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ITALIAN SOCIETY OF
PROTOZOLOGY

Founded in 1965

Italian Section of the Society of
Protozoologists (U.S.A.) since 1983

Societa' Italiana di Protozoologia (SIP)

Foundation of the Italian Society of Protozoology

The SIP was founded in 1965 by the pioneering activity of the first group of supporter members, the Professors Tina Franceschi, Renzo Nobili, Elsa Bottazzi Massera, and Bruno Schreiber.

Inspiring Principle

"To promote the studies of Protozoology, gathering the researchers in this subject and favouring the co-ordination of their activities".

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The Point

This 2003 issue of the Notiziario of the Italian Society of Protozoology is special as it is dedicated to our foreign colleagues gathered in San Benedetto del Tronto to attend the 4th European Congress of Protistology and 10th European Conference on Ciliate Biology. The idea to create the Notiziario was born eight years ago, when Prof. Giuseppe Dettori realized that this information channel would allow the members to express their own opinions, 'to listen to and to be listened to', favouring the participation of promising young researchers in protozoology.

The Italian Society of Protozoology is now 38 years old: here, the history of its foundation is briefly outlined and the composition of its Boards of Directors reported from 1965 to today. Among the enterprises promoted by the Italian Society of Protozoology in favour of young researchers, the Nobili-Franceschi prize, awarded every two years to the best Italian Degree Thesis on a protozoological subject, should be noted. For some years, the Notiziario has presented the *compendia* of the Theses of the Research Doctorate in 'Protistology'. In this issue, the *compendia* of the Theses discussed in 2003 by Dr Sabrina Barchetta (Camerino) (Research Doctorate in 'Biology', *curriculum* Cell Biology), and by Dr Marzia Ognibene (Genova) (Research Doctorate in 'Evolutionary Biology', *curriculum* Protists) are presented. Advisors are invited to ask their graduate-students to prepare a *compendium* of their Doctoral Thesis to be discussed in 2004, to be presented in the next issue of the Notiziario.

Prof. Cristina Miceli reports on the Xth International Meeting on Ciliate Molecular Biology that she attended at Saxton River in July 2003, with special emphasis on the genome projects of *Paramecium tetraurelia* and *Tetrahymena thermophila*.

As far as the employment opportunities are concerned, post-doctoral positions are available in Molecular Genetic/Cell Biological Analyses in *Tetrahymena thermophila*, at the Department of Biology, University of Rochester, and a Scientific Curator position is open at the Department of Genetics, University of Stanford, for the nascent *Tetrahymena* Genome Database.

On the last pages of this issue of the Notiziario, the e-mail addresses of members are listed and those members who have not yet done so are invited to send their e-mail address, or relative corrections, to the Secretary of the Italian Society of Protozoology, Prof. Olga Brandonisio.

The list of the upcoming Congresses of protozoological interest, the notebook, and a bibliographic selection close this special 2003 issue of the Notiziario.

Wishing you all the best.

For the Editorial Staff

Maria Umberta Corrado

History of the Foundation of the Italian Society of Protozoology

During the 2nd International Congress of Protozoology (London, July 29th – August 5th, 1965), Prof. Pierre de Puytorac suggested establishing an International Organization of Protozoology. Afterwards, it was agreed to create an ‘International Commission of Protozoology’ (ICP) with the aim of organizing International Conferences and collaborating with the Organizing Committees of single groups or National Societies. Prof. Tina Franceschi was aware of the great opportunity for Italian protozoologists to be included in this international community, and focused the attention of Prof. Renzo Nobili on forming a National Group of Protozoology. Thus, a first group was constituted with Professors Elsa Bottazzi Massera and Bruno Schreiber.

This proposal was presented to the assembly of the members of the Unione Zoologica Italiana, during their 34th Congress in Pallanza, September 27th – October 2nd, 1965. The National Group of Protozoology was so established with 20 members, and a Provisional Commission was formed of Professors Marisa Cigada, Alessandro Filipponi, Tina Franceschi, as secretary, Renzo Nobili, Silvio Ranzi, Bruno Schreiber, and Giorgio Schreiber. On October 30th 1965, at the Institute of Zoology of the University of Milan, the Italian Society of Protozoology (SIP) was officially constituted with a Management Committee consisting of Giuseppe Scortecci (President), Renzo Nobili (Vice-President), and Tina Franceschi (Secretary). The Secretary also represented the SIP abroad and attended the meetings of the ICP, as the Italian delegate.

