

Chronic Disease Research Foundation

Project Title:

Full Genome Sequencing & Study of Homo Funis Vermis, “Human Rope Worms”

Project Contact:

Alex A. Volinsky, Ph.D

Department of Mechanical Engineering:University of South Florida

Tampa, FL 33620 USA

Email: volinsky@usf.edu

Phone: +1 813 974 5658, Fax: +1 813 974 3539

Table of Contents

I. Project Synopsis.....	1
II. Homo Funis Vermis Description.....	2
III. Current DNA and Microscopic Findings.....	3
IV. General Approach.....	4
V. Major Assumptions.....	4
VI. Preliminary Budget	4
VII. Preliminary Key Research Team Members.....	4
VIII. Data Sharing and Publication	5
IX. References	5
Appendix I. Photos of “Worm-Like Features”	6
Appendix II. Photos of Homo Funis Vermis (Five Stages)	8

I. Project Synopsis

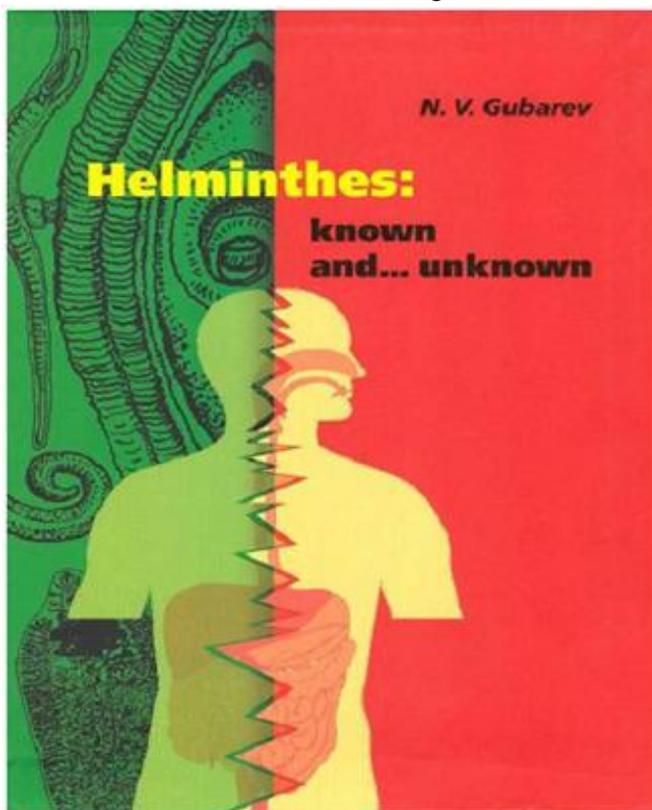
Parasite Facts

- 1) 60% to 99% of the World population have parasites [1].
- 2) Over 15% of all cancers in humans are parasite-related [2].
- 3) In the USA, pinworms is the most common worm infection, and affects 11.4% of the populace[3]. Prevalence can reach 50% in children under 18, people who take care of infected children and people who are institutionalized [4].
- 4) According to Dr. Roberta Foss-Morgan many parasitic based illnesses can be misdiagnosed as peptic ulcers; amoebic (internal animal parasites) colitis can be misdiagnosed as ulcerative colitis; chronic fatigue syndrome may be secondary to Giardiasis; diabetes mellitus and hypoglycemia could be a tapeworm infection[5].

Introduction

Many chronic disease doctors have begun to think that untreated parasite infections are a major root cause of chronic illness. As such they are using either allopathic anti-parasite protocols and/or various detoxification procedures to try and improve their patients symptoms. Many of the patients are excreting “worm-like features” when undergoing the treatments and photos of these mysterious features are propagating on websites around the world (see Appendix I). When these organisms are sent to United States laboratories for analysis, the results are typically stated as “undigested food fibers” or “mucous threads.” The main two questions continue to be...What are these features and what is their impact on our health?

