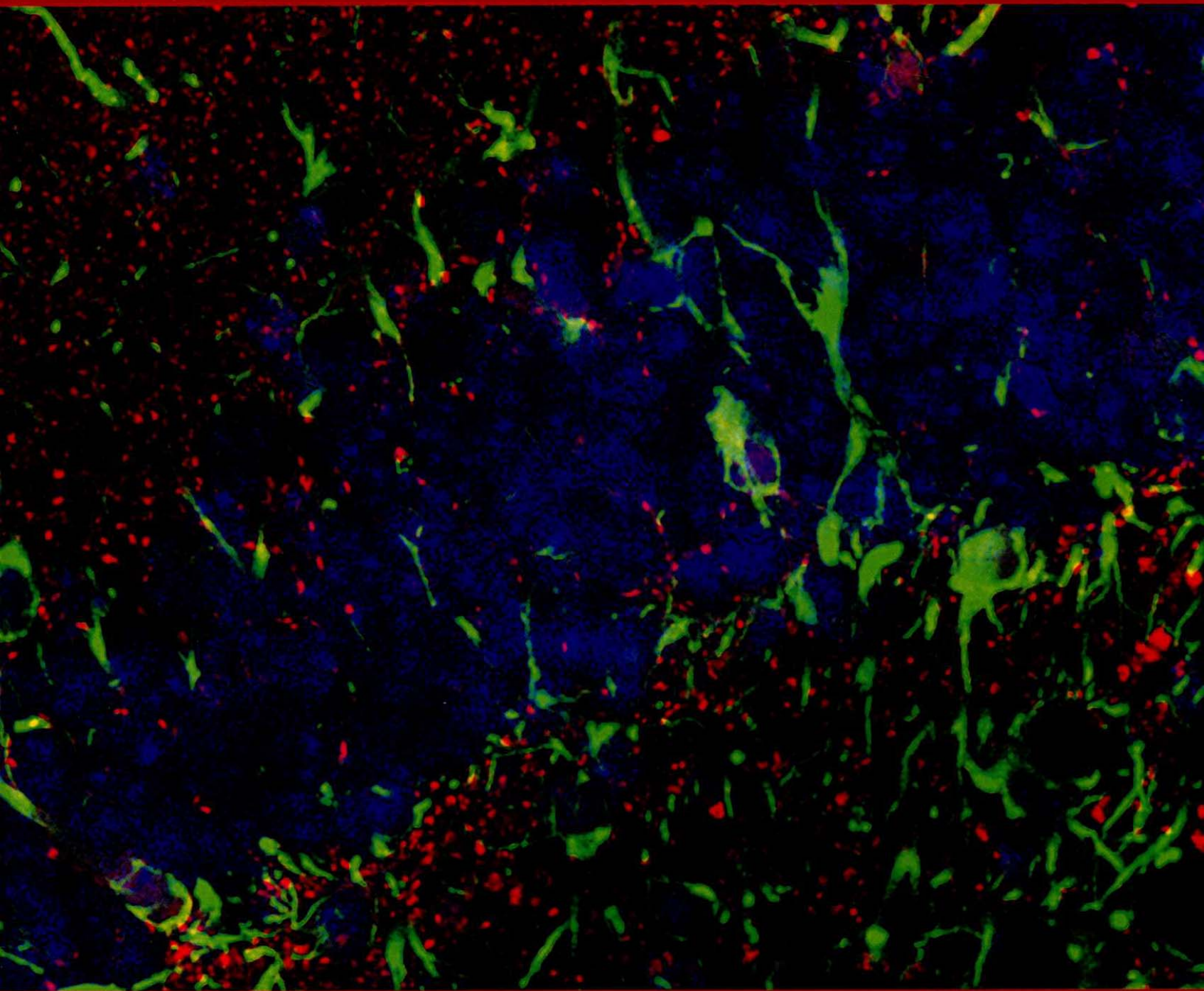


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PARKINSON'S DISEASE
VOLUME 132



