**浙江大学医学院-斯坦福大学联合招收博士后计划项目招聘启事**

**Joint Postdoctoral Fellowship Program: Zhejiang University School of Medicine and Stanford University**

**岗位一**

**研究方向（1）**：胃肠道肿瘤的靶向及免疫治疗的转化医学研究

**研究方向（2）**：长寿的转化医学研究

**合作导师（浙江大学）及团队简介：**

闵军霞，肿瘤学博士，博士生导师，浙江大学转化医学研究院特聘教授。2006年美国密苏里哥伦比亚大学生物学博士；2006-2010年哈佛大学医学院医学遗传系博士后；2010-2014年任诺华（Novartis，美国）肿瘤部新药研发团队负责人，主要进行整合分析多种组学大数据发现肿瘤新型分子靶标及CAR-T的优化研究。 2014年加盟浙江大学医学院并入选浙江省海外高层次“浙江省千人”创新学者及“浙江省特聘专家”。多年来主要运用医学及生命科学前沿技术开展肿瘤的转化医学研究。在Nature Medicine、Hepatology、PNAS等著名期刊发表论文40余篇，多次应邀在国内外学术大会及著名大学院所进行主旨报告。先后承担国家自然科学基金项目及科技部国家重点研发计划等。更多信息请见闵军霞老师个人主页：<https://person.zju.edu.cn/Junxia>

**合作导师（斯坦福大学）及团队简介：**

程震教授，现为美国斯坦福大学分子影像中心肿瘤分子影像化学实验室主任，斯坦福大学医学院分子影像中心、克莱瑞-斯坦福癌症早期检测研究中心、斯坦福癌症研究所、放射科及BioX中心副教授。长期从事肿瘤分子影像技术、多模态分子探针的研制和开发, 至今发表论文230余篇, H-因子61，引用超过12800次（Google学术）。程震教授在肿瘤分子影像探针及纳米药物研发及转化方面研究成果卓著。

**联合招收博士后工作计划：**

拟结合合作双方的互补优势，开展胃肠道肿瘤的靶向及免疫治疗的转化医学研究，在消化道肿瘤早期分子诊断及精准纳米治疗方面有所突破。

**岗位二**

**研究方向：**医学X射线定量成像及医学影像深度分析

**合作导师（浙江大学）及团队简介：**

牛田野，浙江大学转化医学研究院和附属邵逸夫医院双聘教授、博士生导师，浙江省海外高层次人才引进计划特聘专家，科技部863计划“青年科学家”，美国新泽西州立大学罗格斯分校放射肿瘤学系兼职副教授、美国应用临床医学物理期刊（SCI收录）编委、美国医学物理与工程类顶级期刊Physics in Medicine & Biology期刊（SCI收录）国际咨询委员、中国生物医学工程学会医学物理分会和精准放疗技术分会委员。其团队主要从事多学科交叉的医学工程研究，致力于将设计图像定量化分析技术用于临床肿瘤治疗评估，包括基于临床病例数据收集的肿瘤治疗疗效评估、超低剂量双能CT用于人体组织精准识别等。

**合作导师（斯坦福大学）及团队简介：**

邢磊，斯坦福大学医学院放射肿瘤学系教授，Jacob Haimson讲席教授，放射肿瘤系医学物理学部主任，美国医学物理学会院士，电子工程系客座教授。分子影像、Bio-X和癌症生物学项目成员。其团队致力于医学物理和医学影像技术的研究和应用，创建和领导了国际上第一个集成医学物理、纳米医学和分子影像的研究中心，该中心也是第一个把放射肿瘤治疗学与分子影像学相结合的转化研究中心。

**联合招收博士后工作计划：**

第一年：在浙江大学牛田野教授课题组开展医学成像和图像处理的研发工作，设计X射线断层功能成像方法，构建成像-治疗一体化数据分析评估体系；第二年：在斯坦福邢磊教授课题组深入研究功能成像在临床治疗引导和评估中的作用，构建肿瘤治疗的多模态影像评估系统。