Recently, works written by a Russian research team led by Nikolai V. Gubarev, PhD, a Russian expert in Occupational Safety, have gained notoriety. They have described a new type of intestinal anaerobic worm in various research reports and also in a Russian book titled, “Helminths...Known and Unknown” [6-9]. The Russian team refers to these organisms as Homo Funis Vermis or Human “Rope” Worms.



Why have these organisms not been previously discovered? The authors surmise that it is because the parasites resemble human feces, dry in air within hours and are mistaken for other human features, like MALT (Mucosa-Associated Lymphoid Tissue) or the lining of the intestines.

Project Objective

The Project's main goal is to build on the current Russian findings and sequence the full genome of the Homo Funis Vermis. In doing so the results should end the debate as to the exact nature of the worms.

The Foundation's Role

The Chronic Disease Research Foundation will be the main fund raising vehicle and will also oversee the project in its entirety, including evaluating budgetary requirements and project partnerships.

II. Homo Funis Vermis Description

Please review the paper, "[Development Stages of the "Rope" Human Intestinal Parasite](#)"

Link: <http://arxiv.org/ftp/arxiv/papers/1301/1301.2845.pdf>

Abstract

“This paper describes the five development stages of the rope human parasite. Rope parasites have been discovered as a result of cleansing enemas. Parasite adult stages live in human gastrointestinal tract and are anaerobic. They move inside the body by releasing gas bubbles utilizing jet propulsion. Rope parasites look like a rope, and can be over a meter long. It takes tens of years for them to fully develop into mature species (fifth stage). The fourth stage looks similar, but the parasite is shorter and has softer slimier body. The third stage looks like branched jellyfish. The second stage is viscous snot, or mucus with visible gas bubbles that act as suction cups. The first stage is slimier mucus with fewer bubbles, which can reside almost anywhere in the body. Anthelmintic methods are also mentioned in the paper.”

See [Appendix II](#) for photos of the 5 stages of development.

III. Current DNA and Microscopic Findings

Preliminary DNA results have been obtained from ongoing studies and matches were found for human pseudogene, chromosomes 8 and 17, and *Cymoninus Notabilis*, a seed bug by 98%. It has been noted that Rope Worms produce fecal stones, 1-2 cm in diameter, which are agglomerates of fecal matter with seeds in them. Multiple species of *Cymoninus Notabilis* have been observed on such fecal stones in Tampa, FL and in St. Petersburg, Russia. While the Rope Worm reproductive routes are not clear at this point, it is possible that *Cymoninus Notabilis* is a vector for *Homo Funis Vermis*.

Microscopic observations of the worm structure are presented in Figure 1 below. Figure 1a) is an optical micrograph of the worm's wall, which has multiple branching channels, 50-150 μm wide. The worm walls are formed by multiple scale-like cells, 10-20 μm in size, and are clearly seen. When water was injected into a channel, it traveled along the length of the worm, observed under the optical microscope, without carrying any surrounding cells. Particle motion in the channels was also observed by optical microscope. Unlike nematodes, which have the main body cavity, these rope worms have a branching network of channels along their length (Figure 1a). Thus, unlike nematodes, they have no single apparent digestive tube. Similar to some nematodes, rope worms attach to the internal wall of the intestine using suction cups positioned at the head, or even along their body. At the same time, these worms don't have a cuticle, like nematodes, but a tegument, like cestodes. This tegument is slimy and gel-like in consistency. Figure 1b) shows optical microscope image of the sample fixed with formalin and stained with 4,6-diamidino-2-phenylindole (DAPI). DNA-containing regions are clearly seen. Figure 1c) shows gas bubbles 35-40 μm in diameter found inside the worm internal channels. Figure 1d) is an environmental scanning electron microscopy (SEM) image of the worm surface. The sample was kept in 70% ethanol for 2 days prior to placing it in the FEI Quanta 200 dual beam focused ion beam microscope, operated in the environmental SEM mode, without any preparation. While the worm crumbled under low vacuum, holes outlining microchannels terminating on the worm surface were clearly seen.

