# Serotonin and Melatonin with Melanophores







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# SEROTONIN AND MELATONIN WITH MELANOPHORES

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#### **PREFACE**

I am very pleased to present this book "Serotonin and Melatonin with Melanophores". This book has been based on the work done during the Ph.d. research. The present book is detailed study about the pharmacological study on melanophores. It deals with, how the melanophores interact with different types of drugs on the fish and what are their responses. In present study has used Serotonin and Melatonin drugs, along with these various other drugs are also used. This book is completely based on research work conducted by the author himself. This book will help to all those students, research scholars and faculty members who are interested in pharmological based research work.

I am highly indebted to all my well-wishers, our publisher and most important by students who co-operated us in all our steps to deliver this book. Interactions with students, research scholars, guide and colleagues have given me valuable inputs and I am grateful to them as well.

I would like express my deep sense of humbleness, sincere heartfelt and profound gratitude to my revered and learned guide Dr. Mohammad Ovais, Professor and Former Head Department of Biosciences, Barkatullah University, Bhopal (M.P.) for his able guidance, incessant encouragement, sound counsel and constructive criticism along with innumerable suggestions, meticulous efforts and exemplary behavior at every stage of this work.

The following companies provided the free samples of the drugs used in the present study. I am grateful to them (Aristo Pharma Pvt Ltd Mumbai, Ciba-Geigy, Basel Switzerland, ICI Chennai, Hindustan Ciba-Geigy Ltd Mumbai, Wallace India).

Healthy criticism and useful suggestions for the improvement of this book are welcome.

Dr. Sudhir Kumar Srivastava

Dedicated

To

My Wife

#### **Abbreviations**

5-Hydroxytryptamine (5-HT)

D-Lysergic Acid Diethylamide (LSD)

Melanophore Contracting Hormone (MCH).

Melanophore Dispersing Hormone (MDH)

Melanophore Size Index (MSI)

Melatonin (MT)

Protein Kinase A (PKA)

Protein Kinase C (PKC)

 $\alpha$ -Melanocytes Stimulating Hormone ( $\alpha$ -MSH)

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M.Phil. & Ph.d from Barkatullah Vishwavidyalaya Bhopal in Biosciences and presently serving as an Associate Professor, HOD in department of Zoology at Arts, Commerce & Science College, Taloda, Nandurbar, Maharashtra, is a passionate teacher and researcher with an experience of 13 years. He has published more than 20 research papers and articles in national and international scientific magazines and journals. He has also published 10 books for undergraduate classes of Indian universities.

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