**Alan Olav Bergland**

OTHER SUPPORT

**Active:**

None

**Pending:**

1 R35 GM119686-01 07/01/2016-06/2021

National Institutes of Health $250,000 (annual direct)

The genetic and physiological architecture of rapid and cyclic adaptation 1 SM

Role: PI

The major goals of this project are to identify functional polymorphisms segregating in natural populations of Drosophila melanogaster and Daphnia pulex in response to ecologically relevant, environmental variation. We will study the evolutionary history of these polymorphisms and use them to examine how the local adaptation shapes patters of genetic variation genome-wide

IOS 1628436

National Science Foundation N/A

The genetic and physiological architecture of rapid and cyclic adaptation N/A

Role: Lead co-PI

The major goals of this project are to identify the genetic basis of temperature sensitive photoperiodism in *Drosophila melanogaster* through forward and reverse genetic techniques and to examine the role of these genes in the photoperiodic response in other Drosophilids and Diptera.

There is no scientific overlap between this NSF proposal and the aims of our NIH MIRA application under consideration.

DEB 1631596

National Science Foundation N/A

Preliminary Proposal:NSFDEB-NERC: Tracking the dynamics of adaptive evolution from months to millennia and continents to kilometers N/A

Role: Lead co-PI

The major goals of this project are to study the peristence time of natural polymorphisms subjec to temporally variable selection pressures. Do accomplish this goal, we propose to identify the genetic basis of predator defenses *Daphnia pulex* through GWA and to examine the age and persistence time of these alleles through population genetic inference of samples collected over months (i.e., across seasonal time) and decades (thorugh examination of samples resurrected through lake-cores).

Aim 1 of NSF DEB 1631596 proposes to resequence the genomes of ~1000 *D. pulex* clonal lineages sampled from 8 ponds throughout England for genome-wide association with neck-tooth induction, a phenotypic response to predation cue. The re-sequencing of ~1000 lineages of *D. pulex* overlaps with work proposed in the NIH MIRA grant currently under consideration. If both are funded, the budgets will be adjusted appropriately in conjunction with agency staff.