

The dynamics of Brazilian protozoology over the past century

M Carolina Elias^{1,2/+}, Lucile M Floeter-Winter³, Jesus P Mena-Chalco⁴

¹Instituto Butantan, Laboratório Especial de Ciclo Celular, São Paulo, SP, Brasil ²Instituto Butantan, Centro de Toxinas, Resposta-Imune e Sinalização Celular, São Paulo, SP, Brasil ³Universidade de São Paulo, Instituto de Biociências, Departamento de Fisiologia, São Paulo, SP, Brasil ⁴Universidade Federal do ABC, Centro de Matemática, Computação e Cognição, Santo André, SP, Brasil

*Brazilian scientists have been contributing to the protozoology field for more than 100 years with important discoveries of new species such as *Trypanosoma cruzi* and *Leishmania* spp. In this work, we used a Brazilian thesis database (Coordination for the Improvement of Higher Education Personnel) covering the period from 1987-2011 to identify researchers who contributed substantially to protozoology. We selected 248 advisors by filtering to obtain researchers who supervised at least 10 theses. Based on a computational analysis of the thesis databases, we found students who were supervised by these scientists. A computational procedure was developed to determine the advisors' scientific ancestors using the Lattes Platform. These analyses provided a list of 1,997 researchers who were inspected through Lattes CV examination and allowed the identification of the pioneers of Brazilian protozoology. Moreover, we investigated the areas in which researchers who earned PhDs in protozoology are now working. We found that 68.4% of them are still in protozoology, while 16.7% have migrated to other fields. We observed that support for protozoology by national or international agencies is clearly correlated with the increase of scientists in the field. Finally, we described the academic genealogy of Brazilian protozoology by formalising the "forest" of Brazilian scientists involved in the study of protozoa and their vectors over the past century.*

Key words: protozoology - pioneers - academic genealogy - scientific mapping method

The last decade of the XIX century is considered to be the period in which experimental protozoology began (Calkins 1911). At that time, protozoa were suspected of being the causative agents of only two human diseases: dysentery and malaria (Calkins 1911). Currently, protozoan parasites are recognised as the causative agents of some of most important human illnesses. For instance, amebiasis is the second leading cause of death due to parasitic diseases worldwide and causes approximately 40-100,000 deaths per year (Moraes et al. 2015). Approximately 6.5 million people are estimated to be infected with *Trypanosoma cruzi*, 1,300,000 new cases of leishmaniasis occur every year, and 214 million new cases of malaria have occurred in 2015 alone. Toxoplasmosis and giardiasis are also diseases caused by protozoa, both of which represent significant public health threats (who.int). These are examples of protozoa that are of medical interest and do not include protozoa of veterinary interest or free-living protozoa, which may be important environmental markers.

Therefore, protozoology has become a unique field of study, and an impressive amount of work has gone into detailing the biological aspects of this subject. In-

deed, the study of protozoa has rapidly evolved from the molecular characterisation of eukaryotes through host-parasite interactions and ecoepidemiological aspects to therapeutic interventions. Several important mechanisms were first described in protozoa, such as nonconventional RNA polymerase II promoter sites (Clayton 2002), *trans*-splicing (Mayer & Floeter-Winter 2012) and RNA editing (Simpson et al. 2006). Some of these findings have been highly influential in other medical and biological fields, such as the discovery of telomeres protecting chromosomes in *Tetrahymena* (Blackburn & Gall 1978), the understanding of glycosylphosphatidylinositol protein anchor structures (Ferguson et al. 1985, Ferguson 1999), and the delineation of the respective roles of the T-helper (Th1) and Th2 lymphocyte subsets against infectious agents in studies using *Leishmania major*-infected mice (Heinzel et al. 1989).

In Brazil, where some protozoan infections are endemic, these aetiological agents and their vectors have attracted considerable interest from researchers and students. A few "founding fathers" (pioneers) of this field of science have nurtured later generations of protozoologists, resulting in the development of a solid network of 100 years of scientists.

The evolution of science is the pillar that provides a solid foundation for the development of society by creating the means to face the challenges ahead (Cordova et al. 2015). The study of the origin of a scientific area and the identification of the motives behind its development in new disciplines provide important contributions to the understanding of future needs. This academic genealogy allows the development of qualifying studies based on the training of new researchers.

Academic genealogy was defined by Sugimoto (2014) as a quantitative study of the intellectual heritage

doi: 10.1590/0074-02760150386

Financial support: FAPESP (2013/07467-1 to MCE), CNPq (461757/2014-1 to JPM-C)

MCE and LMF-W are research fellows from CNPq (306376/2012-1 and 307587/2014-2 respectively).

+ Corresponding author: carolina.eliassabbaga@butantan.gov.br

Received 8 October 2015

Accepted 8 December 2015

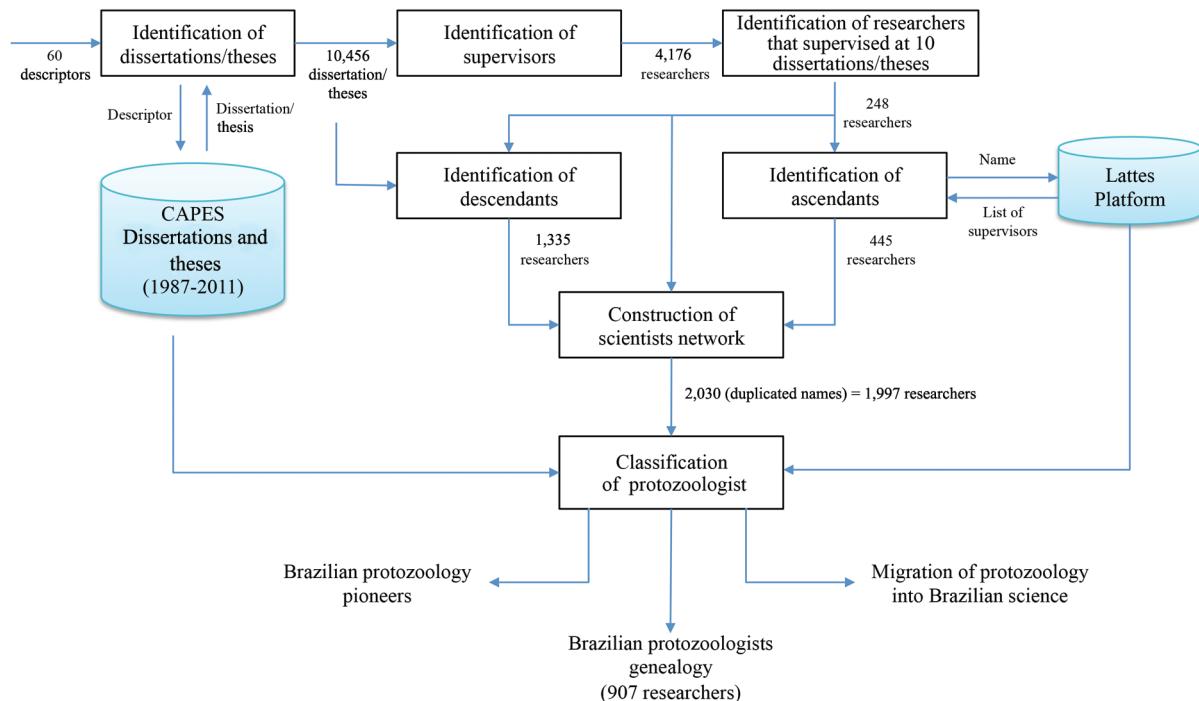


Fig. 1: diagram of the tracking of Brazilian protozoologists. Each block represents a process and each arrow represents the information flow between processes.

perpetuated through academic orientation relationships among professors (i.e., mentors or supervisors) and their students. Various questions can be answered by building an academic genealogy. Sugimoto (2014) proposed five types of academic genealogies: honorific, egotistical, historical, paradigmatic, and analytical. These categories are not mutually exclusive, and most academic genealogies can be classified into at least two of these types.

In this work, we followed the development of protozoology in Brazil using a historical and paradigmatic approach. Systematic data collection was performed through the analysis of formal thesis orientation and was organised to create a chain of mentorships, resulting in the construction of our academic genealogy.

MATERIALS AND METHODS

In this work, the identification of researchers associated with protozoology who influenced (supervised) other researchers over a 100 year timespan was performed through seven processes (Fig. 1). The methodology was based on the analysis of two sources of Brazilian academic information that allowed the tracing of scholarly interactions among researchers.

Process 1 - Identification of dissertations and theses related to protozoology - A local repository extracted from the Coordination for the Improvement of Higher Education Personnel (CAPES) thesis database (Mena-Chalco & Rocha 2014) was used in this process. We identified 10,456 dissertations or theses with at least one

descriptor related to protozoology (Supplementary Table I). This quantity represented 1.7% of the 607,389 dissertations or theses registered in the local repository.

Process 2 - Identification of supervisors of Masters and PhD students in protozoology - In this process, we extracted all supervisors' names from the dissertations/theses identified in process 1. The process handled incomplete or similar names using approximate string matching. Two names were considered the same/similar if the Levenshtein distance (Levenshtein 1966) between them was equal to 2. This process allowed us to identify 4,176 researchers related to the protozoology field.

Process 3 - Identification of representative protozoologists in terms of the quantity of supervisions registered in the CAPES thesis database - In this process, researchers who supervised at least 10 projects were selected to generate a list of 248 supervisors (6% of 4,176 researchers). This threshold was considered suitable for manual inspection. Supplementary Table II presents the complete list of names obtained through this process.

Process 4 - Identification of ancestors of the representative protozoologists - This process was performed recursively for each supervisor identified in the Lattes Platform. First, the name of the supervisor was identified and associated with its Lattes CV. Then, the same approach was undertaken for the supervisors of the supervisors until the inability to identify a new supervisor was reached. We identified 445 researchers as the ancestors of the 248 representative protozoologists.

Process 5 - Identification of the descendants of the representative protozoologists - This process was accomplished by selecting the PhD students (process 1) who were supervised by the researchers obtained in process 3. We identified 1,335 direct descendants from the group of 248 representative protozoologists.

Process 6 - Construction of a scientist network - In this process, the researchers identified in processes 3, 4 and 5 were used to generate a supervisor network (i.e., a directed graph where each node represented a researcher, and the edge represented the relationship between 2 researchers). Duplicated names were processed manually. A list of 1,997 complete names was generated as the result of this process (Supplementary Table III).

Process 7 - Classification of protozoologists - This process was performed by manual inspection of each researcher identified in the previous process. Information from the protozoology field was associated with each of the 1,997 researchers using the Lattes Platform and academic repositories.

RESULTS

Identification of scientists actively working in protozoology - This work aims to understand the past and present of Brazilian protozoology and the migration of scientists from protozoology to other fields and from other fields to protozoology. Academic dissertations and theses are an important source of information concerning the growth and evolution of science (Andersen & Hammarfelt 2011). Therefore, we accessed a data collection containing most of the Brazilian protozoologists from the CAPES database combined with the Lattes examination. By searching for the supervisors of actively working protozoologists, the supervisors of these supervisors, and so on, we identified the pioneers of this field in Brazil. Similarly, by searching for students trained by these actively working protozoologists, we identified other people currently working in the field. To establish the names of actively working protozoologists to nucleate our search, we prepared a set of 60 words (descriptors) (Supplementary Table I) for use as keywords to screen theses (Masters or PhD) present in the local CAPES thesis database, which contained all theses completed in Brazil from 1987-2011 (Mena-Chalco & Rocha 2014). A total of 10,456 Masters or PhD theses contained at least one such descriptor. This number corresponded to 1.7% of the total theses presented in the same period throughout all fields. A total of 4,176 researchers supervised these 10,456 dissertations/theses. As expected, the number of scientists diminished when we increased the number of works supervised per researcher (Fig. 2). For operational reasons, it might not be possible to analyse in detail all the 4,176 researchers (advisors) and the relevant factors considered in the adopted methodology. Therefore, only researchers with at least 10 dissertations/theses supervised in the field of protozoology were considered in our study (248 scientists) (Supplementary Table II). With a threshold of five or two dissertations, for instance, the number of researchers increases by 276% (689 researchers) or 745% (1,864 researchers), respec-

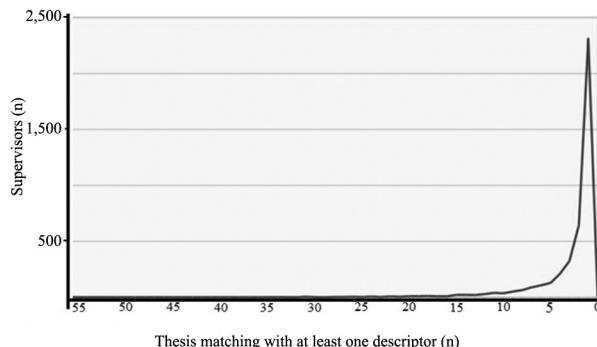


Fig. 2: relationship between the number of supervisors and number of theses generated from 1987-2011 containing at least one descriptor. Supplementary Table I containing 60 descriptors was used to screen the Coordination for the Improvement of Higher Education Personnel database. The graph indicates how many scientists supervised a different number of theses containing at least one descriptor as a keyword.

tively. With the threshold adopted, important pioneers in the field of protozoology are included in the analyses, but we recognise that this empirical value might penalise early career researchers. However, we believe that this arbitrarily selected threshold of 10 dissertations/theses was appropriate to define a selected group of representative researchers. A total of 36% of these researchers are or were members of the Brazilian Society of Protozoology in the period between 2000-2015.

Identification of Brazilian protozoologists - We used the complete list of names in Supplementary Table II as a starting point to search for the people supervised by these people and *vice versa* (i.e., scientists who supervised these people). Using automated analysis of the local CAPES thesis database, we found students whom these researchers supervised (descendants). We did not search for students of these students because some of them were still settling, which could compromise our analysis. Based on the automated analysis of their Lattes CVs, we could also follow the advisors' ancestors by searching for their supervisors and the supervisors of these supervisors available on the Lattes CV database (Fig. 1). As shown below, the analyses also allowed the identification of Brazilian supervisors who worked outside of protozoology and supervisors that were from other countries; thus, we could identify the seeds of Brazilian protozoology. These analyses provided a list of 1,997 names that were manually inspected through the Lattes CV examination, following the pathway shown in Fig. 3A. We used the following criteria to establish that a researcher is/was working in the field of protozoology. Researchers studying the biology of protozoa or protozoa-host interaction were considered protozoologists. Additionally, scientists investigating protozoa vectors were considered protozoologists. In contrast, researchers working with protozoa but investigating the clinical aspects of diseases (e.g., mostly ophthalmologists, dermatologists, and cardiologists who study diseases caused by protozoa) were not considered protozoologists. From the total of

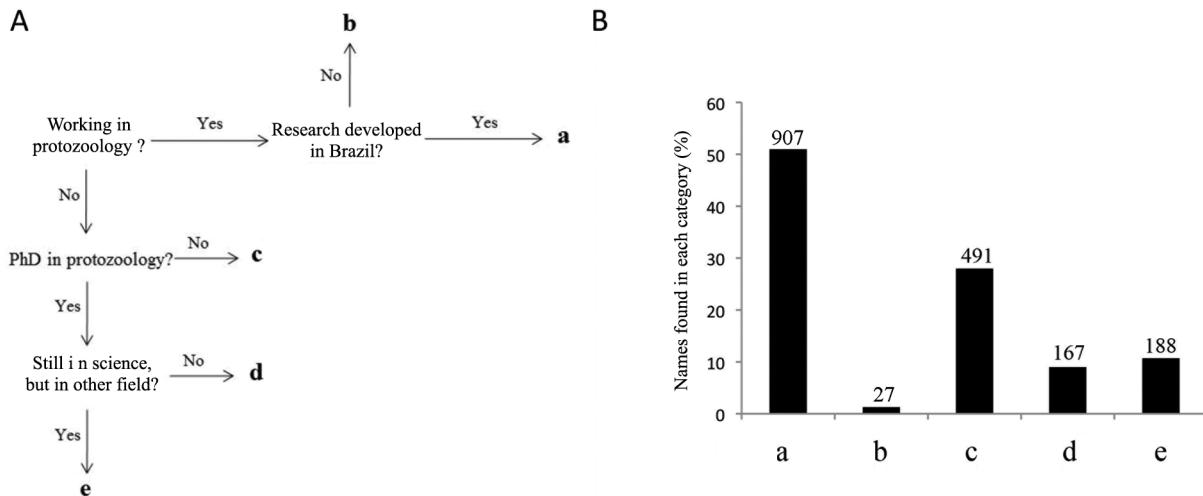


Fig. 3: classification of scientists according to Lattes CV. A: pathway followed during inspection with Lattes CV; B: frequency of each category described in A; a: scientists working or who worked in the past in protozoology in Brazil; b: scientists working in protozoology outside of Brazil that were advisors of Brazilians; c: scientists that did not work in protozoology during their PhD or establish a research interest in this field but were advisors of scientists that migrated to protozoology; d: persons who developed their PhD in protozoology but are now involved in activities other than science; e: scientists who developed their PhD in protozoology but established research in another field.

1,997 names found, some were not included in the Lattes database. This discrepancy might have occurred for four different reasons: (i) misspelling of names, (ii) people who are no longer in science, (iii) foreign supervisors, and (iv) people who worked in protozoology before the Lattes CV was created. To include this last group in our analysis, we searched for these people in the CAPES database or in public repositories to identify their ancestors and the field in which they worked. To include supervisors from other countries, we searched for these people in PubMed to verify the field in which they work/worked. Finally, 10.86% of the 1,997 names could not be found in either the Lattes Platform, CAPES database, or public repositories and were removed from the forward analyses. These analyses allowed the classification of researchers into five different categories: (a) scientists who are working or previously worked in protozoology in Brazil, (b) scientists working in protozoology outside of Brazil who were advisors of Brazilians, (c) scientists who did not work in protozoology during their PhD and did not establish a research interest in this field but were advisors of scientists who migrated to protozoology, (d) people who obtained their PhD in protozoology but were now involved in activities other than science, and (e) scientists who developed their PhD in protozoology but established a research interest in another field (Supplementary Table III). The frequency of each group is presented in Fig. 3B. Based on the data, 907 names were identified as Brazilian protozoologists (classified as group a).

Identification of Brazilian protozoology pioneers

- To identify researchers who were Brazilian protozoology pioneers, we first assumed that people who were awarded a PhD in protozoology in Brazil were not pioneers but that the pioneers would be their advisors.

Therefore, we concluded that the pioneers were among the scientists who were awarded PhD degrees in other fields and then migrated to protozoology or people who were awarded PhDs in protozoology outside Brazil and then came to our country to establish a group here. Among the researchers classified as group a (Brazilian protozoologists), we manually searched the Lattes CV and the CAPES database for ones who were (766) and were not (141) awarded a PhD in protozoology (Fig. 4, Supplementary Table IV). Additionally, we searched the Lattes CV for researchers who were awarded a PhD in protozoology outside Brazil (15) (Supplementary Table V, in bold). Then, we determined in what year these researchers who did not receive a PhD in protozoology (141

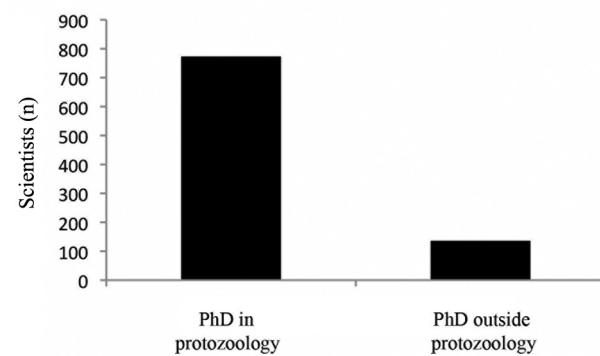


Fig. 4: analysis of fields where scientists classified as developed their PhD. Scientists classified in category “PhD in protozoology” were divided into those who developed and those who did not develop PhDs in protozoology.

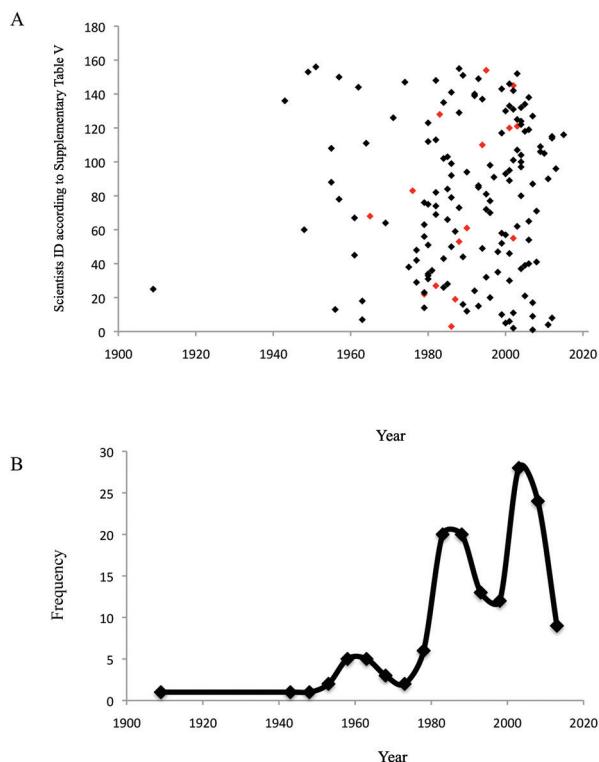


Fig. 5: incoming scientists into protozoology. A: the graph shows the year in which each researcher who did not develop a PhD in protozoology published their first paper in this field. Red dots indicate the year that scientists who developed a PhD in protozoology outside of Brazil published their first paper in Brazil after their PhD; B: frequency of scientists immigrating into Brazilian protozoology according to the year of arrival.

names) or who received a PhD outside Brazil (15 names; a total of 156 names) established a protozoology group in Brazil. For scientists who arrived from other fields, we searched the Lattes CV for the year of their first paper published in protozoology (Supplementary Table V). For scientists who received their PhD outside of Brazil, we searched the Lattes CV for the year in which they published their first paper after their PhD from a position in Brazil (Supplementary Table V, in bold). Carlos Chagas's paper describing *T. cruzi* was not found in PubMed but was considered due to its relevancy. Using this date as the year the scientist entered Brazilian protozoology, we plotted a graph of this incoming year for each of the 156 scientists who arrived in protozoology (Fig. 5A). Additionally, we plotted a graph showing the frequency of this influx according to the year of migration (Fig. 5B). From both analyses, it was clear that there were three waves of immigration into Brazilian protozoology: (i) up to and including 1974, (ii) between 1978-1993, and (iii) between 1998-2013. However, the drop observed after 2013 might be artificial because the collection of data is recent. Thus, we concluded that the pioneers (i.e., founders or precursors) of Brazilian protozoology were the 20 scientists who migrated into the field up to 1974: Carlos

Chagas, Samuel Pessoa, Hertha Meyer, Zigman Brener, Wladimir Lobato Paraense, Leonidas Deane, Maria von Paumgartten Deane, Amilcar Viana Martins, José Rodrigues da Silva, Washington Luiz Tafuri, Erney Felicio Plessmann de Camargo, Jayme Neves, Aluizio Prata, Thales de Brito, Astolpho Ferraz de Siqueira, Jeffrey Jon Shaw, Mario Endsfeldez Camargo, Isaac Roitman, Raymundo Martins de Castro, and Walter Colli.