The scientific activity of this newly-born Society officially began with a Congress held in Genoa in 1967. One year later, the Congress of the SIP was linked to that of the Italian Society of Parasitology in Trieste. Further informal scientific meetings of the SIP were held in Genoa (1972), in Pisa (1975), in Camerino (1976), and in Ferrara (1977). Formal scientific meetings took place from 1978, and annually from 1982.

The Italian Society of Protozoology affiliated with the Society of Protozoologists in 1983: a significant step in the history of the SIP. As a Section of the Society of Protozoologists, the abstracts of the contributions presented at the annual Congresses of the SIP are published in *The Journal of Eukaryotic Microbiology*, formerly *The Journal of Protozoology*.

M.G. Chessa, M.U. Corrado, F. Dini, F. Trielli



Certosa at Calci (Pisa). Legal seat of the Italian Society of Protozoology

Boards of Directors of the Italian Society of Protozoology 1965 – 2003

1965	Prof. Giuseppe Scortecci, President Prof. Renzo Nobili, Vice-President Prof. Tina Franceschi, Secretary and ICP Delegate	1991 – 1992	Prof. Piero Cappuccinelli, President Dr. Luigi Gradoni, Secretary Prof. Renzo Nobili, ICP Delegate Prof. Tina Crippa Franceschi Prof. Cristina Miceli
This Board of Directors continued in office until Prof. G. Scortecci passed away in 1974.		1993 – 1994	Prof. Piero Cappuccinelli, President Dr. Luigi Gradoni, Secretary Prof. Renzo Nobili, ICP Delegate Prof. Maria Giovanna Chessa Prof. Cristina Miceli
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1977 – 1978	Provisional Committee Prof. Renzo Nobili, President Prof. Tina Crippa Franceschi, Secretary and ICP Delegate Prof. Vincenzo Albergoni Prof. Fernando Dini Prof. Elsa Bottazzi Massera Prof. Marisa Leonardi Cigada Prof. Pierangelo Luporini	February 1995	Prof. Piero Cappuccinelli, President <i>pro-tempore</i>
1978 – 1981	Prof. Renzo Nobili, President and ICP Delegate Prof. Elsa Bottazzi Massera, Secretary Prof. Tina Crippa Franceschi Prof. Marisa Leonardi Cigada Prof. Ester Piccinni	May 1995 – 1996	Prof. Pierangelo Luporini, President and ICP Delegate Dr. Marina Gramiccia, Secretary Prof. Maria Giovanna Chessa Prof. Giuseppe Dettori Dr. Claudio Orteni Prof. Nicola Ricci (co-opted)
1982 – 1984	Prof. Pierangelo Luporini, President Prof. Ester Piccinni, Secretary Prof. Renzo Nobili, ICP Delegate Prof. Piero Cappuccinelli Prof. Tina Crippa Franceschi	1997 – 1998	Prof. Piero Luporini, President and ICP Delegate Dr. Marina Gramiccia, Secretary, Prof. Maria Umberta Corrado Prof. Giuseppe Dettori Prof. Nicola Ricci
1985 – 1986	Prof. Pierangelo Luporini, President Prof. Ester Piccinni, Secretary Prof. Renzo Nobili, ICP Delegate Prof. Piero Cappuccinelli Prof. Tina Crippa Franceschi	1999 – 2000	Dr. Luigi Gradoni, President and ICP Delegate Prof. Olga Brandonisio, Secretary Prof. Maria Umberta Corrado Prof. Pier Luigi Fiori Prof. Nicola Ricci
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1989 – 1990	Prof. Ester Piccinni, President Prof. Fernando Dini, Secretary Prof. Renzo Nobili, ICP Delegate Prof. Pierangelo Luporini Dr. Luigi Gradoni	This Board of Directors will continue in office <i>pro-tempore</i> until the end of 2003, to facilitate the organization of the 4 th European Congress of Protistology and 10 th European Conference on Ciliate Biology.	

