JUNG SUN YOO

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A. Education and Certification

Year(s)	Degree	Institution and Topic
Mar 2004 – Aug 2009	PhD	Department of Physics and Astronomy, College of Natural Sciences, Seoul National University, South Korea Field of Study: Biomedical Physics Supervisor: Prof. Soh, Kwang-Sup Thesis: In vivo Tracking of Cancer Cells in Bonghan Channels using Multispectral Fluorescence Imaging System
Mar 2000 – Feb 2004	BSc	Department of Physics Education, College of Education, Seoul National University, South Korea Field of Study: Physics Education

26 Feb 2004 Secondary Teaching Certificate for Physics, South Korea (Ref. no. 16466)

B. Employment and Experiences

Year(s)	Position	Institution
Sept 2023 – present	Programme Leader	Master of Science in Medical Physics Programme, Department of Health Technology and Informatics, Faculty of Health and Social Sciences, The Hong Kong Polytechnic University, Hong Kong

Jul 2023 – present	Associate Professor	Department of Health Technology and Informatics, Faculty of Health and Social Sciences, The Hong Kong Polytechnic University, Hong Kong
Sept 2020 – Aug 2023	Deputy Programme Leader	Master of Science in Medical Physics Programme, Department of Health Technology and Informatics, Faculty of Health and Social Sciences, The Hong Kong Polytechnic University, Hong Kong
Jan 2017 – Dec 2018	Honorary Research Fellow	Nano-Bio Research Laboratory, Advanced Institutes of Convergence Technology, Seoul National University, South Korea
Oct 2016 – Jun 2023	Assistant Professor	Department of Health Technology and Informatics, Faculty of Health and Social Sciences, The Hong Kong Polytechnic University, Hong Kong
Nov 2014 – Oct 2016	Research Scientist (Joint Researcher)	Center for Nanomolecular Imaging and Innovative Drug Development, Institute of Bio Convergence, Advanced Institutes of Convergence Technology, Republic of Korea
Mar 2014 – Oct 2016	BK Assistant Professor	Smart Humanity Convergence Center, Program in Biomedical Radiation Sciences, Department of Transdisciplinary Studies, Graduate School of Convergence Science and Technology, Seoul National University, Republic of Korea
Feb 2011 – Oct 2013	Research Fellow	Department of Chemistry, Faculty of Science, National University of Singapore, Singapore Singapore Bioimaging Consortium, Agency for Science, Technology and Research, Singapore Supervisor: Prof. Chang, Young-Tae (Tel: +82-54-279-2101, Email: ytchang@postech.ac.kr)
Sept 2009 – Jan 2011	Postdoctoral Research Associate	College of Natural Sciences, Seoul National University, Republic of Korea The Research Institute of Basic Sciences, Seoul National University, Republic of Korea Supervisor: Prof. Soh, Kwang-Sup
Apr 2007 – Mar 2008	Visiting Student (Internship)	Chair for Biological Imaging, School of Medicine, School of Engineering, Technical University of Munich, Germany Institute of Biological and Medical Imaging, Helmholtz Center Munich - German Research

		Center for Environmental Health, Germany Supervisor: Prof. Vasilis Ntziachristos (Tel: +49-89-3187-3852, Email: v.ntziachristos@tum.de)
Dec 2005 – Feb 2006	Visiting Student (Internship)	Harvard Medical School, Department of Radiology, Massachusetts General Hospital, Brigham and Women's Hospital, USA Supervisor: Dr. Kim, Hyung-Hwan (Tel: +1-617-643-7334, Email: Kim.HyungHwan@mgh.harvard.edu)
Mar 2004 – Feb 2006	Teaching Assistant	Department of Physics and Astronomy, College of Natural Sciences, Seoul National University, Republic of Korea
Sep 2003 – Feb 2004	Undergraduate Research Internship	Department of Physics and Astronomy, College of Natural Sciences, Seoul National University, Republic of Korea Supervisor: Prof. Soh, Kwang-Sup

C. Research Interests

My research has been focused on translational science to develop and propagate in vivo imaging technology for understanding, diagnosing, and treating human diseases. Specifically, my research spans from fluorescence molecular imaging, image-guided surgery, label-free optical imaging, high-resolution intravital imaging, nanomedicine to a recent artificial intelligence driven application in optical and nuclear imaging.

D. Honors and Fellowship

Date	**Contents**
15 Sept 2022	**Reward of Publishing Paper in High Impact Journal** from Department of Health Technology and Informatics, The Hong Kong Polytechnic university, HKD 100,000 Research Fund
1 Apr 2022	**2020-2021 Outstanding Reviewer Award** from Journal of Imaging, 300 Swiss francs
14 Nov 2014	**KOFWST Future Talent Award** from Korea Federation of Women's Science & Technology Associations (KOFWST), KRW 1,000,000
25 Jul 2014	**Conference and Training Participation Support for Non-Regular Researchers** from Center for Women in Science, Engineering and Technology (WISET), KRW 2,500,000

11 Oct 2009	**Young Scientist Award** for the Acupuncture and Meridian Studies Awards 2009 from the International Pharmacopuncture Institute (IPI), USD 5,000
31 Aug 2009	**Graduate Student Research Award**-Second Place from the Seoul National University, KRW 500,000
11 Mar 2005 – 28 Feb 2007	**Seoul Science Fellowship** from Seoul Metropolitan Government, KRW 11,000,000

*Prizes and Awards of Research Students/Staffs under my Supervision

Date	**Contents**
22 Mar 2023	**Faculty Distinguished Thesis Award** from Faculty of Health and Social Sciences, The Hong Kong Polytechnic University, **Dr. Minfeng Yang** (Faculty Congregation, Label-free metabolic imaging for sensitive and robust monitoring of anti-CD47 immunotherapy response in triple-negative breast cancer)
27 Jun 2023	**The SNMMI 2023 International Best Abstract Award for Hong Kong** from The 2023 Society of Nuclear Medicine & Molecular Imaging (SNMMI) Annual Meeting, **Dr. Minfeng Yang** (June 24-27, 2023, McCormick Place, Chicago, Illinois, USA, **Jung Sun Yoo*** and Minfeng Yang: In vivo immunoscoring technique to predict anti-CD47 immunotherapy efficacy in triple-negative breast cancer via single-cell pharmacokinetic imaging)
16 Jun 2022	**3rd Prize** from Department of Health Technology and Informatics of the Hong Kong Polytechnic University, Postgraduate Symposium 2022, **Ms. Minfeng Yang** (16 June 2022, Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Minfeng Yang, Kenneth Cheng, **Jung Sun Yoo***: Label-free metabolic imaging for sensitive and robust monitoring of anti-CD47 immunotherapy response in triple-negative breast cancer)
7-11 Sept 2022	**Young Investigator Award** from World Federation of Nuclear Medicine and Biology (WFNMB), The 13th Congress of the World Federation of Nuclear Medicine and Biology (WFNMB 2022). **Mr. Chung Ting Tang**, Registration fee exemption (September 7-11, 2022, Kyoto International Conference Center, Japan & Hybrid meeting, Chung Ting Tang, ZeBang He, Alex Nagi Nick Wong, Boom Ting Kung, Tin Kun Au Yong, **Jung Sun Yoo***: Deep Learning to Reduce Scan Time and Radiation Dose in Myocardial Perfusion Imaging SPECT)
6 Oct 2021	**Women in Molecular Imaging Network Scholar Award** from the Women in Molecular Imaging Network (WIMIN), World Molecular Imaging Congress Virtual 2021 (WMIC Virtual 2021). **Ms. Minfeng Yang**, USD 100, October 6, 2021 (Virtual conference, October 5-8, 2021, Minfeng Yang, **Jung Sun Yoo***: Label-free metabolic imaging for sensitive and robust monitoring of anti-CD47 immunotherapy response in triple negative breast cancer)
23 Jun 2021	**2nd Prize** from Department of Health Technology and Informatics of the

	Hong Kong Polytechnic University, Postgraduate Symposium 2021, **Mr Nagi Nick Alex Wong** (23 June 2021, Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Ngai Nick Alex Wong, **Jung Sun Yoo***: Prioritization on whole-slide images of clinical gastric carcinoma biopsies through a weakly supervised and annotation-free system)
14 Jun 2019	**2nd Prize** from Department of Health Technology and Informatics of the Hong Kong Polytechnic University, Postgraduate Symposium 2019, **Mr Nagi Nick Alex Wong** (14 June 2019, Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Ngai Nick Alex Wong, **Jung Sun Yoo***: Intraoperative imaging technique to highlight peripheral nerves using polarized spectral reflectance)
14 Dec 2018	**Certificate of Excellence** from Organizing Committee of 2018 International Symposium on NanoBiotechnology, Biosensors and Biochips (2018 ISNBB, Organized by Asian Federation of Biotechnology (AFOB), Chinese Society of Biotechnology (CSBT), City University of Hong Kong (CityU)), **Mr Ngai Nick Alex Wong** (City University of Hong Kong, December 13-14, 2018, Ngai Nick Alex Wong, **Jung Sun Yoo***: Intraoperative Imaging System to Highlight Peripheral Nerves using Polarized Spectral Reflectance)
25 Aug 2016	**Poster Award** from Korean Association for Laboratory Animal Science (KALAS), 2016 KALAS International Symposium, **Ms Ga Ram Kim** (Hwabaek International Convention Center, Gyeongju, Korea, August 24-26, 2016, Ga Ram Kim, Sang Eun Kim, **Jung Sun Yoo***: Intraoperative Visualization of Nerve for Surgical Guidance with No Exogenous Label using Spectral Reflectance Imaging)

E. Teaching of Students in Courses

Year(s)	**Subject**	**Students/Class Size**	**Hours**	**Institution**
Jan 2021 – present	Medical Imaging Physics (HTI5003)*	MSc in Medical Physics (30~35)	69	Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Hong Kong
Jan 2019 – May 2020	Computed Tomography (HTI48101)*	Year 3 BSc in Radiography (75~95)	11	Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Hong Kong
Sept 2018 – Dec 2018	Freshman Seminar for Broad Disciplines and Health Sciences	Year 1 Undergraduate Students of FHSS	14	Faculty of Health and Social Sciences, The Hong Kong Polytechnic

	(HSS1010)	(23)		University, Hong Kong
Jan 2018 - present	Medical Imaging Instrumentation (HTI28101)*	Year 2 BSc in Radiography – Medical Imaging (86~97)	146	Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Hong Kong
Sept 2017 – present	Radiographic Imaging Science (HTI27104)*	Year 2 BSc in Radiography (101~116)	194	Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Hong Kong
Sept 2017 – present	Advanced Technology and Clinical Application in Nuclear Medicine Imaging (HTI5725)*	MSc in Medical Imaging and Radiation Science (25~57)	98	Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Hong Kong
Apr 2017 – present	Imaging in Radiotherapy (HTI49105)	Year 3 BSc in Radiography – Radiotherapy (12~17)	21	Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Hong Kong
Mar 2016 – Jun 2016	Lecture on Immunology (00826001)*	Research Postgraduate Students (8)	48	Department of Food Science and Biotechnology, Gachon University, South Korea
Mar 2016 – Jun 2016	Molecular Imaging as a Convergence Science	Research Postgraduate Students (5)	15	Graduate School of Convergence Science and Technology, Seoul National University, South Korea
Mar 2009 – Dec 2010	Physics for Oriental Medicine	Year 2 Oriental Medicine Undergraduate Students (43~68)	28	Wonkwang University, South Korea
		Total	644	

*Subject Leader

F. Peer-reviewed Journal Publications

- *h*-index: 22 (Google Scholar), 21 (Scopus), 17 (Web of Science)
- Total citations: 2212 (Google Scholar), 1428 (Scopus), 1183 (Web of Science)

- 40 peer-reviewed journal papers – 6 corresponding, 13 first, 21 co-author

1. ZeBang He, Alex Ngai Nick Wong, **Jung Sun Yoo*** : Co-ERA-Net: Co-supervision and Enhanced Region Attention for Accurate Segmentation in COVID-19 Chest Infection Images, Bioengineering, 10, 928, **2023 August 4** (**IF=3.8**, 44/122 **Q2** in Engineering, Biomedical, Top **36.07%** by JIF)

