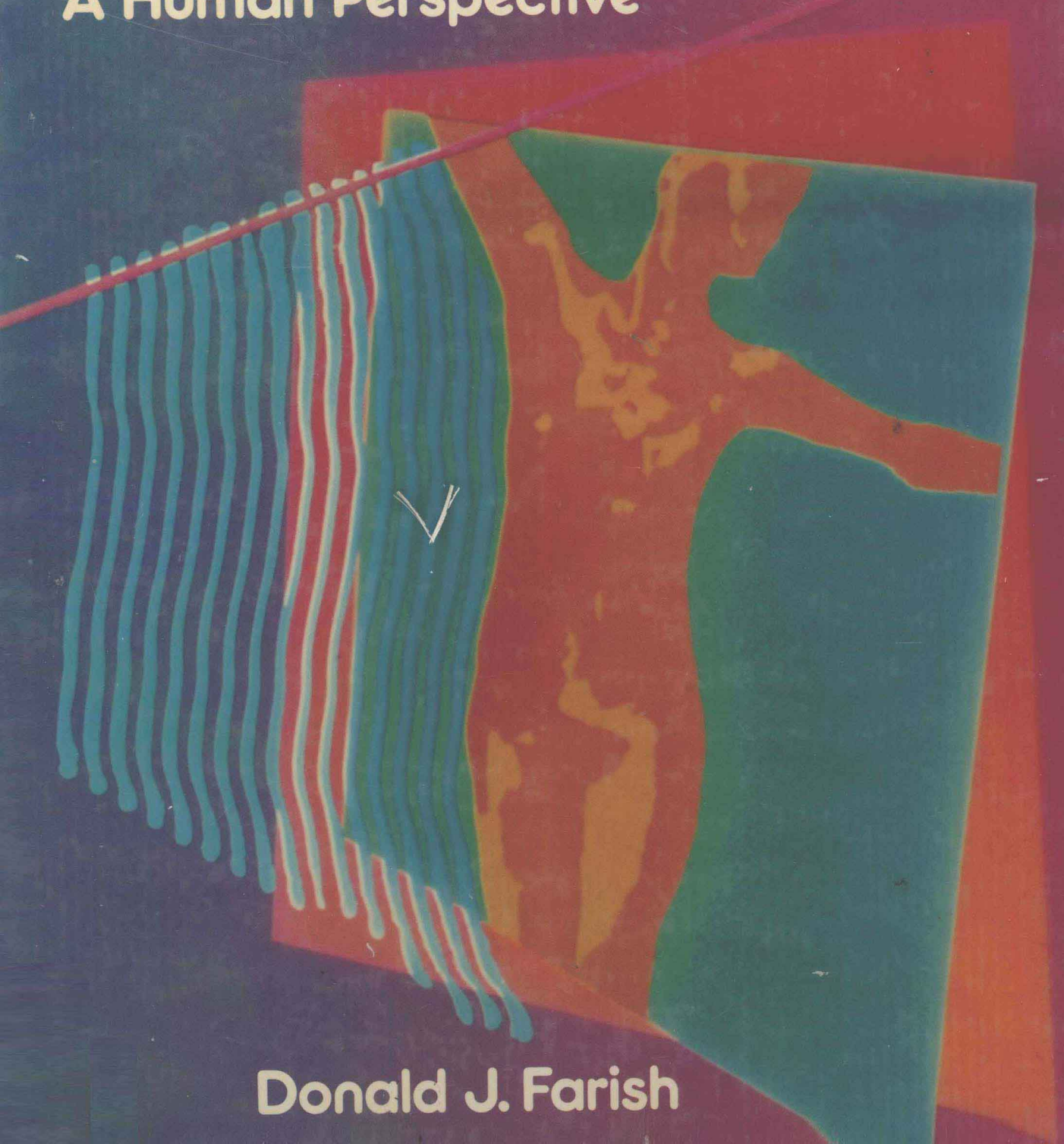
INTRODUCTION TO BIOLOGY
A Human Perspective



Donald J. Farish

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A Human Perspective

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to Ellen

Preface

Introduction to Biology: A Human Perspective presents the basic concepts of biology for students who are not majoring in the subject. The course for which it is intended offers a difficult challenge, one of presenting science in a context that will appeal to nonscience students. Most texts available for this one-term course are either watered-down versions of larger works or collections of unrelated topics with little hint of biology as an intellectual discipline.