Enterprises of the Italian Society of Protozoology in Favour of Young Researchers

The Nobili-Franceschi Award

In 1993, the SIP initiated an award for the best Italian Degree Thesis on a protozoological subject discussed in the academic year 1992/1993 in memory of Prof. Tina Crippa Franceschi. At the XVth Congress of the SIP, held in Parma in 1994, this prize was awarded to Dr Sandra Raoli, University of Rome 'La Sapienza' for her Thesis: 'Molecular Diagnosis of the Leshmaniasis in Italy: Isolation of DNA Sequences Specific for *Leishmania infantum* (Kinetoplastida, Trypanosomatidae)', tutor Dr Maria Cristina Angelici, Istituto Superiore di Sanità, Rome.

Later, the protozoologists of the University of Pisa established an award in favour of young researchers in Protozoology, in memory of Prof. Renzo Nobili. This prize was won in 1996 by Dr Filippo Barbanera, a collaborator of Prof. Nicola Ricci, University of Pisa, for his scientific work: 'Temperature Effects on the Behavior of Ciliate Protozoa', and in 1997 by Dr Romina Camilli, a collaborator of Dr Marina Gramiccia, Istituto Superiore di Sanità, Rome, for her scientific work: 'A Study of the Caryotype of *Leishmania infantum* by Means of Pulsed Field Gel Electrophoresis and Clinical Applications'.

During the XIXth Congress of the SIP, held in Rome in 1998, the assembly of the members decided to award a biennial prize entitled 'Nobili-Franceschi' to the best Italian Degree Thesis on a protozoological subject. This prize was won in 1999 by Dr Paola Ceccacci, University of Camerino, for her Degree Thesis: 'The Endocytotic Process Stimulated by the Interaction between Pheromonal Signal and Receptor in *Euplotes raikovi*', tutors Prof. Cristina Miceli and Dr Patrizia Ballarini, and in 2001 by Dr Andrea Amaroli, University of Genoa, for his Degree Thesis: '*Dictyostelium discoideum*: a Single-cell Model for the Study of the Interactions between Environment and Organisms', tutors Professors Maria Umberta Corrado and Aldo Viarengo.

Maria Umberta Corrado

Research Doctorates: invitation for the year 2004

Due to recent reform of the University system, which also involved the Research Doctorates, the researchers in Protistology have been placed in different Doctorates, instead of within a single one. Therefore, all advisors are invited to ask their graduate-students to prepare a *compendium* of their Doctoral Thesis on a protozoological subject to be discussed in 2004. The *compendia* with their essential data (name of the candidate, title of the thesis, and date of the discussion) have to be sent to the Editorial Department of the Notiziario.

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Maria Umberta Corrado, Fernando Dini

Compendium of the Research Doctoral Theses discussed in 2003

Research Doctorate in Biology (*curriculum* Cell Biology) XIV Cycle

Doctoral Thesis

“Ciliates as Biological Models to Study Cytoskeletal Proteins and Stress Inducible Genes”

(Discussed in Camerino, on January 13th, 2003; advisor Prof. Cristina Miceli)

Sabrina Barchetta

Department of Molecular, Cellular, and Animal Biology, University of Camerino

Ciliated protozoa are unicellular eukaryotic organisms sharing many biological features with higher eukaryotes. For their aptitude to be easily cultured and their availability for most of the newly developed molecular genetic techniques, they represent ideal biological models. The research on ciliated protozoa has led to a remarkable series of discoveries in biology, many of which have found important applications in biotechnology.

The aim of this experimental work was to give a contribution to the knowledge of cellular biology of ciliated protozoa, focusing the attention on cytoskeletal proteins in *Euplotes aediculatus* and on stress genes in *Tetrahymena thermophila*.

The first part of the work was deputed to the characterization of plateins, a new family of cytoskeletal proteins related to articulins, in the ciliate *E. aediculatus* (Kloetzel, 1991). This project was developed in collaboration with Dr John Kloetzel (Department of Biological Sciences, University of Maryland, Baltimore County, Baltimore, MD, USA), who spent a sabbatical period in Camerino, and Dr Anne Fleury (Laboratoire de Biologie Cellulaire 4, Université Paris-Sud, Paris, France). Using genetic techniques, the molecular characterization of two isoforms of alpha-platein (alpha-1 and alpha-2) at level of gene sequencing, gene expression and protein sequence analysis was achieved during this thesis. These proteins belong to a larger family that includes also beta- and gamma-plateins, mainly studied in the other