**岗位三**

**研究方向**：神经元树突发育与退行的分子机制研究

**合作导师（浙江大学）及团队简介：**

邹炜，浙江大学“百人计划”研究员、浙江大学医学院附属第四医院特聘教授。其团队主要研究方向包括：（1）神经元树突发育的分子机理；（2）神经退行的分子机制；（3）抑制神经退行的小分子化合物筛选及其功能研究。多篇原创性研究论文发表于Developmental Cell和eLIFE等本领域国际著名学术杂志。更多信息请见邹炜老师个人主页：<https://person.zju.edu.cn/weizou>

**合作导师（斯坦福大学）及团队简介：**

沈康，斯坦福大学生物系终身教授、霍华德休斯医学研究所研究员。其团队主要研究方向是：（1）突触发育的分子机制；（2）突触囊泡转运的分子机制；（3）神经元微管极性建立和维持的分子机制。（4）神经元树突形态建成的分子机制。更多信息请见沈康老师的研究组主页：<http://web.stanford.edu/group/shenlab/cgi-bin/shenlab/>

**联合招收博士后工作计划**：

第一年：在浙江大学邹炜研究员课题组开展遗传学筛选、基因定位和克隆、突变体表型分析等工作，鉴定新颖的树突发育和神经退行调控因子；第二年：在斯坦福大学沈康教授课题组利用先进的超分辨显微成像、单细胞转录组分析等技术，深入研究新调控基因的分子机制。

**岗位四**

**研究方向：**功能化纳米探针的研发及其在肿瘤分子影像及治疗中的应用

**合作导师（浙江大学）及团队简介：**

周民研究员，恶性肿瘤预警与干预教育部教育部重点实验室副主任。曾长期在美国安德森癌症中心从事分子影像及纳米医学领域的研究工作。其团队主要研究工作为医学分子影像探针设计合成、智能纳米载体材料在预临床研究及临床转化，特别是多功能纳米药物用于癌症及感染性疾病的治疗和早期诊断，并取得了一系列的创新性结果。

更多信息请见周民老师个人主页：<https://person.zju.edu.cn/mi>。

**合作导师（斯坦福大学）及团队简介：**

Sanjiv Sam Gambhir教授，美国医学科学院院士、斯坦福大学医学院放射学系主任、分子影像中心主任。在Science、Nat Biotechnol、Nat Med、Nat Nanotechnol、Nat Method、Ca-Cancer J Clin等国际顶级期刊发表论文600余篇，是分子影像学领域的国际领军专家。其团队主要研究方向是分子影像探针的研发，在肿瘤的早期检测、早期成像及治疗方面处于国际顶尖水平，特别是在药物的临床转化和应用领域有着卓著的成绩。

详见Gambhir教授个人主页：<https://profiles.stanford.edu/sanjiv-gambhir>.

**联合招收博士后工作计划：**

第一年：在浙江大学周民研究员课题组开展分子影像探针的研发工作，设计具有多功能拉曼及其他功能的分子影像探针，构建拉曼为基础的诊疗一体化纳米药物，并考察其各理化性质；第二年：在斯坦福大学Gambhir教授课题组深入研究分子影像探针在肿瘤及其他疾病领域的生物学评价及开展预临床实验。

**岗位五**

**研究方向：**基于CRISPR-Cas9系统的基因技术研发与运用

**合作导师（浙江大学）及团队简介：**

陈宝惠，浙江大学基础医学院“百人计划”研究员，双聘于浙大附属第一医院，博士生导师。陈宝惠研究员致力于开发基因组动态成像技术，并结合基因组编辑，探索四维基因组如何在发育、环境响应与疾病发生过程中执行功能。近年来在利用CRISPR-Cas9系统实现活细胞基因组动态成像领域取得一系列进展，以第一作者或通讯作者身份发表论文于*Cell, Nucleic Acids Research, Nature Communications*等国际著名杂志上。更多信息请见陈宝惠博士的个人主页：https://person.zju.edu.cn/chenlab2017

