



State key Laboratory of Reproductive Biology (SKLRB)

INSTITUTE OF ZOOLOGY, CHINESE ACADEMY OF SCIENCES



Dear friends,

Welcome to the State Key Laboratory of Reproductive Biology (SKLRB). SKLRB was established in 1991 by merging Laboratory of Reproductive Biology (LRB) and Laboratory of Endocrinology, which were previously affiliated to Institute of Zoology (IOZ), Chinese Academy of Sciences (CAS). The establishment of SKLRB is a milestone for the improvement of research environment for Chinese reproductive biologists. We are greatly indebted to Professor Zhi-Yi Zhang, the former Director of LRB, Academician and Acting Director of Biological Sciences Division of CAS, for his creating a new working concept in reproductive research in China and for his indispensable contribution to the establishment of SKLRB. Looking back, it is no doubt that SKLRB has been acting as a pioneer in China in promoting basic research, national and international collaborations, as well as pre- and post-doctoral training in the field of reproductive biology. Our aim is to develop the lab into an international excellence in the field of reproductive biology in the next 10 years.

The SKLRB is located on the new IOZ campus which is very close to the 2008 Beijing Olympic Park. Each year it receives the running budget from Chinese government and CAS. SKLRB also acted as the Chinese Center for WHO/Rockefeller Foundation (RF) Initiative on Implantation and was under the support of RF from 1979 to 2004. The main research activities of SKLRB are annually evaluated by a scientific committee composed of 22 highly established Chinese scientists. At present, SKLRB is comprised of 21 independent research groups and staffed by 67, including 21 professors, 8 associate professors, 17 assistant professors and 21 junior scientists, technicians and administrators. SKLRB also opens all its facilities to a selected number of competitive, particularly young scientists from Institutions and Universities all over the country and the world.

Qi Zhen 周琪



实验室总体定位

计划生育生殖生物学国家重点实验室瞄准国家人口与计划生育重大需求，开展生殖发育生物学基础性、前沿性和系统性研究，旨在为避孕手段的改进、人类生殖健康和动物繁殖新技术的建立提供理论基础。

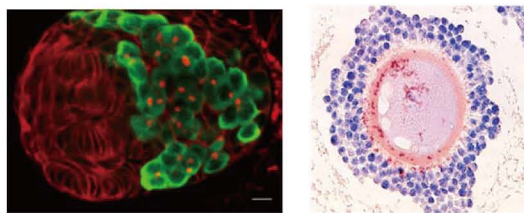
实验室运用现代细胞及分子生物学手段，在蛋白及基因水平上对生殖发育生物学领域的关键问题进行研究，成为国内生殖发育生物学研究的创新基地，通过带动和引领作用，把我国生殖发育生物学研究推向国际生殖与发育研究领域的主流和前沿。通过阐明控制生殖重要环节的关键基因和分子，发现新的有效的避孕靶点和生殖相关疾病的相关分子，为设计和开发新型避孕手段、改善生殖健康和完善辅助生殖技术提供科学依据，以适应二十一世纪人类对生育调节技术的更高要求和我国人口安全的需要；通过深入开展干细胞增殖及分化研究，解决我国在人类健康和畜牧业生产等方面所面临的重大问题。

主要研究方向

1. 早期生殖细胞发育和生殖干细胞命运调控



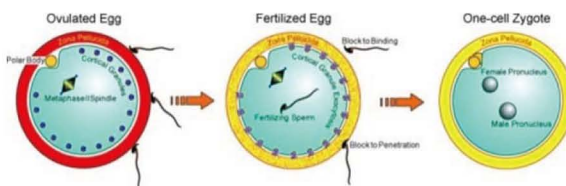
- (1) 原始生殖细胞的特化与迁移
- (2) 生殖干细胞自我更新与分化的命运调控
- (3) 早期生殖细胞与体细胞的相互作用



2. 减数分裂和配子发生



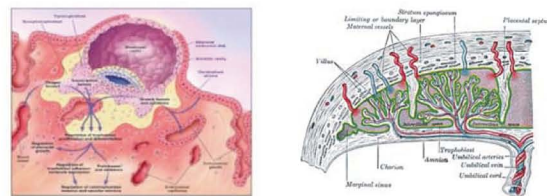
- (1) 减数分裂启动与恢复及染色体精确分离
- (2) 受精过程的调控机理
- (3) 早期胚胎发育



3. 胚胎植入和胎盘发育调控



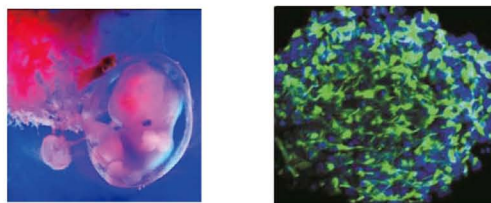
- (1) 子宫内膜接受性建立及胚胎植入的调节机理
- (2) 小鼠及人类胎盘发育的调节机制
- (3) 母胎免疫豁免的分子信号通路