2. Minfeng Yang, Arpan Mahanty, Chunjing Jin, Alex Nagi Nick Wong, **Jung Sun Yoo*** : Label-free metabolic imaging for sensitive and robust monitoring of anti-CD47 immunotherapy response in triple-negative breast cancer, *Journal for ImmunoTherapy of Cancer*, 10, e005199, **2022 September 12** (*corresponding author) (**IF=10.3**, 26/322 **Q1** in Oncology Top **8.07%** by JIF, 12/181 Q1 in Immunology Top **6.62%** by JIF)

3. Alex Ngai Nick Wong, Zebang He, Ka Long Leung, Curtis Chun Kit To, Chun Yin Wong, Sze Chuen Ce-sar Wong, **Jung Sun Yoo**, Cheong Kin Ronald Chan, Angela Zaneta Chan, Maribel D Lacambra and Martin Ho Yin Yeung : Current Developments of Artificial Intelligence in Digital Pathology and its Future Clinical Applications in Gastrointestinal Cancers, *Cancers*, 14, 3780, **2022 August 03** (**IF=4.5**, 78/322 **Q1** in Oncology, Top **24.22%** by JIF)

4. Martin Ho Yin Yeung, Ka Long Leung, Lai Yuen Choi, **Jung Sun Yoo**, Susan Yung, Pui-Kin So and Chi-Ming Wong : Lipidomic Analysis Reveals the Protection Mechanism of GLP-1 Analogue Dulaglutide on High-Fat Diet-Induced Chronic Kidney Disease in Mice, *Frontiers in Pharmacology*, 12, 777395, **2022 March 01** (**IF=4.4**, 65/354 Q1 in Pharmacology & Pharmacy, Top **18.36%** by JIF)

5. Minfeng Yang, In Young Oh, Arpan Mahanty, Wei-Lin Jin*, **Jung Sun Yoo*** : Immunotherapy for Glioblastoma: Current State, Challenges, and Future Perspectives, *Cancers*, 12(9): 2334, **2020 August 19** (*corresponding author) (**IF=4.5**, 78/322 **Q1** in Oncology, Top **24.22%** by JIF)

6. Nunzio Denora, Chaedong Lee, Rosa Maria Iacobazzi, Ji Young Choi, In Ho Song, **Jung Sun Yoo**, Yuanzhe Piao, Antonio Lopalco, Francesco Leonetti, Byung Chul Lee, Sang Eun Kim : TSPO-targeted NIR-fluorescent ultra-small iron oxide nanoparticles for glioblastoma imaging, *European Journal of Pharmaceutical Sciences*, 139: 105047, **2019 November 1** (**IF=5.112**, 34/361 **Q1** in Pharmacology & Pharmacy, Top **9.28%** by JIF)

7. Chaedong Lee, Ga Ram Kim, Juhwan Yoon, Sang Eun Kim, **Jung Sun Yoo***, Yuanzhe Piao* : *In Vivo* delineation of glioblastoma by targeting tumor-associated macrophages with near-infrared fluorescent silica-coated iron oxide nanoparticles in orthotopic xenografts for surgical guidance, *Scientific Reports*, 8: 11122, **2018 July 24** (*corresponding author) (**IF=3.8**, 25/134 **Q1** in Multidisciplinary Sciences, Top **18.66%** by JIF)

8. Bo Quan, Chaedong Lee, **Jung Sun Yoo***, Yuanzhe Piao* : Facile scalable synthesis of highly monodisperse small silica nanoparticles using alkaline buffer solution and their application for efficient lymph node mapping, *Journal of Materials Chemistry B*, 5: 586-594, **2017 January 1** (*corresponding author) (**IF=6.1**, 11/53 **Q1** in Materials Science, Biomaterials, Top **20.75%** by JIF)

9. Min Su Lee, Hyun Soo Park, Byung Chul Lee, Jae Ho Jung, **Jung Sun Yoo***, Sang Eun Kim* : Identification of Angiogenesis Rich-Viable Myocardium using RGD Dimer based SPECT after Myocardial Infarction, *Scientific Reports*, 6 : 27520, **2016 June 10** (*corresponding author) (**IF=3.8**, 25/134 **Q1** in Multidisciplinary Sciences, Top **18.66%** by JIF)

10. Haeyun Jang, Chaedong Lee, Gi-Eun Nam, Bo Quan, Hyuck Jae Choi, **Jung Sun Yoo**, Yuanzhe Piao : *In Vivo* Magnetic Resonance and Fluorescence Dual Imaging of Tumor Sites by using Dye-Doped Silica-Coated Iron Oxide Nanoparticles, *Journal of Nanoparticle Research*, 18(2) :41, **2016 February 8** (**IF=2.1**, 129/230 **Q3** in Chemistry, Multidisciplinary, Top **56.09%** by JIF)

11. **Jung Sun Yoo**, Jonghwan Lee, Jae Ho Jung, Byung Seok Moon, Soonhag Kim, Byung Chul Lee, Sang Eun Kim : SPECT/CT Imaging of High-Risk Atherosclerotic Plaques using Integrin-Binding RGD Dimer Peptides, *Scientific Reports*, 5 : 11752, **2015 June 30** (**IF=3.8**, 25/134 **Q1** in Multidisciplinary Sciences, Top **18.66%** by JIF)

12. Satoshi Arai, Madoka Suzuki, Sung-Jin Park, **Jung Sun Yoo**, Lu Wang, Nam-Young Kang, Hyung-Ho Ha, Young-Tae Chang : Mitochondria-targeted Fluorescent Thermometer Monitors Intracellular Temperature Gradient, *Chemical Communications*, 51(38) : 8044-8047, **2015 May 11** (**IF=4.3**, 71/230 **Q2** in Chemistry, Multidisciplinary, Top **30.87%** by JIF)

13. **Jung Sun Yoo**, Raj Kumar Das, Zhi Yen Jow, Young-Tae Chang : *In Vivo* Detection of Macrophage Recruitment in Hind-limb Ischemia using a Targeted Near-Infrared Fluorophore, *PLoS ONE*, 9(7) : e103721, **2014 July 29** (**IF=2.9**, 39/134 **Q1** in Multidisciplinary Sciences, Top **23.13%** by JIF)

14. **Jung Sun Yoo**, Kwang-Sup Soh : A Transformative Approach to Cancer Metastasis: Primo Vascular System as a Novel Microenvironment for Cancer Stem Cells, *Cancer Cell & Microenvironment*, 1(3) : e142, **2014 July 2** (Non-SCI)

15. **Jung Sun Yoo**, Sung-Chan Lee, Zhi Yen Jow, Pamela Yun Xiang Koh, Young-Tae Chang : A Macrophage-Specific Fluorescent Probe for Intraoperative Lymph Node Staging, *Cancer Research*, 74(1): 44-55, **2014 January 1** (**IF=12.5**, 20/322 **Q1** in Oncology, Top **6.21%** by JIF)

16. Jaekwan Lim, Sungwoo Lee, Zhendong Su, Hong Bae Kim, **Jung Sun Yoo**, Kwang-Sup Soh, Sungchul Kim, and Yeon Hee Ryu : Primo Vascular System Accompanying a Blood Vessel from Tumor Tissue and a Method to Distinguish It from the Blood or the Lymph System, *Evidence-Based Complementary and Alternative Medicine*, 2013 : 949245, **2013 May** (**IF=2.650**, 16/30 **Q2** in Integrative & Complementary Medicine, Top **53.33%** by JIF)

17. **Jung Sun Yoo**, Hong Bae Kim, Nayoun Won, Jiwon Bang, Sungjee Kim, Saeyoung Ahn, Byung-Cheon Lee, and Kwang-Sup Soh : Evidence for an Additional Metastatic Route: *In Vivo* Imaging of Cancer Cells in the Primo-Vascular System around Tumors and Organs, *Molecular Imaging and Biology*, 13(3) : 471-480, **2011 June** (**IF=3.0**, 52/204 **Q2** in Radiology, Nuclear Medicine & Medical Imaging, **25.49%** by JIF)

18. Ping An, Jingxing Dai, Zhendong Su, **Jung Sun Yoo**, Rongmei Qu, Sung-Woo Lee, Ki-Hoon Eom, Kyang-Hee Bae, Hesheng Luo, Kwang-Sup Soh : Putative Primo-vascular System in Mesentery of Rats, *Journal of Acupuncture and Meridian Studies*, 3(4) : 232-240, **2010 December** (**JCI=0.9**, 32/43 **Q4** in Integrative & Complementary Medicine, Top **79.07%** by JIF)

19. Vasilis Ntziachristos, **Jung Sun Yoo**, Gooitzen M. van Dam : Current Concepts and Future Perspectives on Surgical Optical Imaging in Cancer, *Journal of Biomedical Optics*, 15(6) : 066024, **2010 November/December** (**IF=3.0**, 39/119 **Q2** in Optics, Top **32.77%** by JIF)

20. **Jung Sun Yoo,** Nayoun Won, Hong Bae Kim, Jiwon Bang, Sungjee Kim, Saeyoung Ahn, and Kwang-Sup Soh : *In Vivo* Imaging of Cancer Cells with Electroporation of Quantum Dots and Multispectral Imaging, *Journal of Applied Physics*, 107(12) : 124702, **2010 June 15** (**IF=2.7**, 76/179 **Q2** in Physics, Applied, Top **42.46%** by JIF)

21. **Jung Sun Yoo,** M. Hossein Ayati, Hong Bae Kim, Wei-bo Zhang, and Kwang-Sup Soh : Characterization of the Primo-Vascular System in the Abdominal Cavity of Lung Cancer Mouse Model and Its Differences from the Lymphatic System, *PloS ONE*, 5(4) : e9940, **2010 April** (**IF=2.9**, 39/134 **Q1** in Multidisciplinary Sciences, Top **23.13%** by JIF)

22. George Themelis*, **Jung Sun Yoo***, Kwang-Sup Soh, Ralf Schulz, and Vasilis Ntziachristos : Real-time Intraoperative Fluorescence Imaging System using Light-absorption Correction, *Journal of Biomedical Optics*, 14(6) : 06412, **2009 November/December** (*co-first author) (**IF=3.0**, 39/119 **Q2** in Optics, Top **32.77%** by JIF)

23. **Jung Sun Yoo**, Hong Bae Kim, Vyacheslav Ogay, Byung-Cheon Lee, Saeyoung Ahn, and Kwang-Sup Soh : Bonghan Ducts as Possible Pathways for Cancer Metastasis, *Journal of Acupuncture and Meridian Studies*, 2(2) : 118-123, **2009 June** (**JCI=0.9**, 32/43 **Q4** in Integrative & Complementary Medicine, Top **79.07%** by JIF)

24. George Themelis, **Jung Sun Yoo**, and Vasilis Ntziachristos : Multispectral Imaging using Multiple-bandpass Filters, *Optics Letters*, 33(9) : 1023-1025, **2008 May** (**IF=3.1**, 37/119 **Q2** in Optics, Top **31.09%** by JIF)

25. Byung-Cheon Lee, **Jung Sun Yoo**, Ku Youn Baik, Baeckkyoung Sung, Jawoong Lee, and Kwang-Sup Soh : Development of a Fluorescence Stereomicroscope and Observation of Bong-Han Corpuscles inside Blood Vessels, *Indian Journal of Experimental Biology*, 46(5) : 330-335, **2008 May** (**IF=0.7**, 87/109 **Q4** in Biology, Top **79.81%** by JIF)

26. **Jung Sun Yoo**, Min Su Kim, Vyacheslav Ogay, and Kwang-Sup Soh : *In Vivo* Visualization of Bonghan Ducts inside Blood Vessels of Mice by using an Alcian Blue Staining Method, *Indian Journal of Experimental Biology*, 46(5) : 336-339, **2008 May** (**IF=0.7**, 87/109 **Q4** in Biology, Top **79.81%** by JIF)