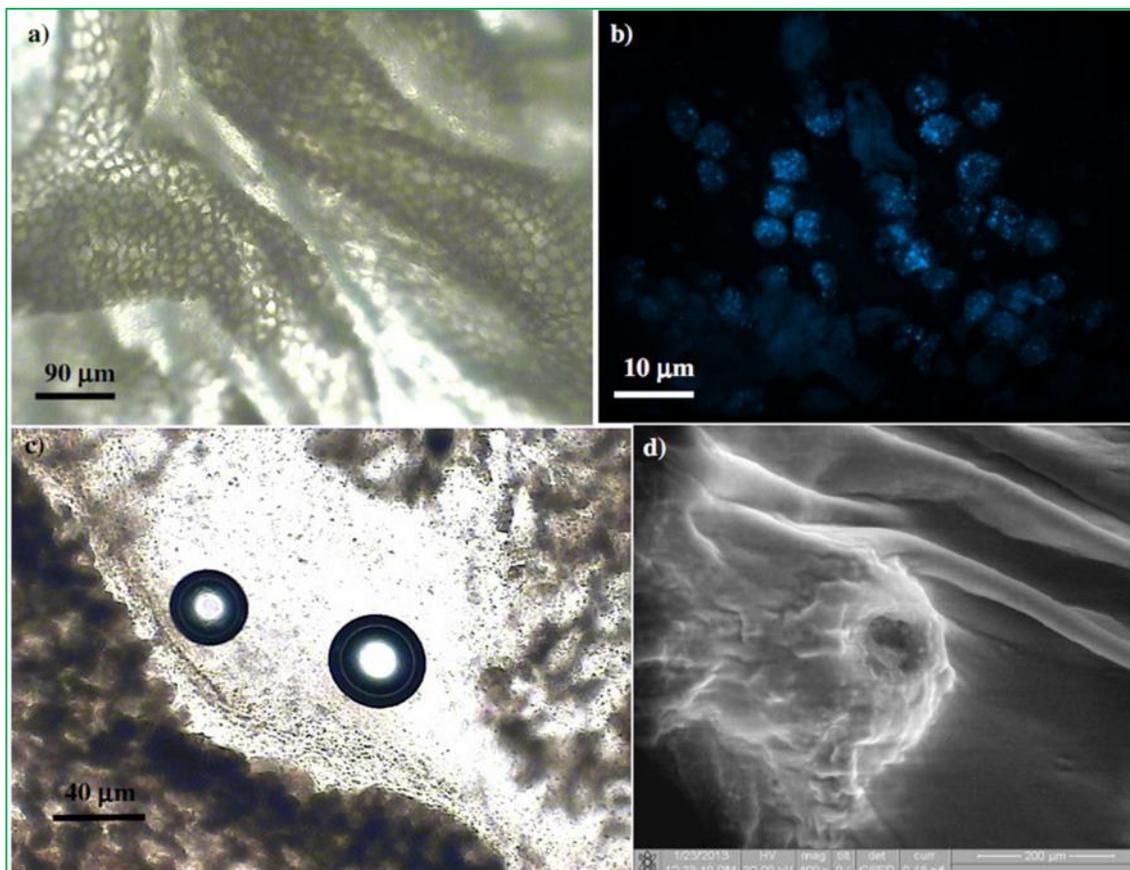


Figure 1 (Above). a) Optical micrograph of the rope worm wall structure showing scales and microchannels. b) DAPI-stained sample; c) Spheres inside the channel cavity; d) SEM micrograph of the worm surface showing holes outlining microchannels terminating on the surface.

IV. General Approach

- 1) Identify strategic partners to assist with the project's overall methodology
- 2) Review current Russian findings with strategic partners
- 3) Determine final project team
- 4) Determine sequencing technique and select Genome Laboratory
- 5) Review current sample viability
- 6) Determine Final Project Methodology and Budget
- 7) Conduct Project
- 8) Publish Results

V. Major Assumptions

This project assumes that the observed organisms are a new parasite species. There are some claims stating that these are actually remains of *Ascaris Suum* pig parasites. Obtained CO1 gene sequence doesn't seem to match that of the *Ascaris Suum*. It is also quite possible that these anaerobic worms have no CO1 gene at all.