laboratories involved in this collaboration. Plateins have features that are hallmarks of articulins, a class of cytoskeletal proteins that has been identified in the cortex of a wide variety of protistan cells, including certain flagellates, ciliates, dinoflagellates and apicomplexa such as *Plasmodium* (Tchavtchitch et al., 2001). Besides a prominent domain of tandem 12-amino acid repeats rich in the VP dipeptide, that is typical also of articulins, plateins have a second smaller domain with shorter repeating units, rich in the motif PA/VWT, that in alpha-plateins is at the N-terminus of the mature protein, while in the other plateins are at the C-terminus. Furthermore, a novel feature of plateins is the presence of a canonical hydrophobic signal peptide at the N-terminus of the precursor form, that correlates well with the cellular localization of these proteins (different from the epiplasmic articulins) into the membrane-limited alveolar sacs. This is the first report in any eukaryotes of cytoskeletal proteins with a signal peptide.

This part of the thesis contributed to two recent publications (Kloetzel JA, Baroin-Tourancheau A, Miceli C, Barchetta S, Farmar J, Banerjee D, Fleury-Aubusson A, 2002, Cytoskeletal proteins with N-terminal signal peptides: plateins in the ciliate *Euplotes* define a new family of articulins, *J. Cell Science* 116:1291-1303. Kloetzel JA, Baroin-Tourancheau A, Miceli C, Barchetta S, Farmar J, Fleury-Aubusson A, 2003, Plateins: a novel family of signal peptide-containing articulins in euplotid ciliates, *J. Euk. Microbiol.*

50 (1):19-33).

In the second part of the doctorate the attention was focused on the characterization at molecular level of the *hsp70* gene in *T. thermophila*, with particular interest in understanding the regulation of the expression of this gene under the control of its inducible promoter. The long term goal of this project is the use of *Tetrahymena* cells as eukaryotic vectors to overexpress heterologous proteins (Brunk, 1999), such as proteins of higher eukaryotes and also *Euplotes* proteins, considering that transfection in *Euplotes* is still inefficient.

The 5' and 3' non-coding regions of the *hsp70* gene were sequenced and the promoter region analyzed for the presence of regulatory elements. Heat-shock elements (HSE) and GATA elements (Ingolia et al., 1980; Ko and Engel, 1999) were identified. These latter elements are specific for the GATA binding factors, a family of transcription factors characterized mainly in vertebrates and yeast, and not in protozoa. After the characterization of the inducibility of the *hsp70* promoter by the analysis of the level of *hsp70* gene expression in

relation to thermal stress and to the addition of increasing concentrations of heavy metals and other contaminants to the culture medium, transfection vectors were constructed using the vector pD5H8, derived from ribosomal DNA (Gaertig and Gorovsky, 1992). These vectors carried the coding region of the green fluorescent protein (GFP) as a reporter gene controlled by either standard or modified *hsp70* regulatory elements (promoter and terminator). The transfected cell lines proved to be inducible for the expression of the fluorescent GFP when exposed to specific thermal stress conditions, and to other environmental pollutants. Cell lines transformed with the modified regulatory elements revealed that the canonical HSE plays a determinant role in the induction of *hsp70* gene transcription and that the repetitive GATA sequences are necessary for the *hsp70* expression. This work open the way to the use of ciliates as bioindicators of contaminants in the environment and also represents an excellent opportunity to analyze basic cellular processes involved in the control of stress-gene expression.

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Research Doctorate in Evolutionary Biology (*curriculum Protists*) XV Cycle

Doctoral Thesis

“Identification, Characterization, and Functional Analysis of a 38 kDa Glycoprotein Involved in the Pre-Conjugant Cell-Cell Interactions of *Paramecium primaurelia*”

(Discussed in Pisa, on January 10th, 2003; advisor Prof. Maria Umberta Corrado)

Marzia Ognibene

Department for the Study of the Territory and its Resources, University of Genoa

The aim of this work was to characterize the *Paramecium primaurelia* surface glycoprotein(s), responsible for promoting cell-cell interactions leading to conjugation. In this ciliate, mating interactions occur between differentiated classes of mating-competent cells, denoted as mating type (mt) I and mt II, which differ from each other in chemical signals, and are able to join in pairs (Hiwatashi and Kitamura, 1985).