27. Baeckkyoung Sung, Min Su Kim, Byung-Cheon Lee, **Jung Sun Yoo**, Sang-Hee Lee, Youn-Joong Kim, Ki-Woo Kim, and Kwang-Sup Soh : Measurement of Flow Speed in the Channels of Novel Threadlike Structures on the Surfaces of Mammalian Organs, *Naturwissenschaften*, 95(2) : 117-124, **2008 Feb** (**IF=2.2**, 19/64 **Q2** in Multidisplinary Sciences, Top **28.91%** by JIF)

28. **Jung Sun Yoo**, Min Su Kim, Baeckkyoung Sung, Byung-Cheon Lee, Kwang-Sup Soh, Sang-Hee Lee, Youn-Joong Kim, and Harald Dobberstein : Cribriform Structure with Channels in the Acupuncture Meridian-like System on the Organ Surfaces of Rabbits, *Acupuncture & Electro-Therapeutics Research*, 32(1/2) : 130-132, **2007** (**IF=0.2**, 42/43 **Q4** in Integrative & Complementary Medicine, Top **97.67%** by JIF**)**

29. Su Hong, **Jung Sun Yoo**, Ju Young Hong, Byung-Cheon Lee, Kwang-Sup Soh, Sang-Hee Lee, Youn-Joong Kim, Dae-In Kang, Byung Soo Ahn, and Hee-Jong Woo : Immunohistochemical and Electron Microscopic Study of the Meridian-like System on the Surface of Internal Organs of Rats, *Acupuncture & Electro-Therapeutics Research*, 32(3/4) : 195-210, **2007** (**IF=0.2**, 42/43 **Q4** in Integrative & Complementary Medicine, Top **97.67%** by JIF)

30. **Jung Sun Yoo**, Hyeon-Min Johng, Tae-Jong Yoon, Hak-Soo Shin, Byung-Cheon Lee, Changhoon Lee, Byung Soo Ahn, Dae-In Kang, Jin-Kyu Lee, and Kwang-Sup Soh : *In Vivo* Fluorescence Imaging of Threadlike Tissues (Bonghan Ducts) inside Lymphatic Vessels with Nanoparticles, *Current Applied Physics,* 7(4) : 342-348, **2007 May** (**IF=2.4**, 96/179 **Q3** in Physics, Applied, Top **53.63%** by JIF)

31. Hyeon-Min Johng, **Jung-Sun Yoo**, Tae-Jong Yoon, Hak-Soo Shin, Byung-Cheon Lee, Changhoon Lee, Jin-Kyu Lee, and Kwang-Sup Soh : Use of Magnetic Nanoparticles to Visualize Threadlike Structures inside Lymphatic Vessels of Rats, *Evidence-based Complementary and Alternative Medicine,* 4(1) : 77-82, **2007 Mar** (**IF=2.650**, 16/30 **Q2** in Integrative & Complementary Medicine, Top **53.33%** by JIF)

32. Byung-Cheon Lee, **Jung Sun Yoo**, Vyacheslav Ogay, Ki Woo Kim, Harald Dobberstein, Kwang-Sup Soh, and Byung-Soo Chang : Electron Microscopic Study of Novel Threadlike Structures on the Surfaces of Mammalian Organs, *Microscopy Research and Technique,* 70(1) : 34-43, **2007 Jan** (**IF=2.0**, 6/22 **Q2** in Anatomy & Morphology, Top **27.27%** by JIF)

33. Yong-Yui Han, Joon-Mo Yang, **Jung Sun Yoo**, Vyacheslav Ogay, Jung-Dae Kim, Min-Su Kim, Byung-Cheon Lee, Ku-Youn Baik, Sang-Hyun Park, and Kwang-Sup Soh : Measurement of the Optical Properties of In-vitro Organ-Surface Bonghan Corpuscles of Rats, *Journal of the Korean Physical Society*, 49(6) : 2239-2246, **2006 Dec** (**IF=0.8**, 77/110 **Q3** in Physics, Multidisciplinary Top **70%** by JIF)

34. Changhoon Lee, **Jung Sun Yoo**, Joonhyung Kwon, Kwang-Sup Soh : Study on the flow through the organ surface Bonghan duct by using nanoparticles, *Journal of the Korean Society of Jungshin Science*, 10(2) : 49-55, **2006 Dec** (Non-SCI)

35. Byung-Cheon Lee, **Jung Sun Yoo,** Ku Youn Baik, Ki Woo Kim, and Kwang-Sup Soh : Novel Threadlike Structures (Bonghan Ducts) inside Lymphatic Vessels of Rabbits Visualized with a Janus Green B Staining Method, *Anatomical Record-Advances in Integrative Anatomy and Evolutionary Biology*, 286B(01) : 1-7, **2005 Sep** (**IF=1.8**, 9/22 **Q1** in Anatomy & Morphology, Top **40.91%** by JIF)

36. **Jung Sun Yoo**, Kihwan Choi, Ku Youn Baik, Doo Soo Chung, and Kwang-Sup Soh : Liquid-Phase Microextraction Method in Capillary Electrophoresis to Detect Adrenaline in Bonghan Liquid, *Journal of International Society of Life Information Science*, 23(02) : 292-296, **2005 Sep** (Non-SCI)

37. Baeckkyoung Sung, Vyacheslav Ogay, **Jung Sun Yoo**, Hyung Suk Yu, Byung-Cheon Lee, Chan Chung, Guhung Jung, and Kwang-Sup Soh : UV-A-Induced Activation of Bonghan Granules in Motion, *Journal of International Society of Life Information Science*, 23(02) : 297-301, **2005 Sep** (Non-SCI)

38. Hak-Soo Shin, Hyeon-Min Johng, Byung-Cheon Lee, Sung-Il Cho, Ku Youn Baik, **Jung Sun Yoo,** and Kwang-Sup Soh : Feulgen Reaction Study of Novel Threadlike Structures (Bonghan Ducts) on the Surface of Mammalian Organs, *Anatomical Record-Advances in Integrative Anatomy and Evolutionary Biology*, 284B(01) : 35-40, **2005 May** (**IF=1.8**, 9/22 **Q1** in Anatomy & Morphology, Top **40.91%** by JIF)

39. Byung-Cheon Lee, **Jung Sun Yoo**, Eun Sung Park, Yeo Sung Yoon, Hak-Soo Shin, and Kwang-Sup Soh : Histological features of Bonghan Corpuscles on the Surface of Rabbit Internal Organs, *Journal of International Society of Life Information Science*, 23(01) : 95-99, **2005 Mar** (Non-SCI)

40. Hyeon-Min Johng, Hak-Soo Shin, **Jung Sun Yoo**, Byung-Cheon Lee, Ku-Youn Baik, Soyeun Kim, and Kwang-Sup Soh : Bonghan Ducts on the Surface of Rat Liver, *Journal of International Society of Life Information Science,* 22(2) : 469-472, **2004 Sep** (Non-SCI)

G. Peer-reviewed Conference Proceedings Papers

1. Seong-Tae Han, Woo-Jae Lee, Ki-Sang Park, Sung-Wook Choi, Juhwan Yoon, **Jung Sun Yoo** : Application of T-Ray Gyrotron Developed for Real-Time Non-Destructive Inspection to Enhanced Regeneration of Cells, IRMMW-THz2015 (The 40th International Conference on Infrared, Millimeter, and Terahertz Waves, The Chinese University of Hong Kong, Hong Kong), The International Society of Infrared, Millimeter, and Terahertz Waves, August 23-28, 2015 (**oral**, August 24, 2015) Published as Proceedings Paper in the Book Series of "International Conference on Infrared Millimeter and Terahertz Waves"

2. **Jung Sun Yoo**, Min Su Kim, Vyacheslav Ogay, Kwang-Sup Soh : Alcian Blue Staining Method for Visualizing Bonghan Ducts inside Blood Vessels of Mice, WC 2006 World Congress on Medical Physics and Biomedical Engineering (COEX, Seoul, Korea), IFMBE Proceedings book series (IFMBE, volume 14, pp 3626-3629), International Federation of Medical and Biological Engineering (IFMBE), International Organization for Medical Physics (IOMP), August 27 – September 1, 2006 (**poster**)

3. Byung-Cheon Lee, **Jung Sun Yoo**, Ku Yuen Baik, Eun-sung Park, Yeo-Sung Yoon, Kwang-Sup Soh : Hidden Corpuscular Structures Floating Inside Blood Vessels of Mammalians, WC 2006 World Congress on Medical Physics and Biomedical Engineering (COEX, Seoul, Korea), IFMBE Proceedings book series (IFMBE, volume 14, pp 3598-3601), International Federation of Medical and Biological Engineering (IFMBE), International Organization for Medical Physics (IOMP), August 27 – September 1, 2006 (**oral**)

4. Hyeon-Min Johng, Chang-Hoon Lee, **Jung Sun Yoo**, Tae-Jong Yoon, Hak-Soo Shin, Byung-Cheon Lee, Jin-Kyu Lee, Jung Dae Kim, Wan Su Park, Kwang-Sup Soh: Nanoparticles for Tracing Acupuncture Meridians and Bonghan Ducts, WC 2006 World Congress on Medical Physics and Biomedical Engineering (COEX, Seoul, Korea), IFMBE Proceedings book series (IFMBE, volume 14, pp 3584-3586), International Federation of Medical and Biological Engineering (IFMBE), International Organization for Medical Physics (IOMP), August 27 – September 1, 2006 (**poster**)

5. Byung-Cheon Lee, **Jung Sun Yoo**, Sungkwang Kim, Kwang-Sup Soh : Meditation and Plant-like Bundle Structure of Bonghan Duct, The 23th Symposium of the Korean Society of Jungshin Science, Proceedings of Korean Jungshin Science Symposium 23, 2005, 10, 135-140 (Korea Military Academy, Seoul, Korea), October 28-29, 2005 (**oral**)

H. Invited Chapters in Books

1. **Jung Sun Yoo,** Baatartsogt Oyungerel, Il Youn Han, Ji Young Kim, Choong Hwan Lee, Kang Duk Choi, Kwang-Sup Soh, Tae Young Han : Molecular Compositional Differences of the Primo and the Lymphatic Vascular Systems in Murine Melanoma Models, The Primo

Vascular System: Its Role in Cancer and Regeneration, Springer New York, Ed. K. S. Soh, K. A. Kang, and D. K. Harrison, 185-191, **2012**, ISBN=9781461406006

2. Walter Akers, Yang Liu, Gail Sudlow, Joon Lee, **Jung Sun Yoo**, Byung-Cheon Lee, Kwang-Sup Soh, and Samuel Achilefu : Identification of Primo Vascular System in Murine Tumors and Viscera, The Primo Vascular System: Its Role in Cancer and Regeneration, Springer New York, Ed. K. S. Soh, K. A. Kang, and D. K. Harrison, 179-183, **2012**, ISBN=9781461406006

I. Peer-reviewed Conference Presentations

1. Chung Ting Tang, ZeBang He, Boom Ting Kung, Ting Kun Au Yong, **Jung Sun Yoo**: Fast and low dose myocardial perfusion imaging SPECT using deep learning-based denoising, ISRRT World Congress 2024 (ISRRT World Congress 2024, Hong Kong Convention and Exhibition Centre, Hong Kong), Hong Kong Association of Radiation Therapists, Hong Kong Radiographers' Association, and Hong Kong College of Radiographers and Radiation Therapists, June 6-9, 2024 (**oral**, June 8, 2024)

2. Hongzhao Chen, Song-Bai Liu, Minfeng Yang, **Jung Sun Yoo***: Artificial Intelligence-assisted Therapeutic Outcome Monitoring of Head and Neck Cancer using Angiogenesis Imaging after Targeted Therapy and Immunotherapy, ISRRT World Congress 2024 (ISRRT World Congress 2024, Hong Kong Convention and Exhibition Centre, Hong Kong), Hong Kong Association of Radiation Therapists, Hong Kong Radiographers' Association, and Hong Kong College of Radiographers and Radiation Therapists, June 6-9, 2024 (**oral**, June 8, 2024) (*corresponding author)

