**项目名称**：脑梗死后远隔损害和神经可塑性研究

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**项目简介**：

脑卒中在我国和世界范围内均是导致残疾的首要原因。其中，脑梗死是最常见的脑卒中类型，约占70%-80%。脑梗死不仅导致局灶性缺血性损害，还引起与缺血区域有纤维联系的远隔部位的继发性损害，是阻碍脑梗死后神经功能恢复的重要机制之一。以往的研究对此未进行深入研究，其机制不明，治疗效果欠佳。本项目历时16年，在国家自然科学基金、广东省自然科学基金等多项基金支持下，针对脑卒中后远隔损害和神经可塑性开展了一系列的临床和基础研究，取得了如下创新性成果。

1、将脑梗死后的神经功能缺失机制延伸到了全脑网络领域和脑外因素。

2、系统研究了脑梗死后远隔损害的发生机制，探讨了治疗新策略。

3、揭示了脑梗死后神经可塑性和缺氧预处理的部分神经保护新机制。

本项目成果被纳入美国2013年急性缺血性脑卒中早期管理指南和中国2014年急性缺血性脑卒中诊治指南，推广至全国多家医院神经内科，更新了脑梗死神经功能损害的机制理念和治疗模式，取得很好的社会经济效益。发表SCI论文34篇，中文核心期刊论文33篇。影响因子>5分7篇，最高影响因子12.042。SCI论文被引用406次，他引297次；国内核心期刊论文被引用278次，他引247次。主编著作6部，参编著作26部。作为大会主席和主办单位，每年主办国际神经病学中山高峰论坛，多次在世界卒中大会、欧洲卒中大会、亚洲卒中大会等国际学术会议作学术报告。培训神经科医师3000人次。培养博士后、博士研究生、硕士研究生共约50名。

**主要知识产权目录**：

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**应用情况**：

本项目阐明了脑梗死后远隔损害和神经可塑性的机制及其对神经功能恢复的影响，强调了局灶性脑梗死后整个脑网络变化的作用，并使用多种治疗方法减少脑梗死后远隔损害和促进神经功能恢复。远隔部位保护性治疗成为卒中干预的“第二时间窗”。因远隔损害发生较慢，需要数天至数周，本项目成果可应用于广大脑梗死的患者。成果被纳入AHA/ASA2013年急性缺血性脑卒中早期管理指南和2014年中国急性缺血性脑卒中诊治指南，推广至全国多家三甲医院神经内科，更新了脑梗死神经功能损害的机制理念和治疗模式，取得很好的社会经济效益。