

PROTIST WEB ALERT

From Parasites to Life in Space!

The World Wide Web is a true international revolution in communication for science as well as for society in general. The amount of information available is truly astounding, with the main problems being the lack of organization, the absence of ready authentication, and the entropic tendency towards benign neglect of updating the information. This section will provide a necessarily opinionated review of new and interesting web sites related to the study of protists. Please send me (simpson@hhmi.ucla.edu) any interesting web sites for review, together with your own critical evaluation if you want to limit the editorial bias!

Molecular Parasitology Network web site (<http://www.rna.ucla.edu/par/molpar/>)

This under construction web site is a portal to the Molecular Parasitology Network, which was created by L.S. at the Woods Hole Molecular Parasitology Meeting in September, 2000, as a „virtual“ international scientific society to further this field of research, which covers not only parasitic protists but also parasitic worms. It has working links to the following sites: (1) Members of Molecular Parasitology Network. (2) Parasite Genome Projects. (3) Parasite sequence databases. (4) Vectors available. (5) Laboratory Protocols. (6) Postdoctoral and faculty positions available. (7) Postdoctoral and faculty positions wanted. (8) Scientific Meetings. (9) A Bulletin Board. (10) Virtual courses. (11) Funding Agencies. (12) Fellowships and Prizes. The „Members“ site at <http://www.arc.ucla.edu/mpn/faculty.cfm> should be very useful and the engine used could serve as a model for other virtual scientific associations in that it offers the participant the ability to log on and upgrade their own information. My students find the „Parasite Genome“ site at <http://www.rna.ucla.edu/par/> a useful portal to most of the parasite genome project web sites, specific databases and blast servers. The „Bulletin Board“ site at <http://www.rna.ucla.edu/par/molpar/bull.html> provides a threaded bulletin board for ongoing and archived discussions about any subject in this field (but is yet unfortu-

nately underutilized!). The „Positions Available“ site at <http://www.rna.ucla.edu/par/molpar/positions%20avail.htm> is already proving useful for researchers seeking postdocs and postdocs seeking positions. The „Vectors“ site provides links to several locations providing vector sequences and maps. In regard to this, I would like to make a plea for labs that provide online vector sequences to present them as text files in standard Genbank format together with features, since most current analysis programs such as Vector NTI can import these and map the features automatically. Otherwise one must manually enter feature positions into the raw sequences.

All in all, a fabulous site, if I must say so myself!

Uridine-insertion/deletion RNA Editing web site (<http://www.rna.ucla.edu/trypanosome/index.html>)

This site contains information on this unusual type of RNA modification that occurs in the mitochondrion of kinetoplastid protists. It contains a list of researchers in the field, a Bulletin Board, definitions of the jargon, announcements of meetings, and a selective list of recent interesting results in the field (suffers from benign neglect, unfortunately). It also points towards the major specialized databases in this field: (1) The minicircle DNA database (with a somewhat distorted photo of Douglas Barker!) (<http://www.ebi.ac.uk/parasites/kDNA/Source.html>). This mainly provides pointers to the available Genbank minicircle sequences for different species. (2) The Edited Sequence Database (<http://www.rna.ucla.edu/trypanosome/database.html>). This database contains sequences of mitochondrial genes and cryptogenes from kinetoplastid protozoa. Edited mRNA sequences and translated amino acid sequences are also provided. The sequences are in GCG format and can be obtained as HTML files either by clicking the gene in the genomic maps, or by clicking the gene name in the Table. A novel „map“ format provides the edited RNA sequence aligned with the genomic DNA sequence and the translated amino acid sequence; both U-deletions and U-insertions are indicated by gaps in the edited se-

quence or the genomic sequence. In the *Leishmania tarentolae* genomic map, the sequences of the maxicircle-encoded gRNAs are also indicated. For *Trypanoplasma borreli*, the sequences of the known gRNA genes encoded in the 180 kB component I DNA are provided. Several published alignments of nuclear rRNAs of kinetoplastids are also provided in the proper formats for running standard phylogenetic programs (I encourage everyone who has such alignments to send them to me for posting, since they are not otherwise available in any databases). *I am prevented by modesty to put a value judgment on this valuable site.*

DictyBase – An Online Informatic Resource for *Dictyostelium*
(<http://dictybase.org/>)

The purpose of this site is to provide a centralized source for information about *Dictyostelium discoideum* and related organisms and to facilitate communication between researchers. The linked sites include: (1) What's New. (2) Learn About *Dictyostelium* (a nice educational section that features many beautiful mpg and avi movies. I would however recommend that some instruction be provided to the novice web surfer as to how to run these movie formats on their browser and their platform.) (3) Search. (4) Dicty Annual Conference (Great places and nice informal photos. Almost makes me want to work on Dicty just to go to the meetings!). (5) *Dictyostelium* Genomics. (6) Read the Dicty News. (7) Franke Database of Dicty Literature. (8) Dicty Book of Virtues (An interesting concept – to present a discussion of the advantages of the organism for genetic, biochemical and evolutionary research, that you can paste into a grant request! (9) Dicty Labs on the Web. (10) Investigator Database (useful, but it does grab you and not let you go unless you are an awfully rapid mouse clicker!). (11) Dicty Listserv (I myself find Listservers annoying and much prefer a Bulletin Board type of communication rather than receiving unwanted emails). (12) *Dictyostelium* techniques (nice, but two of the protocol links are currently broken). (13) Other Internet Biology Resources.

A well organized and informational site that provides much useful information. This site really opened my eyes to recent research on these organisms!

***Giardia lamblia* – A Model for Ancient Eukaryotic Genome Analysis**
(<http://www.mbl.edu/Giardia/index2.html>)

A web site for the *Giardia* genome project. The rationale of the project is well described, as is the sequencing strategy and the enlightened rapid release policy. There are links to a *Giardia*-specific Blast server, BlastX annotations of gene identifications, downloads of sequences in FastA format, Genome sequencing statistics and publications by the sequencing consortium. *A very useful genome site for researchers on a fascinating lower protist.*

Woods Hole Astrobiology Institute Micro*Scope web site
(http://www.mbl.edu/microscope/general/page_01.htm)

Astrobiology is a new field of research that yet lacks a subject matter. However, studies of earthly microbes currently substitute for studies of life on other planets. This site is still under construction and already has over 400 excellent images of microbes. The links include images of "Groups of Microbes", an alphabetical list of illustrated microbes, microbes organized by habitat, classification of microbes, and educational resources (two lectures so far). There is also a "Zeiss downloadable image site" which has a number of high resolution images indicating (I suppose) why you should buy a Zeiss microscope. *A site with great potential. I look forward with great anticipation to seeing images of extraterrestrial microbes in the future!*

Larry Simpson
HHMI-UCLA, 6780 MacDonald Research
Laboratories, 675 Charles E. Young Dr. S.,
Los Angeles, CA 90095-1662, USA
fax 1 310 206 8967
e-mail simpson@hhmi.ucla.edu