

JUNG SUN YOO

[Personal]



Position Title: Assistant Professor of Department of Health Technology and Informatics, Deputy Programme Leader of Master of Science in Medical Physics Programme of The Hong Kong Polytechnic University

Date of Birth: 2nd January 1981

Nationality: Republic of Korea

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A. Education

Degree	Institution	Year(s)	Field of Study
Ph.D.†	Seoul National University Department of Physics and Astronomy	01 Mar. 2004 ~31 Aug. 2009	Biomedical Physics
B.S.	Seoul National University Department of Physics Education	01 Mar. 2000 ~26 Feb. 2004	Physics education

†Advisor Soh, Kwang-Sup (Theoretical physics, Biomedical physics)

Thesis *In vivo* Tracking of Cancer Cells in Bonghan Channels using Multispectral Fluorescence Imaging System

B. Employment and Other Experiences

- Oct. 11. 2016 – present **Assistant Professor**
Department of Health Technology and Informatics, Faculty of Health and Social Sciences, The Hong Kong Polytechnic University, Hong Kong
- Sep. 02. 2020 – present **Deputy Programme Leader**
Master of Science in Medical Physics Programme, Faculty of Health and Social Sciences, The Hong Kong Polytechnic University, Hong Kong
- Jan. 01. 2017 – Dec. 31. 2018 **Honorary Research Fellow**
Nano-Bio Research Laboratory, Advanced Institutes of Convergence Technology, Seoul National University, South Korea
- Mar. 01. 2014 – Oct. 10. 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
- Nov. 01. 2014 – Oct. 10. 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
- Feb. 01. 2011 – Oct. 31. 2013 **Research Fellow**
Department of Chemistry, Faculty of Science, National University of Singapore, Singapore
Singapore Bioimaging Consortium, Agency for Science, Technology and Research, Singapore
Prof. Young-Tae Chang +82-54-279-2101, ytchang@postech.ac.kr
- Sep. 01. 2009 – Jan. 31. 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

Prof. Kwang-Sup Soh +82-10-6324-0398, kssoh1@gmail.com

Apr. 01. 2007 – Mar. 31. 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

Prof. Vasilis Ntziachristos +49-89-3187-3852, v.ntziachristos@tum.de

Dec. 20. 2005 – Feb. 28. 2006 **Visiting Student (Internship)**

Harvard Medical School, Department of Radiology, Massachusetts General Hospital

Department of Medicine, Brigham and Women's Hospital, USA

Instructor Dr. Hyung-Hwan Kim +1-617-643-7334, Kim.HyungHwan@mgh.harvard.edu

Mar. 01. 2004 – Feb. 28. 2006 **Teaching Assistant**

Department of Physics and Astronomy, Seoul National University, Republic of Korea

Sep. 01. 2003 – Feb. 29. 2004 **Undergraduate Research Internship**

Department of Physics and Astronomy, Seoul National University, Republic of Korea