Migration of protozoology into Brazilian science - We also investigated the immigration and emigration of scientists to and from Brazilian protozoology. A total of 17.1% of the studied researchers immigrated into protozoology, based on the number of people who entered protozoology from other fields and arrived from protozoology outside of Brazil (156 names/907 total). Researchers who stayed in protozoology after their PhD corresponded to 68.4% of individuals, based on the 770 protozoologists who received a PhD in protozoology and were still acting as protozoologists, those who received a PhD in protozoology and were involved in other activities but still involved in science [group d: 167 (Supplementary Table III)], and those who received a PhD in protozoology and established a group in another field [group e: 188 (Supplementary Table III)]. Finally, we determined the percentage of people who left Brazilian protozoology to contribute to other fields of Brazilian science. To obtain this number, we divided the number of people classified as group e in Supplementary Table III (188) by the total number who received a PhD in protozoology. This analysis demonstrated that protozoology provided 16.7% of its PhDs to other fields of science.

Academic genealogy of Brazilian protozoologists - Finally, we constructed an academic genealogy (Fig. 6) that included all names classified as protozoologists to reflect the scenario of protozoology in Brazil. The resulting structure is a forest containing one tree for each scientist who entered Brazilian protozoology. A detailed view of this academic genealogy is available from professor.ufabc.edu.br/~jesus.mena/brazilian-protozoology-scenario/. It is clear that protozoology expanded in the mid-1970s. It is also clear that protozoology today consists of the descendants of the pioneers as well as other scientists who migrated to protozoology and supervised their students in this field.

DISCUSSION

The analysis of the dynamics of Brazilian protozoology over the past century based on database searches from 1987-2011 allowed us to track and identify scientists who made important contributions by acting as the pioneers of this field. Moreover, we could determine the percentage of scientists immigrating to protozoology as well as the percentage of scientists who were supervised in protozoology but established a research group in another field. The field of Brazilian protozoology comprises at least 907 researchers. Certainly, there are other protozoologists who were not covered by our criteria and therefore were not included in our analysis. The interesting result is that a large number of people working in this field are the result of the efforts of 20 pioneers who introduced protozoa as

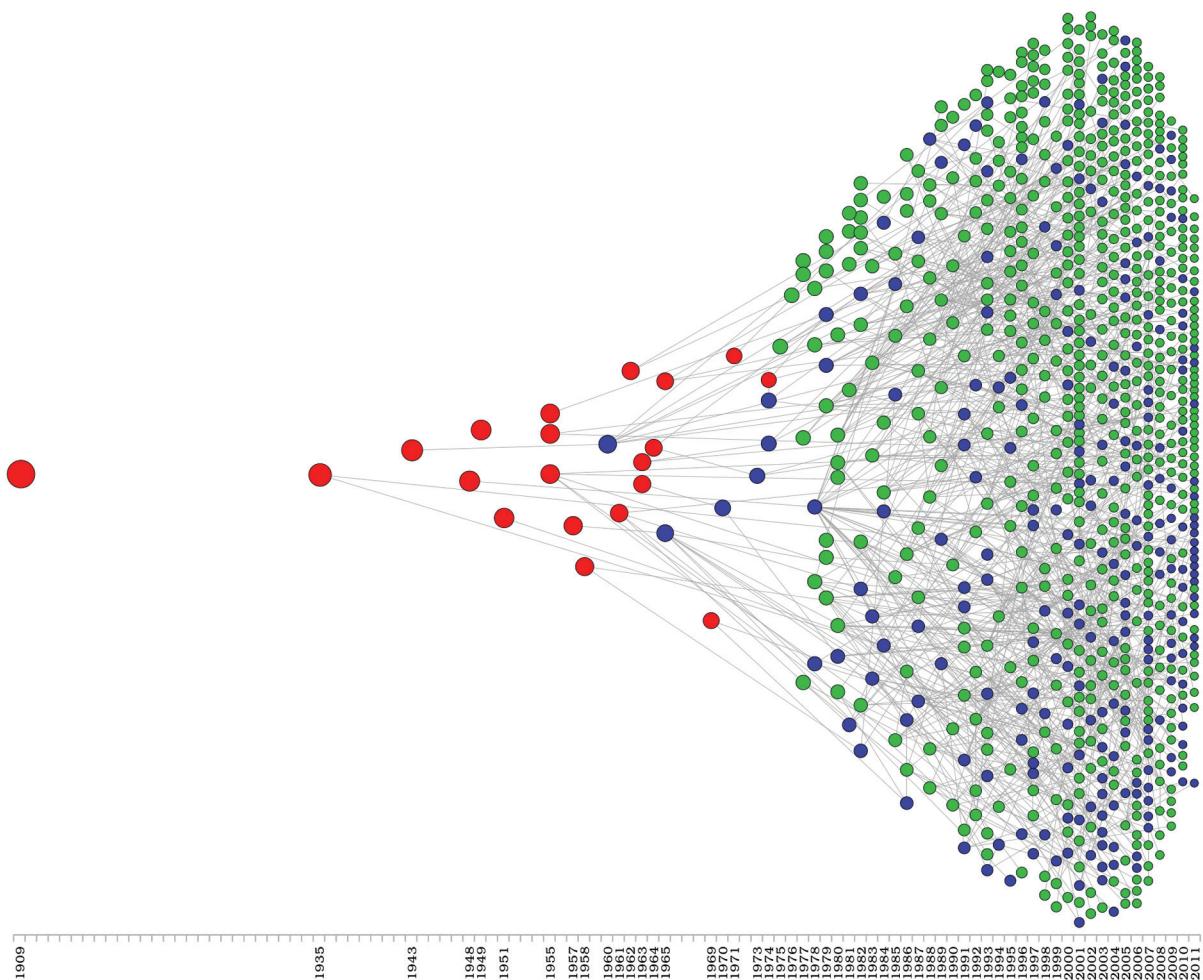


Fig. 6: academic genealogy of Brazilian protozoology protozoologists (group a in Fig. 3) were included in this graph. Each circle represents one researcher and lines represent student-supervisor relationships. Persons identified as pioneers are shown in red, persons directly influenced by pioneers (students or students of their students) are shown in blue, and persons who arrived in protozoology after the pioneers and their descendants are shown in green. The x-axis shows the year of the conclusion of the PhD in protozoology or, for those who did not receive a PhD in protozoology, the year that they migrated to protozoology.

biological models or drug targets in the period between 1909-1974. In a seminal paper published in *Memórias do Instituto Oswaldo Cruz*, Carlos Chagas described *T. cruzi* and thereby introduced the study of protozoology in Brazil (Chagas 1909). Surprisingly, no descendants were identified for Carlos Chagas, probably because his descendants were clinical doctors and therefore were not classified as protozoologists according to the criteria used in this study. However, Carlos Chagas's work at the beginning of the previous century was so complete in showing the causal agent of a disease and its relationship to an insect vector that it still inspires researchers today.

In the 1940s, Samuel Pessoa inaugurated his huge contribution to the field by studying the behaviour of *Leishmania* in tissues (Pessoa & Barreto 1945) and the geographic distribution of phlebotomines (Barreto & Pessoa 1946). Hertha Meyer published on *T. cruzi* cul-

tivation (Meyer & de Oliveira 1948); this field of study evolved to include her contribution regarding the structural analysis of this organism. In the 1950s, the study of protozoa in Brazil expanded with Amilcar Viana Martins, Leonidas Deane, and Maria Deane, who investigated the epidemiology of leishmaniasis (Deane & Deane 1954, Martins et al. 1956), Zigman Brener and Washington Luiz Tafuri, who contributed to our understanding of Chagas disease (Brener 1952, de Queiroz & Tafuri 1957), José Rodrigues da Silva, who investigated hepatic problems related to *Leishmania* and amoeba infections (da Silva & de Paola 1957, da Silva & Torres 1957), and Wladimir Lobato Paraense, who was interested in *Plasmodium* (Paraense 1952). Then, over the next two decades, a new group of scientists migrated into protozoology. Their studies included the detection and treatment of *Trypanosoma*, *Leishmania*, *Toxoplasma*,

and *Plasmodium* by Raymundo Martins de Castro (Sampaio et al. 1971), Aluizio Prata (Prata 1963), Mario Camargo (Camargo 1964b), and Thales de Brito (de Brito et al. 1962), the biology of trypanosomatids by Walter Colli (Alves & Colli 1974), Erney Camargo (Camargo 1964a), and Isaac Roitman (Roitman 1969), and epidemiological approaches to studying diseases and hosts by Jeffrey Shaw (Shaw & Lainson 1968), Jayme Neves (Neves et al. 1961), and Astolpho Ferraz de Siqueira (Barreto et al. 1963). These studies concluded the first phase of Brazilian protozoology. The co-authors of the works cited above certainly contributed to Brazilian protozoology and could be identified as founders of Brazilian protozoology.

The pioneers/founders, together with the students they supervised, nucleated the Brazilian protozoologist network. Thus, the environment favouring the construction of this field in Brazilian science was created. By supervising new students, organising scientific meetings and working side by side with agencies to create programmes for financial support, these scientists solidified the foundations of Brazilian protozoology and allowed the influx of new scientists into this area.

Immigration occurred in two waves. The entry of scientists between 1978–1993 might be a consequence of the creation of the Integrated Program for Endemic Diseases (PIDE), which was the Funding Programme from the Brazilian Council for Science Development (CNPq) that operated between 1976–1986. This programme invested the equivalent of 12 million American dollars in groups working in approximately 200 projects in endemic diseases (Gonçalves et al. 1988). Due to its differentiated financial policy, which means an initiative to influence the development of a special area, the programme had a huge impact on attracting more groups to work in protozoology, and our data reinforce this importance.

The second wave of incoming scientists occurred after 1998 and might be the consequence of the elevated number of fellowships and resources offered by the CNPq. In this sense, national politics favoured Brazilian science, and protozoology took advantage of this situation. However, we cannot forget the contribution of International Funding Programmes such as the Tropical Diseases Research (TDR) of the World Health Organization.

By tracking students who completed their PhD in protozoology, we observed that 85% of them were still involved with science. Considering that the other 15% might include people who teach in private universities using the knowledge acquired during their PhD, we can conclude that the resources invested in protozoology were very well returned to society. However, it is time to reflect on whether the current number of students completing their PhDs will be harnessed in Brazil as has occurred in the past.

The scenario of protozoology in Brazil, as shown in Fig. 6, presents an increasing trend. Although the immigration dynamics presented in Fig. 5 showed a possible decrease in interest, Brazilian protozoology is the result of the work of pioneers and also (as evidenced by the green dots in Fig. 6) the consequence of the immigration of many scientists to protozoology who supervised their students in this area. It is important to reinforce that this flux requires financial support or strong funding programmes such as the PIDE and TDR.

Our goal in this communication was to show the dynamics of protozoologists and the impact of protozoology on Brazilian science. The same approach can be used to study contributions in other fields. The use of different criteria can group people in various ways to reveal other trees and identify other pioneers, even in protozoology. The genealogy presented here is one of multiple possible methods to track our past and hopefully point to our future.

From Isaac Newton to Stephen Hawking, the idea of “having seen further by standing on the shoulders of giants” has been used in science to recognise past mentors for new discoveries. We expect that in addition to serving as a source for research on the historical and paradigmatic aspects of Brazilian protozoology and positioning the contributions of the field to Brazilian science, this paper may be seen as a form of acknowledgement of the pioneering researchers who built the foundations of our work and inspired new generations of protozoology.

ACKNOWLEDGEMENTS

To Marcelo Reis, for grateful discussions concerning data analysis.

REFERENCES

- Alves MJM, Colli W 1974. Agglutination of *Trypanosoma cruzi* by concavalin A. *J Protozool* 21: 575–578.
- Andersen JP, Hammarfelt B 2011. Price revisited: on the growth of dissertations in eight research fields. *Scientometrics* 88: 371–383.
- Barreto MP, Pessoa SB 1946. Contribuição para o estudo da distribuição geográfica dos flebotomos americanos (Diptera, Psychodidae). *An Paul Med Cir* 51: 261.
- Barreto MP, Siqueira AF, Correa FM 1963. Study on reservoirs and forest vectors of *Trypanosoma cruzi*. I. Presence of *Triatoma infestans* (Hemiptera, Reduviidae) in forest outhouses. *Rev Inst Med Trop São Paulo* 5: 289–293.
- Blackburn EH, Gall JG 1978. Tandemly repeated sequence at the termini of the extrachromosomal ribosomal RNA genes in *Tetrahymena*. *J Mol Biol* 120: 33–53.
- Brener Z 1952. Complement fixation with *L. brasiliensis* in cutaneous American leishmaniasis and in Chagas disease. *Hospital* 41: 269–275.
- Calkins GN 1911. The scope of protozoology. *Science* 34: 129–138.
- Camargo EP 1964a. Growth and differentiation in *Trypanosoma cruzi*. I. Origin of metacyclic trypanosomes in liquid media. *Rev Inst Med Trop São Paulo* 6: 93–100.
- Camargo ME 1964b. Improved technique of indirect immunofluorescence for serological diagnosis of toxoplasmosis. *Rev Inst Med Trop São Paulo* 6: 117–118.
- Chagas C 1909. Nova tripanozomíase humana. Estudos sobre a morfologia e o ciclo evolutivo do *Schizotrypanum cruzi* n. gen., n. sp., agente etiológico de nova entidade morbida do homem. *Mem Inst Oswaldo Cruz* 1: 159–218.
- Clayton CE 2002. Life without transcriptional control? From fly to man and back again. *Embo J* 21: 1881–1888.
- Cordova KE, Furukawa H, Yaghi OM 2015. The development of global science. *ACS Cent Sci* 1: 18–23.
- da Silva JR, de Paola D 1957. Histochemical changes in the hepatic reticuloendothelial system in kala-azar. *Med Cir Farm* 19: 211–215.
- da Silva JR, Torres E 1957. Amebic abscess of the liver; review and case report. *Rev Bras Gastroenterol* 9: 215–234.

- de Brito T, Meira JA, Bassoi ON 1962. Contribution to the study of malaria. II. Pathology of the liver in acute malaria. *Rev Inst Med Trop Sao Paulo* 4: 105-111.
- de Queiroz JM, Tafuri WL 1957. Lesion of the eye and adnexa in experimental schizotrypanosomiasis in albino rats. *Rev Assoc Med Bras* 3: 256-262.
- Deane LM, Deane MP 1954. Dogs naturally infected by *Leishmania donovani* in Ceará. *Hospital* 45: 703-707.
- Ferguson MA 1999. The structure, biosynthesis, and function of glycosylphosphatidylinositol anchors, and the contribution of trypanosome research. *J Cell Sci* 112: 2799-2809.
- Ferguson MA, Haldar K, Cross GA 1985. *Trypanosoma brucei* variant surface glycoprotein has a sn-1,2-dimyristyl glycerol membrane anchor at its COOH terminus. *J Biol Chem* 260: 4963-4968.
- Gonçalves A, Albuquerque RH, Lins MG, Neiva DS, Souza GF 1988. Avaliação exploratória de atuação bienal do Programa Integrado de Doenças Endêmicas do Conselho Nacional de Desenvolvimento Científico e Tecnológico PIDE/CNPq. *Rev Inst Med Trop Sao Paulo* 30: 109-117.
- Heinzel FP, Sadick MD, Holaday BJ, Coffman RL, Locksley RM 1989. Reciprocal expression of interferon gamma of interleukin 4 during the resolution or progression of murine leishmaniasis. Evidence for expansion of distinct helper T-cell subsets. *J Exp Med* 169: 59-72.
- Levenshtein VI 1966. Binary codes capable of correcting deletions, insertions, and reversals. *Soviet Physics-Doklady* 10: 707-710.
- Martins AV, Brener Z, Mourão OG, Lima MM, de Souza MA, da Silva JE 1956. Autochthonous kala-azar in Minas Gerais. *Rev Bras Malariol Doencas Trop* 8: 555-563.
- Mayer MG, Floeter-Winter LM 2012. Identification of SL addition *trans*-splicing acceptor sites in the internal transcribed spacer I region of pre-rRNA in *Leishmania* (*Leishmania*) *amazonensis*. *Mem Inst Oswaldo Cruz* 107: 1070-1072.
- Mena-Chalco JP, Rocha V 2014. Caracterização do banco de teses e dissertações da CAPES. In 4º Encontro Brasileiro de Bibliometria e Cientometria, 14-16 de maio de 2014, Recife, 11 pp.
- Meyer H, de Oliveira MX 1948. Cultivation of *Trypanosoma cruzi* in tissue cultures; a four day study. *Parasitology* 39: 91-94.
- Moraes LCA, França EL, Pessoa RS, Fagundes DLG, Hernandes MG, Ribeiro VP, Gomes MA, Honório-França C 2015. The effect of INF-g and TGF-b in the functional activity of mononuclear cells in the presence of *Entamoeba histolytica*. *Parasit Vectors* 8: 413.
- Neves J, Mayrink W, Mourão OG, Cardoso JP 1961. Kala-azar in Minas Gerais. Clinical and immuno-serological survey in the Hospital das Clínicas and in the Santa Casa de Misericórdia de Belo Horizonte, to identify cases of kala-azar. *Hospital* 59: 1165-1177.
- Paraense WL 1952. Observations on a Brazilian strain of *Plasmodium circumflexum*. *Mem Inst Oswaldo Cruz* 50: 229-241.
- Pessoa SB, Barreto MP 1945. Sobre a localização dos parasitos nos tecidos e a intensidade do parasitismo na leishmaniasi tegumentar americana. *Rev Paul Med* 26: 355-357.
- Prata A 1963. Treatment of kala-azar with amphotericin B. *Trans R Soc Trop Med Hyg* 57: 266-268.
- Roitman I 1969. Experiments in growing *Trypanosoma conorhini* on a synthetic medium. *J Protozoology* 16: 36.
- Sampaio SA, Castro RM, Rivitti E, Sampaio SA 1971. Treatment of mucocutaneous (American) leishmaniasis with amphotericin B: report of 70 cases. *Int J Dermatol* 12: 388-394.
- Shaw J, Lainson R 1968. Leishmaniasis in Brazil. II. Observation on enzootic leishmaniasis in the lower Amazonian Basin. *Trans R Soc Trop Med Hyg* 62: 396-405.
- Simpson AG, Stevens JR, Lukes J 2006. The evolution and diversity of kinetoplastid flagellates. *Trends Parasitol* 22: 168-174.
- Sugimoto CR 2014. Academic genealogy. In B Cronin, CR Sugimoto (eds.), *Beyond bibliometrics: harnessing multidimensional indicators of scholarly impact*, MIT Press, Cambridge, p. 365-382.

