Specific Metabolic Precursor for In Vivo Tumor-Specific Fluorescence Imaging", *Angew. Chem. Int. Ed.*, 55(47), 14698-14703 (2016).