4. 干细胞研究



- (1) 干细胞的干性标志、调控及定向分化的调控机制
- (2) 细胞重编程与转分化调控机制
- (3) 建立临床级干细胞库，优化细胞移植方案



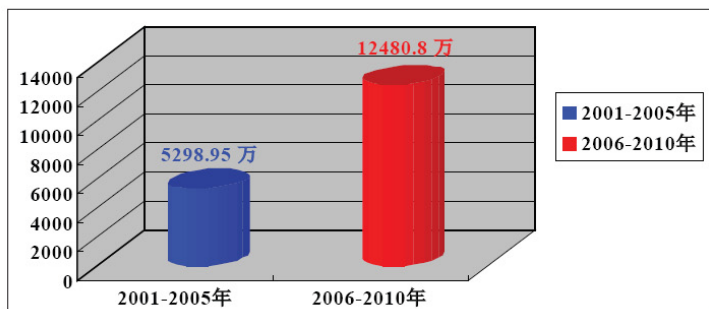
在国家科技发展中的作用

计划生育生殖生物学国家重点实验室是我国生殖生物学研究重要基地之一，拥有国内最大的生殖生物学研究团队。实验室自建立之初，在我国生殖生物学研究领域一直发挥引领和带头作用。2001年，国家开始设立人口健康领域的973项目，生殖生物学国家重点实验室主持了第一个生殖生物学领域的973项目。到2011年止，实验室主持了生殖生物学领域5个973和重大科学研究计划项目，为组织和培养我国生殖生物学、生殖医学领域的研究队伍，推动我国生殖发育生物学研究，提升我国相关领域的国际地位做出了重要贡献。

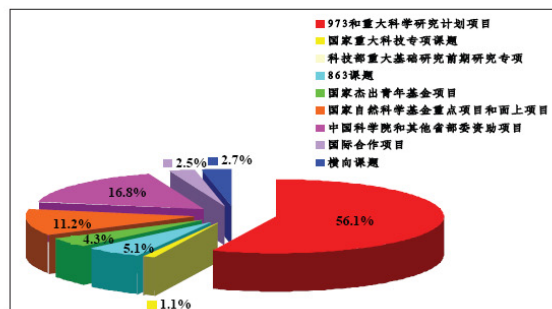
十一五期间，国家中长期发展规划将“发育与生殖”作为国家基础研究领域四个重要支持方向之一，并在全中国范围内确立了两个基地。计划生育生殖生物学国家重点实验室是两个基地之一，担负着我国人口与计划生育、生殖健康、辅助生殖及干细胞方面的基础研究和应用基础研究重任，也承担相关领域的国家科技发展规划任务。2006-2011年间，有1人担任科技部政策专家顾问组成员，2人担任科技部“发育与生殖重大研究计划”专家组召集人，1人担任863项目“干细胞与组织工程”专家组副组长，在国家生殖与发育研究中长期发展规划的建议和决策中发挥重要作用。

实验室承担的主要科研任务

经费总额比较

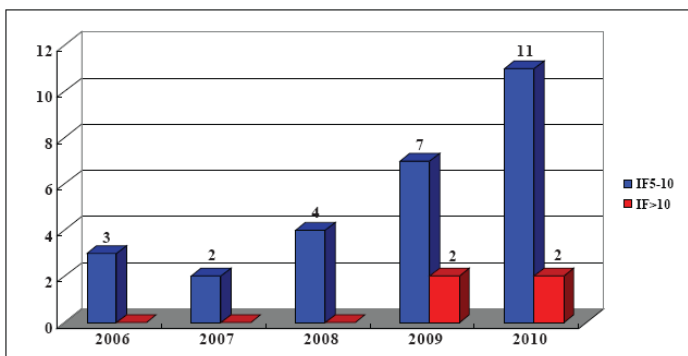
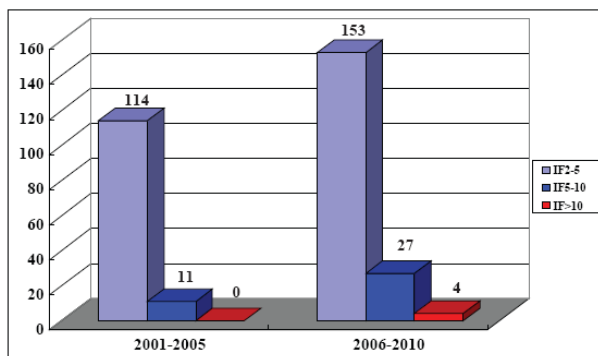


5年期间承担的主要任务



研究成果

2006~2010年间，实验室生殖与发育生物学和干细胞等领域的研究工作在Nature、Cell、J Clinical Investigation、Developmental Cell、Current Biology和PNAS等期刊发表SCI论文278篇。



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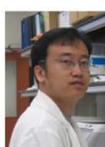
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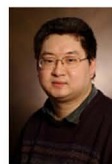
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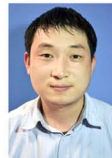
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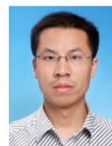
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