VI. Preliminary Budget

At this time it is only possible to determine a budgetary range until the final project methodology is established in September 2013.

Expense	Amount
Project Direct Costs (personnel, supplies, travel, etc)	\$150k to \$275k
Indirect Costs	\$15k to \$27k
Total Costs of Project	\$165k to \$304k

VII. Preliminary Key Research Team Members

- **Alex Volinsky, PhD:** The Principle Investigator (PI), has extensive experience conducting research in international teams. He has performed research in the US, Poland, Russia, China, Italy and Germany, and most recently completed a cancer study regarding the anti-tumorous activities of particular nanoparticles [10].
The PI has an ongoing collaboration with the Peking University Health Science Centre, Beijing, research associates at the Tampa, Florida General Hospital and similar connections at facilities in Moscow and Nizniy Novgorod, Russia.
- **Elena Marchenko, MD, PhD,** specializing in field of endocrinology. She will be responsible for handling the samples and DNA analysis.

VIII. Data Sharing and Publication

The data and samples will be readily available to all team members and the Foundation. Results will be rapidly published and available to the broader global health community through good data access practices.

IX. References

1. World Health Organization, <http://www.who.int>
2. P. Anand, A.B. Kunnumakara, C. Sundaram, K.B. Harikumar, S.T. Tharakan, O.S. Lai, B. Sung, B.B. Aggarwal, Cancer is a Preventable Disease that Requires Major Lifestyle Changes, *Pharmaceutical Research*, Vol. 25, No. 9 (2008), 2097-2116
3. Burkhart CN, Burkhart CG (October 2005). "Assessment of frequency, transmission, and genitourinary complications of enterobiasis (pinworms)". *International Journal of Dermatology* 44 (10): 837–40.
4. Centers for Disease Control and Prevention (<http://www.cdc.gov/parasites/pinworm/epi.html>)
5. Dr. Roberta Foss-Morgan <http://www.drrobertamorgan.com/parasites.htm>
6. N.V. Gubarev, Helminths known and....Unknown/Gelminty izvestnye i...neizvestnye, Special Literature, First Class Publishing, St. Petersburg, 2009 (In Russian)
7. N.V. Gubarev, A.V. Gubarev, S.A. Lebedev, L.P. Orlovskaya, G.M. Orlovskaya, O.N. Pakulina, Method of Human Dehilmintation/Sposob Izgnaniya Gelmintov iz Organizma Cheloveka, Russian Federation Patent RU2270688, 2007
8. N.V. Gubarev, S.A. Lebedev, L.P. Orlovskaya, O.N. Pakulina, Method of Human Dehilmintation/Sposob Izgnaniya Gelmintov iz Organizma Cheloveka, Russian Federation Patent RU2250111, 2007
9. N.V. Gubarev, A.V. Gubarev, L.P. Orlovskaya, G.M. Orlovskaya, O.N. Pakulina, Method of Human Dehilmintation/Sposob Izgnaniya Gelmintov iz Organizma Cheloveka, Russian Federation Patent RU (11) 228110, 2006
10. C. Lin, C. Jiexin, W. Cong, C. Ping, D.A. Pan, A.A. Volinsky, Anti-tumor Activity of Self-charged (Eu,Ca):WO₃, Eu:CaWO₄ Nanoparticles, *Bulletin of Materials Science*, Vol. 35(5), pp. 767-772, 2012

Appendix I. Photos of “Worm-Like Features”

From United States Forums



From Russian Forums



Multiple photos of eucalyptus-lemon cleansing results



Appendix II. Photos of Homo Funis Vermis (Five Stages)