Prof. Kwang-Sup Soh +82-10-6324-0398, kssoh1@gmail.com

C. Teaching of Students in Courses

- 19 January 2021 – 04 May 2021 (2020/21 Sem2), 13 January 2022 – 21 April 2022 (2021/22 Sem2), MSc in Medical Physics students, **Medical Imaging Physics** (HTI5003), The Hong Kong Polytechnic University, Hong Kong, 3hr sessions per wk for 13 wks, given in English
- 15 January 2018 – 21 April 2018 (2017/18 Sem2), 14 January 2019 – 20 April 2019 (2018/19 Sem2), 11 February 2020 – 13 May 2020 (2019/20 Sem2), 22 January 2021 – 15 May 2021 (2020/21 Sem 2), 14 January 2022 – 14 April 2022 (2021/22 Sem2), 2nd year Radiography (Medical Imaging) undergraduate students, BSc (Hons) in Radiography, **Medical Imaging Instrumentation** (HTI28101), The Hong Kong Polytechnic University, Hong Kong, 3hr sessions per wk for 13 wks, given in English
- 04 September 2017 – 02 December 2017 (2017/18 Sem1), 03 September 2018 – 01 December 2019 (2018/19 Sem1), 02 September 2019 – 26 November 2019 (2019/20 Sem1), 11 September 2020 – 14 December 2020 (2020/2021 Sem1), 40 April 2021 – 29 November 2021 (2021/2022 Sem1), 1 September 2022 – 24 November 2022 (2022/23 Sem1), 2nd year Radiography (Medical Imaging & Radiotherapy) undergraduate students, BSc (Hons) in Radiography, **Radiographic Imaging Science** (HTI27104), The Hong Kong Polytechnic University, Hong Kong, 3hr sessions per wk for 13 wks, given in English
- 04 September 2017 – 02 December 2017 (2017/18 Sem1), 03 September 2018 – 01 December 2019 (2018/19 Sem1), 13 February 2020 – 7 May 2020 (2019/20 Sem2), 31 August – 30 November 2021 (2021/22 Sem1), MSc in Medical Imaging and Radiation Science, **Advanced Technology and Clinical Application in Nuclear Medicine Imaging** (HTI5725), The Hong Kong Polytechnic University, Hong Kong, 3hr sessions per wk for 13 wks, given in English
- 18 April 2017, 12 March 2018, 25 March 2019, 20 April 2020, 30 March 2021, 21 March 2022, 3rd year Radiography (Medical Imaging & Radiotherapy) undergraduate students, BSc (Hons) in Radiography, **Imaging in Radiotherapy**, The Hong Kong Polytechnic University, Hong Kong, 3hr session (Title: Functional and Molecular Imaging in Radiotherapy), given in English
- 14 January 2019 – 20 April 2019 (2018/19 Sem1), 10 February – 11 May 2020 (2019/20 Sem1), 3rd year Radiography (Medical Imaging) undergraduate students, BSc (Hons) in Radiography, **Computed Tomography** (HTI48101), The Hong Kong Polytechnic University, Hong Kong, 3hr sessions per wk for 13 wks, given in English
- 03 September 2018 – 01 December 2019 (2018/19 Sem1), 1st year BSc undergraduate students of Faculty of Health and Social Sciences, **Freshman Seminar for Broad Disciplines and Health Sciences** (HSS1010), The Hong Kong Polytechnic University, Hong Kong, 2hr sessions per 2 wks for 13 wks, given in English

8. 01 March 2016 – 30 June 2016, Graduate students, **Lecture on Immunology**, Gachon University, Department of Food Science and Biotechnology, Seongnam, Gyeonggi-do, Korea, 3 hr sessions per wk for 16 wks, given in English
9. 01 March 2016 – 30 June 2016, Graduate students, **Molecular Imaging as a Convergence Science**, Seoul National University, Graduate School of Convergence Science and Technology, Suwon, Korea, 3 hr sessions per wk for 16 wks, team teaching, given in Korean
10. 01 March 2009 – 31 December 2010, 2nd year Oriental Medicine undergraduate students, **Physics for Oriental Medicine**, Wonkwang University, Iksan, Korea, 2 hr sessions per wk for 31 wks, given in Korean

D. Honors and Fellowship

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| 15 Sept 2022 | <u>Reward of Publishing Paper in High Impact Journal</u> from Department of Health Technology and Informatics, The Hong Kong Polytechnic university, HKD 100,000 Research Fund |
| 1 April 2022 | <u>2020-2021 Outstanding Reviewer Award</u> from Journal of Imaging, 300 Swiss francs |
| 14 Nov. 2014 | <u>KOFWST Future Talent Award</u> from Korea Federation of Women's Science & Technology Associations (KOFWST), KRW 1,000,000 |
| 25 July 2014 | <u>Conference and Training Participation Support for Non-Regular Researchers</u> from Center for Women in Science, Engineering and Technology (WISET), KRW 2,500,000 |
| 11 Oct. 2009 | <u>Young Scientist Award</u> for the Acupuncture and Meridian Studies Awards 2009 from the International Pharmacopuncture Institute (IPI), USD 5,000 |
| 31 Aug. 2009 | <u>Graduate Student Research Award</u> -Second Place from the Seoul National University, KRW 500,000 |
| 11 Mar. 2005
- 28 Feb. 2007 | <u>Seoul Science Fellowship</u> from Seoul Metropolitan Government, KRW 11,000,000 |
| 26 Feb. 2004 | <u>Secondary teaching certificate for physics in the Republic of Korea (Ref. no. 16466)</u> |