3. Zebang HE, Ho-yin Anson CHEUNG, Ting Hei Edward WONG, **Jung Sun Yoo***: Enhancing Chest X-Ray Report Generation in Radiology through Deep Learning: Leveraging Keywords from Existing Reports and Multi-Label Classification, ISRRT World Congress 2024 (ISRRT World Congress 2024, Hong Kong Convention and Exhibition Centre, Hong Kong), Hong Kong Association of Radiation Therapists, Hong Kong Radiographers' Association, and Hong Kong College of Radiographers and Radiation Therapists, June 6-9, 2024 (**poster**) (*corresponding author)

4. **Jung Sun Yoo**: Label-free multiphoton imaging of single cell immunometabolism to monitor therapeutic response of CD47 immune checkpoint blockade and cetuximab therapy, Annual Congress of Hong Kong Society for Immunology 2023/24 (Annual Congress of HKSI 2023/24, Cordis Hotel, Hong Kong), Hong Kong Society for Immunology, March 23, 2024 (**invited**)

5. **Jung Sun Yoo**, Minfeng Yang, Hongzhao Chen: In Vivo Fluorescent Immunoscoring Technique to Monitor and Predict Immunotherapy Efficacy in Triple-Negative Breast Cancer, The 5th International Conference on Fluorescent Biomolecules and Their Building Blocks (FB3) (The Hong Kong Polytechnic University, Hong Kong), The Hong Kong Polytechnic University and Hong Kong Baptist University, March 10-13, 2024 (**oral**, March 12, 2024)

6. Minfeng Yang, **Jung Sun Yoo***: Label-free Metabolic Intravital Imaging for Robust Monitoring of Combinational anti-CD47 Immunotherapy and Cetuximab-targeted Therapy Response in Squamous Cell Carcinoma of the Head and Neck, The 5th International Conference on Fluorescent Biomolecules and Their Building Blocks (FB3) (The Hong Kong Polytechnic University, Hong Kong), The Hong Kong Polytechnic University and Hong Kong Baptist University, March 10-13, 2024 (**poster**) (*corresponding author)

7. Hongzhao Chen, Minfeng Yang, Epizitone Ayoh, **Jung Sun Yoo***: Fluorescent Dextran-based Tumor Vasculature Imaging and its Automatic Classification via Artificial Intelligence for Accurate Assessment of Therapeutic Efficacy, The 5th International Conference on Fluorescent Biomolecules and Their Building Blocks (FB3) (The Hong Kong Polytechnic University, Hong Kong), The Hong Kong Polytechnic University and Hong Kong Baptist University, March 10-13, 2024 (**poster**) (*corresponding author)

8. ZeBang He, Alex Ngai Nick Wong, **Jung Sun Yoo***: Integrating Dual-Supervision and Region Fusion Attention for COVID-19 Image Segmentation, American College of Radiology 2024 Annual Meeting (ACR 2024 Annual Meeting, Washington Hilton, Washington, USA), American College of Radiology, April 13-17, 2024 (**poster**) (*corresponding author)

9. ZeBang He, **Jung Sun Yoo***: Deep Learning Based Differentiation of COVID-19 and Non-COVID-19 Cases and Segmentation of COVID-19 Infected Regions in Chest X-ray Images, Hong Kong Radiographers' Association Annual Scientific Meeting (New World Millennium Hong Kong Hotel, Hong Kong), Hong Kong Radiographers' Association (HKRA), August 12, 2023 (**invited**) (*corresponding author)

10. **Jung Sun Yoo***, Minfeng Yang: In vivo immunoscoring technique to predict anti-CD47 immunotherapy efficacy in triple-negative breast cancer via single-cell pharmacokinetic imaging, The 2023 Society of Nuclear Medicine & Molecular Imaging Annual Meeting (The 2023 SNMMI Annual Meeting, McCormick Place, Chicago, Illinois, USA), Society for Nuclear Medicine & Molecular Imaging, June 24-27, 2023 (**poster**, June 27, 2023) (*corresponding author)

11. Alex Ngai Nick Wong, ZeBang He, Minfeng Yang, **Jung Sun Yoo***: A Deep Learning Approach for Real-time Intraoperative Detection of Peripheral Nerves, World Molecular Imaging Congress Virtual 2022 (WMIC 2022, Miami Beach Convention Center, Florida, USA), World Molecular Imaging Society, September 28-October 1, 2022 (**oral**, September 29, 2022) (*corresponding author)

12. Arpan Mahanty, Inyoung Oh, Ka Wing Wan, **Jung Sun Yoo***: Immunofluorescence Specific Measurement of Differentiation by Cell Profiler software: A New Approach to Analysis of Macrophage/Microglia Polarization, World Molecular Imaging Congress Virtual 2022 (WMIC 2022, Miami Beach Convention Center, Florida, USA), World Molecular Imaging Society, September 28-October 1, 2022 (**poster, virtual**) (*corresponding author)

13. Chung Ting Tang, ZeBang He, Alex Nagi Nick Wong, Boom Ting Kung, Tin Kun Au Yong, **Jung Sun Yoo***: Deep Learning to Reduce Scan Time and Radiation Dose in Myocardial Perfusion Imaging SPECT, The 13th Congress of the World Federation of Nuclear Medicine and Biology (WFNMB 2022, Kyoto International Conference Center, Japan, Hybrid meeting), World Federation of Nuclear Medicine and Biology (WFNMB), September 7-11, 2022 (**poster**) (*corresponding author), **Young Investigator Award – Mr. Chung Ting Tang (DHSc student)**

14. **Jung Sun Yoo**, Ngai Nick Alex Wong : Surgical Microscopy for Peripheral Nerve Imaging with Spectral Reflectance and Deep Neural Networks, Focus on Microscopy 2022 – Online (FoM 2022 – Online), Organizing Committee FOM2022, April 10 – 13, 2022 (**oral**, April 11, 2022)

15. Minfeng Yang, **Jung Sun Yoo*** : Label-free Multiphoton Microscopy of Single Cell Metabolism to Monitor Therapeutic Outcome of CD47 Immune Checkpoint Blockade in Breast Cancer, Focus on Microscopy 2022 – Online (FoM 2022 – Online), Organizing Committee FOM2022, April 10 – 13, 2022 (**oral**, April 12, 2022) (*corresponding author)

16. Martin Ho Yin Yeung, Ka Long Leung, Lai Yuen Choi, **Jung Sun Yoo**, Susan Yung, Pui-Kin So, Chi-Ming Wong : Metabolomics analysis reveals the protection mechanism of GLP-1 analogue Dulaglutide on high-fat diet-induced chronic kidney disease in mice. The 11th International Congress of Diabetes and Metabolism (2021 ICDM) and the 13th AASD (Asian Association for the Study of Diabetes) Scientific Meeting, Online, October 7 – 9 2021 (**oral**)

17. Minfeng Yang, **Jung Sun Yoo*** : Label-free Metabolic Imaging for Sensitive and Robust Monitoring of Anti-CD47 Immunotherapy Response in Triple Negative Breast Cancer, World Molecular Imaging Congress Virtual 2021 (WMIC Virtual 2021), World Molecular Imaging Society, October 5-8, 2021 (**poster**) (*corresponding author), **Women in Molecular Imaging Network Scholar Award – Ms. Minfeng Yang (PhD student)**

18. Alex Ngai Nick Wong, Martin Ho Yin Yeung, Cheong Kin Ronald Chan, Angela Zaneta Chan, Chun Yin Wong, Tsz Yan Joyce Chan, **Jung Sun Yoo**, Chi Ming Wong : Prioritization on Whole-slide Images of Clinical Gastric Carcinoma Biopsies Through a Weakly Supervised and Annotation-free System, International Digestive Disease Forum 2021, Institute of Digestive Disease at the Chinese University of Hong Kong, Henry Cheng International Conference Centre of The Chinese University of Hong Kong, Hong Kong & Online, September 4-5, 2021 (**poster**) Published Abstract: Ngai Nick Wong A, Ho Yin Yeung M, Kin Ronald Chan C, et alIDDF2021-ABS-0100 Prioritization on whole-slide images of clinical gastric carcinoma biopsies through a weakly supervised and annotation-free system. Gut 2021;70:A122-A123. 2 September 2021

19. Martin Ho Yin Yeung, Pui-Kin So, **Jung Sun Yoo**, Chi-Ming Wong : Glucagon-like peptide 1 receptor agonist dulaglutide ameliorate kidney function in diet-induced obese mice by regulating lipids and metabolites. The 17th Annual Conference of the Metabolomics Society (METABOLOMICS 2021), Online, June 22 – 24 2021 (**poster**)

20. **Jung Sun Yoo***, In Young Oh, Seong-Tae Han : Terahertz Wave Irradiation Promotes Skin Regeneration and New Hair Growths, World Molecular Imaging Congress Virtual 2020 (WMIC Virtual 2020), World Molecular Imaging Society, October 7-9, 2020 (**poster**) (*corresponding author)

21. Ngai Nick Alex Wong, **Jung Sun Yoo*** : Intraoperative Imaging Technique to Highlight Peripheral Nerves during Cancer Surgery using Spectral Reflectance, World Molecular Imaging Congress Virtual 2020 (WMIC Virtual 2020), World Molecular Imaging Society, October 7-9, 2020 (**poster**) (*corresponding author)

22. Arpan Mahanty, Inyoung Oh, Ka Wing Wan, **Jung Sun Yoo*** : Glioblastoma Staging with Fluorescence Molecular Imaging of Macrophages/Microglia Polarization, World Molecular Imaging Congress Virtual 2020 (WMIC Virtual 2020), World Molecular Imaging Society, October 7-9, 2020 (**poster**) (*corresponding author)

23. **Jung Sun Yoo** : Watching Molecular Targets with Nanomaterials in Cancer and Cardiovascular Disease for Diagnosis and Image-Guided Surgery, 2018 International Symposium on Nanobiotechnology, Biosensors and Biochips (2018 ISNBB, City University of Hong Kong, Department of Biomedical Sciences), Asian Federation of Biotechnology (AFOB), Chinese Society of Biotechnology (CSBT), City University of Hong Kong (CityU), December 13-14, 2018 (**invited**, December 13, 2018)

24. Ngai Nick Alex Wong, **Jung Sun Yoo*** : Intraoperative Imaging System to Highlight Peripheral Nerves using Polarized Spectral Reflectance, 2018 International Symposium on Nanobiotechnology, Biosensors and Biochips (2018 ISNBB, City University of Hong Kong, Department of Biomedical Sciences), Asian Federation of Biotechnology (AFOB), Chinese Society of Biotechnology (CSBT), City University of Hong Kong (CityU), December 13-14, 2018 (**oral**, December 14, 2018) (*corresponding author), **Certificate of Excellence – Mr. Ngai Nick Alex Wong (PhD student)**

25. **Jung Sun Yoo** : Imaging Molecular Targets in Cancer and Cardiovascular Disease for Diagnosis and Image-Guided Surgery, 2018 International Symposium on New Frontiers in Nano-Bio-Electronic Convergence Science and Techology (ISNBE 2018, Graduate School of Convergence Science and Technology, Seoul National University, Suwon, Korea), Graduate School of Convergence Science and Technology, Seoul National University, December 3-4, 2018 (**invited**, December 4, 2018)

26. **Jung Sun Yoo** : Radionuclide Imaging (RNI) in Atherosclerosis, 21st Asia-Australasia Conference of Radiological Technologists in conjunction with 5h Asia Radiotherapy

Symposium 3rd Hong Kong Radiographers and Radiation Therapists Conference (AACRT 2017, Science Park, Hong Kong), The Hong Kong College of Radiographers and Radiation Therapists (HKCRRT), The Hong Kong Radiographers' Association (HKRA), Hong Kong Association of Radiation Therapists (HKART), June 23-25, 2017 (**invited**, June 24, 2017)