The focus in this text is on the human organism as a vehicle for illustrating the major biological principles, because students are familiar with their own bodies and are motivated to learn more about themselves and the immediate world around them. This focus allows the presentation of concepts in a reasonably complete, challenging way that will give students a solid grounding in biological principles.

To make the experience more profitable and permanent, several helpful tools have been included: introductory case studies, brief chapter introductions, enrichment boxes, chapter summaries, lists of key terms, study questions, a glossary, and a large number of illustrations.

Each chapter begins with a brief, real-life case study. This section is designed to draw students into the chapter, to help them apply what they learn to the common experience, and to pose questions they will be able to answer as they read the chapter. Chapter introductions offer a brief overview of what is to come, enrichment boxes give additional insight without breaking the continuity of the text material, and chapter summaries provide a capsule review of the ground just covered.

The excitement of biology as a science can be obscured by the large amount of terminology. Technical vocabulary has, therefore, been kept to a minimum and conceptual understanding rather than sheer memorization of terms has been emphasized. To help students test their understanding of material and of essential terms, however, I have included end-of-chapter lists of key terms and study questions and an extensive glossary at the end of the book.

A great deal of time and effort was invested in the selection and creation of functional as well as attractive illustrations since a careful integration of text and figures helps to enhance understanding.

A comprehensive instructor's manual, including transparency masters selected from the illustrations in the text, is available to adopters.

Acknowledgments

I have been fortunate to have the assistance of the reviewers listed below. Their help was invaluable, and I wish to extend my heartfelt thanks to them; without them, this book would be a different and inferior one. Thomas Capraro, Mohawk Valley Community College; Manus Donohue, North Texas State University; Ronald Hybertson, Mankato State University; Sol Karlin, Los Angeles Pierce College; Helen Lambert, Northeastern University; August Mueller, SUNY at Binghamton; Kenneth Prestwich, University of Florida.

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Donald J. Farish

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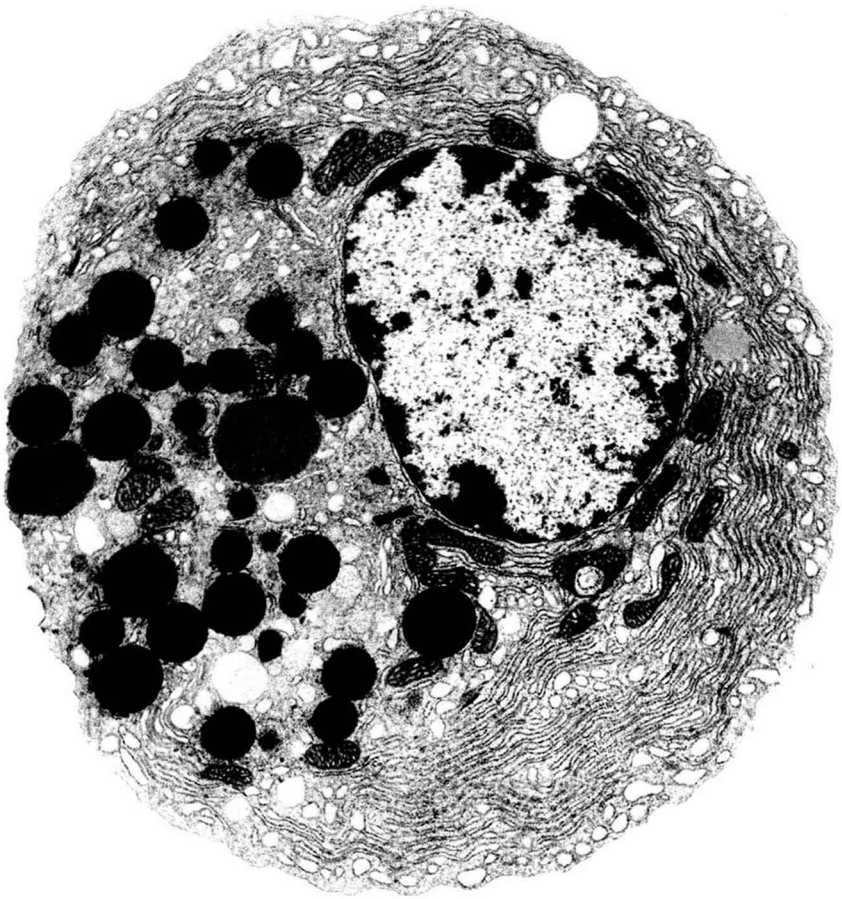

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Life and the Cell

1 Development of Biological Principles

Life, Death, and History