TABLE I

Descriptors used to screen theses on Coordination for the Improvement of Higher Education Personnel database

<i>Trypanosoma cruzi</i>
<i>Trypanosoma brucei</i>
<i>Leishmania</i>
<i>Plasmodium</i>
<i>Toxoplasma</i>
Crithidia
Parasita
Parasito
Protozoa
Protozoário
Trypanosomatideo
Apicomplexa
Doença de Chagas
Doença do sono
Leishmaniose
Toxoplasmose
Malária
<i>Giardia</i>
Giardiase
<i>Trychomonas</i>
<i>Tricomonas</i>
Ameba
Entamoeba
Amebiase
Neisseria
Cinetoplasto
kDNA
Mini-círculo
Maxi-círculo
Kinetoplastida
Bodo
<i>Endotrypanum</i>
Leptomonas
Phytomonas
Phlebotomineo
<i>Rhodnius</i>
<i>Lutzomyia</i>
Barbeiro
Babesia
Eimeria
Glicossomo
Flagelados
Flagelo
Fagocitose
Flebotominio
Trofozoito
Bradizoito
Promastigota
Amastigote
Epimastigota
Apicoplasto
Tripanotiona
Protista
RNA leader
Trans-splicing
Monoxeno
Heteroxeno
Angomonas
Tsetse
<i>Cryptobia</i>

TABLE II
Scientists that supervised at least 10 theses/dissertations
containing at least one of the 60 descriptors present on Supplementary Table I

Adauto Jose Goncalves De Araujo	Elizabeth Ferreira Rangel
Adevair Henrique Da Fonseca	Elizabeth Igne Ferreira
Adjair Antonio Do Nascimento	Elizabeth Malagueno De Santana
Alda Maria Da Cruz	Elizabeth Spangler Andrade Moreira
Aldina Maria Prado Barral	Eloisa Amalia Vieira Ferro
Alejandro Miguel Katzin	Eloy Guillermo Castellon Bermudez
Alexandre Afranio Peixoto	Elvio Carlos Moreira
Alexandre Barbosa Reis	Elvira Maria Saraiva Chequer Bou Habib
Alfredo Miranda De Goes	Erik Daemon De Souza Pinto
Alvaro Jose Romanha	Erika Martins Braga
Alvimar Jose Da Costa	Eunice Aparecida Bianchi Galati
Ana Lucia Teles Rabello	Evaldo Nascimento
Ana Maria De Castro	Fernando Costa E Silva Filho
Ana Maria Jansen	Fernando De Queiroz Cunha
Ana Paula Junqueira Kipnis	Fernando Orefice
Andrea Caetano Da Silva	Flavio Antonio Pacheco De Araujo
Andrea Mara Macedo	Francisco Carlos Rodrigues De Oliveira
Angela Hampshire De Carvalho Santos Lopes	Francisco Juarez Ramalho Pinto
Angela Kaysel Cruz	Gabriel Grimaldi Filho
Anita Hilda Straus Takahashi	George Alexandre Dos Reis
Antonia Maria Ramos Franco	Geraldo Gileno De Sa Oliveira
Antoniana Ursine Krettli	Gervasio Henrique Bechara
Antonio Luiz Pinho Ribeiro	Glaucius Oliva
Antonio Raimundo Lima Cruz Teixeira	Gloria Regina Franco
Antonio Walter Ferreira	Guido Fontgalland Coelho Linhares
Armando De Oliveira Schubach	Guilherme Loureiro Werneck
Arnaldo Zaha	Heitor Franco De Andrade Junior
Bartira Rossi Bergmann	Helene Santos Barbosa
Bianca Silvana Zingales	Helio Langoni
Bodo Wanke	Heloisa Werneck De Macedo
Camila Indiani De Oliveira	Hernando Antonio Del Portillo Obando
Caris Maroni Nunes	Hiro Goto
Carlos Eduardo Tosta Da Silva	Ionice Felipe
Carlos Graeff Teixeira	Ises De Almeida Abrahamsohn
Carlos Luiz Massard	Italmar Teodorico Navarro
Carlos Renato Machado	Jacenir Reis Dos Santos Mallet
Carlos Wilson Gomes Lopes	Jaime Martins De Santana
Celia Maria De Almeida Soares	Jeffrey Jon Shaw
Celia Maria Machado Barbosa De Castro	Joao Aristeu Da Rosa
Celia Regina Da Silva Garcia	Joao Palermo Neto
Celso Vataru Nakamura	Joao Santana Da Silva
Celuta Sales Alviano	Joaquim Hernan Patarroyo Salcedo
Cezar Martins De Sa	Jose Ciriaco Pinheiro
Cirano Jose Ulhoa	Jose Clovis Do Prado Junior
Clara Lucia Barbieri Mestriner	Jose Daniel Figueroa Villar
Claude Pirmez	Jose Franco Da Silveira Filho
Claudia Ida Brodskyn	Jose Manuel Macario Rebelo
Claudia Maria Leal Bevilqua	Jose Maria Alvarez Mosig
Claudia Martins Carneiro	Jose Maria De Souza
Claudio Tadeu Daniel Ribeiro	Jose Maria Soares Barata
Conceicao Ribeiro Da Silva Machado	Jose Mauro Peralta
Cristiana Ferreira Alves De Brito	Jose Roberto Meyer Fernandes
Deborah Aparecida Negrao Correa	Jose Roberto Mineo
Denise Carmona Cara Machado	Jose Rodrigues Coura
Dulciene Maria De Magalhaes Queiroz	Joseli Lannes Vieira
Edelberto Santos Dias	Judith Kardos Klotzel
Edesio Jose Tenorio De Melo	Julia Maria Costa Cruz
Edgar Marcelino Carvalho Filho	Juliana Lopes Rangel Fietto
Edward Felix Silva	Julio Scharfstein
Eliane Lages Silva	Kenneth John Gollob
Elisa Cupollilo	Lain Carlos Pontes De Carvalho
Supplementary data	

Leda Quercia Vieira	Paulo Filemon Paolucci Pimenta
Leonor Laura Pinto Leon	Paulo Inacio Da Costa
Leucio Camara Alves	Paulo Paes De Andrade
Ligia Miranda Ferreira Borges	Pedro Lagerblad De Oliveira
Lileia Goncalves Diotaiuti	Raimunda Nonata Ribeiro Sampaio
Lucia Mendonca Previato	Regina Maria Barretto Cicarelli
Lucile Maria Floeter Winter	Regina Maura Bueno Franco
Luis Carlos Crocco Afonso	Reginaldo Pecanha Brazil
Luis Eduardo Ramirez Giraldo	Renata Guerra De Sa
Luiz Carlos Alves	Renato Arruda Mortara
Luiz Hildebrando Pereira Da Silva	Renato Augusto Da Matta
Luiz Ricardo Orsini Tosi	Ricardo Lourenco De Oliveira
Manoel Barral Netto	Ricardo Luiz Dantas Machado
Manoel Otavio Da Costa Rocha	Ricardo Tostes Gazzinelli
Marcello Andre Barcinski	Ricardo Wagner De Almeida Vitor
Marcelo Simao Ferreira	Rinaldo Aparecido Mota
Marcia Cristina Paes	Rita De Cassia Alves Alcantara De Menezes
Marcia Dos Santos Lazera	Roberto Jose Da Silva Badaro
Marco Aurelio Krieger	Rodrigo Correa De Oliveira
Marco Tulio Antonio Garciazapata	Romario Cerqueira Leite
Marcos Andre Vannier Dos Santos	Ronald Bastos Freire
Maria Aparecida Da Gloria Faustino	Rosangela Zacarias Machado
Maria Aparecida Gomes	Salvatore Giovanni De Simone
Maria Cristina Machado Motta	Samuel Goldenberg
Maria Das Gracas Costa Alecrim	Santuza Maria Ribeiro Teixeira
Maria De Fatima Ferreira Da Cruz	Selma Giorgio
Maria De Fatima Martins Horta	Selma Maria Bezerra Jeronimo
Maria De Nazareth Silveira Leal De Meirelles	Sergio Costa Oliveira
Maria Heloisa De Souza Lima Blotta	Sergio Danilo Junho Pena
Maria Imaculada Muniz Barboza Junqueira	Sergio De Albuquerque
Maria Julia Manso Alves	Sergio Salles Xavier
Maria Julia Salim Pereira	Sergio Schenkman
Maria Lucia Belem Pinheiro	Silvana Marques De Araujo
Maria Norma Melo	Silvia Reni Bortolin Uliana
Maria Regina Reis Amendoeira	Sinval Pinto Branda Filho
Maria Terezinha Bahia	Solange Lisboa De Castro
Maria Valdrinez Campana Lonardoni	Solange Maria Gennari
Mariangela Carneiro	Sonia Gumes Andrade
Marinete Marins Povoa	Stenio Perdigao Fragoso
Marlene Benchimol	Susie Andries Nogueira
Marlene Isabel Vargas Viloria	Sylvio Celso Goncalves Da Costa
Marlene Tiduko Ueta	Tania Cremonini De Araujo Jorge
Marta De Lana	Tania Maria Valente Pacheco
Marta Maria Gerald Des Teixeira	Tecia Maria Ulisses De Carvalho
Marta Tavares D Agosto	Teresa Cristina Bergamo Do Bomfim
Mauricio Martins Rodrigues	Thais Cristina Baeta Soares Souto Padron
Maurilio Jose Soares	Thais Gomes Verzignassi Silveira
Mauro Celio De Almeida Mazorchi	Ueslei Teodoro
Monica Lucia Gomes	Ulisses Gazos Lopes
Nadia Regina Pereira Almosny	Valeria Marcal Felix De Lima
Nanci Do Nascimento	Vanderlei Rodrigues
Nara Amelia Da Rosa Farias	Vanete Thomaz Soccol
Narcisa Leal Da Cunha E Silva	Vanize De Oliveira Macedo
Nicolau Maues Da Serra Freire	Vicente De Paula Antunes Teixeira
Nobuko Yoshida	Virmondes Rodrigues Junior
Octavio Fernandes Da Silva Filho	Wagner Luiz Tafuri
Olindo Assis Martins Filho	Walderez Ornelas Dutra
Osvaldo Pompilio De Melo Neto	Wanderley De Souza
Otavio Henrique Thiemann	Wanderli Pedro Tadei
Patricia De Azambuja Penna	Washington Luiz Tafuri
Patricia Sampaio Tavares Veras	Wilson Mayrink
Paula Dias Bevilacqua	Yara De Miranda Gomes
Paulo Eduardo Martins Ribolla	Yara Maria Traub Cseko

source: Coordination for the Improvement of Higher Education Personnel database in the period from 1987-2011.

TABLE III
Classification of names according to diagram in Fig. 3A

Name	Group	Name	Group
Absalom Lima Filgueira	c	Alexandre Morrot Lima	a
Ada Amalia Ayala Urdapilleta	d	Alexandre Nizio Maria	c
Adalberto Ramon Vieyra	c	Alexandre Rego Souza Pinto	-
Adauto Castelo	c	Alfredo Carlos Rodrigues de Azevedo	a
Adauto Jose Goncalves de Araujo	c	Alfredo Jose Afonso Barbosa	c
Adelina Diaz de Ramirez	-	Alfredo Jose Altamirano Enciso	a
Ademir de Jesus Martins Junior	c	Alfredo Miranda de Goes	c
Aderson Zottis	e	Alice Machado da Silva	e
Adevair Henrique da Fonseca	c	Alicia Kompalic Cristo	-
Adjair Antonio do Nascimento	c	Aline Aparecida Rezende Rodrigues	c
Adrian Martin Pohlit	a	Aline Cardoso Caseca Volotao	a
Adriana Barrinha Fernnades	a	Aline Chaves Alexandrino	a
Adriana Carlos Rodrigues Fuzato	d	Aline de Azevedo	e
Adriana da Roza Chaves	c	Aline do Carmo Franca Botelho	c
Adriana Degrossoli	e	Aline Fernandes Angella Martins	-
Adriana dos Passos Lemos	e	Allan Kardec Ribeiro Galardo	a
Adriana Goncalves de Oliveira	c	Aluizio Rosa Prata	a
Adriana Jardim de Almeida	a	Alvaro Augusto Ribeiro D Almeida Couto	a
Adriana Lanfredi Rangel	d	Alvaro Cantini Nunes	e
Adriana Melo Ferreira	d	Alvaro Eduardo Eiras	c
Adriana Oliveira Costa	a	Alvaro Fernando Acosta Serrano	b
Adriana Oliveira dos Santos	a	Alvaro Jose Romanha	a
Adriane Pimenta da Costa Val Bicalho	a	Alverne Passos Barbosa	d
Adriane Regina Todeschini	a	Alvimar Jose da Costa	c
Adriano Defini Andricopulo	a	Amadeu Cury	-
Adriano Gomes da Silva	a	Amanda Fortes Francisco	a
Alan Mitchell Durham	c	America Kaori Tanaka	-
Alan Sher	b	Amilcar Vianna Martins	a
Alba Valeria Machado da Silva	a	Ana Acacia de Sa Pinheiro	a
Albert Thomas Lonero	-	Ana Carolina Borella Anhe	e
Alberto Carvalho da Silva	-	Ana Carolina Bussacos Maranhao	d
Alberto Francisco Fachado Carvajales	-	Ana Carolina Campi Azevedo	a
Alberto Gomes Ferreira	c	Ana Carolina de Aguiar Vasconcelos Carneiro	a
Alberto Jesus Cornejo Mora	-	Ana Carolina dos Santos Monteiro	e
Alcides Milton da Silva	d	Ana Carolina Fonseca Lindoso Melo	d
Alda Maria da Cruz	a	Ana Carolina Paulo Vicente	c
Alda Maria Teixeira Ferreira	a	Ana Carolina Renno Sodero	c
Aldina Maria Prado Barral	a	Ana Claudia Goncalves	c
Aldo Mellender de Araujo	c	Ana Claudia Ribeiro e Silva	-
Alejandra Saori Araki	a	Ana Cristina Arend	-
Alejandro Miguel Katzin	a	Ana Cristina Bahia Nascimento	a
Alena Mayo Iniguez	-	Ana Cristina da Silva Pinto	a
Alessandra Conceicao Faria Aguiar Campos	c	Ana Cristina de Carvalho Botelho	a
Alessandra D Almeida Filardy	a	Ana Cristina dos Santos Otero	d
Alessandra Gutierrez Oliveira	a	Ana Cristina Rodrigues Saldanha	c
Alessandra Loureiro Morassutti	c	Ana Cristina Vianna Mariano da Rocha Lima	a
Alessandra Mara Alves Ragozo	a	Ana de Cassia Oliveira Rosa Vexenat	-
Alessandra Rejane Ericsson de Oliveira	e	Ana de Nazare Martins da Silva	e
Alessandra Santos D Alencar	c	Ana Iara da Costa Ferreira	d
Alessandra Scofield Amaral	a	Ana Leuch Lozovei	d
Alessandro Aparecido Rodrigues da Silva	a	Ana Lucia Abreu Silva	a
Alessandro Comarau Pasqualotto	c	Ana Lucia Teles Rabello	a
Alex Garcia Todorov	d	Ana Maria Barral de Martinez	c
Alexander Sibajev	a	Ana Maria Caetano de Faria	c
Alexandra Lena Galetovic Carabantes	-	Ana Maria de Castro	a
Alexandre Afranio Peixoto	a	Ana Maria Dieckmann	e
Alexandre Barbosa Reis	a	Ana Maria Jansen Franken	a

Supplementary data

Name	Group	Name	Group
Ana Maria Reis Ferreira	c	Angela Hampshire de Carvalho Santos Lopes	a
Ana Maria Revoredo da Silva Ventura	a	Angela Kaysel Cruz	a
Ana Paula Cabral de Araujo Lima	a	Anibal Antonio da Silva Pereira	a
Ana Paula Campanelli	e	Anissa Daliry	e
Ana Paula dos Reis Veloso Siciliano	d	Anita Hilda Straus Takahashi	a
Ana Paula Ferreira Lopes Correa	e	Annamaria Ravara Vago	a
Ana Paula Galvao da Silva	d	Anselmo Afonso Golynski	e
Ana Paula Iglesias Santin	c	Antonia Maria Ramos Franco Pereira	a
Ana Paula Junqueira Kipnis	c	Antoniana Ursine Krettli	a
Ana Paula Maia Peixoto Marino	a	Antonio Campos Neto	c
Ana Paula Moreira	e	Antonio Carlos Alves Meirelles Filho	-
Ana Paula Peconick	c	Antonio Carlos Francesconi do Valle	c
Ana Paula Pimentel Cassilhas	d	Antonio Cesario Rios Leite	c
Ana Paula Rocha Gadelha	a	Antonio Cezar Rocha Cavalcante	d
Ana Paula Salles Moura Fernandes	a	Antonio de Deus Filho	c
Ana Silvia Dagnone	c	Antonio de Oliveira Lima	a
Ana Tereza de Mendonca Viveiros	c	Antonio Florencio De Figueiredo	a
Ana Yece das Neves Pinto	a	Antonio Gildo de Bianchi	c
Analina Furtado Valadao	c	Antonio Lima Cruz Teixeira	a
Anamaria Aranha Camargo	e	Antonio Lucio Teixeira Junior	c
Anamaria Mello Miranda Paniago	c	Antonio Luiz Pinho Ribeiro	c
Anderson Barbosa de Moura	a	Antonio Marcos Guimaraes	a
Anderson Sena Barnabe	a	Antonio Medeiros Peregrino da Silva	c
Andre Dreyfus	c	Antonio Neres Norberg	c
Andre Flavio Soares Ferreira Rodrigues	c	Antonio Paes de Carvalho	c
Andre Gustavo Tempone Cardoso	a	Antonio Paulino Ribeiro Sobrinho	c
Andre Luis Bombeiro	e	Antonio Sesso	c
Andre Luiz Fonseca de Souza	a	Antonio Walter Ferreira	a
Andre Luiz Jeovanio da Silva	d	Aparecida de Fatima Michelin	a
Andre Luiz Land Curi	c	Aramis Augusto Pinto	c
Andre Luiz Pedrosa	a	Argemiro Sanavria	c
Andre Luiz Rodrigues Roque	a	Ariane Baratta Masini	e
Andre Nobrega Pitaluga	a	Ariane Machado Lima	e
Andrea Alice da Silva	a	Aristarco Goncalves Siqueira Filho	c
Andrea Aparecida Morais Fernandes	a	Aristeu Vieira da Silva	c
Andrea Bouer	a	Aristides Cheto de Queiroz	-
Andrea Caetano da Silva	a	Arlei Marcili	a
Andrea Carla Leite Chaves	a	Arlene de Jesus Mendes Caldas	a
Andrea Cristina Higa Nakaghi	c	Arlete Aparecida Martins Coelho Castelo	c
Andrea Cristina Veto Arnholdt	a	Arlie C Todd	-
Andrea Henriques Pons	a	Armando de Oliveira Schubach	a
Andrea Mara Macedo	a	Arnaldo FI da Rocha	-
Andrea Pereira de Souza	a	Arnaldo Zaha	c
Andrea Rodrigues Avila	a	Artur Torres Cordeiro	a
Andrea Silvestre de Sousa	c	Astolpho Ferraz de Siqueira	a
Andrea Sobral de Almeida	a	Augusto Mello Simoes Barbosa	a
Andrea Teixeira de Carvalho	a	Aurelio Pedroso Junior	e
Andrea Vieira Goncalves	d	Aurelio Vicente Graca de Souza	e
Andreia Dantas Medeiros	c	Aurilene Monteiro Bandeira	c
Andreia Pires Dantas	e	Avelino Jose Bittencourt	c
Andres Jimenez Galisteo Junior	a	Barbara Cruz Tavares de Macedo Fernandes	a
Andrew John George Simpson	b	Barbara Kellen Antunes Borges	d
Andrey Jose de Andrade	a	Bartira Rossi Bergmann	a
Andreza Pain Marcelino	a	Beatriz Dolabela de Lima	a
Anette Kelsei Partata	d	Beatriz Gomes Brazil	a
Angela Andrade Maestrini	-	Beatriz Gomes Guimaraes	a
Angela Cardoso de Alvarenga	e	Beatriz Lilian da Silva Costa Souza	a
Angela Cristina Verissimo Junqueira	a	Beatriz Rossetti Ferreira	a
Angela Cristina Volpini	a	Bellisa de Freitas Barbosa	-

Name	Group	Name	Group
Bernardo Galvao Castro	a	Carlos Eugenio Cavasini	a
Bernardo Simoes Franklin	e	Carlos Frederico Loiola	b
Bernd Liess	-	Carlos Frederico Martins Menck	c
Betania Maria Ribeiro	e	Carlos Graeff Teixeira	c
Bianca Brand Ederli	a	Carlos Gustavo Regis da Silva	a
Bianca Chiganer Cramer Ribeiro	-	Carlos Henryque De Souza E Silva	-
Bianca Ervatti Gama	e	Carlos Jose de Carvalho Pinto	a
Bianca Perdigao Olivieri	a	Carlos Luiz Massard	a
Bianca Silvana Zingales	a	Carlos Massayuki Kikuti	e
Blima Fux	a	Carlos Mauricio de Figueiredo Antunes	a
Bodo Wanke	c	Carlos Medicis Morel	a
Braulio Muzzi Ribeiro de Oliveira	-	Carlos Noriyuki Kaneto	a
Bruna Cunha Gondim de Alencar	-	Carlos Ramon Ruiz Miranda	-
Bruna Guimaraes Oliveira	-	Carlos Renato Machado	a
Bruno Antonio Marinho Sanchez	a	Carlos Roberto Alves	-
Bruno Augusto Maciel Guedes	c	Carlos Wilson Gomes Lopes	a
Bruno da Rocha Azevedo	a	Carmen Dea Ribeiro Paula	c
Bruno de Bezerril Andrade	a	Carol Homewood	b
Bruno Luiz Fonseca Schamber Reis	e	Carolina Borsoi Moraes	a
Bruno Pereira Berto	a	Carolina de Oliveira Mendes Aguiar	a
Byanca Regina de Paiva	d	Carolina Furtado Torres da Silva	a
Caio Benjamin Dias	c	Carolina Guilherme Prestes Beyrodt	a
Camila Alves Bandeira Falcao	d	Carolina Maria Vianna de Freitas	c
Camila Augusta de Oliveira Martins	a	Carolina Nascimento Spiegel	a
Camila del Sarto Macedo	-	Caroline Dantas de Oliveira	a
Camila Indiani de Oliveira	a	Caroline Furtado Junqueira	-
Camila Junqueira Mazzoni	e	Cassia Abadia Xavier Costa	d
Camila Maciel de Sousa	c	Cassio da Silva Baptista	d
Camila Marques Adade	a	Catarina Gadelha	a
Camila Sachelli Ramos	-	Catia Amancio Almeida	c
Camila Souza Lemos	d	Cecilia Beatriz Fiúza Favali	a
Camilo Adalton Mariano da Silva	c	Cecília Maria Antunes B Biancardi	a
Candida Fagundes Teixeira	c	Celene Maria de Oliveira Simões Alves	a
Cardi Bruno Andrade	c	Celeste da Silva Freitas de Souza	a
Carina Elisei de Oliveira	a	Celeste Fava Netto	-
Carina Margonari de Souza	a	Celia Alves de Almeida	-
Caris Maroni Nunes	a	Celia Aparecida Paulino	c
Carl Peter Von Dietrich	c	Celia Maria de Almeida Soares	c
Carla Claser	d	Celia Maria Gontijo Ferreira	a
Carla Cristina Braz Louly	c	Celia Maria Machado Barbosa de Castro	c
Carla de Almeida Cardozo	-	Celia Maria Silva Pedrosa	a
Carla Domingues dos Santos	a	Celia Maria Vieira Vendrame	a
Carla Gasparotto Shande Vasconcelos	-	Celia Regina da Silva Garcia	a
Carla Maria de Souza Menezes	c	Celio Geraldo Freire de Lima	a
Carla Monica Pinheiro	a	Celio Lopes Silva	c
Carlos Alberto do Nascimento Ramos	e	Celso Barbosa de Santanna Filho	e
Carlos Alberto Garofalo	c	Celso Cruz Tavares	a
Carlos Alberto Pereira Tavares	a	Celso Martins Pinto	e
Carlos Alexandre de Amorim Garcia	c	Celso Vataru Nakamura	a
Carlos Capistrano Goncalves de Oliveira	a	Celuta Sales Alviano	a
Carlos Chagas	a	Cezar Martins de Sa	a
Carlos da Silva Lacaz	c	Charalambos P Kyriacou	c
Carlos Eduardo Almeida	a	Charles Alfredo Covarrubias Flores	-
Carlos Eduardo Calzavará Silva	c	Charles Anacleto	c
Carlos Eduardo Maia Gomes	a	Charles Kenneth Whitehair	-
Carlos Eduardo Pereira Corbett	a	Charles Salmon	-
Carlos Eduardo Peres Sampaio	e	Christian Macagnan Probst	a
Carlos Eduardo Tadokoro	a	Christian Robson de Souza Reis	c
Carlos Eduardo Tosta da Silva	a	Christiane Contigli	c

