DESCRIPTION:
It is well known and researched, that deprivation of oxygen to the brain can quickly result in irreversible damage and death. What is less well known, is that some vertebrate species are exceptionally tolerant of brain hypoxia. The Brain Without Oxygen: Causes of failure - Physiological and molecular mechanisms for survival, Third edition, discusses the mechanisms of brain hypoxia tolerance in these exceptional vertebrates, which include diving marine mammals, high altitude dwellers and the hibernating mammal. Special attention is given to the extraordinary adaptations that allow a few turtle and fish species to tolerate months of brain anoxia.

This third, fully updated edition addresses the potential of these animal models as targets for human clinical intervention. Perhaps the most interesting of these, are those involved in the suppression of metabolic activities to new set points well below their normoxic minima or maintenance levels. This volume will be valuable reading for researchers in physiology, medicine and general biological sciences, and of great importance to pharmaceutical companies researching novel models for stroke and brain ischemia.

CONTENTS:
1. Introduction.