***List of Prizes and Awards of Research Postgraduate Students under my Supervision**

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| 16 June 2022 | <u>3rd Prize</u> 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 September
2022 | <u>Young Investigator Award</u> from World Federation of Nuclear Medicine and Biology (WFNMB), The 13 th 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 October 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 June 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 June 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. Peer-reviewed Journal Publications (in descending chronological order)

Total # of peer-reviewed papers: 39 including 31 SCI(E) papers

h-index : 21 (Google Scholar, 2022 September)

Total # of citations : 1963 (Google Scholar, 2022 September)

1. Alex N N Wong, Chi-Ming Wong, Ronald C K Chan, Martin H Y Yeung, **Jung Sun Yoo** : Automation on Histological Diagnosis with Whole-Slide Images of Gastric Biopsy Specimens, manuscript in preparation
2. **Jung Sun Yoo**, Sue Yeon Lim, Juhwan Yoon, Sang Eun Kim, Won Woo Lee : SPECT/Fluorescence Detection of Myocardial Infarction *In Vivo* using a CCR2+ Inflammatory Cell Targeted Peptide, manuscript in preparation
3. **Jung Sun Yoo**, In Young Oh, Juhwan Yoon, Seong-Tae Han : Terahertz Wave Irradiation

Contributes to Proliferation of Hair Follicle Stem Cells, manuscript in preparation

4. Alex Ngai Nick Wong, In Young Oh, Minfeng Yang, **Jung Sun Yoo*** : Intraoperative imaging technique to highlight peripheral nerves during cancer surgery with spectral reflectance and artificial intelligence, manuscript in preparation
5. ZeBang He, Alex Nagi Nick Wong, **Jung Sun Yoo***: Enhanced COVID-19 CT Image Infection Segmentation by Dual-Stream Network and Auxiliary Region Attention, European Conference on Computer Vision 2022 (ECCV 2022, Israel, Hybrid meeting), Organizing Committee ECCV2022, October 23-27, 2022 (submitted) (*corresponding author)
6. Chung Ting Tang, ZeBang He, Alex Ngai Nick Wong, Jing Cai, **Jung Sun Yoo*** : Current concepts and future perspectives on deep learning in nuclear medicine, *Life-Basel*, under review-review comments received, preparing revision (*corresponding author) (IF=3.251, 39/94 Q2 in Biology)
7. Chung Ting Tang, ZeBang He, Alex Ngai Nick Wong, Boom Ting Kung, Ting Kun Au Yong, Jing Cai, **Jung Sun Yoo*** : Deep learning-based fast/low dose SPECT myocardial perfusion imaging, *JACC-Cardiovascular Imaging*, submitted
8. Minfeng Yang, Alex Nagi Nick Wong, Arpan Mahanty, **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=12.487, 22/317 Q1 in Oncology Top 6.78% by JCI, 14/177 Q1 in Immunology Top 7.63% by JCI)
9. 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=6.575, 60/245 Q1 in Oncology, Top 24.29% by JIF)
10. 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** (F=5.988, 46/361 Q1 in Pharmacology & Pharmacy, Top 12.6% by JCI)
11. 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=6.575, 60/245 Q1 in Oncology, Top 24.29% by JIF)
12. 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 JCI)
13. 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=4.996, 19/134 Q1 in Multidisciplinary Sciences, Top 13.81% by JCI)
14. 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=7.571, 10/44 Q1 in Materials Science, Biomaterials, Top 21.59% by JIF)
15. 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=4.996, 19/134 Q1 in Multidisciplinary Sciences, Top 13.81% by JCI)