Name	Group	Name	Group
Christina Alves Peixoto	c	Cristiane Divan Baldani	d
Chung Man Chin	a	Cristiane Gaboggini Melo de Pinheiro	-
Cibele Baptista	d	Cristiane Guimaraes Morais	d
Cicero Brasileiro Mello Neto	a	Cristiane Varella Lisboa	a
Cid Sergio Ferreira	c	Cristiano Barros de Melo	e
Cinthia Furst Leroy Gomes	a	Cristiano Marcelo Espinola Carvalho	e
Cintia Aparecida de Jesus Pereira	c	Cristina de Oliveira Massoco	c
Cintia Fernandes de Souza	a	Cristina de Souza Chaves	a
Cintia Fontes Alves	d	Cristina Germani Fialho	d
Cirano Jose Ulhoa	c	Cristina Henriques	a
Clara Lucia Barbieri Mestriner	a	Cristina Ribeiro de Barros Cardoso	c
Clarence A Speer	c	Cristina Toscano Fonseca	c
Clarissa Romero Teixeira	a	Cristina Wide Pissetti	a
Claude Andre Solari	c	Cristine Hirsch Monteiro	c
Claude Pirmez	a	Crodowaldo Pavan	c
Claudia Alves de Andrade Coelho	a	Cynthia Rayol de Andrade	-
Claudia Cristina Gulias Gomes	c	Daniel Adesse Pedra Martins	-
Claudia de Matos Raja Gabaglia	d	Daniel Claudio de Oliveira Gomes	a
Claudia Dias Zettermann	c	Daniel Sa Carvalho	d
Claudia Ida Brodskyn de Assis	a	Daniel Vieira Dias	d
Claudia Magalhaes Calvet	a	Daniela de Melo Resende	a
Claudia Maia Brigagao	a	Daniela de Oliveira Procopio	d
Claudia Mara Lara Melo Coutinho	a	Daniela de Pita Pereira	a
Claudia Maria Leal Bevilqua	a	Daniela de Stefani Marquez	a
Claudia Maria Valete Rosalino	c	Daniela Fiori Gradia	a
Claudia Martins Carneiro	a	Daniela Goncales Rando	c
Claudia Moura de Melo	c	Daniela Lelles de Souza	-
Claudia Portes Santos Silva	d	Daniela Luz Ambrosio	a
Claudia Regina Lopes Cardoso	c	Daniela Parada Pavoni	a
Claudia Soares Santos Lessa	c	Daniela Pedrassani	e
Claudia Soares Zouain	c	Daniela Rodrigues de Faria	a
Claudia Sossai Soares	c	Daniela Sales Alviano Moreno	c
Claudia Torres Codeco	c	Daniela Santoro Rosa	e
Claudia Zuleida Gonzalez Lombana	d	Daniele da Silva Ferreira	d
Claudine Herzlich	-	Daniele dos Santos Andrade	a
Claudiney Melquiades Rodrigues	e	Daniele Pereira de Castro	a
Claudio Alessandro Massamitsu Sakamoto	c	Daniella Alchaar D Avila	a
Claudio Baptista de Carvalho	c	Daniella Areas Mendes da Cruz	e
Claudio Osmar Pereira Alexandre	e	Daniella Castanheira Bartholomeu	a
Claudio Roberto Madruga	a	Daniella Regina Arantes Martins	a
Claudio Romero Farias Marinho	a	Danielle Ferreira de Magalhaes	a
Claudio Tadeu Daniel Ribeiro	a	Danielle Frias Ribeiro Bisaggio	c
Claudio Vieira da Silva	a	Danielle Gomes Passos Silva	e
Clayton Luiz Borges	c	Danielle Maria Nascimento Moura	a
Clea Andrade Chiari	a	Danielle Pereira Cavalcanti	a
Clea Nazare Carneiro Bichara	a	Danielle Pereira Vieira	a
Cleber Oliveira Soares	e	Danielle Reis Napolitano	a
Cleudson Nery de Castro	c	Danilo Ciccone Miguel	a
Cleusa Alves Theodoro Rodrigues	a	Darcy Fontoura de Almeida	c
Clever Gomes Cardoso	a	Dario Abbud Righi	c
Cloe Duarte Fernandes	d	David Charles Warhurst	b
Colete Fonseca	a	David Eduardo Barroso	c
Conceicao Ribeiro da Silva Machado	a	David Nascimento Silva Teixeira	c
Constanca Felicia de Paoli de Carvalho Britto	a	Debora Barreiros Petropolis	d
Cornelius Bernard Van Niel	-	Debora de Oliveira Lopes	c
Cristiana Ferreira Alves de Brito	a	Debora Naves Santos	c
Cristiane Alves da Silva Menezes	-	Debora Pereira Garcia Melo	a
Cristiane da Silva Stabenow	c	Debora Rochelly Alves Ferreira	e
Cristiane de Souza Carvalho	d	Debora Rose de Oliveira	e



Name	Group	Name	Group
Deboraci Brito Prates	a	Eduardo Osorio Cisalpino	-
Deborah Aparecida Negrao Correa	c	Eduardo Penna Franca	-
Deila Jordao Franco	d	Eduardo Sergio da Silva	a
Deise Aparecida de Oliveira Silva	a	Edward Felix Silva	a
Deivid Costa Soares	a	Edwards Frazao Teixeira	a
Delir Correa Gomes Maues da Serra Freire	c	Egler Chiari	a
Denise Barcantre Castro Pinto	a	Elaine Bernardo Mapeli	c
Denise Bertulucci Rocha Rodrigues	a	Elaine Soares Coimbra	a
Denise Borges dos Santos Dias	a	Elaine Speziali de Faria	c
Denise Carmona Cara Machado	c	Elen Mello de Souza	e
Denise Costa Arruda	e	Elenice Moreira Lemos	a
Denise da Silveira Lemos	a	Eleuza Rodrigues Machado	c
Denise Fonseca Cortes	a	Eliame Mouta Confort	a
Denise Oliveira da Rosa	d	Eliana Lucia Tomaz do Nascimento	a
Denise Valle	a	Eliane Correa de Santana	-
Diamar da Costa Pinto	d	Eliane Cristina Laurentino	d
Diana Cordeiro Taboada	c	Eliane de Moraes Teixeira	a
Diana Magalhaes de Oliveira	c	Eliane Gomes de Almeida	d
Diane McMahon Pratt	b	Eliane Lages Silva	a
Diego Peres Alonso	a	Eliane Maria Vieira Milward De Azevedo	c
Dilvia Ferreira da Silva	a	Eliane Perlatto Moura	a
Diogenes Aparicio Garcia Cortez	c	Elias Jorge Facury Filho	c
Dirceu Bartolomeu Greco	c	Eliete Cavalcante da Silva	-
Dirceu Joaquim Costa	e	Elieth Afonso de Mesquita	a
Diva do Carmo Teixeira	c	Eline S Prado	c
Djair dos Santos de Lima E Souza	c	Eliomara Sousa Sobral Alves	e
Donaldo Rosa Pires Junior	c	Elisa Cupolillo	a
Dong Hyun Kim	-	Elisa Neves Vianna	a
Dorlene Maria Cardoso Aquino	c	Elisa San Martin Mouriz Savani	a
Dorly de Freitas Buchi	c	Elisabeth Neumann	c
Duarte da Silva	c	Elisaldo Luiz de Araujo Carlini	c
Dulce Helena Ferreira De Souza	a	Elisandra Marcia Rodrigues	e
Dulciene Maria de Magalhaes Queiroz	c	Elita Scio Fontes	c
Dyann Wirth	b	Elizabeth Castro Moreno	a
Ed Palmer	-	Elizabeth Cristina de Almeida Bessa	-
Edalton dos Reis Silva	c	Elizabeth de Souza Neves	a
Edelberto Santos Dias	a	Elizabeth do Nascimento	-
Eden Ribeiro Freire	a	Elizabeth Ferreira Rangel	a
Edenilze Teles Romeiro	c	Elizabeth Gloria Oliveira Barbosa Santos	a
Edesio Jose Tenorio de Melo	a	Elizabeth Igne Ferreira	a
Edgar Marcelino de Carvalho Filho	a	Elizabeth Luz Sanchez Romani	c
Edilaine Marcia Fernandes Camargo	c	Elizabeth Malagueno de Santana	c
Edilene Alcantara de Castro	a	Elizabeth Spangler Andrade Moreira	e
Edilene Oliveira da Silva	a	Ellen de Souza Marques	-
Edmundo Carlos Grisard	a	Ellen Synthia Fernandes de Oliveira	c
Edna Barbosa de Souza	a	Elmo Eduardo de Almeida Amaral	a
Edna Freymuller Haapalainen	a	Elio de Souza Garcia	a
Edson Luiz Paes Camandaroba	c	Eloisa Amalia Vieira Ferro	a
Edson Roberto da Silva	a	Eloisa Freitas	d
Edson Rondinelli	a	Eloy Guillermo Castellon Bermudez	a
Edson Sidiao de Souza Junior	c	Elsa Evelia Nieves Blanco	-
Eduardo Bastianetto	d	Elton Jose Rosas de Vasconcelos	e
Eduardo Caio Torres dos Santos	a	Elvio Carlos Moreira	c
Eduardo de Almeida Marques da Silva	a	Elvio Machado da Rocha	d
Eduardo Fonseca Pinto	a	Elvira Maria S Chequer Bou Habib	a
Eduardo Henrique Gomes Rodrigues	a	Elza Ferreira Noronha	a
Eduardo Jose Lopes Torres	c	Emanuelle Baldo Gaspar	e
Eduardo Lani Volpe da Silveira	a	Emerson Augusto Castilho Martins	e
Eduardo Martins Netto	c	Emilia Akemi Shiraishi Kimura	a

Name	Group	Name	Group
Eneida Cesar Mastrantonio	a	Falqueto Aloisio	a
Eneida Willcox Rego	c	Fanny Beatriz Zamora Veyl	-
Enrique Roberto Arganaraz	-	Fanny Tzelepis	-
Eric Faudry	a	Fatima Heritier Corvalan	e
Erica Araujo Mendes	a	Fatima Soares Motta Noronha	a
Erica dos Santos Martins Duarte	a	Felipe de Almeida Dias	a
Erica Paes Barreto Xavier Moraes	a	Felipe de Mello Vigoder	a
Erich Loza Telleria	a	Ferdinan Almeida Melo	a
Erick Vaz Guimaraes	a	Fernanda Barbosa Nogueira	a
Erico Vinicius de Souza Carmo	d	Fernanda Caldas Cardoso	c
Erik Daemon de Souza Pinto	c	Fernanda Cristina Macedo Rondon	d
Erika Hellena Esther Hoffmann	d	Fernanda Fortes de Araujo	a
Erika Izumi	a	Fernanda Janku Cabral	c
Erika Maria Kopp Xavier da Silveira	e	Fernanda Magalhaes Freire Campos	-
Erika Martins Braga	a	Fernanda Maria Santiago	a
Erika Michalsky Monteiro	a	Fernanda Nobre Amaral Villani	e
Ermelinda Maria Reis Domingues de Carvalho	-	Fernanda Oliveria Novais	-
Ernesto Marcus	c	Fernanda Rosalinski Moraes	c
Erney F Plessmann de Camargo	a	Fernando Alves de Lima Franco	d
Esteban Mauricio Cordero Veas	a	Fernando Antonio Botoni	a
Estela Maris Andrade Forell Bevilacqua	c	Fernando Araujo Monteiro	a
Estevam Guilherme Lux Hoppe	c	Fernando Augusto de Freitas	d
Etel Rocha Vieira	c	Fernando Braga Stheling Dias	-
Ethan Menahen Shevach	-	Fernando Costa E Silva Filho	e
Eufrosina Setsu Umezawa	a	Fernando de Almeida Borges	c
Eumenia da Costa Cunha Castro	c	Fernando de Macedo Dossin	d
Eunice Aparecida Bianchi Galati	a	Fernando de Pilla Varotti	a
Eurione Antonio Garcia da Veiga Jardim	d	Fernando de Queiroz Cunha	c
Eustaquio Claret dos Santos	e	Fernando Delgado Pretel	d
Evaldo Ferreira Vilela	c	Fernando Dias de Avila Pires	a
Evaldo Nascimento	c	Fernando Luiz de Lucca	c
Evander de Jesus Oliveira Batista	a	Fernando Orefice	c
Eveline Gomes Vasconcelos	a	Fernando Pavao	a
Evelise de Souza Monteiro Fonseca	c	Fernando Queiroz de Almeida	c
Evelyn Kety Pratt Riccio	a	Filipe Dantas Torres	a
Everton Botelho Sougey	c	Filomena MP Balestieri	-
Fabiana Maria Ruiz Lopes	c	Firmino Torres de Castro	a
Fabiana Rodrigues dos Santos	a	Flavia Andrade Chaves Borges	d
Fabiana Simao Machado	a	Flavia Aparecida de Oliveira	c
Fabiane Matos dos Santos	a	Flavia Aparecida Paina	c
Fabiano Borges Figueiredo	a	Flavia Coelho Ribeiro	d
Fabiano Sviatopolk Mirsky Pais	e	Flavia da Silva Nader Motta	-
Fabio Aguiar Alves	d	Flavia de Almeida Vieira	d
Fabio Barbour Scott	c	Flavia Falci Ercole	c
Fabio Husemann Menezes	c	Flavia Guimaraes Rodrigues	a
Fabio Luiz D Alexandri	-	Flavia Regina Almeida Campos	a
Fabio Marcio Squina	e	Flavio Alves Lara	a
Fabio Mitsuo Lima	d	Flavio Antonio Pacheco de Araujo	c
Fabio Ribeiro da Silva	c	Flavio Henrique Beraldo de Paiva	e
Fabio Rinaldo Santori	-	Flavya Mendes de Almeida	c
Fabio Trindade Maranhao Costa	a	Flor Ernestina Martinez Espinosa	a
Fabiola Barbieri Holetz	a	Floriano Paes Silva Junior	c
Fabiola Cardillo	a	Francisco Acacio Alves	a
Fabiola do Nascimento Correa	c	Francisco Carlos Rodrigues de Oliveira	a
Fabricia Helena Santello	d	Francisco de Carvalho Dias Filho	a
Fabricio Cesar Dias	a	Francisco Duque de Mesquita Neto	c
Fabricio Freire de Melo	c	Francisco Jeronymo Salles Lara	c
Fabricio Klerynton Marchini	a	Francisco Jose Queiroz Monte	c
Fabricio Montalvao Ferreira	e	Francisco Juarez Ramalho Pinto	a



Name	Group	Name	Group
Francisco Marlon Carneiro Feijo	c	Guilherme Costa Matsutani	a
Francisco Martins Teixeira	c	Guilherme Loureiro Werneck	a
Franco Claudio Bonetti	a	Gustavo Adolfo Sierra Romero	c
Francois Noireau	b	Gustavo Carlos Heringer	-
Franklin Barbalho Magalhaes	a	Gustavo Chemale	c
Franklin Federico Mujica Linarez	-	Gustavo Coutinho Cerqueira	a
Frederico Guilherme Coutinho Abath	a	Gustavo Ferreira Martins	c
Fredy Roberto Salazar Gutierrez	b	Gustavo Fontes Paz	a
Gabriel Antonio Nogueira Nascentes	a	Gustavo Henrique Goulart Trossini	a
Gabriel Eduardo Melim Ferreira	a	Gustavo Miranda Rocha	a
Gabriel Grimaldi Filho	a	Habib Frajha Neto	-
Gabriel Melo de Oliveira	e	Handel Goncalves Nogueira Oliveira Busatti	-
Gary A Splitter	c	Hatisaburo Masuda	a
Geane Peroni Brandao	-	Hector Barrabin	a
Geisa Baptista Barros	a	Hector Francisco Terenzi	c
Geisy Monteiro de Almeida	d	Heitor Franco de Andrade Junior	a
George Alexandre dos Reis	a	Heitor Miraglia Herrera	a
George Rego Albuquerque	a	Helcileia Dias Santos	a
Georgia Correa Atella	a	Helcio Resende Borba	c
Geovania Maria da Silva Braga	c	Helder Magno Silva Valadares	a
Geraldo Gileno de Sa Oliveira	c	Helen Rodrigues Martins	a
Gerhard Wunderlich	a	Helena Bonciani Nader	c
Germano Carneiro da Costa	d	Helena Heloisa Paixao	c
Gerson Salay	a	Helena Hilomi Taniguchi	a
Gervasio Henrique Bechara	c	Helena Keiko Toma	e
Giane Amaral de Oliveira	-	Helena Lucia Carneiro Santos	a
Giani Franca Santoro	a	Helena Teru Takahashi	e
Gifone Aguiar Rocha	c	Helene Santos Barbosa	a
Gil Fernando da Costa Mendes De Salles	c	Helia Maria Cannizzaro	d
Gil Vicente Oliveira da Silva	d	Helio Langoni	a
Gilberto Garcia Botelho	c	Helio Santa Rosa Costa Silva	d
Gilberto Mendes de Oliveira Castro	c	Heloisa Cristina da Silva	c
Gilberto Weissmuller	c	Heloisa Werneck de Macedo	c
Gilcilene Maria dos Santos	e	Helton da Costa Santiago	e
Gilda Maria Sales Barbosa	d	Henio Godeiro Lacerda	a
Gilson Pereira de Oliveira	c	Henrique Bunselmeyer Ferreira	c
Gilvania Coutinho Silva Feijo	d	Henrique Couto Teixeira	c
Ginelza Peres Lima dos Santos	a	Henrique de Paula Lemos	c
Giovanna Negromonte Torquato	d	Heonir De Jesus Pereira da Rocha	c
Girley Francisco Machado de Assis	a	Heonir Rocha	c
Gisele Fernanda Assine Picchi	a	Herbert Leonel de Matos Guedes	a
Gisele Maria de Andrade	c	Herbert Rodrigues Goulart	e
Giselle Maria Rachid Viana	a	Hermann Goncalves Schatzmayr	c
Gislaine Aparecida Martins	a	Hermione Elly Melara de Campos Bicudo	c
Giulliano Aires Anderlini	d	Hernan Chaimovich	c
Glaucia Manzan Queiroz de Andrade	-	Hernando Del Portillo	a
Glaucia Noemy Rodrigues Vespa	-	Hertha Meyer	a
Glaucie Jussilane Alves	c	Herton Helder Rocha Pires	c
Glaucus Oliva	a	Hideko Yamanaka	c
Glenda Meira Cardoso	a	Hilda Fatima de Jesus Pena	a
Glenio Cavalcanti de Barros	c	Hilton Ribeiro da Rocha	-
Gloria Cadavid Restrepo	a	Hiro Goto	a
Gloria Regina Franco	a	Hooman Momen	a
Gordon Lewis Edwin Koch	-	Hugo Caire de Castro Faria Neto	a
Graziela Maria Zanini	a	Humberto de Araujo Rangel	a
Greice Krautz de Mello	-	Idessania Nazareth da Costa	a
Guacyara Tenorio Cavalcante	c	Ieda Maria Martinez Paino	c
Guido Fontgalland Coelho Linhares	a	Igor de Almeida Rodrigues	a
Guilherme Correa de Oliveira	d	Ilea Branda Rodrigues	a