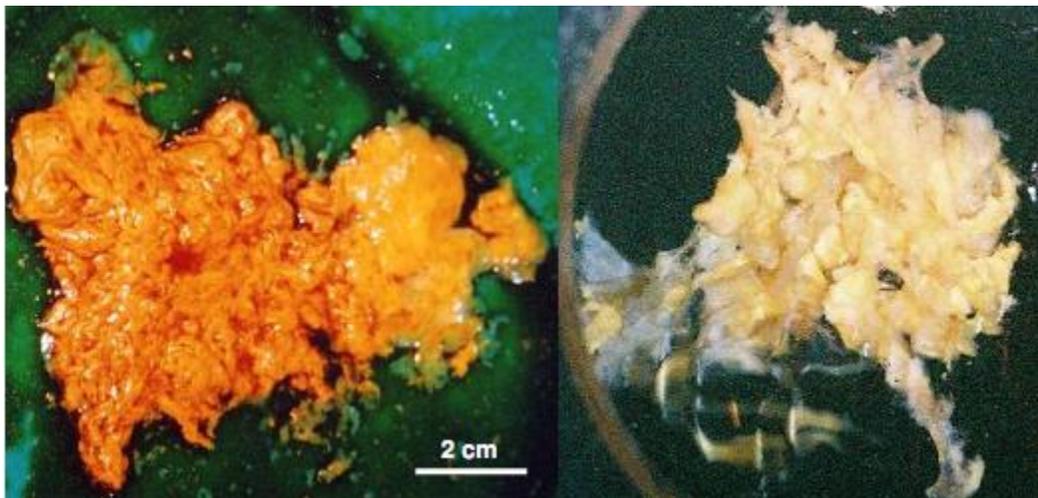
Stage 1: Viscous Mucus, First Development Stage



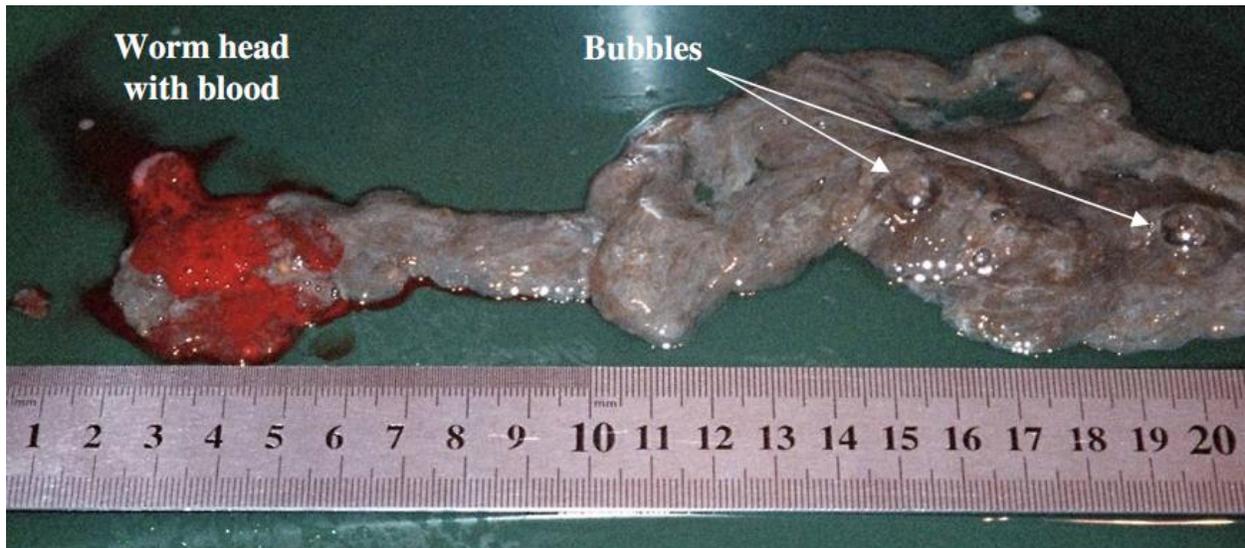
Stage 2: Viscous Mucous with Bubbles, Second Development Stage



Stage 3: Branched Jelly Fish



Stage 4: Pre-Adult stage with soft slimy body



Stage 5: Adult Rope Worm