16. 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=2.533, 130/224 Q3 in Chemistry, Multidisciplinary, Top 57.81% by JCI)
17. **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=4.996, 19/134 Q1 in Multidisciplinary Sciences, Top 13.81% by JCI)
18. 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=6.065, 49/224 Q1 in Chemistry, Multidisciplinary, Top 21.65% by JCI)
19. **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=3.752, 28/134 Q1 in Multidisciplinary Sciences, Top 20.52% by JCI)
20. **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)
21. **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=13.312, 20/245 Q1 in Oncology, Top 7.96% by JIF)
22. 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, 18/43 Q2 in Integrative & Complementary Medicine, Top 40.7% by JCI)
23. **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=3.491, 50/200 Q1 in Radiology, Nuclear Medicine & Medical Imaging, 24.75% by JCI)
24. 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=3.758, 33/118 Q2 in Optics, Top 27.54% by JCI)
25. 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=0.41, 32/43 Q3 in Integrative & Complementary Medicine, Top 73.26% by JCI)
26. **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=2.877, 78/178 Q2 in Physics, Applied, Top 43.54% by JCI)
27. **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=3.752, 28/134 Q1 in Multidisciplinary Sciences, Top 20.52% by JCI)
28. 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=3.758, 33/118 Q2 in Optics, Top 27.54% by JCI)

29. **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=0.41, 32/43 Q3 in Integrative & Complementary Medicine, Top 73.26% by JCI)
30. George Themelis, **Jung Sun Yoo**, and Vasilis Ntziachristos : Multispectral Imaging using Multiple-bandpass Filters, *Optics Letters*, 33(9) : 1023-1025, **2008 May** (IF=3.560, 22/118 Q1 in Optics, Top 18.22% by JCI)
31. **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=0.944, 84/113 Q3 in Biology, Top73.89% by JCI)
32. 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=0.944, 84/113 Q3 in Biology, Top73.89% by JCI)
33. 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=2.221, 19/64 Q2 in Multidisciplinary Sciences, Top 28.91% by JIF)
34. 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=0.684, 268/274 Q4 in Neurosciences, 30/30 Q4 in Integrative & Complementary Medicine)
35. **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=0.684, 41/43 Q4 in Integrative & Complementary Medicine, Top 94.19%)
36. **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=2.856, 75/161 Q2 in Physics, Applied, Top 46.27% by JIF)
37. 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=2.893, 18/113 Q1 in Biology, Top 15.49% by JCI)
38. 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, 18/43 Q2 in Integrative & Complementary Medicine, Top 40.7% by JCI)
39. 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=0.657, 78/86 Q4 in Physics, Multidisciplinary)
40. 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)
41. 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=2.227, 4/24 Q1 in Anatomy & Morphology, Top 14.58% by JCI)
42. 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)
 43. **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)
 44. 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=2.227, 4/24 Q1 in Anatomy & Morphology, Top 14.58% by JCI)
 45. 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)
 46. 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)

F. 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

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, 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**)
3. **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**)

4. 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**)
5. 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**)
6. 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. Peer-reviewed Conference Presentations

1. 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)
2. 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)
3. 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)**
4. 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)
5. 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)
6. 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**)
7. 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)**
 8. 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
 9. 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**)
 10. **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)
 11. 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)
 12. 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)
 13. **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)
 14. 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)**
 15. **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 Technology (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)
 16. **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)
17. 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
 18. 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)
 19. 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)
 20. 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)**
 21. 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)
 22. 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)
 23. 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)
 24. **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)

25. Chaedong Lee, JooHwan Yoon, Bokyoung 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)
26. **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)
27. **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)
28. 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"
29. **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)
30. **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**)
31. **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**)
32. **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**)
33. **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**)
34. **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**)
35. **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**)
36. **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**)
 37. **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**)
 38. **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**)
 39. **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**)
 40. **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 Magnetics Society, December 10-13, 2008 (**oral**), Abstract published in the “Proceedings of the Korean Magnetics Society Conference” (2008, p.16.1)
 41. 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**)
 42. **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**)
 43. **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**)
 44. 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**)
 45. 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**)