Name	Group	Name	Group
Ingrid Solange Evans Osses	a	Jean Dausset	-
Ionice Felipe	c	Jean Yveslaronze	-
Iramaya Rodrigues Caldas	c	Jeanne Blanco de Molfetta	c
Irene da Silva Soares	a	Jeffrey Jon Shaw	a
Isaac Roitman	a	Jenner Karlsson Pimenta dos Reis	c
Isabel Albuquerque Porto Carreiro	d	Jerônimo Conceicao Ruiz	a
Isabel Barroso Augusto da Silva	-	Jerusa Marilda Arantes	e
Isabel Cristina Fabregas Bonna	a	Jesus Santiago Moure	c
Isabel Martinez	a	Joana Ferreira do Amaral	e
Isabela Penna Ceravolo	a	Joanna Darc Aparecida Herzog Soares	a
Isabele Barbieri dos Santos	d	Joao Aguiar Nogueira Batista	e
Isabella Dib Ferreira Gremiao	c	Joao Alves Araujo Filho	c
Isaias Raw	c	Joao Aristeu da Rosa	c
Ises de Almeida Abrahamsohn	a	Joao Atilio Jorge	c
Isis Fernandes Magalhaes Santos	a	Joao Carlos Araujo Carreira	a
Italmar Teodorico Navarro	a	Joao Carlos Gonzales	c
Italo Rodrigues De Araujo Sherlock	a	Joao Carlos Palazzo de Mello	c
Ivan da Mota E Albuquerque	c	Joao Carlos Pinto Dias	a
Ivan M Roitt	-	Joao Elias Vidueira Ferreira	d
Ivan Teobaldo Neira Cortes	-	Joao Garcia Leme	c
Ivan Vieira Sonoda	d	Joao Luis Garcia	a
Ivana Nunes Gomes	a	Joao Luiz Ferreira	c
Ivete Conchon Costa	a	Joao Luiz Horacio Faccini	c
Ivna Alana Freitas Brasileiro da Silveira	c	Joao Luiz Mendes Wanderley	a
Ivo Santana Caldas	a	Joao Morelli Junior	c
Ivonise Follador de Oliveira	-	Joao Palermo Neto	c
Izabela Marques Doutrado Bastos	-	Joao Roberto da Mata	a
Izabella Cabral Hassum	c	Joao Santana da Silva	a
Izaltina Silva Jardim	a	Joao Soares Moreira	e
Izilda Curado	a	Joao Tadeu Ribeiro Paes	c
Jacenir Reis dos Santos Mallet	a	Joaquin Hernan Patarroyo Salcedo	a
Jacira Maria Andrade de Sousa	e	Joel Alves Lamounier	c
Jackson Machado Pinto	c	John F Peberdy	-
Jacqueline Isaura Alvarez Leite	c	John Leslie Turk	b
Jacques Robert Nicoli	c	Jolande Disch	-
Jacy Gameiro	c	Jonh Furlong	-
Jaime Martins de Santana	a	Jorge Alberto Lopez Rodriguez	e
Jair Pereira da Cunha Junior	a	Jorge Almeida Guimaraes	c
Jair Rodine Engracia Filho	-	Jorge Andrade Pinto	c
Jairo Dias Barreira	a	Jorge Cardoso Messeder	e
Jairo Pinheiro da Silva	c	Jorge Clarencio Souza Andrade	a
Jaline Coutinho Silverio	d	Jorge Elias Kalil Filho	a
James Harvey Maguire	b	Jorge Luiz Pesquero	c
Jamile Prado dos Santos	e	Jorge Marcelo de Freitas	d
Jan Carlo Morais Oliveira B Delorenzi	a	Jose Adail Fonseca de Castro	a
Janaina Claudia da Silva Saldanha	d	Jose Ailton da Silva	a
Janaina Fernanda Goncalves Neto	e	Jose Alberto Sampaio Nunes de Mello	-
Janaina Sousa Campos	d	Jose Almir Moraes da Rocha	a
Janayna Hammes de Almeida	d	Jose Andries Morgado Diaz	-
Jane Lima dos Santos	a	Jose Angelo Lauleta Lindoso	a
Janete Chung	e	Jose Bento Pereira Lima	a
Janete Soares Coelho dos Santos	a	Jose Borges Pereira	e
Janethe Deolina de Oliveira Pena	c	Jose Carlos Miranda	a
Janeusa Trindade de Souto	c	Jose Carlos Pereira de Souza	c
Jaqueleine Brandao Guerreiro Marotti	c	Jose Carlos Serufo	c
Jayne Angluster	a	Jose Ciriaco Pinheiro	c
Jayne Augusto de Souza Neto	a	Jose Clovis da Prado Junior	a
Jayne Neves	a	Jose da Rocha Carvalheiro	a
Jean Antoine Rioux	b	Jose Daniel Figueroa Villar	a



Name	Group	Name	Group
Jose Daniel Lopes	c	Juliana Martha Sa	-
Jose de Angelis Cortes	-	Juliana Natal Amazonas	d
Jose de Moura Goncalves	c	Juliana Perrone Bezerra de Menezes	a
Jose de Ribamar de Castro Carvalho	d	Juliana Ramos Pimenta	d
Jose Divino Lima	c	Juliana Saraiva	d
Jose Eduardo Serrao	c	Juliano Simoes de Toledo	a
Jose Eduardo Tolezano	a	Juliany Cola Fernandes Rodrigues	a
Jose Eloy dos Santos Junior	e	Julio Cesar Carranza Martinez	-
Jose Eymard Homem Pitella	-	Julio Cesar Mine	c
Jose Franco da Silveira Filho	a	Julio Cesar Rocha Costa	c
Jose Henrique Maia Campos de Oliveira	a	Julio Cesar Soares Alberti	e
Jose Jurberg	a	Julio Flavio Meirelles Marchini	e
Jose Leal Prado	c	Julio Pudles	a
Jose Lino Neto	c	Julio Scharfstein	a
Jose Luciano Nepomuceno da Silva	a	Junia de Sousa Franco	a
Jose Luiz de Barros Araujo	c	Karen Angelica Cavassani de Souza	a
Jose Luiz Martins do Nascimento	c	Karen dos Santos Charret	a
Jose Manuel Macario Rebelo	a	Karen Luisa Haag	c
Jose Marcelo Ramalho Ortigao	a	Karin Kirchgatter	a
Jose Marcio Sbruzzi Cardoso	d	Karina Nogueira Zeviani	-
Jose Maria Alvarez Mosig	a	Karina Penedo Carvalho	a
Jose Maria de Souza	a	Karine Rezende de Oliveira	a
Jose Maria Segovia de Arana	-	Karis Maria de Pinho Rodrigues	e
Jose Maria Soares Barata	a	Karla Consort Ribeiro	c
Jose Mario de Freitas Balanco	e	Katia Cirlene Alves Botelho	c
Jose Mauro Peralta	a	Katia da Silva Calabrese	a
Jose Miguel Ortega	c	Katia Denise Saraiva Bresciani	e
Jose Orivaldo Mengel Junior	c	Katia Roberta Fernandes	c
Jose Osvaldo Costa	-	Katia Solange Cardoso Rodrigues dos Santos	e
Jose Osvaldo Previato	a	Katyane de Sousa Almeida	e
Jose Raimundo Correa	e	Kelly Aparecida Geraldo Yoneyama	a
Jose Ribamar Mesquita Teixeira	a	Kelly Salomao	a
Jose Roberto Meyer Fernandes	a	Kelsen Dantas Eulalio	c
Jose Roberto Mineo	a	Kennedy Kiriira Gachoka	-
Jose Rodrigues Coura	a	Kenneth John Gollob	b
Jose Rodrigues da Silva	a	Kezia Katiani Gorza Scopel	a
Jose Ronnie Carvalho de Vasconcelos	a	Kildare Rocha de Miranda	a
Jose Wilton Pinheiro Junior	e	Killarney Ataide Soares	d
Joseli de Oliveira Ferreira	a	Klaus Scherrer	c
Joseli Lannes Vieira	a	Klaus Wrogemann	-
Josiana Gomes de Andrade	c	Laerte Bento Viola	e
Josiane Cardoso	e	Laerte Grisi	a
Joyce Eliza de Oliveira Souza	-	Lain Carlos Pontes de Carvalho	a
Juan Miguel Villalobos Salcedo	a	Lais de Carvalho	a
Jucara Fahrat de Carvalho Parra	-	Lanny Cristina Burlandy Soares	c
Judith Felman	c	Larry Simpson	b
Judith Kardos Kloetzel	a	Laura C Barbosa de Oliveira	-
Judith Tibisay Molina David	d	Laura Nogueira da Cruz	a
Julia Maria Costa Cruz	c	Lea Camillocoura	-
Julia Pinheiro Chagas da Cunha	a	Lea Cysne Finkelstein	a
Juliana Cristina Schmidt	d	Lea Ferreira Camillo Coura	a
Juliana da Matta Furniel Dutra	e	Leandro Lemgruber Soares	a
Juliana de Assis Silva Gomes Estanislau	a	Leda Quercia Vieira	a
Juliana de Meis	a	Leidi Maria Herrera Cabrera	-
Juliana Dias Costa Roque	a	Leila de Mendonca Lima	a
Juliana Giantomassi Machado	e	Leila Ines Aguiar Raposo da Camara Coelho	a
Juliana Gonzaga de Oliveira	a	Leila Maria Silva Lopes	e
Juliana Hipolito Pessoti	-	Leila Saddi Ortega	d
Juliana Lopes Rangel Fietto	a	Lenita Ramires dos Santos	e

Name	Group	Name	Group
Leonardo Augusto de Almeida	c	Luciana Mori Viero	c
Leonardo de Souza Rocha	a	Luciana Regina Meireles	a
Leonardo Freire de Lima	a	Luciana Ribeiro Garzoni	a
Leonardo Jose de Moura Carvalho	a	Luciana Rodrigues de Almeida	a
Leonardo Jose Richtzenhain	c	Luciana Teixeira Zimmermann	a
Leonardo Nimrichter	c	Luciana Urbano dos Santos	a
Leonardo Pereira Quintella	c	Luciana Vignolio Alves	d
Leoni Villano Bonami	-	Luciana Weidlich	c
Leonidas de Mello Deane	a	Luciane Moreno Storti de Melo	a
Leonor Bezerra Guerra	c	Luciane Rodrigues Portugal	d
Leonor Garcia Rincon	c	Luciano Andrade Moreira	a
Leonor Laura Pinto Leon	a	Luciano Aparecido Panagio	e
Leony Cristina Caetano	d	Luciano Melo de Souza	d
Leopoldo de Meis	c	Luciene Chaves Fernandes	c
Leucio Camara Alves	a	Lucila Grossi Goncalves Pacifico	c
Lia Carolina Almeida Soares de Medeiros	a	Lucile Maria Floeter Winter	a
Liana Cardoso Verinaud	a	Lucilene Amorim Silva	a
Liane Casagrande	d	Lucilene Simoes Mattos	d
Lidia Maria Pepe de Moraes	c	Lucimar Goncalves Milagres	e
Lidiane Aparecida Pereira de Sousa	e	Lucimeire Antonelli da Silveira	a
Ligia Miranda Ferreira Borges	c	Lucio Andre Viana Dias	a
Lileia Goncalves Diotaiuti	a	Lucio Ayres Caldas	a
Liliam de Oliveira Faria Macaneiro	a	Lucio Holanda Gondim de Freitas Junior	a
Lilian Lacerda Bueno	a	Lucio Roberto Cancado Castellano	a
Lilian Maria Castilho	e	Lucy Megumi Yamauchi Lioni	a
Lilian Maria Reis Afonso	-	Ludmila Fiorenzano Baethgen	c
Liliana Torcoroma Garcia Sanchez	d	Ludmila Rodrigues Pinto Ferreira	a
Liliane Coelho da Rocha Nery	a	Luigi Bogliolo	-
Liliane Martins dos Santos	e	Luis Andre Pontes	c
Linda Khalili Boukai	-	Luis Carlos Crocco Afonso	a
Lindamar Maria de Souza Minelli	-	Luis Eduardo Ramirez Giraldo	a
Lindsay Ann Pirrit	d	Luis Fernando Santana	a
Lis Ribeiro do Valle Antonelli	e	Luis Natividad Nunez Apaza	-
Lizandra Guidi Magalhaes	a	Luisa Damazio Rona Pitaluga	a
Loic Monjour	b	Luiz Alberto Santana	a
Loislene Oliveira Brito	e	Luiz Antonio Franco da Silva	c
Lorraine Campanati Araujo de Andrade	e	Luiz Antonio Rodrigues de Freitas	a
Lourdes Maria Garcez dos Santos Silveira	a	Luiz Augusto Batista Brito	c
Luci Ana Fernandes Martins	-	Luiz Augusto Magalhaes	c
Lucia Eiko Oishi Yai	-	Luiz Augusto Pinto	d
Lucia Helena Odwyer de Oliveira	a	Luiz Caetano da Silva	c
Lucia Helena Pinto da Silva	a	Luiz Candido de Souza Dias	c
Lucia Maria da Cunha Galvao	a	Luiz Carlos Alves	a
Lucia Mendonca Previato	a	Luiz Carlos Duarte Formiga	-
Lucia Padilha Cury Thomaz de Aquino	d	Luiz Carlos Junqueira	c
Luciamare Perinetti Alves Martins	a	Luiz Claudio Milette	a
Luciana da Conceicao Pinto	a	Luiz da Silva Vieira	c
Luciana da Silva Mukai	c	Luiz de Macedo Farias	c
Luciana de Almeida Silva	a	Luiz Dione Barbosa de Melo	a
Luciana de Fatima Sianto Martins	-	Luiz Fabiano Borges Oliveira	a
Luciana de Gouveia Viana	e	Luiz Fernando Rocha Ferreira da Silva	a
Luciana de Oliveira Andrade	a	Luiz Hildebrando Pereira da Silva	a
Luciana Furlaneto	c	Luiz Marcelo Aranha Camargo	a
Luciana Girotto Gentil	e	Luiz Ricardo Orsini Tosi	a
Luciana Lima	a	Luiz Roberto Sardinha	a
Luciana Lopes de Almeida Ribeiro Garzoni	a	Luiz Rodolpho Raja Gabaglia Travassos	a
Luciana Loureiro Penha Pacheco	-	Luiz Vicente Rizzo	a
Luciana Madeira da Silva	e	Lukas C Kuhn	-
Luciana Maria Silva	c	Luzia Helena Carvalho	a



Name	Group	Name	Group
Luzineide Wanderley Tinoco	a	Marcio Botelho de Castro	c
Lysangela Ronalte Alves	a	Marcio Loureno Rodrigues	-
Magdalena Nascimento Renno	a	Marcio Neves Boia	c
Maira Cegatti Bosetto	a	Marcio Silva	a
Manoel Adriaao Gomes Filho	c	Marcio Sobreira S Araujo	-
Manoel Barral Netto	a	Marcio Vinicius Lins de Barros	c
Manoel Otavio da Costa Rocha	a	Marco Antonio de Oliveira	e
Manoel Paes de Oliveira Neto	a	Marco Antonio Granja Barbosa	c
Manzelio Cavazzana Junior	e	Marco Aurelio Krieger	a
Mara Silvia Carvalhaes	a	Marco Tullio Alves da Silva	a
Marcel Ivan Ramirez Araya	a	Marco Tullio Antonio Garciazapata	a
Marcel Marin Villa	-	Marcos Andre Vannier dos Santos	a
Marcel Teixeira	a	Marcos Augusto Grigolin Grisotto	a
Marcela Barbosa de Figueiredo	a	Marcos Barbosa de Souza	a
Marcela de Freitas Lopes	a	Marcos Celio de Almeida	e
Marcela Goncalves Drummond	c	Marcos de Assis Moura	e
Marcela Lencine Ferraz	d	Marcos Gonzaga dos Santos	a
Marcela Orsini Andrade	d	Marcos Henrique Ferreira Sorgine	a
Marcello Andre Barcinski	a	Marcos Horacio Pereira	a
Marcello Xavier Sampaio	a	Marcos Jose Marques	a
Marcelo Beltrao Molento	c	Marcos Leoni Gazarini Dutra	e
Marcelo da Silva Genestra	a	Marcos Pinheiro Franque	a
Marcelo Einicker Lamas	a	Marcos Roberto Bonuti	c
Marcelo Luiz Carvalho Goncalves	e	Marcos Rommel Cabanillas Silva	a
Marcelo Ribeiro da S Briones	a	Marcos Takashi Obara	a
Marcelo Rodrigues Pinto	e	Marcos Vinicius da Silva	a
Marcelo Salabert Gonzalez	a	Marcus Fernandes de Oliveira	a
Marcelo Santos Castilho	e	Marcus Vinicius Gouvea	d
Marcelo Tavares Viana	c	Margaret Haiganouch Magdesian	e
Marcelo Urbano Ferreira	a	Margareth Maria Lessa Goncalves	c
Marcelo Vidigal Caliari	a	Margarida Maria de Lima Pompeu	c
Marcia Alcantara Santos	-	Margo Gomes de Oliveira Karnikowski	-
Marcia Almeida de Melo	a	Margoth Mitchela Moreno Vigo	d
Marcia Antoniazi Michelin	e	Margoth Ramos Garnica	-
Marcia Aparecida Duranti	d	Maria Amelia Villela Oliva	e
Marcia Aparecida Speranca	a	Maria Angelica Vieira da Costa Pereira	c
Marcia Attias	a	Maria Aparecida da Gloria Faustino	a
Marcia Benedita de Oliveira Silva	a	Maria Aparecida da Silva	-
Marcia Chame	e	Maria Aparecida Gomes	a
Marcia Cristina Alves Teixeira	d	Maria Arlene Fausto	c
Marcia Cristina Aquino Teixeira	a	Maria Auxiliadora de Sousa	a
Marcia Cristina Fornazim	c	Maria Auxiliadora Pantoja Ferreira	e
Marcia Cristina Paes	a	Maria Auxiliadora Roque de Carvalho	-
Marcia de Berredo Pinho	e	Maria Beatriz Araujo Silva	a
Marcia de Figueiredo Pereira	c	Maria Belem Cassera	b
Marcia de Melo Barbosa	c	Maria Carla Bastos Abdo	-
Marcia dos Santos Lazera	c	Maria Carolina Quartim Barbosa Elias	a
Marcia Ferraz Nogueira	-	Maria Cecilia Di Ciero Fernandes	a
Marcia Helena Rodrigues Velloso	c	Maria Clara Leal Nascimento Silva	d
Marcia Kiyoe Shimada	a	Maria Clorinda Soares Fioravanti	e
Marcia Maria de Negreiros Pinto Rocha	c	Maria Cristina Casaqui Carollo	d
Marcia Mayumi Ishikawa	c	Maria Cristina Fortes Santos de Bustamante	d
Marcia Narciso Borges	-	Maria Cristina Machado Motta	a
Marcia Pereira de Oliveira	a	Maria Cristina Nonato	a
Marcia Ramos E Silva	c	Maria Cristina Roque Antunes Barreira	c
Marcia Regina Machado dos Santos	e	Maria da Gloria Bonecini de Almeida	a
Marcia Regina Piuvezam	e	Maria da Gloria Bonfim	-
Marcia Rosa de Oliveira	a	Maria da Gloria Fernandes Pegado	a
Marcia Tosta Xavier	e	Maria da Gloria Gomes Cristino	c

Name	Group	Name	Group
Maria da Gloria Martins Teixeira	d	Maria Zilma Andrade Rodrigues	d
Maria da Gloria Quintao E Silva	e	Marialice da Fonseca Ferreira da Silva	e
Maria Dalila Forlano Riera	c	Mariana Caldas Waghabi	a
Maria das Gracas Costa Alecrim	a	Mariana Machado Hecht	a
Maria das Gracas Miranda Danelli	e	Mariane Bandeira de Melo Braga	-
Maria das Gracas Prianti	a	Mariangela Carneiro	a
Maria de Fatima Costa Alves	e	Mariano Gustavo Zalis	a
Maria de Fatima Ferreira da Cruz	a	Mariko Yokoo	a
Maria de Fatima Freire de Melo Ximenes	a	Marilene Marcurzzo do Canto Cavalheiro	-
Maria de Fatima Madeira	a	Marilene Maria de Lima	a
Maria de Fatima Martins Horta	a	Marilene Suzan Marques Michalick	a
Maria de Lourdes Petrillo Peixoto	a	Marina de Moraes Mourao	c
Maria de Lourdes Ribeiro de Carvalho	d	Marina Vianna Braga	e
Maria de Nazare Correia Soeiro	a	Marinete Marins Povoa	a
Maria de Nazare Tavares da Silva	a	Marinez Almeida de Faria	d
Maria de Nazareth Silveira Leal de Meirelles	a	Mario Antonio Spano	e
Maria do Amparo Salmito Cavalcanti	-	Mario Endsfeldez Camargo	a
Maria do Carmo Pereira Nunes	c	Mario Steindel	a
Maria do Socorro Costa Oliveira Braga	e	Marise Pinheiro Nunes	a
Maria do Socorro Rosa Rodrigues de Carvalho	a	Maristela Gomes da Cunha	a
Maria Eduarda Monteiro Silva	d	Maristela Martins de Camargo	e
Maria Emilia Bodini Santiago	e	Mariza Fordelone Rosa Cruz	-
Maria Esther Carvalho	a	Mariza Martins Avelino	a
Maria Esther Macedo	d	Marlei Joseli Augusto	-
Maria Fernanda Laranjeira da Silva	a	Marlene Antonia dos Reis	c
Maria Fernanda Reis Gavazzoni Dias	c	Marlene Benchimol	a
Maria Helena Franco Morais	d	Marlene Cabrine dos Santos	a
Maria Heloisa de Souza Lima Blotta	c	Marlene Isabel Vargas Viloria	a
Maria Ilma Andrade Santos de Araujo	-	Marlene Tiduko Ueta	c
Maria Imaculada Muniz Barboza Junqueira	a	Marlisson Augusto Costa Feitosa	a
Maria Inacia Estevao Costa	c	Marselha Marques Barral	c
Maria Inez Santos Silva	e	Marsen Garcia Pinto Coelho	c
Maria Isabel Botelho Vieira	d	Marta Chagas Monteiro	a
Maria Isabel Lynch Gaete	a	Marta Citelli dos Reis	e
Maria Izabel de Pinho Pesso Amorim	-	Marta de Lana	a
Maria Jania Teixeira	a	Marta Maria Geraldus Teixeira	a
Maria Jose Conceicao	c	Marta Tavares Dagosto	a
Maria Julia Manso Alves	a	Marta Teixeira Gomes	a
Maria Julia Salim Pereira	c	Martha Cecilia Suarez Mutis	a
Maria Leticia Costa Reis	a	Martin Cancela Sehabiague	c
Maria Linda Flora de Novaes Benetton	c	Martin Nemer	-
Maria Lucia Belem Pinheiro	c	Massayoshi Yoshida	c
Maria Lucia Rosa Rossetti	c	Matheus Andrade Rajao	e
Maria Lucia Vieira Moreno	a	Mauricio Costa Fonseca Vieira	-
Maria Luiza Brito de Sousa Atta	a	Mauricio da Rocha e Silva	c
Maria Luiza Cruz	e	Mauricio Martins Rodrigues	a
Maria Madalena Pessoa Guerra	c	Mauricio Roberto Motta Pinto da Luz	d
Maria Norma Melo	a	Maurilio Jose Soares	a
Maria Olivia Amado R Bacellar	a	Mauro Celio de Almeida Marzochi	a
Maria Pilar Iribar Calvo	a	Mauro Ferreira de Azevedo	a
Maria Regina Lima	a	Mauro Javier Cortez Veliz	a
Maria Regina Reis Amendoeira	a	Mauro Shugiro Tada	a
Maria Rosimery de Carvalho	e	Max Jean de Ornelas Toledo	a
Maria Sandra Andrade	d	Mayra Xiomara Hernandez Sanabria	a
Maria Silvia Furquim de Azevedo Morgulis	c	Meire Ioshie Hiyane	a
Maria Stela Branquinho	a	Meire Maria de Lima	d
Maria Terezinha Bahia	a	Melissa Orzechowski Xavier	c
Maria Valdrinez Campana Lonardoni	a	Melissa Regina Fessel	e
Maria Vos Paumgartten Deane	a	Michael Alexander Miles	b