27. Ji Young Choi, Jae Ho Jung, Do Dam Park, Sue Yeon Lim, **Jung Sun Yoo**, Won Woo Lee, Byung Chul Lee, Sang Eun Kim : Evaluation of the C-C Chemokine Receptor Type 2 (CCR2) Expression in a Mouse Model of Myocardial Infarction by using SPECT and Fluorescence Molecular Imaging Probes, The 22nd International Symposium on Radiopharmaceutical Sciences (ISRS 2017, International Congress Center Dresden, Dresden, Germany), Society of Radiopharmaceutical Sciences (SRS), Helmholtz Zentrum Dresden Rossendorf, May 14-19, 2017 (**poster**), Published information in the "Journal of labelled compounds and radiopharmaceuticals" 2017 vol. 60, p S307

28. Ji Young Choi, Jae Ho Jung, Do Dam Park, **Jung Sun Yoo**, Won Woo Lee, Byung Chul Lee, Sang Eun Kim : Synthesis of Tricarbonly Technetium-99m Labeled Peptide Targeted For CCR2 (C-C Chemokine Receptor Type 2), The 55th Annual Autumn Meeting of the Korean Society of Nuclear Medicine 2016 (Asan Medical Center, Seoul, Korea), The Korean Society of Nuclear Medicine (KSNM), October 28-29, 2016 (**poster**, October 29, 2016)

29. Minsu Kang, Garam Kim, Chaedong Lee, Yuanzhe Piao, Sangeun Kim, **Jung Sun Yoo*** : *In Vivo* Imaging of Tumor-associated Macrophages to Delineate the Margins of Glioblastoma using Near-infrared Fluorescent Nanoparticles, 2016 KALAS International Symposium (Hwabaek International Convention Center, Gyeongju, Korea), Korean Association for Laboratory Animal Science (KALAS), August 24-26, 2016 (**oral**, August 25, 2016) (*corresponding author)

30. Ga Ram Kim, Sang Eun Kim, **Jung Sun Yoo*** : Intraoperative Visualization of Nerve for Surgical Guidance with No Exogenous Label using Spectral Reflectance Imaging, 2016 KALAS International Symposium (Hwabaek International Convention Center, Gyeongju, Korea), Korean Association for Laboratory Animal Science (KALAS), August 24-26, 2016 (**poster**, August 25, 2016) (*corresponding author), **Poster Award – Ms. Ga Ram Kim (Research Assistant)**

31. So Jeong Kim, Chae Dong Lee, Jae Ho Jung, Ji Young Choi, Byung Chul Lee, Yuanzhe Piao, Sang Eun Kim, **Jung Sun Yoo*** : *In Vivo* Fluorescence Imaging of Glioblastoma using Translocator Proteins (TSPOs) Targeted Nanoparticles, 2016 KALAS International Symposium (Hwabaek International Convention Center, Gyeongju, Korea), Korean Association for Laboratory Animal Science (KALAS), August 24-26, 2016 (**poster**, August 25, 2016) (*corresponding author)

32. Wan Kim, So Jeong Kim, Sang Eun Kim, **Jung Sun Yoo*** : Semi-Automated Image Analysis Technique for Quantifying Cellular Expression of Mitochondrial Translocator Protein (TSPO) Targeting Nanoparticles using Free Open-Source Software, 2016 KALAS International Symposium (Hwabaek International Convention Center, Gyeongju, Korea), Korean Association for Laboratory Animal Science (KALAS), August 24-26, 2016 (**poster**, August 25, 2016) (*corresponding author)

33. Anna Go, Minsu Kang, Sojeong Kim, **Jung Sun Yoo**, Tae-Rin Lee : Prediction of Blood Flow *In Vivo* using Bifurcated Microfluidic Channels, The Korean Society of Mechanical Engineers 2016 Spring Conference – Bioengineering Division (Kangwon National University, Kangwon-Do, Korea), The Korean Society of Mechanical Engineers, April 27-29, 2016 (**oral**, April 29, 2016)

34. **Jung Sun Yoo**, Juhwan Yoon, Sang Eun Kim, Seong-Tae Han : Terahertz Wave Irradiation enhances Proliferation of Hair Follicle Stem Cells, 2015 International Symposium on New Frontiers in Nano-Bio Convergence Technology (ISNB 2015, Graduate School of Convergence Science and Technology, Seoul National University, Suwon, Korea), Graduate School of Convergence Science and Technology, Seoul National University, December 17-18, 2015 (**oral**, December 18, 2015)

35. Chaedong Lee, Joohwan Yoon, Bokyung Seo, **Jung Sun Yoo**, Yuanzhe Piao : Tumor-associated macrophage imaging using bimodal nanoparticles for delineating margins of glioblastoma, 2015 International Symposium on New Frontiers in Nano-Bio Convergence Technology (ISNB 2015, Graduate School of Convergence Science and Technology, Seoul National University, Suwon, Korea), Graduate School of Convergence Science and Technology, Seoul National University, December 17-18, 2015 (**oral**, December 18, 2015)

36. **Jung Sun Yoo**, Chaedong Lee, Juhwan Yoon, Yuanzhe Piao, Sang Eun Kim : Tumor-associated Macrophage Imaging to Delineate the Margins of Glioblastoma using Near-infrared Fluorescent Nanoparticles, 11th Asia Oceania Congress of Nuclear Medicine and Biology (AOCNMB2015, International Convention Center Jeju, Jeju, Korea), Asia and Oceania Federation of Nuclear Medicine and Biology, October 31-November 4, 2015 (**oral**, November 3, 2015)

37. **Jung Sun Yoo,** Chaedong Lee, Juhwan Yoon, Jae Ho Jung, Byung Chul Lee, Yuanzhe Piao, Sang Eun Kim : Tumor-associated Macrophage Imaging to Delineate the Margins of Glioblastoma using a Triple-modality PET-MRI-fluorescent Nanoparticle, World Molecular Imaging Congress 2015 Precision Medicine…Visualized (WMIC 2015, Hawaii Convention Center, Honolulu, Hawaii, USA), World Molecular Imaging Society, September 2-5, 2015 (**poster**, September 4, 2015)

38. Seong-Tae Han, Woo-Jae Lee, Ki-Sang Park, Sung-Wook Choi, Juhwan Yoon, **Jung Sun Yoo** : Application of T-Ray Gyrotron Developed for Real-Time Non-Destructive Inspection to Enhanced Regeneration of Cells, IRMMW-THz2015 (The 40th International Conference

on Infrared, Millimeter, and Terahertz Waves, The Chinese University of Hong Kong, Hong Kong), The International Society of Infrared, Millimeter, and Terahertz Waves, August 23-28, 2015 (**oral**, August 24, 2015) Published as Proceedings Paper in the Book Series of "International Conference on Infrared Millimeter and Terahertz Waves"

39. **Jung Sun Yoo**, Sue Yeon Lim, Juhwan Yoon, Sang Eun Kim, Won Woo Lee : CCR2 Targeted Fluorescent Peptides Highlight Inflammation in Myocardial Infarction, 2015 International Symposium on New Frontiers in Nano-Bio-Energy Convergence Science and Technology (ISNBE 2015, Yangzhou University, Yangzhou, China), College of Chemistry and Chemical Engineering, Yangzhou University, July 24-25, 2015 (**invited**, July 25, 2015)

40. **Jung Sun Yoo**, Juhwan Yoon, Seong-Tae Han : Terahertz Wave Irradiation Contributes to Proliferation of Hair Follicle Stem Cells, Korea Physical Society 2015 Spring Conference (Daejeon Convention Center, Daejeon, Korea), The Korean Physical Society, April 22-24, 2015 (**oral**)

41. **Jung Sun Yoo**, Young-Tae Chang, Sang Eun Kim : Intraoperative Lymph Node Staging using a Macrophage-Specific Fluorescent Probe, Imaging in 2020 – Imaging the Immune System (Jackson Hole, WY, USA), World Molecular Imaging Society, September 21-25, 2014 (**poster**)

42. **Jung Sun Yoo,** Young-Tae Chang, Byung Chul Lee, Sang Eun Kim : A Fluorescent Dye for *In Vivo* Labeling of Alveolar Progenitors and Type II Cells, World Molecular Imaging Congress 2014 (WMIC 2014, COEX Convention Center, Seoul, Korea), World Molecular Imaging Society, September 17-20, 2014 (**poster**)

43. **Jung Sun Yoo**, Chaedong Lee, Byung Chul Lee, Yuanzhe Piao, Sang Eun Kim : Fluorescent Nanoparticles for *In Vivo* Imaging of Tumour Metastasis and Tumour-associated Macrophages, 2014 International Symposium on New Frontiers in Nano-Bio-Energy Convergence Science and Technology (ISNBE 2014, Graduate School of Science and Technology, Seoul National University, Suwon, Korea), Graduate School of Convergence Science and Technology, Seoul National University, August 12-13, 2014 (**oral**)

44. **Jung Sun Yoo,** Young-Tae Chang, Byung Chul Lee, Sang Eun Kim : Fluorescence Imaging for *In Vivo* Biology and Clinical Applications, Korea Physical Society 2014 Spring Conference (Daejeon Convention Center, Daejeon, Korea), The Korean Physical Society, April 23-25, 2014 (**oral**)

45. **Jung Sun Yoo** : Fluorescence Imaging for *In Vivo* Biology and Clinical Applications, 4th Conference on Pioneering Convergence Technologies (Graduate School of Science and Technology, Seoul National University, Suwon, Korea), Graduate School of Science and Technology, Seoul National University, January 23, 2014 (**oral**)

46. **Jung Sun Yoo**, Sung-Chan Lee, Zhi Yen Jow, Yun Xian Koh, Young-Tae Chang : A macrophage-specific Fluorescent Probe Distinguishes Metastatic and Inflamed Lymph Nodes *In Vivo*, Korea Physical Society 2013 Spring Conference (Daejeon Convention Center, Daejeon, Korea), The Korean Physical Society, April 24-26, 2013 (**oral**)

47. **Jung Sun Yoo**, M. Hossein Ayati, Wei-bo Zhang, Hong Ryul Park, Young-Guen Kwon, Kwang-Sup Soh : Compositional Differences of Primo-, Blood, and Lymphatic Vascular System in Lung Cancer Xenograft, International Symposium on Primo-Vascular System – Special Topics on Cancer, Regeneration, and Acupuncture (ISPS2010, Cheongpung Resort-Lake Hotel, Jecheon, Korea), 2010 World Oriental Medicine-Bio EXPO in Jecheon, Korea & College of Natural Sciences, Seoul National University, September 17-18, 2010 (**poster**)

48. **Jung Sun Yoo,** Hong Bae Kim, Nayoun Won, Jiwon Bang, Sungjee Kim, Saeyoung Ahn, and Kwang-Sup Soh : *In Vivo* Imaging of Cancer Cells in the Primo-vascular System with Electroporation of Quantum Dots and Multispectral Imaging, Korea Physical Society 2009 Spring Conference (Changwon Exhibition Convention Center, Changwon, Korea), The Korean Physical Society, October 21-23, 2009 (**oral**)

49. **Jung Sun Yoo,** Hong Bae Kim, Vyacheslav Ogay, Byung-Cheon Lee, Saeyoung Ahn, and Kwang-Sup Soh : Bonghan Ducts as Possible Pathways for Cancer Metastasis, The 5th SAMS 2009 Symposium on Acupuncture and Meridian Studies Traditional and holistic medicine: The past, present and future (SETEC convention center, Seoul, Korea), International Pharmacopuncture Institute, October 9-11, 2009 (**oral**)

50. **Jung Sun Yoo**, Ku-Youn Baik, Kwang-Sup Soh : Application of Fluorescent Magnetic Nanoparticles in Bonghan System Study, Asian Magnetics Conference 2008 & KMS 2008 Winter Conference (Paradise Hotel, Busan, Korea), The Korean Magnestics Society, December 10-13, 2008 (**oral**), Abstract published in the "Proceedings of the Korean Magnetics Society Conference" (2008, p.16.1)