46. **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**)
47. **Jung Sun Yoo**, Byung-Soo Chang, Vyacheslav 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**)
48. **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**)
49. **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**)
50. 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**)
51. 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**)
52. 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**)
53. **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**)
54. 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**)
55. **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**)
56. 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)

57. 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)

I. Invited Seminars

1. 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
2. Biomedical Research using Optical Molecular Imaging, Department of Food Science and Biotechnology, Gachon University, Seongnam, Gyeonggi-do, Korea, Jul 26, 2016
3. Optical Molecular Imaging Can Change the Future of Medicine, Department of Physics Education, Seoul National University, Seoul, Korea, Nov 19, 2015
4. 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
5. 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
6. *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
7. 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
8. 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
9. Fluorescence-guided Surgery using Multispectral Imaging System, Seminar Speaker, Biomedical Engineering Branch, National Cancer Center, Goyang, Gyeonggi-do, Korea, Apr 10, 2014
10. *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
11. Fluorescence Imaging for *In Vivo* Biology and Image-guided Surgery, Seminar Speaker, Seoul National University College of Medicine, Seoul, Korea, Apr 1, 2014
12. 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
13. 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
14. 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
15. 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
16. 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
 17. 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 Radiology, School of Medicine, Washington University in St. Louis, Saint Louis, MO, USA, May 7, 2010
 18. *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
 19. 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

J. 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
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
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

K. Research Support

Ongoing Research Support

1. Jung Sun Yoo (PI) 06/01/2017-present
Several Seed Funds, Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Total HKD 920,000
Role: Principal Investigator
Internal Research Fund
2. 15101422 Kai Hei Tse (PI), 01/01/2023-12/31/2025
General Research Fund (GRF), Research Grants Council of Hong Kong (RGC), HKD 1,177,736
Dysregulation of Autophagy by Tripartite Motif (TRIM) Family Proteins at the Blood Brain Barrier – A Novel Cellular Mechanism Towards White Matter Hyperintensity
Role: Co-Investigator
Externally competitive and peer-reviewed
3. C5078-21E, Mo Yang (PC) 30/06/2022-29/06/2025
Collaborative Research Equipment Grant (CRF), Research Grants Council of Hong Kong (RGC), HKD 7,820,000
An Upright Multiphoton Microscope for Intravital Imaging and Optogenetic Studies
Role: Co-Principal Investigator
Externally competitive and peer-reviewed
4. P0039715 **Jung Sun Yoo (PI)** 02/02/2022-08/01/2023
Departmental General Research Fund, The Hong Kong Polytechnic University, HKD 100,000
Label-free Multiparametric Metabolic Imaging for Sensitive and Robust Monitoring of Immunotherapy Response: A Pilot Study.
Role: Principal Investigator
Internal Research Fund
5. P0041343 Yun Chung Leung (PI) 04/29/2022-04/30/2023
Large Equipment Fund, The Hong Kong Polytechnic University, HKD 3,500,000
A Multi-Parameter Flow Analyzer
Role: Co-Investigator
Internal Research Fund
6. P0040893 Yun Chung Leung (PI) 04/03/2022-03/03/2023
Large Equipment Fund, The Hong Kong Polytechnic University, HKD 25,000,000
Animal MRI System and Animal Imaging Equipment in Animal Imaging Centre
Role: Co-Investigator
Internal Research Fund

Pending Funding Application

1. **Jung Sun Yoo (PI)** 01/01/2023-12/31/2025
Health and Medical Research Fund (HMRF), Food and Health Bureau (FHB), HKD 1,500,000
Early and Accurate Monitoring of Immunotherapy Response by Artificial Intelligence-Assisted Multimodal Metabolic Imaging
Role: Principal Investigator
Externally competitive and peer-reviewed
2. Kenneth King-yip Cheng (PI)
Guangdong-Hong Kong Technology Cooperation Funding Scheme (TCFS)