Unlike other species of ciliates, such as *Blepharisma japonicum* and *Euplotes raikovi*, in which the signal molecules are secreted into the extracellular environment (Miyake and Beyer, 1973; Miyake, 1981; Luporini *et al.*, 1983; Luporini and Miceli, 1986; Sugiura and Harumoto, 2001), in all the *Paramecium* species studied so far the signal molecules seem to be anchored to the cell surface, where their biological activity is exploited by physical cell-cell contacts (Hiwatashi, 1961; Love and Rotheim, 1984). The chemical characterization of the molecules responsible for the mating type specificity, denoted as “mating substances”, has attracted considerable interest since 1937, when the ciliate mating types were identified by Sonneborn in *Paramecium* (Sonneborn, 1937; Metz, 1948; Tsukii, 1988; Kitamura, 1988). However, the numerous attempts to extract and purify these molecules did not show complete success (Kitamura and Hiwatashi, 1976; Barnett and Steers, 1980; Hori and Fujishima, 1992; Azuma *et al.*, 1996; Xu *et al.*, 2001). What is actually known is that these molecules are probably intrinsic proteins of the ciliary membranes, the cell region directly involved in mating interactions (Adoutte *et al.*, 1980; Watanabe, 1990).

The involvement of glycoproteins and the contribution of their carbohydrate moieties to promoting mating interactions has long been controversial (Kitamura and Hiwatashi 1978), even though it has been reported that in numerous ciliates, including *P. bursaria*, *P. caudatum*, *P. trichium* (Tsukii and Hiwatashi, 1978) and *P. tetraurelia* (Pape *et al.*, 1988), mating-competent cells fail to form mating pairs upon incubation with lectins and with their specific binding monosaccharides. The identification of a key role for glycoconjugates in mating interactions would be of great interest in light of the fact that oligosaccharide side chains of glycoproteins play a significant role in a wide variety of cell-cell adhesion systems, such as sperm-egg interactions during fertilization (Rosati, 1995; Focarelli *et al.*, 2001).

We have already shown that surface sialic acid-containing molecules are involved in *P. primaurelia* mating-cell pairing, and that ConA-binding sites are not involved in this process (Delmonte Corrado *et al.*, 1997).

To identify the sialic acid-containing glycoprotein(s) candidate for promoting mating interactions, membrane proteins from non-mating-competent, mt I, and mt II cells were analyzed by lectin-blotting with *Sambucus nigra* agglutinin (SNA), specific for terminal α -2,6-linked sialic acid residues. Then, non-mating-competent cells were metabolically radiolabelled with D-[6-³H]-galactose (³H-Gal), which usually binds terminal sialic acid residues. SNA recognized a band with apparent molecular mass of 38 kDa, while no polypeptide was ConA-positive. The ³H-Gal-radiolabelling

showed a maximum radioactivity peak corresponding to a glycoprotein of about 38 kDa (gp38), the same recognized by SNA.

To partially purify the gp38, proteins were fractionated by anion-exchange FPLC. Afterwards, the major fraction corresponding to 38 kDa was used to immunize a rabbit in which the polyclonal antibody against gp38 was raised. The anti-gp38 serum, tested by immunoblotting on non-mating-competent, mt I, and mt II cells, only recognized its antigen.

The immunolocalization of the gp38, analyzed under a confocal microscope during the developmental cycle, showed the presence of positive sites on the cell surface of non-mating-competent cells. In mt I and mt II cells, immunoreactive sites also appeared on the ciliary surface; conversely, no positive site was detected in immature cells. Therefore, in mating-competent cells gp38 is present in that cell region directly involved in mating interactions. Immunoblot experiments, performed on protein fraction from immature cells, as well as on both

protein fractions from isolated cilia and deciliated cell bodies of mt I and mt II cells, confirmed the previous results obtained by confocal microscopy.

In vivo anti-gp38 antibody competition assays showed that the anti-gp38 immune serum inhibited mating interactions in a dose-dependent manner; conversely, the pre-immune serum was ineffective.

The amino acid sequencing of gp38 led to the identification of the N-terminus sequence that does not show significant similarity to any known protein sequence.

In conclusion, this 38 kDa glycoprotein seems to be a good candidate as signal molecule for *P. primaurelia* mating interactions, as it is ConA-negative and exhibits terminal α -2,6-linked sialic acid residues; it is recognized by its specific antibody on the ciliary surface and in the ciliary fraction of mating-competent cells; its specific antibody interferes significantly with cell-cell recognition and adhesion.

