**ENVIRONMENT, DEVELOPMENT, AND PHYSIOLOGY: A SYNTHESIS**

**Editors**

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1. **INTRODUCTION**
   * Current Trends and Perspectives in Environmental Developmental Physiology

(Benjamin Dubansky, Warren Burggren, University of North Texas, USA)

1. **EXPERIMENTAL APPROACHES**
   * Section Introduction (1 page)
   * Ch 1: The Opportunities and Limitations of Laboratory versus Field Approaches

(Martin Grossel, University of Miami, USA)

* + Ch 2: Adverse Outcome Pathways and Systems Integration

(Aaron Roberts, University of North Texas)

* + Ch 3: Multivariate Experimental Designs in Environmental Developmental Physiology

(Author Needed)

* + Ch 4: Emerging Data Bases and Data Management Plans

(Author Needed)

* + Ch 5: Case Study: Research Consortia and the Art of Collaboration

(Author Needed)

1. **MULTIPLE ENVIRONMENTAL STRESSORS, THEIR INTERACTIONS, AND THE COMPLEX RESPONSES THEY EVOKE**
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(Fernando Galvez, Louisiana State University, USA)

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(Sylvia Branum and Warren Burggren, University of North Texas, USA)

* + Ch 8: Integrated Responses from the Molecular to the Population Level

(Andrew Whitehead, University of California, Davis, USA)

* + Ch 9: Case Study: Developmental Physiology at High Altitude

(Bill Milsom, University of British Colombia, Canada)

1. **PLASTICITY IN DEVELOPMENTAL TIME AND SPACE**
   * Section Introduction (1 page)
   * Ch 10: Active and Passive Responses to the Environment in Developing Animals: Costs and Benefits

(Gordon R. Ultsch, University of Florida, USA)

* + Ch 11: Epigenetics in Environmental Developmental Physiology

(David Cruz, University of Texas, Austin, USA)

* + Ch 12: Developmental Windows

(Casey Mueller, McMaster University, Canada)

* + Ch 13: Developmental Plasticity and Heterokairy

(John Spicer, Plymouth University, UK)

* + Ch 14: Case Study: Larval Development in Fishes.

(Collin Brauner, University of British Colombia, Canada)

1. **DEVELOPMENTAL CHALLENGES** 
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(Benjamin Dubansky, University of North Texas, USA)

* + Ch 16: The Implications of the Ontogeny of Immunity

(Charles D. Rice, Clemson University, USA)

* + Ch 17: The Impacts of Individual Fitness and Reproductive Success and Failure on Populations

(Keith R. Cooper, Rutgers University, New York, USA)

* + Ch 18: The Long List of Emerging Challenges

(Daniel Schlenk, University of California, Riverside, USA)

* + Ch 19: Toxicity in Aquatic Environments – The Cocktail Effect

(Duane Huggett, University of North Texas, USA)

* + Ch 20: Case Study: The 2010 Gulf Oil Spill

(John Incardona, NOAA – Seattle, USA)

1. **HUMAN HEALTH IMPACTS[[1]](#footnote-1)**
   * Section Introduction (1 page)
   * Ch 21: The Embryo and It’s Environment – *In utero* Toxicity

(Author Needed)

* + Ch 22: Developmental Neurotoxicology in Children

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* + Ch 23: Transgenerational Transfer of the Response to Environmental Stress

(Rachel Yehuda, Icahn School of Medicine at Mount Sinai Hospital, New York, USA)

* + Ch 24: Case Study: Prenatal Exposure to PCBs and Dioxins

(Reiko Kishi, Hokkaido University, Japan)

1. **A SYNTHESIS**

(Benjamin Dubansky, Warren Burggren, University of North Texas, USA)

1. This section could be left out without affecting the integrity of the book, but adds extra value through the human angle. [↑](#footnote-ref-1)