Platform Construction of Metabolism-based Immunotherapy Development and Efficacy Evaluation for Glioma
Role: Co-Investigator
Externally competitive and peer-reviewed

Completed Research Support

1. P0036791 (Funding Body Ref. No. LEF2021-037) Liang-ting Lin (PI) 06/15/2021-06/30/2022
 Large Equipment Fund-Teaching, The Hong Kong Polytechnic University, HKD 852,420
 The Analytical Bundled Equipment for Radioisotope Qualitative and Quantitative Measurement (HTI-5)
Role: Co-Investigator
Internal Research Fund
2. P0036791 (Funding Body Ref. No. LEF2021-034) Tin Cheung Ying (PI) 06/15/2021-06/30/2022
 Large Equipment Fund-Teaching, The Hong Kong Polytechnic University, HKD 990,000
 Sophisticated Imaging and Advanced Intelligent Ultrasound System (HTI-2)
Role: Co-Investigator
Internal Research Fund
3. 15107118 **Jung Sun Yoo (PI)** 01/01/2019-06/30/2022
 General Research Fund (GRF), Research Grants Council of Hong Kong (RGC), HKD 899,100
 Terahertz Wave Irradiation Promotes Skin Regeneration and New Hair Growths
 The goal of this project to investigate the effect of Terahertz wave irradiation to promote skin regeneration and new hair growths via inflammatory activation.
Role: Principal Investigator
Externally competitive and peer-reviewed
4. P0035228 **Jung Sun Yoo (PI)** 02/01/2021-04/30/2022
 Departmental General Research Fund, The Hong Kong Polytechnic University, HKD 100,000
 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.
Role: Principal Investigator
Internal Research Fund
5. 25104017 **Jung Sun Yoo (PI)** 01/01/18-06/30/21
 Early Career Scheme (ECS), Research Grants Council of Hong Kong (RGC), HKD 1,248,632
 Intraoperative Imaging System to Highlight Peripheral Nerves using Polarized Spectral Reflectance
 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.
Role: Principal Investigator
Externally competitive and peer-reviewed
6. Jung Sun Yoo (PI) 11/01/16-31/10/21
 Start-up Fund, Department of Health Technology and Informatics, The Hong Kong Polytechnic University, HKD 600,000
 Development of In Vivo Fluorescence Imaging Technique for Detection of Glioblastoma using Translocator Proteins Targeted Nanoparticles
Role: Principle Investigaor
Internal Research Fund
7. 2014R1A2A1A11053420 **Jung Sun Yoo (PI)** 11/01/14-10/31/16
 Mid-Career Researcher Program, National Research Foundation of Korea (NRF), Ministry of Science, ICT and Future Planning (MSIP, Korea) KRW 200,000,000
 Development of Spectral Reflectance Imaging System for Label-Free Intraoperative Imaging

of Peripheral Nerves

The goal of this project is to develop specific imaging system for peripheral nerve to provide intraoperative guidance for minimally invasive surgery.