Name	Group	Name	Group
Michael Waisberg	c	Nataly Araujo de Souza	a
Michel Pinkus Rabinovitch	a	Nayara de Oliveira Belo	a
Michelle Aparecida Ribeiro Freitas	a	Neci Matos Soares	a
Michelle Barbi de Moura	-	Neide Maria da Silva	a
Michelle Cristina Guerreiro dos Reis	c	Nelson da Silva Cordeiro	c
Michelle Frazao Muzitano	a	Nelson Monteiro Vaz	c
Michelle Tanny Cunha do Nascimento	a	Nelson Papavero	c
Michelle Viviane Sa dos Santos	c	Neuza Maria Alcantara Neves	e
Michelline do Vale Maciel	e	Newton Valerio Verbisck	e
Milan Trsic	c	Ney Ribeiro Leite	d
Milane de Souza Leite	e	Nicolau Maues Serra Freire	c
Milden Rodrigues de Santa Rosa	-	Nildimar Alves Honorio	-
Milena Botelho Pereira Soares	a	Nilton Barnabe Rodrigues	a
Milena de Paiva Cavalcanti	a	Nitza Maria Alencar Gomes	a
Milene Alvarenga Rachid	e	Nobuko Yoshida	a
Miliane Moreira Soares de Souza	c	Noemi Nosomi Taniwaki	a
Milton Adriano Pelli Oliveira	a	Norah Medrano Mercado	-
Miralba Freire Carvalho Ribeiro da Silva	d	Norbert Miekeley	-
Miria Gomes Pereira	a	Norma Vollmer Labarthe	c
Miriam Cristina Leandro Dorta	a	Nubia Estella Matta Camacho	-
Miriam da Silva Rocha	d	Octavio Fernandes da Silva Filho	a
Miriam de Souza Macre	d	Odair Genaro	a
Miriam Maria Silva Costa	-	Olavo dos Santos Pereira Junior	c
Miriam Oliveira E Rocha	-	Olga Fischman Gompertz	c
Miriam Silva Rafael	a	Olindo Assis Martins Filho	a
Mirian Claudia de Souza Pereira	a	Olney Vieira da Motta	c
Mirian Silva do Carmo	e	Osmarina Pereira da Paixao e Silva	a
Mirko Giuliano Rojas Cortez	-	Osvaldo Andrade Santos Filho	e
Mirna Aparecida Pereira	c	Osvaldo Marinotti	a
Miryam Marroquin Quelopana	e	Osvaldo Pompilio de Melo Neto	a
Mislaine Adriana Brezam	-	Otavio de Toledo Nobrega	e
Moacir Paranhos Silva	a	Otavio Henrique Thiemann	a
Moema de Alencar Hausen	e	Otilio Machado Pereira Bastos	a
Monamaris Marques Borges	a	Pamela Orjuela Sanchez	a
Monica Bastos de Lima Barros	c	Patricia Alves Morking	a
Monica Cristina de Moraes Silva	a	Patricia Carneiro dos Santos	c
Monica da Silva Nunes	d	Patricia Cuervo Escobar	a
Monica de Melo Medeiros	-	Patricia de Azambuja Penna	a
Monica Lucia Giraldo Restrepo	-	Patricia de Oliveira Camera	a
Monica Lucia Gomes	a	Patricia Fampa Negreiros Lima	a
Monica Maria de Albuquerque Pontes	c	Patricia Flavia Quaresma	a
Monica Martinelli Nunes de Carvalho	-	Patricia Giupponi Cardoso	a
Monique Mantovani	d	Patricia Irie Furuta	d
Mucio Flavio Barbosa Ribeiro	a	Patricia Izquierdo Cafrune	c
Myrian Morato Duarte	d	Patricia Karla Santos Ramos	a
Myrna Cristina Bonaldo	e	Patricia Maria D Almeida Lima	c
Myrna Garcia Serrano	e	Patricia Massara Martinelli	a
Nadia Regina Pereira Almosny	a	Patricia Pellegrino de Souza	c
Nadjar Nitz Silva E Silva	-	Patricia Puccinelli Orlando Nogueira	c
Naftale Katz	c	Patricia Regina Barboza Araujo	-
Nagila Francinete Costa Secundino	a	Patricia Rosa de Araujo	d
Nanci Akemi Missawa	d	Patricia Sampaio Tavares Veras	a
Nanci do Nascimento	c	Patricia Silva Cisalpino	c
Nancy Stella Vargas Bonilla	d	Patricia Soares de Maria de Medeiros	a
Nara Amelia da Rosa Farias	a	Patricia Spoto Correa	-
Narcisa Leal da Cunha E Silva	a	Patricio Andres Manque Manque	e
Nassim da Silveira Calixto	c	Patricio Emilio Porcile Cerdá	-
Natal Santos da Silva	e	Patrick Abdala Fonseca Gomes	d
Natalino Hagime Yoshinari	-	Paul David Stolley	c

Name	Group	Name	Group
Paula Dias Bevilacqua	c	Raissa Bocchi Pedroso	a
Paula Lobao Antunes de Siqueira Torres	-	Raquel da Silva Pacheco	a
Paula Melo de Abreu Vieira	a	Raquel Elisa da Silva Lopez	a
Paula Rocha Moreira	c	Raquel Ferreira Rodrigues	a
Paula Rogerio Fernandes	-	Raquel Lopes Martins Souza	c
Paula Viviane de Souza Queiroz	-	Raquel Rodrigues Britto	c
Paulo Afonso Nogueira	a	Raquel Saucier Gomes	d
Paulo Alexandre Abrahamsohn	c	Raquel Silva Lisboa	e
Paulo Batista de Carvalho	a	Raul Manhaes de Castro	c
Paulo Carvalho Ferreira	c	Raymundo Martins de Castro	a
Paulo Cesar Augusto de Souza	a	Regiane Mathias	a
Paulo de Tarso Goncalves Leopoldo	a	Regina Celia Bressan Queiroz de Figueiredo	a
Paulo de Tarso Landgraf Botteon	e	Regina Celia Lima de Macedo	c
Paulo de Toledo Artigas	c	Regina de Fatima dos Santos Braz	a
Paulo Eduardo Alencar de Souza	c	Regina Helena Saramago Peralta	a
Paulo Eduardo Martins Ribolla	a	Regina Maria Barretto Cicarelli	a
Paulo Emilio Vanzolini	c	Regina Maura Bueno Franco	a
Paulo Fernando de Vargas Peixoto	c	Regina Mitsuka Bregano	a
Paulo Fernando Tormin Borges Crosara	c	Reginaldo Pecanha Brazil	a
Paulo Filemon Paolucci Pimenta	a	Regis Bernardo Brandim Gomes	a
Paulo Henrique da Costa Pinheiro	a	Renata Ben Baisch	-
Paulo Inacio da Costa	c	Renata Cristina Pardos Baida	d
Paulo Nogueira Neto	c	Renata de Lima Alvarenga Bottrel	d
Paulo Novis Rocha	e	Renata de Meirelles Santos Pereira	a
Paulo Oldemar Scherer	c	Renata Grespan	e
Paulo Paes de Andrade	a	Renata Guerra de Sa Cota	c
Paulo Roberto Lima Machadoo	a	Renata Oliveira de Araujo Soares	a
Paulo Sergio Monzani	d	Renata Rosito Tonelli	a
Paulo Soares da Costa	c	Renata Santiago Alberto Carlos	e
Pedro Albajar Vinas	-	Renata Tome Alves	a
Pedro Geraldo Pascutti	c	Renata Tonhosolo	a
Pedro Henrique Ferri	c	Renata Torres de Souza	a
Pedro Lagerblad de Oliveira	a	Renato Arruda Mortara	a
Pedro Muanis Persechini	c	Renato Augusto Damatta	a
Pedro Roosevelt Torres Romao	a	Renato Porrozzi de Almeida	e
Pedro Sadi Monteiro	-	Renato Sathler Avelar	a
Pedro Silva Pinto	a	Ricardo Andrade Barata	a
Percy Cyril Claude Garnham	b	Ricardo de Matos Santa Rita	-
Peter Lydyard	-	Ricardo Goncalves	a
Phileno Pingue Filho	a	Ricardo Lourenco de Oliveira	a
Philip Davis Marsden	a	Ricardo Luiz Dantas Machado	-
Philippe Dorchies	-	Ricardo Pereira Igreja	-
Philippe Grellier	a	Ricardo Ramos Mendonca Filho	c
Piero Bagnaressi	a	Ricardo Ribeiro dos Santos	a
Pierre Grabar	-	Ricardo Santiago Gomez	c
Poliana Deolindo	e	Ricardo Scher	a
Priscila Carneiro Campos	a	Ricardo Toshio Fujiwara	a
Priscila Grynberg	a	Ricardo Tostes Gazzinelli	a
RT Damian	-	Ricardo Wagner de Almeida Vitor	a
Rafael Dhalia	a	Ricardo Wagner Dias Portela	a
Rafael Maciel de Freitas	a	Rilke Tadeu Fonseca de Freitas	c
Rafael Marques Porto	d	Rinaldo Aparecido Mota	a
Rafael Miyazawa Martins	a	Rinaldo Duarte	d
Rafael Otavio Cancado Motta	a	Rita de Cassia Alves Alcantara de Menezes	e
Rafael Paranhos de Mendonca	c	Rita de Cassia dos Santos Vasconcellos	c
Rafael Verissimo Monteiro	a	Rita de Cassia Moreira de Souza	a
Rafael Victorio Carvalho Guido	a	Rita de Cassia Pontello Rampazzo	a
Raimunda Nonata Ribeiro Sampaio	a	Rita de Cassia Ruiz	e
Raimundo Wilson de Carvalho	a	Rita do Socorro Uchoa da Silva	e



Name	Group	Name	Group
Riva de Paula Oliveira	a	Rosana Maria Feio Libonati	c
Robert Coffman	-	Rosana Regina de Saldanha	c
Roberta Dias Rodrigues Rocha	a	Rosane Maria Temporal	a
Roberta Lemos Freire	a	Rosane Moreira Silva de Meirelles	d
Roberta Olmo Pinheiro	e	Rosangela Clara Paulino	d
Roberta Ribeiro Silva	e	Rosangela Locatelli Dittrich	a
Roberto Carlos Grassi Malta	e	Rosangela Maria Rodrigues	a
Roberto Esteves Pires Castanho	a	Rosangela Zacarias Machado	a
Roberto Jose da Silva Badaro	a	Rosaura Penaranda Carrillo	-
Roberto Jose Meyer Nascimento	c	Rosely Maria Conceicao Zancope	-
Roberto Martins Goncalves	c	Rosiane Aparecida da Silva	a
Roberto Mitsuyoshi Hiramoto	a	Rossana Correa Netto de Melo	e
Roberto Montoya Araujo	-	Rossiane Claudia Vommaro	a
Roberto Regis Magalhaes Pinto	c	Rozalia Mendes Figueira Campos	a
Roberto Rudge de Moares Barros	a	Rubem Figueiredo Sadok Menna Barreto	a
Roberto Ruhman Daher	c	Rubens Jose do Nascimento	d
Robin G Bell	c	Rubens Riscala Madi	c
Robson Amaro Augusto da Silva	a	Ruberval Armando Lopes	c
Robson Cavalcanti Ferreira	d	Rute Maria Goncalves de Andrade	c
Robson Coutinho Silva	c	Sabrina Castilho Duarte	a
Robson Sartorello	d	Salvatore Giovanni de Simone	a
Rodivan Braz da Silva	c	Samanta Etel Treiger Borborema	a
Rodolfo Antonio Devera	-	Samuel Goldenberg	a
Rodolfo Cordeiro Giunchetti	a	Samuel Pessoa	a
Rodolfo Pereira Mendes	-	Sandra Antonia Tagliavini Santos	c
Rodrigo Barbosa Ferraro	d	Sandra Cristina Gomes Oliveira	c
Rodrigo Correa de Oliveira	a	Sandra do Lago Moraes Avila	-
Rodrigo Costa da Silva	a	Sandra Lucia da Cunha E Silva	c
Rodrigo Hinojosa Valdez	e	Sandra Mara Alessi Aristides Arraes	-
Rodrigo Pedro Pinto Soares	a	Sandra Mayumi Nishi	a
Roger Louis Storck	-	Sandra Regina Afonso Cardoso	e
Roger T Dean	b	Sandro Nelson Lunedo	a
Rogeria Maria Ventura	d	Sanivia Aparecida de Lima Pereira	a
Rogerio Amino	b	Sanny Helena Valente de Oliveira Alberio	-
Rogerio Costa Gondim	c	Santos Joao Barberino	e
Rogerio Luiz Kopp	a	Santuza Maria Ribeiro Teixeira	a
Rogerio Meneghini	c	Sara Timoteo Passos	a
Rogerio Saad Vaz	a	Sarah Maria Singulano Cinque	-
Roland J Terry	-	Saulo Cabral Bourguignon	a
Romario Cerqueira Leite	c	Saulo Teixeira de Moura	a
Romeu Cantusio Neto	c	Savio Amado da Silva	c
Romulo Menna Barreto Valenca	a	Sebastiao Afonso Viana Macedo Neves	c
Romulo Tadeu Dias de Oliveira	c	Sebastiao Aldo da Silva Valente	a
Ronald Bastos Freire	e	Sebastiao Cronemberger Sobrinho	c
Ronald Sederoff	-	Sebastiao Martins Souza Netto	-
Ronaldo Peres Costa	d	Sebastiao Tostes Junior	d
Ronaldo Reis	-	Selene Maia de Morais	a
Ronaldo Ribeiro de Albuquerque	c	Selma Aparecida Souza Kuckelhaus	c
Ronaldo Zucchi	c	Selma Bacellar de Souza Leao	a
Ronei Luciano Mamoni	c	Selma Giorgio	a
Ronize Andreia Ferreira	a	Selma Lilian Sallenave Salles	-
Rosa Amelia Maldonado Medina	a	Selma Maria Bezerra Jeronimo	a
Rosa Maria Esteves Arantes	a	Sergian Vianna Cardozo	a
Rosa Maria Ferreira Noguerol Odorizzi	d	Sergio Caldas	c
Rosa Maria Tubaki	a	Sergio Costa Oliveira	c
Rosa Teixeira de Pinho	a	Sergio Danilo Junho Pena	a
Rosalia Moraes Torres	a	Sergio de Albuquerque	a
Rosana Alves Martorelli	a	Sergio G Coutinho	a
Rosana de Sousa Veras	a	Sergio Henrique da Silva	c

Name	Group	Name	Group
Sergio Henrique Ferreira	c	Susana Balmant Emerique Simoes	c
Sergio Henrique Seabra	a	Suse Daise Silva Barbosa	-
Sergio Marcelo Rodriguez Malaga	a	Susie Andries Nogueira	c
Sergio Reyes	c	Suzana Elisa Moreno	-
Sergio Salles Xavier	c	Suzana Passos Chaves	a
Sergio Schenkman	a	Suzete Araujo Oliveira Gomes	a
Sergio Steven Cornejo Rubin de Celis	e	Sylvia Regina Temer Cursino	d
Sergio Verajovski Almeida	c	Sylvio Celso Goncalves da Costa	a
Sheila Cristina Nardelli	a	Symone Fulgencio Lima	c
Sheila Tavares Pereira	d	Taciana de Figueiredo Soares	c
Shirley Maddison	-	Taia Maria Berto Rezende	e
Siegfried Siegesmund	-	Tais Nobrega de Sousa	a
Silvana Maria Eloi Santos	a	Tamara Nunes de Lima Camara	a
Silvana Marques de Araujo	a	Tania Cremonini de Araujo Jorge	a
Silvana Tulio Fortes	c	Tania Mara Pinto Dabes Guimaraes	e
Silvane Maria Fonseca Murtat	a	Tania Maria Pacheco Shubach	-
Silvia Amaral Goncalves da Silva	a	Tania Maria Valente Pacheco	c
Silvia Beatriz Boscardin	a	Tania Santos de Marco	-
Silvia Cristina Osaki	c	Tania Ueda Nakamura	a
Silvia de Barros Mazon	e	Tania Zaverucha do Valle	a
Silvia Ermelinda Barbosa	a	Tanos Celmar Costa Franca	e
Silvia Maria Santos Carvalho	a	Tatiana Berber Teixeira	d
Silvia Maria Spalding	a	Tatiana Galvao de Melo de Oliveira	a
Silvia Reni Bortolin Uliana	a	Tatiana Rodrigues de Moura	a
Silvio Bertini	d	Tatiana Shioji Tiuman	a
Silvio Celso Gomes da Costa	-	Tatiane Luciano Balliano	c
Silvio Favoretto Junior	d	Tatjana Keesen de Souza Lima	a
Silvio Luis Pereira de Souza	a	Tecia Maria Ulisses de Carvalho	a
Silvio Santana Dolabella	a	Tercio de Souza Goes	-
Simone Aparecida Antoniazi	d	Teresa Cristina Bergamo do Bomfim	a
Simone Cardoso Leon	a	Teresa Cristina Franca de Assumpcao	a
Simone da Fonseca Pires	a	Teresa Cristina Leandro de Jesus	a
Simone Ladeia Andrade	a	Teresa Cristina Melo Garcia	c
Simone Patricia Carneiro de Freitas	a	Teresa Cristina Monte Goncalves	a
Simone Pontes Xavier	c	Teresa Fernandes Silva do Nascimento	a
Simoni Machado de Medeiros	d	Tereza Cristina Orlando	a
Sineide Maria de Oliveira Vilela	-	Thais Cristina Baeta Soares Souto Padron	a
Sinval Pinto Brandao Filho	a	Thais Ferreira Isabel	a
Solange Cristina Uber Busek	c	Thais Gomes Verzignassi Silveira	a
Solange do Perpetuo Socorro Evangelista Costa	c	Thais Helena Constantino Patelli	e
Solange Lisboa de Castro	a	Thales de Brito	a
Solange Maria Gennari	c	Thatiane Santos de Simone	-
Solange Maria Magalhaes da Silva Porto	c	Thiago de Castro Gomes	a
Sonia de Lucena Mioranza	a	Thiago Santana Gastardelo	d
Sonia Gumes Andrade	a	Thuioshi Ioneda	c
Sonia Jancar	c	Tiago Moreno Castilho	a
Sonia Maria de Freitas	c	Tiago Wilson Patriarca Mineo	a
Sonia Maria Neumann Cupolilo	a	Tom Blundell	b
Sonia Nair Bao	c	Tomaz Aroldo da Mota Santos	c
Sonia Regina Lambert Passos	c	Tonny Hiroshi Katsuragawa	-
Sonia Rolim Reis	a	Tricia Maria Ferreira de Sousa Oliveira	a
Sonia Soares Costa	a	Tulio Marcos Santos	c
Soraya Torres Gaze	e	Ubirajara Ribeiro Martins de Souza	c
Stefano Trapani	a	Udelysses Janete Veltrini Fonzar	c
Stella Maria Barrouin Melo	a	Ueslei Teodoro	d
Stella Maris Gonzalez Cappa	b	Ulisses Gazos Lopes	a
Stenio Perdigao Fragoso	a	Uriel Franco da Rocha	a
Steven Reed	b	Usha Vashist	b
Sthenia Santos Albano Amora	c	Vaca Marin Miguel Angel	-
Stuart Schlossman	-	Vagner Jose Mendonca	a
Sueli Fumie Yamada Ogatta	a	Valdelaine Etelvina Miranda de Araujo	d
Susana Andrea Sculaccio	d	Valdelice Oliveira Burgos	d

