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Author: Dante Zarlenga Zhengyuan Wang Makedonka Mitreva

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***Trichinella spiralis*; adaptation and parasitism**

Dante Zarlenga¹, Zhengyuan Wang², Makedonka Mitreva^{2, 3}

¹Agricultural Research Service, Animal Parasitic Diseases Lab, Beltsville, MD 20705 USA;

²McDonnell Genome Institute, Washington University in St. Louis, MO, 63108, MO

³Department of Internal Medicine, Washington University School of Medicine, St. Louis, MO 63110, USA

Correspondence:

Dante Zarlenga

Agricultural Research Service

Animal Parasitic Diseases Lab

Beltsville, MD 20705 USA

Ph 301-504-8754

Fx 301-504-8979

dante.zarlenga@ars.usda.gov

Highlights

- Gene loss occurred in conjunction with nematode specialization
- Parasitic nematodes lost proteins through random mutation and deletions
- Parasitic nematodes gained proteins through duplication and lateral gene transfer
- Lateral gene transfer may have played a role in the evolution of parasitism
- Nematodes independently acquired the cyanase gene family from different sources

Abstract

Publication of the genome from the clade I organism, *Trichinella spiralis*, has provided us an avenue to address more holistic problems in parasitology; namely the processes of adaptation and the evolution of parasitism.

Parasitism among nematodes has evolved in multiple, independent events. Deciphering processes that drive

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