Role: Principal Investigator

Externally competitive and peer-reviewed

8. AICT-20150013 Tae-Rin Lee (PI) 09/22/15-12/31/15
Advanced Institutes of Convergence Technology (Korea) KRW 15,000,000
Nanomedicine Design using High-Resolution Bioimaging and Simulation
This project finds the optimized design of nanomedicine for targeted therapy of malignant cancer by using high-resolution intravital imaging and computational modeling.
Role: Co-Investigator (Stake – KRW 7,500,000)
Internally competitive and peer-reviewed
9. **Jung Sun Yoo (PI)** 06/01/15-11/31/15
Sejong Science High School R&E Program, Korea Foundation for the Advancement of Science & Creativity (KOFAC, Korea) KRW 4,800,000
Skin Regeneration using Terahertz Wave
The goal of this project is to investigate the effect of terahertz wave on skin regeneration and hair follicle stem cell proliferation.
Role: Principal Investigator
Externally competitive and peer-reviewed
10. 13-2015-013 Byung Chul Lee (PI), Jung Sun Yoo (Co-PI) 04/01/15-03/31/16
SNUBH Research Fund, Seoul National University Bundang Hospital (SNUBH, Korea) KRW 30,000,000
Development of PET-MRI-Optical Imaging Technique using Water Well-dispersed Iron Oxide Nanoparticle for Tumor Diagnosis and Intraoperative Guidance
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.
Role: Co-Principal Investigator
Internally competitive and peer-reviewed
11. HI14C1072 Sang Eun Kim (PI) 07/01/14-9/30/19
Korea Health Technology R&D Project, Korea Health Industry Development Institute (KHIDI), Ministry of Health & Welfare (MOHW, Republic of Korea) KRW 7,500,000,000
Center for Bioimaging Convergence Technologies and Innovative Drug Development
The goal of this project is to develop bioimaging based drug development technologies and provide bioimaging service for pharmaceutical companies.
Role: Co-Investigator (07/01/15-9/30/16)
Externally competitive and peer-reviewed
12. SSCC/10/024 Young-Tae Chang (PI), Bing Lim (Co-PI) 11/01/10-10/31/13
Singapore Stem Cell Consortium Grant Call 2010, A*STAR Singapore Stem Cell Consortium (SSCC, Singapore) SGD 984,000
Development of Novel Chemical Compounds for Directing Human ES Cell Differentiation to Lineages of Respiratory Airways
This project developed specific fluorescent probes for human ES derived cells to lung cells and functional chemicals for enhancing human ES differentiation.
Role: Co-Investigator
Externally competitive and peer-reviewed
13. Kwang-Sup Soh (PI) 07/05/10-12/31/10
Ministry of Health & Welfare (MOHW, Korea) KRW 49,300,000
Visualization of Bonghan System using Nanotechnology and Endoscope Development
The goal of this project was to visualize Bonghan system using nanotechnology and endoscope development.
Role: Co-Investigator

Contract research

14. Kwang-Sup Soh (PI) 07/01/10-11/30/10
Korea Institute of Oriental Medicine (Korea) KRW 30,000,000
Comparison of Characteristics of Lymphatic and Primo Vessel in Tumor Tissue
This project analyzed histological characteristics of lymphatic and primo vessels in tumor tissue.
Role: Co-Investigator
Contract research
15. Kwang-Sup Soh (PI) 06/01/09-12/31/09
Korea Institute of Oriental Medicine (Korea) KRW 62,000,000
Measurement of Membrane Potential and Action Potential of Bonghan System Consisting Cells and it's Analysis with Nonlinear theory
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.
Role: Co-Investigator
Contract research
16. 20090435361-00 Kwang-Sup Soh (PI) 04/21/09-02/19/10
Ministry of Health & Welfare (MOHW, Korea) KRW 98,000,000
The Development of a Vision Device for the Bonghan System Observation
This study developed a prototype of endoscopic imaging system to visualize microanatomical structures representing acupuncture meridian (Bonghan system).
Role: Co-Investigator
Contract research
17. Kwang-Sup Soh (PI) 09/01/08-08/31/10
Mobase, Inc. (Korea) KRW 160,000,000
Research on Imaging and Tracing of Bonghan System
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.
Role: Co-Investigator
Contract research
18. KRF-612-2007-1-C00046 Jung Sun Yoo (PI) 08/01/07-03/31/08
Basic Research Promotion Fund, National Research Foundation of Korea (NRF), Ministry of Education (MOE, Korea) KRW 19,000,000
Development of Intra-operative Fluorescence Imaging System for Small Animals
The goal of this project was to develop a new animal imaging system for intra-operative guidance using multispectral techniques.
Role: Principal Investigator
Externally competitive and peer-reviewed
19. Kwang-Sup Soh (PI) 09/01/05-08/30/08
Mobase, Inc. (Korea) KRW 240,000,000
Research on the Relation between Stem Cells and Bonghan Systems
The goal of this project was to find and analyze stem cells inside Bonghan systems.
Role: Co-Investigator
Contract research
20. M604EA020005-04E0102-00510 Kwang-Sup Soh (PI) 07/01/04-06/30/07
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) KRW 900,000,000
Cavendish-KAIST Cooperative Research Project-Biophysics Division
The goal of this project was to reveal ultrastructure and analyze motion of small cells in the acupuncture meridian system.