51. Baeckkyoung Sung, Min Su Kim, **Jung Sun Yoo**, Byung-Cheon Lee, Sang-Hee Lee, Youn-Joong Kim, Ki-Won Kim, and Kwang-Sup Soh : Liquid Flow in the Channels of the Novel Threadlike Structures on the Surfaces of Mammalian Organs and its Electron Microscopic Analysis, Korean Society of Microscopy 2006 Fall Conference (The Catholic University of Korea, Seoul, Korea), Korean Society of Microscopy, November 9, 2006 (**oral**)

52. **Jung Sun Yoo**, Min Su Kim, Baeckkyoung Sung, Byung-Cheon Lee, Kwang-Sup Soh, Sang-Hee Lee, Youn-Joong Kim, and Harald Dobberstein : Cribriform Structure with Channels in the Acupuncture Meridian-like System on the Organ Surfaces of Rabbits, 22nd Annual International Symposium on Acupuncture & Electro-Therapeutics & Bi-Digital O-ring Test (Columbia University, New York City, USA), The International College of Acupuncture & Electro-Therapeutics, November 4-7, 2006 (**oral**)

53. **Jung Sun Yoo**, Min Su Kim, Vyacheslav Ogay, Kwang-Sup Soh : Alcian Blue Staining Method for Visualizing Bonghan Ducts inside Blood Vessels of Mice, WC 2006 World Congress on Medical Physics and Biomedical Engineering (COEX, Seoul, Korea), IFMBE Proceedings book series (IFMBE, volume 14, pp 3626-3629), International Federation of Medical and Biological Engineering (IFMBE), International Organization for Medical Physics (IOMP), August 27 – September 1, 2006 (**poster**)

54. Byung-Cheon Lee, **Jung Sun Yoo**, Ku Yuen Baik, Eun-sung Park, Yeo-Sung Yoon, Kwang-Sup Soh : Hidden Corpuscular Structures Floating Inside Blood Vessels of Mammalians, WC 2006 World Congress on Medical Physics and Biomedical Engineering (COEX, Seoul, Korea), IFMBE Proceedings book series (IFMBE, volume 14, pp 3598-3601), International Federation of Medical and Biological Engineering (IFMBE), International Organization for Medical Physics (IOMP), August 27 – September 1, 2006 (**oral**)

55. Hyeon-Min Johng, Chang-Hoon Lee, **Jung Sun Yoo**, Tae-Jong Yoon, Hak-Soo Shin, Byung-Cheon Lee, Jin-Kyu Lee, Jung Dae Kim, Wan Su Park, Kwang-Sup Soh: Nanoparticles for Tracing Acupuncture Meridians and Bonghan Ducts, WC 2006 World Congress on Medical Physics and Biomedical Engineering (COEX, Seoul, Korea), IFMBE Proceedings book series (IFMBE, volume 14, pp 3584-3586), International Federation of Medical and Biological Engineering (IFMBE), International Organization for Medical Physics (IOMP), August 27 – September 1, 2006 (**poster**)

56. **Jung Sun Yoo**, Min Su Kim, Vyacheslav Ogay, and Kwang-Sup Soh : Alcian Blue Staining Method for Visualizing Bonghan Ducts inside Blood Vessels of Mice, Frontiers in Biophysics and Nano-biotechnology, organized by the Biophysics Division, the Cavendish-KAIST Cooperative Research Program (Hoam convention center, Seoul National University, Seoul, Korea), June 22 – 23, 2006 (**poster**)

57. **Jung Sun Yoo**, Byung-Soo Chang, Vyacheslay Ogay, Byung-Cheon Lee, Sang-Hee Lee, Youn-Joong Kim, and Kwang-Sup Soh : Study on the Ultrastructure of Bonghan Duct with Electron Microscopy, Korean Society of Microscopy 2006 Spring Conference (Hoam convention center, Seoul National University, Seoul, Korea), Korean Society of Microscopy, May 25-26, 2006 (**oral**)

58. **Jung Sun Yoo**, Hyeon-Min Johng, Tae-Jong Yoon, Hak-Soo Shin, Byung-Cheon Lee, Changhoon Lee, Jin-Kyu Lee and Kwang-Sup Soh : Visualizing Bonghan Ducts inside Lymphatic Vessels using Nanoparticles, IW-NSI 2006 The 2nd international workshop of NANO systems institute (Hoam convention center, Seoul National University, Seoul, Korea), NANO systems institute of the Seoul National University, May 8-10, 2006 (**poster**)

59. **Jung Sun Yoo**, Vyacheslav Ogay, Byung-Cheon Lee and Kwang-Sup Soh : Three-Dimensional Reconstruction of a New Threadlike Tissue with High-Voltage Electron Microscope Tomography, Korea Physical Society 2006 Fall Conference (Phoenix

Park,PyeongChang, Gangwon-do, Korea), The Korean Physical Society, April 20-21, 2006 (**poster**)

60. Ju Young Hong, Su Hong, Byung-Cheon Lee, **Jung Sun Yoo**, and Kwang-Sup Soh : Identification and Isolation of the Pluripotent Stem Cells from the Bonghan Corpuscle, The FASEB Journal, 20 : A884, 2006, Experimental Biology 2006 Meeting (Moscone Convention Center, San Francisco, California, USA), Federation of American Societies for Experimental Biology, April 1-5, 2006 (**poster**)

61. Kwang-Sup Soh, Su Hong, Ju-Young Hong, Byung-Cheon Lee, **Jung Sun Yoo** : Immunohistochemical Characterization of Intravascular Bonghan Duct, Microcirculation, 13: 166, Developmental Vascular Biology Workshop II Abstracts (Asilomar Conference Grounds, Pacific Grove, California), The North American Vascular Biology Organization, February 1-5, 2006 (**poster**)

62. Byung-Cheon Lee, **Jung Sun Yoo**, Sungkwang Kim, Kwang-Sup Soh : Meditation and Plant-like Bundle Structure of Bonghan Duct, The 23th Symposium of the Korean Society of Jungshin Science, Proceedings of Korean Jungshin Science Symposium 23, 2005, 10, 135-140 (Korea Military Academy, Seoul, Korea), October 28-29, 2005 (**oral**)

63. **Jung Sun Yoo**, Kihwan Choi, Ku Youn Baik, Doo Soo Chung and Kwang-Sup Soh : Liquid-Phase Microextraction Method in Capillary Electrophoresis to Detect Adrenaline in Bonghan Liquid, The 20th Symposium on Life Information Science Program (Tokyo Institute of Technology, Tokyo, Japan), International Society of Life Information Science (ISLIS), September 2-4, 2005 (**oral**)

64. Changhoon Lee, **Jung Sun Yoo**, Hyung Hwan Kim, Joonhyung Kwon, Kwang-Sup Soh : Flow of Nanoparticles inside Organ-surface Bonghan Ducts, The 23th Symposium of the Korean Society of Jungshin Science, Proceedings of Korean Jungshin Science Symposium 23, 2005, 10, 129-134 (Korea Military Academy, Seoul, Korea), October 28-29, 2005 (**oral**)

65. **Jung Sun Yoo**, Kihwan Choi, Doo Soo Chung and Kwang-Sup Soh: Identification of Adrenaline in Bonghan Liquid by Liquid-Phase Microextraction Method of Capillary Electrophoresis, The 13th International Conference of Women Engineers and Scientists (Ewha Womans University, Seoul, Korea), International Network of Women Engineers and Scientists (INWES), August 26-29, 2005 (**poster**)

66. Byung-Cheon Lee, **Jung Sun Yoo**, Eun Sung Park, Yeo Sung Yoon, Hak-Soo Shin and Kwang-Sup Soh : Histological features of Bonghan Corpuscles on the Surface of Rabbit Internal Organs, The 19th Symposium on Life Information Science Program (Tokyo Denki University, Tokyo, Japan), International Society of Life Information Science (ISLIS), February 26-27, 2005 (**oral**)

67. Byung-Cheon Lee, **Jung Sun Yoo**, Eun Sung Park, Ku Youn Baik, Jung-Dae Kim, Ki Woo Kim, Yeo Sung Yoon, Kwang-Sup Soh: Histological Studies on Threadlike and Corpuscular Structures on the Surfaces of Rat and Rabbit Internal Organs, Korean Association of Veterinary Anatomists (Kangwon National University, Chuncheon, Korea), February 24, 2005 (**poster**)

J. Invited Seminars

1. Molecular Imaging for Image-Guided Surgery and Personalized Medicine, Yonsei University, Wonju, Korea, May 29, 2024

2. Visualizing Cancer Immunotherapy and Image-Guided Surgery, College of Medicine, Korea University, Seoul, Korea, Oct 4, 2023

3. Getting into Biology and Medicine as Physicist, Department of Physics, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Dec 20, 2022

4. Molecular Imaging for Cancer Immunotherapy and Image-Guided Surgery, Seminar Speaker, Department Colloquium, Chemical Engineering and Materials Science, Ewha Womans University, Seoul, Korea, Dec 08, 2022

5. Biomedical Research using Optical Molecular Imaging, Department of Food Science and Biotechnology, Gachon University, Seongnam, Gyeonggi-do, Korea, Jul 26, 2016

6. Optical Molecular Imaging Can Change the Future of Medicine, Department of Physics Education, Seoul National University, Seoul, Korea, Nov 19, 2015

7. Watching Molecular Targets in Living Bodies: the Cutting Edge in Clinical Medicine, Seminar Speaker, Department Colloquium, Department of Physics, Sungkyunkwan University, Suwon, Gyeonggi-do, Korea, Sep 16, 2015

8. Imaging Inflammation with Nanomaterials in Cancer and Cardiovascular Disease, Seminar Speaker, The 18th Convergence Research Forum, Advanced Institutes of Convergence Technology, Seoul National University, Suwon, Gyeonggi-do, Korea, May 27, 2015

9. *In Vivo* Fluorescence Imaging of Glioblastoma with Water Well-dispersed Iron Oxide Nanoparticles, Seminar Speaker, Nanoparticle Innovation Research Center, Advanced Institutes of Convergence Technology, Seoul National University, Suwon, Gyeonggi-do, Korea, Dec 23, 2014

10. Fluorescence Imaging for *In Vivo* Biology and Image-guided Surgery, Seminar Speaker, Department of Nuclear Medicine, Seoul National University Bundang Hospital, Bundang, Gyeonggi-do, Korea, May 7, 2014

11. Fluorescence Imaging of Live Animals with Nanomaterials, Seminar Speaker, Nanoparticle Innovation Research Center, Advanced Institutes of Convergence Technology,

Seoul National University, Suwon, Gyeonggi-do, Korea, Apr 14, 2014

12. Fluorescence-guided Surgery using Multispectral Imaging System, Seminar Speaker, Biomedical Engineering Branch, National Cancer Center, Goyang, Gyeonggi-do, Korea, Apr 10, 2014

13. *In Vivo* Biology and Image-guided Surgery using Fluorescence, Seminar Speaker, Graduate School of Convergence Science and Technology, Seoul National University, Suwon, Gyeonggi-do, Korea, Apr 9, 2014

14. Fluorescence Imaging for *In Vivo* Biology and Image-guided Surgery, Seminar Speaker, Seoul National University College of Medicine, Seoul, Korea, Apr 1, 2014

15. Fluorescence Imaging for *In Vivo* Biology and Clinical Applications, Seminar Speaker, Center for Neuroscience Imaging Research, Institute for Basic Science, Sungkyunkwan University, Suwon, Gyeonggi-do, Korea, Mar 21, 2014

16. Fluorescence Imaging for *In Vivo* Biology and Clinical Applications, Seminar Speaker, Molecular Imaging & Therapy Branch, Division of Convergence Technology, National Cancer Center, Goyang, Gyeonggi-do, Korea, Mar 7, 2014

17. A Macrophage-Specific Fluorescent Probe Distinguishes Metastatic And Inflamed Lymph Nodes *In Vivo*, Seminar Speaker, Plasma Bioscience Research Center, Kwangwoon University, Seoul, Korea, Apr 30, 2013