Name	Group	Name	Group
Valderez Bastos Valero Lapchik	e	Wagner Campos Otoni	c
Valdir de Queiroz Balbino	a	Wagner Loyola	c
Valeria Cavalcanti Rolla	c	Wagner Luiz Tafuri	a
Valeria Marcal Felix de Lima	a	Wagner Welber Arrais da Silva	a
Valeria Pereira Nacife	e	Wagnner Jose Nascimento Porto	e
Valeria Rego Alves Pereira	-	Waldemar Naves do Amaral	e
Valeska de Andrade Stempliuk	e	Walderez Ornelas Dutra	a
Valter da Silva Queiroz	c	Wallace Raimundo Araujo dos Santos	c
Valter Ferreira de Andrade Neto	a	Walter Belda Junior	c
Vanderlei Rodrigues	c	Walter Ceretti Junior	a
Vanessa Cabreira de Freitas	a	Walter Colli	a
Vanessa Diniz Atayde	-	Walter dos Santos Lima	c
Vanessa Migliaccio	a	Walter Fiers	-
Vanessa Muradian	-	Walter Flausino	a
Vanessa Peruhype Magalhaes Pascoal	a	Walter Kindro Andreoli	d
Vanessa Santos Sotomaior	e	Walter Leira Teixeira Filho	d
Vanessa Silvestre Ferreira de Oliveira	-	Wander Rogerio Pavanelli	a
Vanete Thomaz Soccol	a	Wanderley de Souza	a
Vania Lucia Brandao Nunes	a	Wanderli Pedro Tadei	a
Vania Lucia de Assis Santana	c	Wanderson Duarte da Rocha	a
Vania Rita Elias Pinheiro Bittencourt	c	Wanderson Geraldo de Lima	a
Vanize de Oliveira Macedo	a	Wanessa Christina de Souza Neiras	d
Vanja Maria Veloso	d	Warren Thomas Atyeo	-
Vanja Suely Pachiano Calvosa	-	Washington Luis Conrado dos Santos	a
Vera da Costa Valente	a	Washington Luiz Tafuri	a
Vera Lucia Costa Vale	c	Wayner Vieira de Souza	c
Vera Lucia Pereira Chioccola	a	Welber Daniel Zanetti Lopes	c
Vera Margareth Scarpassa	-	Wendel Coura Vital	a
Vera Silvia de Freitas Vinhais	-	Wendell Sergio Ferreira Meira	a
Veronica Figueiredo do Amaral	a	Wilhelm Otto Daniel Martin Neitz	-
Veronica Gomes Monteiro	e	Wilma Marta Elsner Diederichsen de Brito	c
Veronica Schmitz Pereira	a	William A Ayer	-
Vicente Amato Neto	c	William Mello Kattenbach	a
Vicente de Paula Antunes Teixeira	c	Williams Jorge da Cruz Macedo	a
Vicente de Paulo Coelho Peixoto de Toledo	a	Willian de Castro Borges	-
Victor Martin Quintana Flores	c	Wilmar Dias da Silva	c
Victor Nussenzweig	b	Wilson Duarte Alecrim	-
Victorio Valeri	-	Wilson Jacinto Silva de Souza	a
Vinicio Cotta de Almeida	e	Wilson Roberto Navega Lodi	c
Vinicio Santana Nunes	a	Wilson Savino	a
Virginia Maria Barros de Lorena	a	Wilton Carlos Zanetti Lopes	-
Virginia Maria Goes da Silva	a	Wim Maurits Sylvain Degrave	a
Virmondes Rodrigues Junior	a	Wladimir Lobato Paraense	a
Vitorino Modesto dos Santos	d	Wornei Silva Miranda Braga	c
Viviane de Oliveira Vasconcelos	c	Yara de Miranda Gomes	a
Viviane Ferraz de Paula	c	Yara Maria Traub Cseko	a
Viviane Monteiro Goes	d	Yasmine Belkaid	b
Viviane Rodrigues Esperandim	a	Zander Barreto de Miranda	-
Viviane Sampaio Boaventura de Oliveira	a	Zelia Maria Profeta Da Luz	c
Vladimir Michailowsky Leite Ribeiro	a	Zelia Profeta da Luz	a
Vladimir Yong Gonzalez	-	Zelson Giacomo Loss	a
Vlaudia Maria Assis Costa	a	Zenon Rodriguez Batista	c
Wagner Barbosa Dias	e	Zigman Brener	a
		Zoiilo Pires de Camargo	c

a: scientists working or who worked in the past in protozoology in Brazil; b: scientists working in protozoology outside of Brazil that were advisors of Brazilians; c: scientists that did not work in protozoology during their PhD or establish a research interest in this field but were advisors of scientists that migrated to protozoology; d: persons who developed their PhD in protozoology but are now involved in activities other than science; e: scientists who developed their PhD in protozoology but established research in another field.

TABLE IV
Classification of names that developed (1) or not (2) PhD in protozoology

Name	1/2	Name	1/2
Adrian Martin Pohlit	2	Andre Nobrega Pitaluga	1
Adriana Barrinha Fernandes	1	Andréa Alice da Silva	1
Adriana Jardim de Almeida	1	Andrea Aparecida Morais Fernandes de Freitas	1
Adriana Oliveira Costa	1	Andréa Bouer	1
Adriana Oliveira dos Santos	1	Andrea Caetano da Silva	1
Adriane Pimenta da Costa-Val Bicalho	1	Andrea Carla Leite Chaves	1
Adriane Regina Todeschini	1	Andrea Cristina Vetö Arnholdt	1
Adriano Defini Andricopulo	2	Andrea Henriques Pons	1
Adriano Gomes da Silva	1	Andrea Mara Macedo	1
Alba Valéria Machado da Silva	1	Andréa Pereira de Souza	1
Alda Maria da Cruz	1	Andrea Rodrigues Avila	1
Alda Maria Teixeira Ferreira	1	Andrea Sobral	1
Aldina Maria Prado Barral	1	Andréa Teixeira de Carvalho	2
Alejandra Saori Araki	1	Andrés Jimenez Galisteo Jr	1
Alejandro Miguel Katzin	1	Andrey José de Andrade	1
Alessandra D'almeida Filardy	2	Andreza Pain Marcelino	1
Alessandra Gutierrez de Oliveira	1	Angela Cristina Verissimo Junqueira	1
Alessandra Mara Alves Ragozo	1	Angela Cristina Volpini	1
Alessandra Scofield	1	Angela Hampshire de Carvalho Santos Lopes	1
Alessandro Aparecido Rodrigues da Silva	1	Angela Kaysel Cruz	2
Alexander Sibajev	1	Anibal Antonio da Silva Pereira	2
Alexandre Afranio Peixoto	2	Anita Hilda Straus Takahashi	2
Alexandre Barbosa Reis	1	Annamaria Ravara Vago	1
Alexandre Morrot Lima	1	Antonia Maria Ramos Franco Pereira	1
Alfredo Carlos Rodrigues de Azevedo	1	Antoniana Ursine Kretli	1
Alfredo José Altamirano-Enciso	1	Antonio de Oliveira Lima	2
Aline Cardoso Caseca Volotão	1	Antonio Florêncio de Figueiredo	2
Aline Chaves Alexandrino	1	Antonio Marcos Guimarães	1
Allan Kardec Ribeiro	1	Antonio Raimundo Lima Cruz Teixeira	1
Aluízio Prata	2	Antonio Walter Ferreira	1
Alvaro Augusto Ribeiro D'almeida Couto	1	Aparecida de Fatima Michelin	1
Alvaro Jose Romanha	1	Arlei Marcili	1
Amanda Fortes Francisco	1	Arlene de Jesus Mendes Caldas	1
Amilcar Vianna Martins Filho	2	Armando de Oliveira Schubach	1
Ana Acacia de Sa Pinheiro	1	Artur Torres Cordeiro	1
Ana Carolina Campi Azevedo	2	Astolpho Ferraz de Siqueira	2
Ana Carolina de Aguiar Vasconcelos Carneiro	1	Augusto Mello Simões Barbosa	1
Ana Cristina Bahia Nascimento	1	Bárbara Cruz Tavares de Macedo Fernandes	1
Ana Cristina da Silva Pinto	2	Bartira Rossi Bergmann	1
Ana Cristina de Carvalho Botelho	1	Beatriz Dolabela de Lima	2
Ana Cristina Vianna Mariano da Rocha Lima	1	Beatriz Gomes Brazil	1
Ana Lucia Abreu Silva	1	Beatriz Gomes Guimarães	1
Ana Lúcia Teles Rabello	2	Beatriz Lilian da Silva Costa Souza	1
Ana Maria de Castro	1	Beatriz Rossetti Ferreira	2
Ana Maria Jansen-Franken	1	Bernardo Galvão Castro Filho	1
Ana Maria Revorêdo da Silva Ventura	1	Bianca Brand Ederli	1
Ana Paula Cabral de Araujo Lima	1	Bianca Perdigão Olivieri	1
Ana Paula Maia Peixoto Marino	1	Bianca Silvana Zingales	2
Ana Paula Rocha Gadelha	1	Blima Fux	1
Ana Paula Salles Moura Fernandes	1	Bruno Antonio Marinho Sanchez	1
Ana Yeci das Neves Pinto	1	Bruno da Rocha Azevedo	1
Anderson Barbosa de Moura	1	Bruno de Bezerril Andrade	1
Anderson Sena	1	Bruno Pereira Berto	1
André Gustavo Tempone Cardoso	1	Camila Augusta de Oliveira Martins Arakaki	1
André Luiz Fonseca de Souza	1	Camila Indiani de Oliveira	1
André Luiz Pedrosa	1	Camila Marques Adade	1
André Luiz Rodrigues Roque	1	Carina Elisei de Oliveira	1

Supplementary data



Name	1/2	Name	1/2
Carina Margonari de Souza	1	Claudio Vieira da Silva	1
Caris Maroni Nunes	1	Clea Andrade Chiari	1
Carla Domingues dos Santos	1	Clea Nazare Carneiro Bichara	2
Carla Mônica Pinheiro	1	Cleusa Alves Theodoro Rodrigues	1
Carlos Alberto Pereira Tavares	2	Clever Gomes Cardoso	1
Carlos Capistrano Gonçalves de Oliveira	1	Colete Fonseca	1
Carlos Chagas	2	Conceição Ribeiro da Silva Machado	2
Carlos Eduardo Almeida	1	Constança Felícia de Paoli de Carvalho Britto	1
Carlos Eduardo Maia Gomes	1	Cristiana Ferreira Alves de Brito	2
Carlos Eduardo Pereira Corbett	2	Cristiane Varella Lisboa	1
Carlos Eduardo Tadokoro	1	Cristina de Souza Chaves	1
Carlos Eduardo Tosta da Silva	1	Cristina Henriques	1
Carlos Eugênio Cavasini	1	Cristina Wide Pissetti	1
Carlos Gustavo Regis da Silva	1	Daniel Claudio de Oliveira Gomes	1
Carlos José de Carvalho Pinto	1	Daniela de Melo Resende	1
Carlos Luiz Massard	1	Daniela de Pita Pereira	1
Carlos Mauricio de Figueiredo Antunes	2	Daniela de Stefani Marquez	1
Carlos Medicis Morel	2	Daniela Fiori Gradia	1
Carlos Noriyuki Kaneto	1	Daniela Luz Ambrosio	1
Carlos Renato Machado	2	Daniela Parada Pavoni	1
Carlos Wilson Gomes Lopes	2	Daniela Rodrigues de Faria Barbosa	1
Carolina Borsoi Moraes	1	Daniele dos Santos Andrade	1
Carolina de Oliveira Mendes Aguiar	1	Daniele Pereira de Castro	1
Carolina Furtado Torres da Silva	1	Daniella Alchaar D'avila	1
Carolina Guilherme Prestes Beyrodt	1	Daniella Castanheira Bartholomeu	1
Carolina Nascimento	1	Daniella Regina Arantes Martins	1
Caroline Dantas de Oliveira	1	Danielle Ferreira de Magalhães Soares	1
Catarina Gadelha	1	Danielle Maria Nascimento Moura	1
Cecilia Beatriz Fiúza Favali	1	Danielle Pereira Cavalcanti	1
Cecília Maria Antunes Barbosa Biancardi	1	Danielle Pereira Vieira	1
Celene Maria de Oliveira Simões Alves	1	Danielle Reis Napolitano	1
Celeste da Silva Freitas de Souza	1	Danilo Ciccone Miguel	1
Celia Maria Ferreira Gontijo	1	Débora Pereira Garcia Melo	2
Celia Maria Silva Pedrosa	1	Deboraci Brito Prates	1
Célia Maria Vieira Vendrame	1	Deise Aparecida de Oliveira Silva	1
Célia Regina da Silva Garcia	2	Deivid Costa Soares	1
Célio Geraldo Freire de Lima	1	Denise Barcante Castro Pinto	1
Celso Cruz Tavares	1	Denise Bertulucci Rocha Rodrigues	1
Celso Vataru Nakamura	1	Denise Borges dos Santos Dias	1
Celuta Sales Alviano	2	Denise da Silveira Lemos	2
Cezar Martins de Sá	2	Denise Fonseca Córtes	1
Christian Macagnan Probst	1	Denise Valle	1
Chung Man Chin	1	Diego Peres Alonso	1
Cicero Brasileiro de Mello Neto	1	Dílvia Ferreira da Silva	1
Cinthia Furst Leroy Gomes Bueloni	1	Dulce Helena Ferreira de Souza	1
Cyntia Fernandes de Souza	1	Edelberto Santos Dias	1
Clara Lúcia Barbiéri Mestriner	1	Eden Ribeiro Freire	1
Clarissa Romero Teixeira	1	Edésio José Tenório de Melo	1
Claude Pirmez	1	Edgar Marcelino de Carvalho Filho	1
Cláudia Alves de Andrade-Coelho	1	Edilene Alcantara de Castro	1
Claudia Ida Brodskyn	1	Edilene Oliveira da Silva	1
Claudia Magalhaes Calvet Alvarez	1	Edmundo Carlos Grisard	1
Claudia Maia Brigagão	1	Edna Barbosa de Souza	1
Claudia Mara Lara Melo Coutinho	1	Edna Freymuller Haapalainen	2
Claudia Maria Leal Beviláqua	2	Edson Roberto da Silva	1
Claudia Martins Carneiro	1	Edson Rondinelli	2
Claudio Roberto Madruga	1	Eduardo Caio Torres dos Santos	1
Claudio Romero Farias Marinho	1	Eduardo de Almeida Marques da Silva	1
Claudio Tadeu Daniel-Ribeiro	2	Eduardo Fonseca Pinto	1

Name	1/2	Name	1/2
Eduardo Henrique Gomes Rodrigues	1	Ferdinan Almeida Melo	1
Eduardo Lani Volpe da Silveira	1	Fernanda Barbosa Nogueira Raad	1
Eduardo Sergio da Silva	1	Fernanda Fortes de Araújo	1
Edward Felix Silva	1	Fernanda Maria Santiago	1
Edwards Frazão-Teixeira	1	Fernando Antonio Botoni	1
Egler Chiari	1	Fernando Araujo Monteiro	1
Elaine Soares Coimbra	1	Fernando de Pilla Varotti	1
Elenice Moreira Lemos	1	Fernando Dias de Avila Pires	2
Eliame Mouta Confort	1	Fernando Pavao	1
Eliana Lucia Tomaz do Nascimento	1	Filipe Dantas-Torres	1
Eliane de Morais Teixeira	1	Firmino Torres de Castro	2
Eliane Lages Silva	1	Flávia Guimarães Rodrigues	1
Eliane Perlatto Moura	1	Flavia Regina Almeida Campos Naief Moreira	1
Elieth Afonso de Mesquita	1	Flavio Alves Lara	1
Elisa Cupolillo	1	Flor Ernestina Martinez Espinosa	1
Elisa Neves Vianna	1	Francisco Acácio Alves	1
Elisa San Martin Mouriz Savani	1	Francisco Carlos Rodrigues de Oliveira	1
Elizabeth Castro Moreno	1	Francisco de Carvalho Dias Filho	1
Elizabeth de Souza Neves	1	Francisco Juarez Ramalho Pinto	2
Elizabeth Ferreira Rangel	1	Franco Claudio Bonetti	1
Elizabeth Gloria Oliveira Barbosa Santos	1	Franklin Barbalho Magalhaes	1
Elizabeth Igne Ferreira	1	Frederico Guilherme Coutinho Abath	2
Elmo Eduardo de Almeida Amaral	1	Gabriel Antonio Nogueira Nascentes	1
Eloi de Souza Garcia	1	Gabriel Eduardo Melim Ferreira	1
Eloisa Amélia Vieira Ferro	1	Gabriel Grimaldi Filho	1
Eloy Guillermo Castellon Bermudez	2	Geisa Baptista Barros	1
Elvira Maria Saraiva Chequer Bou Habib	1	George Alexandre dos Reis	2
Elza Ferreira Noronha	1	George Régo Albuquerque	1
Emilia Akemi Shiraishi Kimura	1	Georgia Correa Atella	1
Eneida César Mastrantonio	1	Gerhard Wunderlich	2
Eric Faudry	1	Gerson Salay	1
Erica Araujo Mendes	1	Giani França Santoro	1
Érica dos Santos Martins Duarte	1	Ginelza Peres Lima dos Santos	1
Erica Paes Barreto Xavier Moraes	1	Girley Francisco Machado de Assis	1
Erich Loza Telleria	1	Gisele Fernanda Assine Picchi	1
Erick Vaz Guimarães	1	Giselle Maria Rachid Viana	1
Erika Izumi	1	Gisléine Aparecida Martins	1
Erika Martins Braga	1	Glaucius Oliva	1
Erika Michalsky Monteiro	1	Glenda Meira Cardoso	1
Erney Felicio Plessmann de Camargo	2	Gloria Ester Cadavid Restrepo	1
Esteban Mauricio Cordero Veas	1	Gloria Regina Franco	2
Euftosina Setsu Umezawa	1	Graziela Maria Zanini	1
Eunice Aparecida Bianchi Galati	1	Guido Fontgalland Coelho Linhares	1
Evander de Jesus Oliveira Batista	1	Guilherme Costa Matsutani	1
Eveline Gomes Vasconcelos	2	Guilherme Loureiro Werneck	1
Evelyn Kety Pratt Riccio	1	Gustavo Coutinho Cerqueira	1
Fabiana Rodrigues dos Santos	1	Gustavo Fontes Paz	1
Fabiana Simão Machado	1	Gustavo Henrique Goulart Trossini	1
Fabiane Matos dos Santos	1	Gustavo Miranda Rocha	1
Fabiano Borges Figueiredo	1	Hatisaburo Masuda	2
Fabio Trindade Maranhão Costa	1	Hector Barrabin	2
Fabiola Barbieri Holetz	1	Heitor Franco de Andrade Junior	1
Fabiola Cardillo	1	Heitor Miraglia Herrera	1
Fabrício César Dias	1	Helcileia Dias Santos	1
Fabricio Klerynton Marchini	1	Helder Magno Silva Valadares	1
Falqueto Aloisio	1	Helen Rodrigues Martins	1
Fatima Soares Motta Noronha	1	Helena Hilomi Taniguchi	1
Felipe de Almeida Dias	1	Helena Lúcia Carneiro Santos	1
Felipe de Mello Vigoder	1	Helene Santos Barbosa	1



Name	1/2	Name	1/2
Helio Langoni	2	José Eduardo Tolezano	1
Henio Godeiro Lacerda	1	José Franco da Silveira Filho	1
Herbert Leonel de Matos Guedes	1	José Henrique Maia Campos de Oliveira	1
Hernando Antonio del Portillo Obando	2	Jose Jurberg	1
Hertha Meyer	2	José Luciano Nepomuceno da Silva	1
Hilda Fátima de Jesus Pena	1	Jose Manuel Macario Rebelo	2
Hiro Goto	1	José Marcelo Ramalho Ortigão	1
Hooman Momen	1	Jose Maria Alvarez Mosig	2
Hugo Caire de Castro Faria Neto	2	José Maria de Souza	2
Humberto de Araujo Rangel	2	Jose Maria Soares Barata	1
Idessania Nazareth da Costa	1	Jose Mauro Peralta	2
Igor de Almeida Rodrigues	1	Jose Osvaldo Previato	2
Ilea Brandao Rodrigues	1	Jose Ribamar Mesquita Teixeira	1
Ingrid Solange Evans Osses	1	Jose Roberto Meyer Fernandes	2
Irene da Silva Soares	1	Jose Roberto Mineo	1
Isaac Roitman	2	Jose Rodrigues Coura	1
Isabel Cristina Fábregas Bonna	1	Jose Rodrigues da Silva	2
Isabel Martinez	1	Jose Ronnie Carvalho de Vasconcelos	1
Isabela Penna Ceravolo	1	Joseli de Oliveira Ferreira	1
Ises de Almeida Abrahamsohn	1	Joseli Lannes-Vieira	2
Isis Fernandes Magalhaes Santos	1	Juan Miguel Villalobos-Salcedo	1
Italmar Teodorico Navarro	1	Judith Kardos Klotzel	1
Italo Rodrigues de Araujo Sherlock	1	Julia Pinheiro Chagas da Cunha	1
Ivana Nunes Gomes de Araujo	1	Juliana de Assis Silva Gomes Estanislau	1
Ivete Conchon Costa	1	Juliana de Meis	1
Ivo Santana Caldas	1	Juliana Dias Costa Roque	1
Izaltina Silva Jardim Cavalli	1	Juliana Gonzaga de Oliveira	1
Izilda Curado	1	Juliana Lopes Rangel Fietto	2
Jacenir Reis dos Santos Mallet	1	Juliana Perrone Bezerra de Menezes	1
Jaime Martins de Santana	1	Juliano Simões de Toledo	1
Jair Pereira da Cunha Junior	1	Juliany Cola Fernandes Rodrigues	1
Jairo Dias Barreira	1	Julio Pudles	2
Jan Carlo Morais Oliveira Bertassoni Delorenzi	1	Julio Scharfstein	2
Jane Lima dos Santos	2	Junia de Sousa Franco	1
Janete Soares Coelho dos Santos	1	Karen Angelica Cavassani de Souza	1
Jayme Angluster	2	Karen dos Santos Charret	1
Jayme Augusto de Souza-Neto	1	Karin Kirchgatter	1
Jayme Neves	2	Karina Penedo Carvalho	1
Jeffrey Jon Shaw	1	Karine Rezende de Oliveira	1
Jeronimo Conceição Ruiz	1	Katia da Silva Calabrese	1
Joanna Darc Aparecida Herzog Soares	1	Kelly Aparecida Geraldo Yoneyama Tudini	1
João Carlos Araujo Carreira	1	Kelly Salomão	1
João Carlos Pinto Dias	1	Kezia Katiani Gorza Scopel	1
João Luis Garcia	1	Kildare Rocha de Miranda	1
João Luiz Mendes Wanderley	1	Laerte Grisi	2
João Roberto da Mata	1	Lain Carlos Pontes de Carvalho	2
João Santana da Silva	1	Lais de Carvalho	1
Joaquin Hernan Patarroyo Salcedo	1	Laura Nogueira da Cruz	1
Jorge Clarencio Souza Andrade	1	Léa Cysne Finkelstein	1
Jorge Elias Kalil Filho	2	Lea Ferreira Camillo Coura	2
José Adail Fonseca de Castro	1	Leandro Lemgruber Soares	1
José Ailton da Silva	2	Leda Quercia Vieira	2
José Almir Moraes da Rocha	1	Leila de Mendonça Lima	2
José Angelo Lauletta Lindoso	1	Leila Inês de Aguiar Raposo da Câmara Coelho	1
José Bento Pereira Lima	1	Leonardo de Souza Rocha	1
José Carlos Miranda	1	Leonardo Freire de Lima	1
José Clóvis do Prado Júnior	1	Leonardo José de Moura Carvalho	1
José da Rocha Carvalheiro	1	Leonidas Deane	2
Jose Daniel Figueroa-Villar	2	Leonor Laura Pinto Leon	1

