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

**I . INTRODUCTION (Section or 1 Chapter??)**

* Current trends
* Pathology or Adaptation?

**II. EXPERIMENTAL APPROACHES**

* Laboratory (In vivo, in vitro)
* Field: Opportunities and Limitations
* Adverse Outcome Pathways
* The “Real World” - Multi-variate experimental designs
* Data bases

**III. MULTIPLE ENVIRONMENTAL STRESSORS, THEIR INTERACTIONS, AND THE COMPLEX RESPONSES THEY EVOKE**

* Multiple stressor interactions (Galvez, Whitehead)
* Multiple system interactions (Branum, Mueller)
* Multiple responses: Molecular through Behavioral
* High Altitude as a Case Study: Cold X Hypoxia X xeric9?)

**IV. PLASTICITY IN DEVELOPMENT**

* Resist or Modify? Cost/Benefits
* Developmental Plasticity
* Epigenetics
* Heterokairy

**V. DEVELOPMENTAL CHALLENGES FROM THE ENVIRONMENT: NATURAL AND ANTHROPOGENIC**

* Development During Acute vs. Chronic Environmental Variation
* Immunology
* Fitness and Reproductive Success (Crews)
* Endocrine Disruption
* Behavior

**VII. HUMAN HEALTH IMPACTS**

**VIII. A SYNTHESIS**

* Predictive powers/tools
* Combating self-induced variation
* Resiliency and costs/tradeoffs
* Conclusions and Future Directions