18. Monocyte/Macrophage Specific Fluorescent Probe Development to Assess inflammation *In Vivo*, Seminar Speaker, Advanced Institutes of Convergence Technology, Seoul National University, Suwon, Gyeonggi-do, Korea, Apr 9, 2012

19. Monocyte/Macrophage Specific Fluorescent Probe Development to Assess inflammation *In Vivo*, Seminar Speaker, Molecular Imaging & Therapy Branch, Division of Convergence Technology, National Cancer Center, Goyang, Gyeonggi-do, Korea, Apr 10, 2012

20. Evidence for an Additional Metastatic Route: *In Vivo* Imaging of Cancer Cells in the Primo-vascular System, Seminar Speaker, Kathy E. Holden Auditorium, Farrell Learning and Teaching Center, Optical Radiology Lab Seminar, Department of Raiology, School of Medicine, Washington University in St. Louis, Saint Louis, MO, USA, May 7, 2010

21. *In Vivo* Tracking of Cancer Cells in Primo-vessels (Bonghan Ducts) using Multispectral Fluorescence Imaging System, Seminar Speaker, Department of Biological Science, Sungkyunkwan University, Suwon, Gyeonggi-do, Korea, Sep 10, 2009

22. Fluorescence Imaging in Living Tissues using Various Correction Methods, Seminar Speaker, Molecular Imaging & Therapy Branch, Division of Convergence Technology, National Cancer Center, Goyang, Gyeonggi-do, Korea, Apr 2, 2008

K. Patents

1. Ho Yin Martin Yeung, Ngai Nick Alex Wong, **Jung Sun Yoo**, Cheong Kin Ronald Chan, Ka Fai To, Systems, Methods and Workflow for Processing Whole Slide Imaging for Disease Detection: The Hong Kong Polytechnic University, The Chinese University of Hong Kong, Application #63/366,019, June 08, 2022, US Provisional Patent Application, Application for China

2. **Jung Sun Yoo**, Ngai Nick Alex Wong, An Intraoperative Imaging Technique to Specifically Visualize Peripheral Nerves using Spectral Reflectance and Deep Neural Networks: The Hong Kong Polytechnic University, Application # 63/265,158, December 09, 2021, US Provisional Patent Application, Application for China, Stage 1 Registration in Hong Kong, September 09, 2023

3. **Jung Sun Yoo**, Tae-Rin Lee, System and Method for Quantifying Cell and/or Drug Transfer Efficiently In Microvessel And Surrounding Tissue: Advanced Institutes of Convergence Technology: Application # PCT/KR2017/008951, Grant # WO 2018/034507/A1, February 22, 2018, PCT patent

4. Tae-Rin Lee, **Jung Sun Yoo**, System and Method for Quantitatively Estimating Delivering Efficiency of Cells and/or Drugs in Microvessels and Tissue: Advanced Institutes of Convergence Technology: KR Patent 10-1909447, Oct. 12, 2018, Republic of Korea

5. Jung Sun Yoo, Tae-Rin Lee, Non-label Imaging System for Selective Microscopy of Peripheral Nerve: Seoul National University R&DB Foundation, Advanced Institutes of Convergence Technology. Application # PCT/KR2017/001823 (Feb. 20, 2017), Grant # WO 2017/142376 A1, August 24, 2017, PCT patent

6. **Jung Sun Yoo**, Tae-Rin Lee, Label-free Imaging System for Specific Detection of Peripheral Nerve: Seoul National University R&DB Foundation, Advanced Institutes of Convergence Technology: KR Patent 10-1790988, Oct. 26, 2017, Republic of Korea

7. Seong-Tae Han, **Jung Sun Yoo**, Device for Stimulating the Growth of Hair and Skin Tissue: Korea Electrotechnology Research Institute: KR Patent 10-1773983, Aug. 28, 2017, Republic of Korea

8. Kwang-Sup Soh, **Jung Sun Yoo**, Jaekwan Lim, A Method for Imaging Metastasis of Cancer via Primo-vessel: Seoul National University R&DB Foundation, Mobase Co., Ltd: KR Patent 10-1218798, Dec. 28, 2012, Republic of Korea

9. Kwang-Sup Soh, Byung-Cheon Lee, **Jung Sun Yoo**, Ku-Youn Baik, Sung-Il Cho, Visualizing Agent Comprising a Janus Green B and Visualizing Method by using the Same: Seoul National University R&DB Foundation: KR Patent 10-0950246, Mar. 23, 2010, Republic of Korea, US Patent US20090155171A1, 18 June 2009, United States

10. Kwang-Sup Soh, Hyeon-Min Johng, Hak-Soo Shin, Chunho Choi, **Jung Sun Yoo**, Young-Zoon Yoon, Changhoon Lee, Sung-Il Cho, Visualizing Agent Comprising a Magnetic

Nanoparticle and Visualizing Method by using the Same: Seoul National University R&DB Foundation: KR Patent 10-0875989, Dec. 18, 2008, Republic of Korea

11. Kwang-Sup Soh, Byung-Cheon Lee, **Jung Sun Yoo**, Changhoon Lee, Hyeon-Min Johng, Min Su Kim, Visualizing Method by using the Alcian Blue: Seoul National University R&DB Foundation, Mobase Co., Ltd: KR Patent 10-0753899, Aug. 24, 2007, Republic of Korea

L. Research Grants

Principal Investigator - Externally Competitive and Peer-Reviewed Research Funding

1. **General Research Fund (GRF)**, Research Grants Council of Hong Kong (RGC)
   Title: Dysregulation of Autophagy by Tripartite Motif (TRIM) Family Proteins at the Blood Brain Barrer – A Novel Cellular Mechanism Towards White Matter Hyperintensity
   Project number: 15101422
   Funding size: HKD 1,177,736
   Period: 1 Jul 2024 – 31 Dec 2025

2. **General Research Fund (GRF)**, Research Grants Council of Hong Kong (**RGC**)
   Title: Terahertz Wave Irradiation Promotes Skin Regeneration and New Hair Growths
   Project number: 15107118
   Funding size: HKD 899,100
   Period: 01 Jan 2019 – 30 Jun 2022
   The goal of this project to investigate the effect of Terahertz wave irradiation to promote skin regeneration and new hair growths via inflammatory activation.

3. **Early Career Scheme (ECS)**, Research Grants Council of Hong Kong (**RGC**)
   Title: Intraoperative Imaging System to Highlight Peripheral Nerves using Polarized Spectral Reflectance
   Project number: 25104017
   Funding size: HKD 1,248,632
   Period: 01 Jan 2018 – 30 Jun 2021
   The goal of this project is to develop specific surgical imaging system for detection of peripheral nerve based on specific optical properties including polarization and spectral reflectance.

4. **Mid-Career Researcher Program**, National Research Foundation of Korea (**NRF**), Ministry of Science, ICT and Future Planning (MSIP, Korea)
   Title: Development of Spectral Reflectance Imaging System for Label-Free Intraoperative Imaging of Peripheral Nerves
   Project number: 2014R1A2A1A11053420
   Funding size: KRW 200,000,000 (HKD 1,149,000)
   Period: 01 Nov 2014 – 31 Oct 2016
   The goal of this project is to develop specific imaging system for peripheral nerve to provide intraoperative guidance for minimally invasive surgery.

5. **Sejong Science High School R&E Program**, Korea Foundation for the Advancement of Science & Creativity (**KOFAC**, Korea)
   Title: Skin Regeneration using Terahertz Wave
   Funding size: KRW 4,800,000 (HKD 28,000)
   Period: 01 Jun 2015 – 31 Nov 2015
   The goal of this project is to investigate the effect of terahertz wave on skin regeneration and hair follicle stem cell proliferation.

6. **Basic Research Promotion Fund**, National Research Foundation of Korea (**NRF**), Ministry of Education (MOE, Korea)
   Title: Development of Intra-operative Fluorescence Imaging System for Small Animals
   Project number: KRF-612-2007-1-C00046
   Funding size: KRW 19,000,000 (HKD 109,000)
   Period: 01 Aug 2007 – 31 Mar 2008
   The goal of this project was to develop a new animal imaging system for intra-operative guidance using multispectral techniques.

Principal Investigator - Non-competitive Research Funding

1. **Academic Reserve**, The Hong Kong Polytechnic University
   Title: Development of new-generation theranostic agents for cancer applications
   Project number: P0051278
   Funding size: HKD 2,000,000
   Period: 1 Sep 2024 – 31 Aug 2026
   Role: Co-PI

2. **Several Seed Funds**
   Department of Health Technology and Informatics, The Hong Kong Polytechnic University
   Funding size: Total HKD 1,080,000
   Period: 1 Jun 2017 – present

3. **Departmental General Research Fund**, The Hong Kong Polytechnic University,
   Title: Label-free Multiparametric Metabolic Imaging for Sensitive and Robust Monitoring of Immunotherapy Response: A Pilot Study
   Project number: P0039715
   Funding size: HKD 100,000
   Period: 02 Feb 2022 – 01 Aug 2023

4. **Departmental General Research Fund**, The Hong Kong Polytechnic University
   Title: Quantitative In Vivo Imaging Technique to Measure a Ratio of Antitumor-to-protumor Macrophages and Microglia to Predict Anti-PD-1 Immunotherapy Efficacy in Glioblastoma: A Pilot Study
   Project number: P0035228
   Funding size: HKD 100,000

Period: 01 Feb 2021 – 30 Apr 2022

5. **Start-up Fund**, Department of Health Technology and Informatics, The Hong Kong Polytechinc University, HKD 600,000
   Title: Development of In Vivo Fluorescence Imaging Technique for Detection of Glioblastoma using Translocator Proteins Targeted Nanoparticles
   Funding size: HKD 600, 000
   Period: 01 Nov – 31 Oct 2021

Co-Investigator - Externally Competitive and Peer-Reviewed Research Funding

1. **General Research Fund (GRF)**, Research Grants Council of Hong Kong (RGC)
   Title: Dysregulation of Autophagy by Tripartite Motif (TRIM) Family Proteins at the Blood Brain Barrer – A Novel Cellular Mechanism Towards White Matter Hyperintensity
   Project number: 15101422
   Funding size: HKD 1,177,736
   Period: 01 Jan 2023 – 30 Jun 2024
   Principal Investigator: Kai Hei Tse

2. **Collaborative Research Equipment Grant (CRF)**, Research Grants Council of Hong Kong (RGC)
   Title: An Upright Multiphoton Microscope for Intravital Imaging and Optogenetic Studies
   Project number: C5078-21E
   Funding size: HKD 7,820,000
   Period: 30 Jun 2022 – 29 Jun 2025
   Principal Investigator: Mo Yang

Co-Investigator - Internally Competitive Research Funding

1. **Large Equipment Fund**, The Hong Kong Polytechnic University
   Title: A Multi-Parameter Flow Analyzer
   Project number: P0041343
   Funding size: HKD 3,500,000
   Period: 29 Apr 2022 – 30 Apr 2023
   Principal Investigator: Yun Chung Leung

2. **Large Equipment Fund**, The Hong Kong Polytechnic University,
   Title: Animal MRI System and Animal Imaging Equipment in Animal Imaging Centre
   Project number: P0040893
   Funding size: HKD 25,000,000
   Period: 04 Mar 2022 – 03 Mar 2023
   Principal Investigator: Yun Chung Leung

3. **Convergence Research Fund**, Advanced Institutes of Convergence Technology (**AICT**, Korea)
   Title: Nanomedicine Design using High-Resolution Bioimaging and Simulation

Project number: AICT-20150013
Funding size: KRW 15,000,000 (Stake - KRW 7,500,000) (HKD 86,000)
Period: 22 Sept 2015 – 31 Dec 2015
Principal Investigator: Tae-Rin Lee
This project finds the optimized design of nanomedicine for targeted therapy of malignant cancer by using high-resolution intravital imaging and computational modeling.