**合作导师（斯坦福大学）及团队简介：**

亓磊（Stanley Qi），斯坦福大学生物工程系和化学与系统生物系教授。其团队主要致力于合成生物学、基因技术研发和细胞治疗方向的研究。近年来取得了一系列突破性进展，主要包括首次将Cas9分子开发改造为核酸酶沉默的dCas9分子，并利用dCas9开发了一系列技术，包括：基因沉默技术CRISPRi、基因激活技术CRISPRa、3D基因组重建技术CRISPR-GO和多基因表达调控及多基因神经元分化筛选系统。拥有专利20多项。在国际刊物Cell、Nature及子刊发表多篇论文，论文引用近万次。亓磊博士获得多项荣誉，包括NIH Director’s Early Independence Award, Pew Biomedical Scholar, Alfred. P. Sloan Scholar.更多信息请见亓磊博士的研究组主页：http://med.stanford.edu/qilab.html

**联合招收博士后工作计划**：

第一年：在浙江大学陈宝惠研究员课题组开展基于CRISPR-Cas9系统的新技术研发；第二年：在斯坦福大学亓磊教授课题组开展基因治疗研究。

**Position 1**

**Research Area(1):**Translational medical research of gastroenterology cancer

**Research Area(2):**Translational medical research of longevity

**Supervisor at Zhejiang University:**

Junxia Min M.D., Ph.D. currently serves as a professor at Institute of Translational Medicine & the First Affiliated Hospital, Zhejiang University School of Medicine, Hangzhou, China. Prof. Min earned her Ph.D. from University of Missouri-Columbia in the United States in 2006. The key finding during her PhD training was discovering the important roles of sphingolipid metabolic pathway in cancer treatment. From 2006-2010, Dr. Min had her postdoctoral training at the Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School. She identified the important novel epigenetic regulatory mechanisms in tumorigenesis. Since 2010, Dr. Min joined Novartis Department of Oncology as a group leader at Boston, U.S.A., where her group discovered and functionally validated several novel targets for further clinical drug development. In aging research area, Prof. Min has been co-leading genetic contributions of the world largest centenarian cohort “The Chinese Longitudinal Healthy Longevity Study (CLHLS)”. Based on this 20-year longitudinal cohort study, the team has uncovered key genetic factors that associated with longevity.

**Supervisor at Stanford University：**

**Prof. Zhen Cheng** serves as the Director of Molecular Imaging Program at Stanford (MIPS) (2007 - Present) and member of Bio-X Program, Stanford Cancer Center, and Canary Center at Stanford for Cancer Early Detection (2009 - Present). Cheng lab has been working on identification of novel cancer biomarkers with significant clinical relevance, to develop new chemistry for probes preparation, and to validate new strategies for probes high-throughput screening. The goal of Cheng laboratory is to develop novel molecular imaging probes and techniques for non-invasive detection of cancer and its metastasis at the earliest stage, so that cancer can be cured or transformed into a chronic, manageable disease. The techniques developed in Cheng research will allow a close examination of the molecular, metabolic and physiological characteristics of cancers and their responses to therapy. Prof Cheng has published over 250 research articles, H-index 61，citation >12800(Google scholar).

**Work Plans (Tentative Schedule):**

Zhejiang University School of Medicine and University of Stanford University: Based on previously established multidisciplinary collaboration, this program aims building innovative cutting-edge technologies in the development of early diagnostic molecular probes and effective precision nanodrugs for improving gastroenterology cancer diagnosis and treatment.​

