

TABLE OF CONTENTS

PREFACE

Charles Walter.....

ROLE OF MATHEMATICAL POPULATION GENETICISTS IN

THE EVOLUTIONARY SYNTHESIS OF THE 1930'S AND 40'S

William B. Provine..... 1

CONTRIBUTIONS OF ENZYME MODELS

Charles Walter..... 31

DYNAMIC MODELS OF THE MITOTIC CYCLE: EVIDENCE FOR A LIMIT CYCLE OSCILLATOR

Stuart Kauffman..... 95

MATHEMATICAL MODELS FOR MORPHOGENESIS

Agnes Babloyantz..... 132

COMPUTER SIMULATION AS A MEANS OF PHYSIOLOGICAL INTEGRATION OF BIOCHEMICAL SYSTEMS

David Garfinkel, Lillian Garfinkel and William Terrell Moore.. 146

HOW MODELS OF FEEDBACK SYSTEMS CAN HELP THE PRACTICAL BIOLOGIST

Douglas S. Riggs..... 174

REALITY AND MODELS: DIFFICULTIES ASSOCIATED WITH APPLYING GENERAL ECOLOGICAL MODELS TO SPECIFIC SITUATIONS

Robert A. Goldstein..... 206

BIOMATHEMATICAL MODELS; SOME TRIUMPHS AND SOME DEFEATS

H. R. van der Vaart..... 216

NEEDS FOR THE FUTURE: RADICALLY DIFFERENT TYPES OF MATHEMATICAL MODELS

Mary B. Williams..... 225