4. **SNUBH Research Fund**, Seoul National University Bundang Hospital (**SNUBH**, Korea)
   Title: Development of PET-MRI-Optical Imaging Technique using Water Well-dispersed Iron Oxide Nanoparticle for Tumor Diagnosis and Intraoperative Guidance
   Project number: 13-2015-013
   Funding size: KRW 30,000,000 (HKD 172,000)
   Period: 01 Apr 2015 – 31 Mar 2016
   Principal Investigator: Byung Chul Lee
   The goal of this project is to develop triple modality imaging technique using a PET-MRI-fluorescent nanoparticle with high water solubility for preoperative diagnosis and intraoperative guidance of glioblastoma.

Teaching Equipment Grants

1. **Large Equipment Fund-Teaching**, The Hong Kong Polytechnic University,
   Title: The Analytical Bundled Equipment for Radioisotope Qualitative and Quantitative Measurement (HTI-5)
   Project number: P0036791
   Funding size: HKD 852,420
   Period: 15 Jun 2021 – 30 Jun 2022
   Role: Co-Investigator (Principal Investigator: Liang-ting Lin)
   Internally Competitive

2. **Large Equipment Fund-Teaching**, The Hong Kong Polytechnic University,
   Title: Sophisticated Imaging and Advanced Intelligent Ultrasound System (HTI-2)
   Project number: P0036791
   Funding size: HKD 990,000
   Period: 15 Jun 2021 – 30 Jun 2022
   Role: Co-Investigator (Principal Investigator: Tin Cheung Ying)
   Internal Research Fund

Team Member - Externally Competitive and Peer-Reviewed Research Funding

1. **Korea Health Technology R&D Project**, Korea Health Industry Development Institute (KHIDI), Ministry of Health & Welfare (MOHW, Republic of Korea)
   Title: Center for Bioimaging Convergence Technologies and Innovative Drug Development
   Project number: HI14C1072
   Funding size: KRW 7,500,000,000 (HKD 43,078,000)
   Period: 01 Jul 2014 – 30 Sept 2019
   Principal Investigator: Sang Eun Kim
   The goal of this project is to develop bioimaging based drug development technologies and provide bioimaging service for pharmaceutical companies.

2. **Singapore Stem Cell Consortium Grant Call 2010**, A*STAR Singapore Stem Cell Consortium (**A*STAR SSCC**, Singapore)
   Title: Development of Novel Chemical Compounds for Directing Human ES Cell Differentiation to Lineages of Respiratory Airways
   Project number: SSCC/10/024
   Funding size: SGD 984,000 (HKD 5,477,000)
   Period: 01 Nov 2010 – 31 Oct 2013
   Principal Investigator: Young-Tae Chang, Co-Investigator: Bing Lim
   This project developed specific fluorescent probes for human ES derived cells to lung cells and functional chemicals for enhancing human ES differentiation.

3. **Global R&D Networking Program**, National Research Foundation of Korea (**NRF**), Ministry of Education (MOE, Korea), Ministry of Science, ICT and Future Planning (MSIP, Korea)
   Title: Cavendish-KAIST Cooperative Research Project-Biophysics Division
   Project number: M604EA020005-04E0102-00510
   Funding size: KRW 900,000,000 (HKD 5,169,000)
   Period: 01 Jul 2004 – 30 Jun 2007
   Principal Investigator: Kwang-Sup Soh
   The goal of this project was to reveal ultrastructure and analyze motion of small cells in the acupuncture meridian system.

4. **National Research Laboratory**, National Research Foundation of Korea (NRF), Ministry of Education (MOE, Korea), Ministry of Science, ICT and Future Planning (MSIP, Korea)
   Title: Study on Biophysical Mechanism of Acupuncture Points and Meridians for Diagnosis and Treatment of Korean Medicine
   Project number: R0A-2003-000-10371-0
   Funding size: KRW 1,150,000,000 (HKD 6,605,000)
   Period: 25 Jun 2003 – 24 Jun 2008
   Principal Investigator: Kwang-Sup Soh
   The goal of this project was to study physiological and biophysical characteristics of anatomical structure under the acupuncture points and meridians.

Team Member – Contract Research Funding

1. **Ministry of Health & Welfare (MOHW, Korea)**
   Title: Visualization of Bonghan System using Nanotechnology and Endoscope Development
   Funding size: KRW 49,300,000 (HKD 283,000)
   Period: 05 Jul 2010 – 31 Dec 2010
   Principal Investigator: Kwang-Sup Soh
   The goal of this project was to visualize Bonghan system using nanotechnology and endoscope development.

2. **Korea Institute of Oriental Medicine (Korea)**
   Title: Comparison of Characteristics of Lymphatic and Primo Vessel in Tumor Tissue
   Funding size: KRW 30,000,000 (HKD 172,000)
   Period: 01 Jul 2010 – 30 Nov 2010
   Principal Investigator: Kwang-Sup Soh
   This project analyzed histological characteristics of lymphatic and promo vessels in tumor tissue.

3. **Korea Institute of Oriental Medicine (Korea)**
   Title: Measurement of Membrane Potential and Action Potential of Bonghan System Consisting Cells and it's Analysis with Nonlinear theory
   Funding size: KRW 62,000,000 (HKD 356,000)
   Period: 01 Jun 2009 – 31 Dec 2009
   Principal Investigator: Kwang-Sup Soh
   The goal of this project was to measure membrane potential and action potential of Bonghan system consisting cells in order to compare with nerve tissue and blood and lymphatic vessels.

4. **Ministry of Health & Welfare (MOHW, Korea)**
   Title: The Development of a Vision Device for the Bonghan System Observation
   Project number: 20090435361-00
   Funding size: KRW 98,000,000 (HKD 562,000)
   Period: 21 Apr 2009 – 19 Feb 2010
   Principal Investigator: Kwang-Sup Soh
   This study developed a prototype of endoscopic imaging system to visualize microanatomical structures representing acupuncture meridian (Bonghan system).

5. **Mobase, Inc. (Korea)**
   Title: Research on Imaging and Tracing of Bonghan System
   Funding size: KRW 160,000,000 (HKD 919,000)
   Period: 01 Sept 2008 – 31 Aug 2010
   Principal Investigator: Kwang-Sup Soh
   The goal of this project was to image anatomical network and show fluid-conducting function of acupuncture meridian using fluorescence molecular imaging technique. The

goal of this project was to develop a new animal imaging system for intra-operative guidance using multispectral techniques.

6. **Mobase, Inc. (Korea)**
   Title: Research on the Relation between Stem Cells and Bonghan Systems
   Funding size: KRW 240,000,000 (HKD 1,378,000)
   Period: 01 Sept 2005 – 30 Aug 2008
   Principal Investigator: Kwang-Sup Soh
   The goal of this project was to find and analyze stem cells inside Bonghan systems.

M. Editorship/Reviewer Board Membership

Journal List for Editorial Board

- Frontiers in Oncology
  - Review Editor on the Editorial Board of Radiation Oncology, Since 2020 July
- International Journal of Molecular Sciences
  - Topic Editor on the Editorial Board, Since 2020 August

Journal List for Reviewer Board

- Information
  - Reviewer Board Member, Since 2020 March
- Journal of Imaging
  - Reviewer Board Member, Since 2020 July

N. Peer-review Service for Journals/Conferences/Grants

Ad Hoc Reviewer for Academic Journals

- Journal of Advanced Research
- Frontiers in Oncology
- Theranostics
- Journal of Experimental and Clinical Cancer Research
- Journal of Imaging
- Cancers
- Electronics
- Machine Learning and Knowledge Extraction
- Cells
- Sensors
- Current Molecular Pharmacology
- Information
- Diagnostics
- Molecules

- Applied Sciences-Basel
- Bioengineering-Basel
- International Journal of Molecular Sciences
- Scientific Reports
- PLOS ONE
- Molecular Imaging
- Molecular Imaging and Biology
- Biomedical Optics Express
- Review of Scientific Instruments
- Stem Cells and Development
- Journal of Acupuncture and Meridian Studies
- Cancer Epidemiology
- Biomarkers & Prevention
- Journal of International Society of Life Information Science
- World Journal of Surgical Oncology

Ad Hoc Reviewer for Conference

- World Molecular Imaging Congress 2020

Ad Hoc Reviewer for Research Grants/Proposals

- Individual Basic Science & Engineering Research Program
  - National Research Foundation of Korea, Ministry of Science, ICT and Future Planning, South Korea
- National Cancer Control Research Program
  - National Cancer Control Planning Board, Ministry of Health and Welfare, Korea
- Industry Convergence Fundamental Technology Development Program
  - Korea Evaluation Institute of Industrial Technology, Ministry of Trade, Industry and Energy, South Korea

O. Institutional Service

Year(s)	**Duty**	**Committee/Institution/Etc**
13 January 2024	Co-Chair of Organizing Committee and Presenter	Greater Bay Area Medical Physics Summit, Department of Health Technology and Informatics (HTI), The Hong Kong Polytechnic University (PolyU)
4 September 2023 - present	Programme Leader	Master of Science in Medical Physics Programme, HTI, PolyU
7 November 2023	Organizer	Celebration of International Day of Medical Physics 2023

21 Oct 2023	Seminar Presenter	MSc in Medical Physics Programme Introduction, PolyU Information Day
13 May 2023	Organizing Committee Member and Presenter	PolyU Medical Physics Day, HTI, PolyU
19 Jul 2022 – 31 December 2023	Faculty Board Member	Faculty Board of Health and Social Sciences, PolyU
19 Feb 2022	Co-Chair	Medical Physics Career Day, HTI, PolyU
08 Jan 2022, 07 Jan 2023	Seminar Presenter	MSc in Medical Physics Programme Introduction, PolyU Info Day for Taught Postgraduate Programmes
02 Sept 2020 – 31 August 2023	Founding Member, Deputy Programme Leader	Master of Science in Medical Physics Programme, HTI, PolyU
14 Jun 2019 - present	Reviewer	Postgraduate Symposium 2019, 2000, 2021, 2022, 2023, 2024 HTI, PolyU
23 Jan 2019 - present	Seminar Coordinator	HTI Departmental Research Seminar (HTI6201, HTI6202, HTI6203, HTI6204 Research Seminar I, II, III, IV subjects), HTI, PolyU
1 Sep. 2018 - present	Reviewer	Human Subjects Ethics Application, HTI, PolyU
1 Sep. 2018 - present	Member	Department Research Committee (DRC), HTI, PolyU
1 Jan. 2018 - present	Lab-in-Charge	Translational Imaging Laboratory, In Vivo Imaging Laboratory, HTI, PolyU
1 Sep. 2017 - present	Year Tutor	Year 2 BSc in Radiography Students, HTI, PolyU

P. Supervision of Students

Ongoing PhD Student Supervision with Chief Supervisor Role (2)

HE ZeBang, enrolled in January 2022
CHEN Hongzhao, enrolled in September 2023

Ongoing Doctor of Health Science (DHSc) Student Supervision with a Co-Supervisor Role (1)

LI Ka Chun, enrolled in September 2023

Completed Supervision of PhD Students as a Chief Supervisor (3)

MAHANTY Arpan, 31 March 2023
YANG Minfeng, 30 February 2023
WONG Ngai Nick Alex, 30 September 2021

Completed Supervision of a Doctor of Health Science (DHSc) Student as a Chief Supervisor (1)

TANG Chung Ting, 02 September 2022

Completed Supervision of a PhD Student as a Co-Supervisor (1)

YEUNG Ho Yin Martin, 17 January 2022

Completed Supervision of a Doctor of Health Science as a Co-Supervisor (1)

LAU Yu Ching, 19 July 2022

Faculty of Health and Social Sciences Summer Research Studentship (7)

LAM Yat Long, 2023/2024
YIP Hoi Lam, 2021/2022
AU Ching Wai, SUNG Chun Ki, 2000/2021
LEE Lap San, 2019/2000
WONG Chun Kin, WAN Ka Wing, 2018/2019

Training of Undergraduate Students under ECS Grant for Educational Activities (3)

WONG Chun Yin, 30 April 2020 – 31 December 2020
WAN Ka Wing, 1 July 2018 – 25 June 2020
SIN Chun Lok, 04 June 2018 – 28 June 2019

BSc Final Year Project Supervision (80)

80 students since 2018