**Position 2**

**Research Area:** Medical X-ray quantitative imaging and deep analysis

**Supervisor at Zhejiang University:**

NIU Tianye, jointly employed full professor at Institute of Translational Medicine and Sir Run Shaw Hospital, Zhejiang University, Ph. D. supervisor, Ministry of Science and Technology 863-Plan “Young Scientist”, adjunct associate professor at Department of Radiation Oncology, the State University of New Jersey, Rutgers, editorial board of Journal of Applied Clinical Medical Physics (SCI), international advisory committee of Physics in Medicine & Biology (top medical physics SCI journal), committee of the Medical Physics and Precision Radiotherapy Technology Branch of [Chinese Society of Biomedical Engineering](http://www.baidu.com/link?url=HriEBKs0CckitSv9HQz4kqKOvvymq1h8Z1WzvgkruA3KJeXcYiBy2lslb8NeOI9DyDStkyjrRuiHPOhAHPrJTLRpoMXlbSYhmwqTg8KNBAP3noIbLJEzAj3oBUwgzh62m0ZrrbecfNcplTUTK996IwaV2YX_-1RCcDtNUVlVHhO) (CSBE). His group is mainly engaged in multidisciplinary medical engineering research, dedicated to the design of image quantitative analysis technology for clinical tumor treatment evaluation, including tumor treatment response evaluation based on clinical case dataset, ultra-low dose dual energy CT for human tissue precision identification, etc.

**Supervisor at Stanford University：**

XING Lei is currently the Jacob Haimson Professor of Medical Physics and Director of Medical Physics Division of Radiation Oncology Department at Stanford University. He also holds affiliate faculty positions in Department of Electrical engineering, Bio-X and Molecular Imaging Program at Stanford. Dr. Xing’s research has been focused on medical imaging, artificial intelligence in medicine, treatment planning, image guided interventions, nanomedicine, and applications of molecular imaging in radiation oncology. He has made unique and significant contributions to each of the above areas. Dr. Xing is an author on more than 300 peer reviewed publications, a co-inventor on many issued and pending patents, and a co- investigator or principal investigator on numerous NIH, DOD, RSNA, ACS and corporate grants. He is a fellow of AAPM (American Association of Physicists in Medicine) and AIMBE (American Institute for Medical and Biological Engineering). He is a recipient of Google Faculty Scholar Award. He is also on the editorial boards of a number of journals in medical physics and medical imaging.

**Work Plans (Tentative Schedule):**

**The first year:** Conduct research on medical imaging and image processing and design the computed tomography image reconstruction scheme in the Professor Niu’s group at Zhejiang University;

**The second year:** Develop the tumor evaluation system based on multimodalities images with the assistance from the research group of Professor Xing Lei from Stanford.

**Position 3**

**Research Area:**Molecular mechanisms of dendrite development and degeneration

**Supervisor at Zhejiang University:**

Prof. Wei Zou, Ph.D., is funded by the “100-talent plan” of Zhejiang University. Prof. Zou focuses on (1) molecular mechanisms of dendrite morphogenesis in neurons; (2) molecular mechanisms of neurodegeneration; and (3) identification of small molecules to suppress neurodegeneration. More information can be found in <https://person.zju.edu.cn/weizou>

**Supervisor at Stanford University：**

Prof. Kang Shen, Ph.D., is a Professor of Department of Biology and investigator of the Howard Hughes Medical Institute. The main research focus of Prof. Shen’s team is to identify novel molecular and cellular mechanisms underlying: (1) synapse formation; (2) axonal transport; (3) neuronal microtubule polarity; and (4) dendrite morphogenesis. More information can be found in:

<http://web.stanford.edu/group/shenlab/cgi-bin/shenlab/>

**Work Plans (Tentative Schedule):**

Year 1: Work with Prof. Wei Zou at Zhejiang University to conduct genetic screens to identify novel regulators in dendrite development and neurodegeneration in C. elegans, map and clone the genes in the genetic mutants and perform genetic pathway analysis.

Year 2: Work with Prof. Kang Shen at Stanford to study the underlying molecular mechanisms of the novel regulators during dendrite development and degeneration by combining cutting edge techniques such as super-resolution imaging and single cell RNA-seq.

