* 项目名称：国人肺动脉高压遗传特征及发病机制研究
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1、中国医学科学院北京协和医院

2、中国医学科学院阜外医院

3、上海市肺科医院

4、首都医科大学附属北京世纪坛医院

5、河南大学

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* 提名意见

项目组近二十余年专注肺动脉高压遗传学和发病机制研究，建立了中国人最大规模肺动脉高压患者临床队列、生物样本银行及基础研究技术平台，为阐明国人肺动脉高压遗传模式、肺血管重构的关键靶点和机制从而研发新的治疗方法攻坚克难，获得主要科学发现：1）率先在国际上报道肺动脉高压新致病基因*BMP9* 和*PTGIS*及其致病机制；发现DNA甲基化转移酶3B保护肺血管重构的表观遗传调控机制；2）在国际上率先发现精胺与肺动脉高压疾病严重程度密切相关，并揭示精胺及其合成酶介导的代谢重编程是导致肺动脉高压血管重构的核心机制之一，此发现被誉为“肺血管代谢的瓦伯格效应”；3）阐明外源性雌激素逆转肺血管重构，改善肺动脉高压表型的关键机制，回答了雌激素是肺动脉高压血管重构的保护还是有害因素的长期学术争论。本项目研究长期收集和保藏了国人肺动脉高压遗传资源，在肺动脉高压遗传特征和发病机制的系列突破性发现，对国内相关研究机构和制药企业进行国人肺动脉高压新药研发提供关键支撑，为推动肺动脉高压分子诊断奠定坚实理论基础。

项目组在包括*NEJM, Lancet, Circulation, JACC, European Heart Journal, European Respiratory Journal, JAMA Cardiology, Science Advances*等国际权威期刊发表SCI论文131篇，5篇代表论著总影响因子78.832（他引126次），包括*Nature Reviews Cardiology, European Heart Journal, American Journal of Respiratory and Critical Care Medicine*等国际顶级期刊均对此进行正面评价和引用。其中BMP9 基因突变研究被*American Journal of Respiratory and Critical Care Medicine*评选为“肺血管疾病和右心功能不全”领域2019年度发现。*European Heart Journal*亦连续刊文高度评价本项目团队在肺动脉高压领域的重要贡献及引领作用。

* 主要支撑材料目录
  + 代表论著5篇

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