# Adult Female *Acanthocheilonema viteae*, Harvested from Golden Syrian LVG Hamsters (Live)

## Catalog No. NR-48881

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## For research use only. Not for human use.

### Contributor:

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### Manufacturer:

Filariasis Research Reagent Resource Center supported by Contract HHSN272201000030I, NIH-NIAID Animal Models of Infectious Disease Program[1]

### Product Description:

Classification: Onchocercidae, *Acanthocheilonema*
Species: *Acanthocheilonema viteae* (previously referred to as *Dipetalonema viteae*)
Strain: FR3
Original Source: *Acanthocheilonema viteae* (*A. viteae*), strain FR3, was obtained from TRS Laboratories in Athens, Georgia, USA.[2]
Comment: *A. viteae* does not contain the *Wolbachia* endosymbiont like most filarial nematodes that cause human disease. *A. viteae* is often used as the negative control for experiments investigating the bacterium.[2]

*A. viteae* is a filarial nematode that parasitizes rodents in Eastern Europe, Iran and North Africa. Natural hosts of *A. viteae* include the Libyan gerbil (*Meriones libycus*) and some species of the *Jaculus* and *Rhombomys* rodent genera. *A. viteae* can also infect experimental hosts including Golden Syrian LVG hamsters (*Mesocricetus auratus*), Mongolian gerbils (*Meriones unguiculatus*) and rats (*Mastomys natalensis*). In nature, third-stage infective larvae (L3) of *A. viteae* are transmitted to their mammalian host by the soft tick *Ornithodoros tartakovskyi*. *Ornithodoros moubata* can be used as an experimental vector for *A. viteae* in the lab. Once inside the mammalian host, the L3 develop into adult worms and generate microfilariae, which are ingested by the tick during its bloodmeal. The microfilariae develop inside the vector to L3, before migrating to the arthropod mouth parts for transmission to the mammalian host when the arthropod feeds.[2-5]

### Material Provided:

NR-48881 consists of up to 40 adult female *A. viteae* harvested from Golden Syrian LVG hamsters. *A. viteae* are shipped in NI medium [1:1 mixture (v/v) of cell culture medium NCTC-135 and Iscove's modified Dulbecco's medium] supplemented with non-heat inactivated fetal bovine serum (final concentration 20%) and containing 100 units penicillin and 100 µg streptomycin per mL of fluid. Live *A. viteae* can be shipped in other media (i.e., RPMI-1640) per users' specific requests. If more material is required for your intended use, please contact BEI Customer Services at contact@beiresources.org to request the additional material.

Note: For information on culturing adult *A. viteae* refer to References 6 and 7. Specific questions regarding handling of *A. viteae* can be sent to Dr. Shelly Michalski at michalsk@uwosh.edu.

### Packaging/Storage:

NR-48881 is packaged in 15 mL or 50 mL conical vials and shipped in insulated boxes that may contain gel packs to moderate extreme temperatures. To maintain viable product transfer the vial contents to fresh medium (see Material Provided for media details) immediately upon arrival and incubate at 37°C in a 5% $CO_2$ and nitrogen atmosphere. The culture fluid should be changed every two to three days or immediately upon any pH decrease indicated by color change in the culture medium. Adult *A. viteae* have been cultured at University of Wisconsin Oshkosh for more than two weeks when using 5% $CO_2$ in air instead of 5% $CO_2$ in nitrogen. All live *A. viteae* orders are shipped overnight from University of Wisconsin Oshkosh, Oshkosh, WI, USA.

### Citation:

Acknowledgment for publications should read "The following reagent was provided by the NIH/NIAID Filariasis Research Reagent Resource Center for distribution by BEI Resources, NIAID, NIH: Adult Female *Acanthocheilonema viteae*, Harvested from Golden Syrian LVG Hamsters (Live), NR-48881."

### Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

### Disclaimers:

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## References:

1. Michalski, M. L., et al. "The NIH-NIAID Filariasis Research Reagent Resource Center." PLoS Negl. Trop. Dis. 5 (2011): e1261. PubMed: 22140585.
2. Michalski, M. L., Personal Communication.
3. Morris, C. P., et al. "A Comprehensive, Model-Based Review of Vaccine and Repeat Infection Trials for Filariasis." Clin. Microbiol. Rev. 26 (2013): 381-421. PubMed: 23824365.
4. Lucius, R. and G. Textor. "*Acanthocheilonema viteae*: Rational Design of the Life Cycle to Increase Production of Parasite Material Using Less Experimental Animals." Appl. Parasitol. 36 (1995): 22-23. PubMed: 7780447.
5. Anderson, R. C. Nematode Parasites of Vertebrates: Their Development and Transmission. 2nd Ed. New York, NY: CABI Publishing, 2000.
6. Franke, E. D. and P. P. Weinstein. "In Vitro Cultivation of *Dipetalonema viteae* Third-Stage Larvae: Effect of Gas Phase." J. Parasitol. 70 (1984): 493-498. PubMed: 6438292.
7. Maki, J. and P. P. Weinstein. "*Dipetalonema vitae*: Survival of Adult Females and Microfilarial Release in Both a Chemically Defined and Serum-Supplemented Medium." J. Parasitol. 75 (1989): 953-957. PubMed: 2614606.

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