**Position 4**

**Research Area:**Development of functionalized nanoprobes for molecular imaging and therapy

**Supervisor at Zhejiang University:**

Min Zhou received his Ph.D. degree from the Department of Chemistry at Shandong University. He worked as an Instructor at the University of Texas, MD Anderson Cancer from 2012 to 2016. Currently, he is a Professor in the Institute of Translational Medicine at Zhejiang University. His research focuses on the development of targeted imaging probes tumor imaging, new technique for real-time imaging-guided surgery, and novel drug-delivery systems for selective delivery of diagnostic and therapeutic agents.

Personal website: https://person.zju.edu.cn/mi.

**Supervisor at Stanford University：**

Prof. Sanjiv Sam Gambhir, MD, Ph.D., is the Virginia & D.K. Ludwig Professor of Cancer Research and the Chair of Radiology at Stanford University School of Medicine. He also heads up the Canary Center at Stanford for Cancer Early Detection and directs the Molecular Imaging Program at Stanford (MIPS). He has over 600 publications in the field and over 40 patents pending or granted. His lab's work has been featured on over 30 journal covers such as Science, Cancer Cell, Nature Drug Discovery, Science Translational Medicine, and Circulation. He was elected to the Institute of Medicine of the US National Academies in 2008. An internationally recognized researcher in molecular imaging, his lab has focused on interrogating fundamental molecular events in living subjects. He has developed and clinically translated several multimodality molecular imaging strategies including imaging of gene and cell therapies.

Personal website: https://profiles.stanford.edu/sanjiv-gambhir

**Work Plans (Tentative Schedule):**

Year 1: Work with Prof. Min Zhou at Zhejiang University to design nanoprobes for Raman imaging and other multimodal imaging functions to construct theranostic nanoplatforms and to investigate their physicochemical properties.

Year 2: Work with Prof. Sanjiv Sam Gambhir at Stanford University to study in vivo Raman imaging on the biological evaluation and mechanism study. Prepare and submit manuscripts for publication.

**Position 5**

**Research Area:**Development and applications of CRISPR-Cas9 systems

**Supervisor at Zhejiang University:**

Dr. Baohui Chen is an investigator in the Department of Cell Biology, Zhejiang University School of Medicine. Chen developed CRISPR-Cas9-based imaging techniques to visualize sequence-specific endogenous DNA in living human cells. These new techniques allow precise examinations of the dynamics and position of specific genes and regulatory DNA elements, as well as the mapping of chromatin interactions in living cells (Cell, 2013; Nucleic Acids Res., 2016; Annu Rev Biophys., 2016; Nat Commun,2018.). Her current research is focused on the genome spatiotemporal organization and its roles in gene regulation, stress response and human diseases. More information can be found in：

https://person.zju.edu.cn/chenlab2017

**Supervisor at Stanford University：**

Dr. Stanley Qi is Assistant Professor in the Department of Bioengineering, the Department of Chemical and Systems Biology, and a core faculty member in Stanford ChEM-H Institute. He engineered the first nuclease-deactivated dCas9 molecule, and was the first to use dCas9 to develop CRISPRi (interference) and CRISPRa (activation) technologies for sequence-specific gene regulation of the genome. His lab developed CRISPR-GO (genome organization) for the 3-D control of the genome structure and nuclear architecture. His team also (co)-developed technologies including CRISPR imaging, receptor-coupled genome engineering (ChaCha), genome-wide CRISPRi/a genetic screens, and the use of CRISPR to reprogram stem cells and neuron cells. His current research is focused on developing novel technologies of genetic engineering to control, manipulate, and engineer the genetic codes of life. More information can be found in: <http://med.stanford.edu/qilab.html>

**Work Plans (Tentative Schedule):**

Year 1: Work with Prof. Baohui Chen at Zhejiang University to develop novel genome engineering technologies.

Year 2: Work with Prof. Stanley Qi at Stanford to manipulate genetic systems for cell therapy.