Role: Co-Investigator

Externally competitive and peer-reviewed

21. R0A-2003-000-10371-0 Kwang-Sup Soh (PI) 06/25/03-06/24/08

National Research Laboratory, National Research Foundation of Korea (NRF), Ministry of Education (MOE, Korea), Ministry of Science, ICT and Future Planning (MSIP, Korea) KRW 1,150,000,000

Study on Biophysical Mechanism of Acupuncture Points and Meridians for Diagnosis and Treatment of Korean Medicine.

The goal of this project was to study physiological and biophysical characteristics of anatomical structure under the acupuncture points and meridians.

Role: Co-Investigator

Externally competitive and peer-reviewed

L. Editorship/Reviewer Board Member

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)

M. Ad Hoc Reviewer for the Following Journals/Conferences

Journal

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

Conference

World Molecular Imaging Congress 2020

N. 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, South Korea

Industry Convergence Fundamental Technology Development Program, Korea Evaluation Institute of Industrial Technology, Ministry of Trade, Industry and Energy, South Korea

O. Institutional Service

19 Jul. 2022 - present	Faculty Board Member, Faculty Board of Health and Social Sciences, The Hong Kong Polytechnic University (PolyU)
19 Feb. 2022	Co-Chair, Medical Physics Career Day, Department of Health Technology and Informatics (HTI), The Hong Kong Polytechnic University (PolyU)
08 Jan. 2022	Seminar Presenter, MSc in Medical Physics Programme Introduction, PolyU Info Day for Taught Postgraduate Programmes
02 Sep. 2020 - present	Founding Member, Deputy Programme Leader, Master of Science in Medical Physics Programme, HTI, PolyU
14 June. 2019 - present	Reviewer, Postgraduate Symposium 2019, 2000, 2021, 2022, HTI, PolyU
23 Jan. 2019 - present	Seminar Coordinator, HTI Departmental Research Seminar (HTI6201, HTI6202, HTI6203, HTI6204 Research Seminar I, II, III, IV subjects)
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
1 Sep. 2017 - present	Year Tutor, Year 2 BSc in Radiography Students

P. Supervision of Students

PhD (1 as chief supervisor, 1 as co-supervisor)

30 September 2021, WONG Ngai Nick Alex (chief supervisor)

17 January 2022, YEUNG Ho Yin Martin (co-supervisor)

31 August 2022, Thesis submitted, MAHANTY Arpan (chief supervisor)

Expected – December 2022, YANG Minfeng (chief supervisor)

Expected – December 2024, HE ZeBang (chief supervisor)

DHSc (Doctor of Health Science)

24 August 2022 Oral examination, 02 September 2022 Revised thesis was submitted, Waiting for approval via Faculty Board of Examiners meeting, TANG Chung Ting (chief supervisor)

19 July 2022 Oral examination, Revised thesis was submitted, Waiting for approval via Faculty Board of Examiners meeting, LAU Yu Ching (co-supervisor)

Faculty of Health and Social Sciences Summer Research Studentship (6)

2018/2019 – WONG Chun Kin, WAN Ka Wing

2019/2000 – LEE Lap San

2000/2021 – AU Ching Wai, SUNG Chun Ki

2021/2022 – YIP Hoi Lam

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

30 April 2020 – 31 December 2020, WONG Chun Yin

1 July 2018 – 25 June 2020, WAN Ka Wing

04 June 2018 – 28 June 2019, SIN Chun Lok

BSc Final Year Project Supervision (67)

67 students since 2018