EDITED BY
KAILASH P. BHATIA, K. RAY CHAUDHURI,
MARIA STAMELOU





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INTERNATIONAL REVIEW OF NEUROBIOLOGY

Parkinson's Disease

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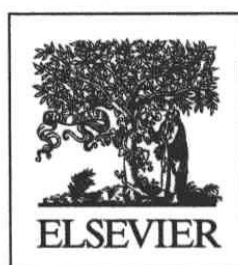
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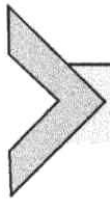
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PREFACE

Two hundred years back, James Parkinson described the condition we now call Parkinson's disease (PD) based on clinical observations of cases he named the "shaking palsy." Much of the seminal observations of Parkinson still remain valid: the core motor features, some nonmotor observations (sleep dysfunction, delirium, constipation), as well as possibly the first description of prodromal pain in PD. Yet much has changed. We now know PD is much more than a simple motor disorder driven by central dopamine deficiency secondary to nigral cell loss. There is now recognition of preprodromal PD with genetic mutations as biomarkers. There is a long prodromal period dominated by nonmotor symptoms, and the motor syndrome of PD has become complex with recognition of a palliative stage as patients live longer. Neuroprotection, a key unmet need, is becoming feasible if treatment is started at the prodromal or preprodromal stage when there are no motor symptoms. Personalized medicine is emerging as the possible future strategy for the management of PD. Yet we also have major hurdles in our quest for progress in understanding, treating, and attempting to "cure" PD. Levodopa dramatically reversed the motor syndrome of PD, bringing a Nobel Prize to Arvid Carlsson; 50 years later it still remains the gold standard of treatment for PD that is cost effective as well as efficacious. No therapies have been successful for neuroprotection or neuromodulation. Nonmotor aspects of PD have remained poorly researched with no robust animal models. Large investments in stem cell, genetic, and other restorative therapies have been unproductive. In part this has been related to our failure to understand the complexity of PD, a complex multineurotransmitter dysfunction-related central and peripheral disorder. This book aims to address these issues which chart the progress, and also unravels the difficulties of understanding PD. Chapters, written by key opinion leaders from across the world, detail all aspects of this condition, from the prodromal stage to the palliative, covering pathophysiology, motor and nonmotor symptoms, diagnosis, biomarkers, and treatment. We hope the contents will help the readers to understand PD in a truly holistic manner and hopefully affect their clinical practice in a positive manner for the people with Parkinson's.

KAILASH P. BHATIA
K. RAY CHAUDHURI
MARIA STAMELOU

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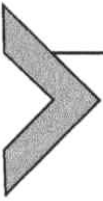
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Hallmarks of Clinical Aspects of Parkinson's Disease Through Centuries

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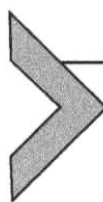
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Abstract

James Parkinson published a treatise "*An Essay on The Shaking Palsy*" in 1817. However, there is historical evidence that there were rudimentary descriptions of the disease long before Parkinson brought it to light. Later day physicians have added to the spectrum of the motor aspects of the disease over the last 200 years and the gamut of its clinical presentation is now known to be more ubiquitous than what was supposed earlier. In the 1960s, atypical Parkinsonism is identified as a distinct and separate entity, and after the introduction of levodopa in clinical practice, a variety of late motor complications have been described. Various stages of disability and motor scales have been devised which have helped in identifying and classifying the degree of severity of the disease. However, such impeccable was the original description that virtually little could be modified and later works have only added to the original text.



1. INTRODUCTION

James Parkinson was born on April 11, 1755, as the first child of Mary and John Parkinson. His father was an apothecary at 1 Hoxton Square, Shoreditch, in the southern part of London where Parkinson lived and practiced for the rest of his life. In the year 1817, he wrote a treatise entitled "*An*