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Congresses of Protozoological Interest Held in 2003: Impressions and Considerations

Xth International Meeting on Ciliate Molecular Biology

Saxton River, July 19-24, 2003

The Tenth International Meeting on Ciliate Molecular Biology was held as a FASEB Summer Research Conference from July 19 to 24, 2003, in the green environment of the Vermont Academy at Saxton River (Vermont, USA). The meeting was attended by more than hundred ciliate biologists, including many young researchers (graduate-students and postdoctors). After the welcome of the organizers (Drs Larry Klobutcher, Eric Cole and Linda Sperling), the meeting started with a “special talk” by Dr. John Preer from Indiana University, Bloomington. In the following days, nine sessions succeeded on different topics of molecular, cellular and evolutionary biology of ciliates, all including original presentations of the most advanced research in the field.

Since we are in the “Genome Era”, particularly relevant information was provided by Drs Linda Sperling and Ed Orias on the status of the genome projects of *Paramecium tetraurelia* and *Tetrahymena thermophila*. Both projects are whole-genome shotgun sequencing of the macronuclear DNA. The *P. tetraurelia* project, officially approved in April 2003, and preceded by a 1 Megabase-chromosome pilot sequencing project, is now underway at the “Genoscope, Centre National de Sequençage” (Evry, France) and some results are already available. The *T. thermophila* project is underway at “The Institute for Genome Research (TIGR)” of Rockville (Maryland), and it was preceded by an EST (Expressed Sequence Tag) analysis from a full-length cDNA library. A great potential impact of the genome knowledge on the future of ciliate research came also out from the workshop on “Functional genomics and bioinformatics”. Dr. Jonathan A. Eisen, the principal investigator of the *T. thermophila* genome sequence at TIGR, presented previous genomic studies carried out in his institute and the current approach to the *Tetrahymena* genome. Dr. Michael Cherry, a bioinformatic researcher at Stanford University, described the plan for the development of a database of *Tetrahymena* genetic and genomic information: the goal of this plan is the merge of the ciliate literature and the genomic sequence into an integrated research tool for the whole ciliate community.

During the business meeting, the site for the next Conference on Ciliate Molecular Biology was discussed. Drs Linda Sperling and Cristina Miceli presented the application that they submitted to the European Science Foundation (ESF) to organize this conference as part of the European Research Conference (EURESCO) series. This application has been preliminary approved by the EURESCO Commission and it has been accepted the proposal to use the EURESCO site “Il Ciocco”, Barga (Lucca, Italy). However the final decision about the ESF funding has still to come. At great majority, the participants of the Saxton River Conference voted for the next meeting (2005) in Italy, at the condition that the ESF will provide financial support. In case of a negative answer by the ESF, the meeting will be again a FASEB Summer Research Conference, probably at Tucson (Arizona) with Drs Judith Van Houten, Theodore Clark and Cristina Miceli as organizers.

Cristina Miceli

Employment Opportunities

Postdoctoral positions are available in Molecular Genetic/Cell Biological Analyses in *Tetrahymena thermophila*. Projects include:

- 1) Studies on the role of RNAi in DNA elimination.
- 2) Studies on the role of histones and their post-translational modifications in gene expression.
- 3) Studies on the cellular mechanisms that control the function of microtubule-containing organelles.

Contact:

Martin Gorovsky
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On August 15th, we received the following e-mail message:

A Scientific Curator position is open in my group at Stanford University for the nascent *Tetrahymena* Genome Database (TGD). The job description is included below. This position is a full-time staff position and is funded by a three year grant from NIH. The URL for the database is www.ciliate.org, no database is available yet. Information about the *Tetrahymena* genome sequencing project is there. If you are interested in the curator position please submit your resume at (click on the "I want this job!" hyperlink):

http://jobs.stanford.edu/openings/display.cgi?Job_Req=003716&JFam=NIL

J. Michael Cherry, Ph.D.
Associate Professor (Research)
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Voice: 650-723-7541
FAX: 650-723-1534
Email: cherry@stanford.edu
<http://genome-www.stanford.edu/~cherry>

