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

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**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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