Description

A Ph.D. in Genetics, Cell Biology, Molecular Biology or related field is required. Specific bioinformatic experience is not required, training for necessary bioinformatic tools will be provided on the job. Responsibilities of the Scientific Curator involve collecting and analyzing information from peer reviewed scientific journals and through direct submissions, abstracting into the required format, verifying for accuracy, compiling educated summaries of the literature, discovering new facts by analyzing the collected data, analysis of genomic sequence information, and refining genetic and physical maps. This person participates in collaborations with other labs and determines a variety of DNA sequence analysis results for inclusion into the *Tetrahymena* Genome Database (TGD). These include: determination of regions of sequence similarity to known genes from other organisms; identifying or verifying DNA and protein sequence features and motifs; and predicting possible functions for unknown open reading frames (ORFs). The curator works with TGD users to answer questions about the contents of the database and provide assistance for submission of information; participates in presentations and live demonstrations of the database at major genetics and molecular biology conferences; creates a variety of reports and user demonstration, using spreadsheet, word processing software; and collaborates with the users in the discovery of new knowledge. The ability to understand and become familiar with the scientific literature, experimental procedures and their limitations, and the current needs of the *Tetrahymena* research community is essential. Excellent verbal and written communication skills are required. Demonstrated understanding of experimental ciliate molecular genetics, DNA and protein function and analysis preferred. Experience with another model system may substitute for specific experience with ciliate molecular genetics. Experience with spreadsheets, word processing software, DNA/Protein sequence analysis software and BLAST and PubMed searching are helpful.

Renewal of Society Appointments

The term of office of the Board of Directors 2001 – 2002 should have expired on December 31st, 2002. However, during the last National Congress of the SIP in Porto Conte, October 2002, the assembly of the members decided that this Board of Directors would continue in office *pro-tempore* until the end of 2003, to facilitate the organization of the 4th European Congress of Protistology and 10th European Conference on Ciliate Biology.

E-mail Addresses of Members

Those members who have not yet done so are invited to send their e-mail address, or relative corrections, to the Secretary of the Italian Society of Protozoology, Prof. Olga Brandonisio.

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DOCTOR FUN presents BLOBS



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<http://ibiblio.org/Dave/drfun.html>

"Dear Daphne - how I long to run my pseudopods through your cilia..."

Upcoming Meetings

December 3rd –7th, 2003 - Annual Scientific meeting of the American Society of Tropical Medicine and Hygiene – Philadelphia. ASTMH 60 Revere Drive, Suite 500, Northbrook, IL, 60062, USA. E-mail: astmh@astmh.org Web: www.astmh.org Phone 847 480 9592; Fax 847 480 9282.

XIIth International Congress of Protozoology, China, 2005.

XIth International Meeting on Ciliate Molecular Biology, probable site Il Ciocco, Lucca (Italy), 2005.

Notebook

YEAR	MONTH	<i>Memorandum for the Members</i>
2004	2	The subscription dues of euro 31.00 is to be paid by the members within February 29 th .
	9-10	XXIV National Congress of the SIP
	12	December 31 st - Closing of the financial year 2004 - 2004 final balance - 2005 budget

Bibliographic Selection

Encyclopaedia of Protozoa. A.N. Shukla, and R. Tyagi (eds). 3 Vols. Anmol Publications Pvt Ltd, New Delhi, 2002, \$ 115.08.

Giardia: the Cosmopolitan Parasite. P.M. Wallis, B. Olson, and M. Olson (eds). Cabi Publishing, 368 pp, 2002, £ 65.00.

Learning Protozoa: Through Latest Portfolio of Theory and Practice. B. Jenkins, U. Route, and G. Solanki (eds). Dominant Publishers & Distribution, Delhi, 262 pp, 2002, \$ 16.52.

Soil Protozoa. J.F. Darbyshire (ed.). Cabi Publishing, 224 pp, 2002, \$ 95.00.

Biologically Active Substances of Protozoa. N.N. Sukhareva-Buell (ed.). Kluwer Academic Publishers, Dordrecht Hardbound, 112 pp, 2003, \$ 71.00.

Microbial Threats to Health: Emergence, Detection, and Response. M.S. Smolinski, M.A. Hamburg, and J. Lederberg (eds). 350 pp, 2003, \$ 40.00.

Monerans and Protists. A. Silverstein, 64 pp, 2003, \$ 24.90.

Protozoa and Protozoan Diseases of Domestic Livestock, B.B. Bhatia, and H.L. Shah (eds). Indiana Council of Agricultural Research, New Delhi, 2003, \$ 27.00.

The Parasites of Homo Sapiens: and Annotated Checklist of the Protozoa, Helminths, and Arthropods for Which We Are Home. R. Ashford, and W. Crewe (eds.), Taylor & Francis, 152 pp, 2003, £ 39.95.