Name	1/2	Name	1/2
Leucio Camara Alves	2	Manoel Paes de Oliveira Neto	1
Lia Carolina Almeida Soares de Medeiros	1	Mara Silvia Carvalhaes	1
Liana Maria Cardoso Verinaud	1	Marcel Ivan Ramirez Araya	1
Lileia Gonçalves Diotaiuti	1	Marcel Teixeira	1
Liliam de Oliveira Faria Maçaneiro	1	Marcela Barbosa de Figueiredo	1
Lilian Lacerda Bueno	1	Marcela de Freitas Lopes	1
Liliane Coelho da Rocha Nery	1	Marcello Andre Barcinski	2
Lizandra Guidi Magalhaes	2	Marcello Xavier Sampaio	1
Lourdes Maria Garcez dos Santos	1	Marcelo da Silva Genestra	1
Lucia Helena O'dwyer de Oliveira	2	Marcelo Einicker Lamas	1
Lucia Helena Pinto da Silva	1	Marcelo Ribeiro da Silva Briones	1
Lúcia Maria da Cunha Galvão	1	Marcelo Salabert Gonzalez	1
Lucia Mendonça Previato	2	Marcelo Urbano Ferreira	1
Luciamare Perinetti Alves Martins	1	Marcelo Vidigal Caliari	1
Luciana da Conceição Pinto	1	Marcia Almeida de Melo	1
Luciana de Almeida Silva	1	Marcia Aparecida Speranca	1
Luciana de Oliveira Andrade	1	Marcia Attias	1
Luciana Lima	1	Marcia Benedita de Oliveira Silva	1
Luciana Lopes de Almeida Ribeiro Garzoni	1	Márcia Cristina Aquino Teixeira	1
Luciana Regina Meireles Jaguaribe Ekman	1	Marcia Cristina Paes	1
Luciana Ribeiro Garzoni	1	Márcia Kiyoe Shimada	1
Luciana Rodrigues de Almeida	1	Marcia Pereira de Oliveira	1
Luciana Teixeira Zimmermann	1	Marcia Rosa de Oliveira	1
Luciana Urbano dos Santos	1	Marcio Silva	1
Luciane Moreno Storti de Melo	1	Marco Aurelio Krieger	1
Luciano Andrade Moreira	2	Marco Túlio Alves da Silva	1
Lucile Maria Floeter-Winter	2	Marco Tulio Antonio Garciazapata	2
Lucilene Amorim Silva	1	Marcos Andre Vannier dos Santos	1
Lucimeire Antonelli da Silveira	1	Marcos Augusto Grigolin Grisotto	1
Lucio Andre Viana Dias	1	Marcos Barbosa de Souza	1
Lucio Ayres Caldas	1	Marcos Gonzaga dos Santos	1
Lucio Holanda Gondim de Freitas Junior	1	Marcos Henrique Ferreira Sorgine	1
Lúcio Roberto Cançado Castellano	1	Marcos Horacio Pereira	1
Lucy Megumi Yamauchi Lioni	1	Marcos José Marques	1
Ludmila Rodrigues Pinto Ferreira	1	Marcos Pinheiro Franque	2
Luis Carlos Crocco Afonso	1	Marcos Rommel Cabanillas Silva	1
Luis Eduardo Ramirez Giraldo	1	Marcos Takashi Obara	1
Luís Fernando Santana	1	Marcos Vinícius da Silva	2
Luisa Damazio	1	Marcus Fernandes de Oliveira	1
Luiz Alberto Santana	2	Maria Aparecida da Gloria Faustino	1
Luiz Antonio Rodrigues de Freitas	1	Maria Aparecida Gomes	1
Luiz Carlos Alves	2	Maria Auxiliadora de Sousa	1
Luiz Claudio Miletto	1	Maria Beatriz Araújo Silva	1
Luiz Dione Barbosa de Melo	1	Maria Carolina Quartim Barbosa Elias	1
Luiz Fabiano Borges Oliveira	1	Maria Cecilia Di Ciero Fernandes	1
Luiz Fernando Rocha Ferreira da Silva	2	Maria Cristina Machado Motta	1
Luiz Hildebrando Pereira da Silva	1	Maria Cristina Nonato	1
Luis Marcelo Aranha Camargo	1	Maria da Gloria Bonecini de Almeida	2
Luiz Ricardo Orsini Tosi	2	Maria da Gloria Fernandes Pegado	1
Luiz Roberto Sardinha	1	Maria das Graças Costa Alecrim	1
Luiz Rodolpho Raja Gabaglia Travassos	2	Maria das Graças Prianti	1
Luiz Vicente Rizzo	2	Maria de Fatima Ferreira da Cruz	2
Luzia Helena Carvalho	1	Maria de Fatima Freire de Melo Ximenes	1
Luzineide Wanderley Tinoco	1	Maria de Fátima Madeira	1
Lysangela Ronalte Alves	1	Maria de Fátima Martins Horta	1
Magdalena Nascimento Renné	1	Maria de Lourdes Petrillo Peixoto	1
Maira Cegatti Bosetto Mota	1	Maria de Nazaré Correia Soeiro	1
Manoel Barral Netto	1	Maria de Nazaré Tavares da Silva	1
Manoel Otávio da Costa Rocha	2	Maria de Nazareth Silveira Leal de Meirelles	1



Name	1/2	Name	1/2
Maria do Socorro Rosa Rodrigues de Carvalho	1	Miriam Cristina Leandro Dorta	1
Maria Esther Carvalho	1	Miriam Silva Rafael	1
Maria Fernanda Laranjeira da Silva	1	Mirian Claudia de Souza Pereira	1
Maria Imaculada Muniz Barboza Junqueira	1	Moacir Paranhos Silva	1
Maria Isabel Lynch Gaete	1	Monamaris Marques Borges	1
Maria Jania Teixeira	1	Mônica Cristina de Moraes Silva Bonfim	1
Maria Julia Manso Alves	1	Monica Lucia Gomes	1
Maria Letícia Costa Reis	1	Mucio Flavio Barbosa Ribeiro	2
Maria Lúcia Vieira Moreno	1	Nádia Regina Pereira Almosny	2
Maria Luiza Brito de Sousa Atta	1	Nagila Francinete Costa Secundino	1
Maria Norma Melo	1	Nara Amalia da Rosa Farias	1
Maria Olívia Amado Ramos Bacellar	1	Narcisa Leal da Cunha-E-Silva	1
Maria Pilar Iribar Calvo	1	Nataly Araújo de Saouza	1
Maria Regina Lima	1	Nayara de Oliveira Belo	1
Maria Regina Reis Amendoeira	1	Neci Matos Soares	1
Maria Stela Branquinho Beaudoin	1	Neide Maria da Silva	1
Maria Terezinha Bahia	1	Nilton Barnabe Rodrigues	2
Maria Valdrinez Campana Lonardoni	1	Nitza Maria Alencar Gomes	1
Maria Deane	2	Nobuko Yoshida	1
Mariana Caldas Waghabi	1	Noemi Nosomi Taniwaki	1
Mariana Machado Hecht	1	Octavio Fernandes da Silva Filho	1
Mariangela Carneiro	2	Odair Genaro	1
Mariano Gustavo Zalis	1	Olindo Assis Martins Filho	2
Mariko Yokoo	1	Osmarina Pereira da Paixão	1
Marilene Maria de Lima	1	Osvaldo Marinotti	2
Marilene Suzan Marques Michalick	1	Osvaldo Pompilio de Melo Neto	2
Marinete Marins Povoa	1	Otavio Henrique Thiemann	1
Mario E Camargo	2	Otilio Machado Pereira Bastos	1
Mário Steindel	1	Pamela Orjuela Sánchez	1
Marise Pinheiro Nunes	1	Patrícia Alves Morking	1
Maristela Gomes da Cunha	1	Patricia Cuervo Escobar	1
Mariza Martins Avelino	1	Patricia de Azambuja Penna	1
Marlene Benchimol	1	Patricia de Oliveira Camera	1
Marlene Cabrine dos Santos Silva	1	Patrícia Fampa Negreiros Lima	1
Marlene Isabel Vargas Viloria	1	Patricia Flávia Quaresma	1
Marlisson Augusto Costa Feitosa	1	Patrícia Giupponi Cardoso	1
Marta Chagas Monteiro	1	Patrícia Karla Santos Ramos	1
Marta de Lana	1	Patrícia Massara Martinelli	1
Marta Maria Geraldes Teixeira	1	Patricia Sampaio Tavares Veras	1
Marta Tavares D'agosto	1	Patricia Soares de Maria de Medeiros	1
Marta Teixeira Gomes	1	Paula Melo de Abreu Vieira	1
Martha Cecilia Suárez Mutis	1	Paulo Afonso Nogueira	1
Mauricio Martins Rodrigues	1	Paulo Batista de Carvalho	1
Maurilio José Soares	1	Paulo César Augusto de Souza	1
Mauro Celio de Almeida Marzochi	2	Paulo de Tarso Gonçalves Leopoldo	1
Mauro Ferreira de Azevedo	1	Paulo Eduardo Martins Ribolla	2
Mauro Javier Cortez Véliz	1	Paulo Filemon Paolucci Pimenta	1
Mauro Shugiro Tada	1	Paulo Henrique da Costa Pinheiro	1
Max Jean de Ornelas Toledo	1	Paulo Paes de Andrade	1
Mayra Xiomara Hernández Sanabria	1	Paulo Roberto Lima Machado	1
Meire Ioshie Hiyane	1	Pedro Lagerblad de Oliveira	1
Michel Pinkus Rabinovitch	2	Pedro Roosevelt Torres RoméO	1
Michelle Aparecida Ribeiro de Freitas	1	Pedro Luiz Silva Pinto	1
Michelle Frazão Muzitano	1	Phileno Pingue Filho	1
Michelle Tanny Cunha do Nascimento	1	Philip Davis Marsden	2
Milena Botelho Pereira Soares	1	Phillippe Grelier	1
Milena de Paiva Cavalcanti	1	Piero Bagnaressi	1
Milton Adriano Pelli de Oliveira	1	Priscila Carneiro Campos	1
Miria Gomes Pereira	1	Priscila Grynberg	1

Name	1/2	Name	1/2
Rafael Dhalia	1	Rosa Amelia Maldonado Medina	1
Rafael Maciel de Freitas	2	Rosa Maria Esteves Arantes	2
Rafael Miyazawa Martins	1	Rosa Maria Tubaki	1
Rafael Otávio Cançado Motta	1	Rosa Teixeira de Pinho	1
Rafael Veríssimo Monteiro	1	Rosália Morais Torres	1
Rafael Victorio Carvalho Guido	1	Rosana Alves Martorelli	1
Raimunda Nonata Ribeiro Sampaio	1	Rosana de Sousa Veras	1
Raimundo Wilson de Carvalho	2	Rosane Maria Temporal	1
Raissa Bocchi Pedroso	1	Rosangela Locatelli Dittrich	2
Raquel da Silva Pacheco	1	Rosângela Maria Rodrigues	2
Raquel Elisa da Silva López	1	Rosangela Zacarias Machado	1
Raquel Ferreira Rodrigues	1	Rosiane Aparecida da Silva	1
Raymundo Martins de Castro	2	Rossiane Claudia Vommaro	1
Regiane Mathias	1	Rozalia Mendes Figueira Campos	1
Regina Celia Bressan Queiroz de Figueiredo	1	Rubem Figueiredo Sadok Menna Barreto	1
Regina de Fatima dos Santos Braz	1	Sabrina Castilho Duarte	1
Regina Helena Saramago Peralta	2	Salvatore Giovanni de Simone	1
Regina Maria Barretto Cicarelli	1	Samanta Etel Treiger Borborema	1
Regina Maura Bueno Franco	1	Samuel Goldenberg	2
Regina Mitsuka Breganí	1	Samuel Pessoa	2
Reginaldo Peçanha Brazil	1	Sandra Mayumi Nishi	1
Regis Bernardo Brandim Gomes	1	Sandro Nelson Lunedo	1
Renata de Meirelles Santos Pereira	1	Sanóvia Aparecida de Lima Pereira	1
Renata Oliveira de Araújo Soares	1	Santuza Maria Ribeiro Teixeira	2
Renata Rosito Tonelli	1	Sara Timoteo Passos	1
Renata Tomé Alves	1	Saulo Cabral Bourguignon	1
Renata Tonhosolo	1	Saulo Teixeira de Moura	1
Renata Torres de Souza	1	Sebastião Aldo da Silva Valente	1
Renato Arruda Mortara	2	Selene Maia de Moraes	2
Renato Augusto Damatta	2	Selma Margareth Bacellar de Souza Leã	1
Renato Sathler Avelar	1	Selma Giorgio	1
Ricardo Andrade Barata	1	Selma Maria Bezerra Jerônimo	2
Ricardo Gonçalves	1	Sergian Vianna Cardozo	1
Ricardo Lourenço de Oliveira	1	Sergio Danilo Junho Pena	2
Ricardo Ribeiro dos Santos	1	Sérgio de Albuquerque	1
Ricardo Scher	1	Sergio Galvão Coutinho	1
Ricardo Toshio Fujiwara	1	Sergio Henrique Seabra	1
Ricardo Tostes Gazzinelli	1	Sergio Marcelo Rodriguez Malaga	1
Ricardo Wagner de Almeida Vitor	1	Sergio Schenkman	2
Ricardo Wagner Dias Portela	1	Sheila Cristina Nardelli	1
Rinaldo Aparecido Mota	1	Silvana Maria Eloi Santos	2
Rita de Cássia Moreira de Souza	1	Silvana Marques de Araújo	1
Rita de Cássia Pontello Rampazzo	1	Silvana Maria Fonseca Murta	1
Riva de Paula Oliveira	1	Silvia Amaral Gonçalves da Silva	1
Roberta Dias Rodrigues Rocha	1	Silvia Beatriz Boscardin	1
Roberta Lemos Freire	1	Silvia Ermelinda Barbosa	1
Roberto Esteves Pires Castanho	1	Silvia Maria Santos Carvalho	1
Roberto José da Silva Badaró	1	Silvia Maria Spalding	1
Roberto Mitsuyoshi Hiramoto	1	Silvia Reni Bortolin Uliana	1
Roberto Rudge de Moraes Barros	1	Silvio Luís Pereira de Souza	1
Robson Amaro Augusto da Silva	1	Silvio Santana Dolabella	1
Rodolfo Cordeiro Giunchetti	1	Simone Cardoso Leon	1
Rodrigo Correa de Oliveira	2	Simone da Fonseca Pires	1
Rodrigo Costa da Silva	1	Simone Ladeia Andrade	1
Rodrigo Pedro Pinto Soares	1	Simone Patrícia Carneiro de Freitas	1
Rogério Luiz Kopp	1	Sinval Pinto Brandão Filho	1
Rogerio Saad Vaz	1	Solange Lisboa de Castro	1
Rômulo Menna Barreto Valen��a	1	Sônia de Lucena Mioranza	1
Ronize Andreia Ferreira	1	Sonia Gumes Andrade	1



Name	1/2	Name	1/2
Sonia Maria Neumann Cupolilo	1	Vanete Thomaz Soccol	1
Sônia Rolim Reis	1	Vania Lucia Brandao Nunes	1
Sonia Soares Costa	2	Vanize de Oliveira Macêdo	1
Stefano Trapani	1	Vera da Costa Valente	1
Stella Maria Barrouin Melo	1	Vera Lucia Pereira-Chioccola	1
Stenio Perdigão Fragoso	1	Veronica Figueiredo do Amaral	1
Sueli Fumie Yamada Ogatta	1	Veronica Schmitz Pereira	1
Suzana Passos Chaves	1	Vicente de Paulo Coelho Peixoto de Toledo	1
Suzete Araujo Oliveira Gomes	1	Vinícius Santana Nunes	1
Sylvio Celso Gonçalves da Costa	1	Virginia Maria Barros de Lorena	1
Tais Nóbrega de Sousa	1	Virgínia Maria Góes da Silva	1
Tamara Nunes de Lima Camara	1	Virmondes Rodrigues Junior	1
Tania Cremonini de Araujo-Jorge	1	Viviane Rodrigues Esperandim	1
Tania Ueda Nakamura	1	Viviane Sampaio Boaventura de Oliveira	1
Tânia Zaverucha do Valle	1	Vladimir Michailowsky Leite Ribeiro	1
Tatiana Galvão de Melo de Oliveira	1	Vlauria Maria Assis Costa	1
Tatiana Rodrigues de Moura	1	Wagner Barbosa Dias	1
Tatiana Shioji Tiuman	1	Wagner Luiz Tafuri	1
Tatjana Keesen de Souza Lima	1	Wagner Welber Arrais da Silva	1
Tecia Maria Ulisses de Carvalho	1	Walderez Ornelas Dutra	1
Teresa Cristina Bergamo do Bomfim	1	Walter Ceretti Junior	1
Teresa Cristina França de Assumpção	1	Walter Colli	2
Teresa Cristina Leandro de Jesus	1	Walter Flausino	1
Teresa Cristina Monte Gonçalves	1	Wander Rogerio Pavanelli	1
Teresa Fernandae Silva do Nascimento	1	Wanderley de Souza	1
Tereza Cristina Orlando	1	Wanderli Pedro Tadei	2
Thais Cristina Baeta Soares Souto Padron	1	Wanderson Duarte da Rocha	1
Thais Ferreira Isabel	1	Wanderson Geraldo de Lima	1
Thais Gomes Verzignassi Silveira	1	Washington Luis Conrado dos Santos	2
Thales de Brito	2	Washington Luiz Tafuri	2
Thiago de Castro Gomes	1	Wendel Coura Vital	1
Tiago Moreno Castilho	1	Wendell Sérgio Ferreira Meira	1
Tiago Wilson Patriarca Mineo	1	William Mello Kattenbach	1
Trícia Maria Ferreira de Sousa Oliveira	1	Williams Jorge da Cruz Macêdo	1
Ulisses Gazos Lopes	1	Wilson Jacinto Silva de Souza	1
Vagner José Mendonça	1	Wilson Savino	2
Valdir de Queiroz Balbino	1	Wim Maurits Sylvain Degrave	2
Valéria Marçal Felix de Lima	2	Wladimir Lobato Paraense	2
Valter Ferreira de Andrade Neto	1	Yara de Miranda Gomes	1
Vanessa Cabreira de Freitas	1	Yara Maria Traub-Csekö	2
Vanessa Migliaccio	1	Zelia Maria Profeta da Luz	1
Vanessa Peruhype Magalhães Pascoal	1	Zelson Giacomo Líss	1
		Zigman Brener	2

bolded names: persons who developed PhD in protozoology having as supervisor a nonprotozoologist.

TABLE V
Year that persons who did not develop PhD in protozoology published in this field

Name	Year ^a	ID	Name	Year ^a	ID
Adrian Martin Pohlit	2007	1	Hector Barrabin	2000	57
Adriano Defini Andricopulo	2002	2	Helio Langoni	1999	58
Alejandro Miguel Katzin	1986	3	Hernando Antonio del Portillo Obando	1987	59
Alessandra D'almeida Filardi	2011	4	Hertha Meyer	1948	60
Alessandra Scofield	2000	5	Hooman Momen	1990	61
Alexandre Afranio Peixoto	2001	6	Hugo Caire de Castro Faria Neto	2003	62
Aluizio Prata	1963	7	Humberto de Araújo Rangel	1979	63
Ana Carolina Campi Azevedo	2012	8	Isaac Roitman	1969	64
Ana Cristina da Silva Pinto	2007	9	Jane Lima dos Santos	2006	65
Ana Lúcia Teles Rabello	1999	10	Jayme Angluster	1985	66
Andréa Teixeira de Carvalho	2002	11	Jayme Neves	1961	67
Angela Kaysel Cruz	1990	12	Jeffrey Jon Shaw	1965	68
Amilcar Viana Martins	1956	13	Jorge Elias Kalil Filho	1982	69
Anibal Antonio da Silva Pereira	1979	14	José Manuel Macário Rebêlo	1996	70
Anita Hilda Straus Takahashi	1993	15	José Ailton da Silva	2008	71
Antonio de Oliveira Lima	1989	16	Jose Daniel Figueredo-Villar	1995	72
Antonio Florencio de Figueiredo	2007	17	Jose Maria Alvarez Mosig	1988	73
Astolpho Ferraz de Siqueira	1963	18	José Maria de Souza	1982	74
Bartira Rossi Bergmann	1987	19	Jose Mauro Peralta	1980	75
Beatriz Dolabela de Lima	1996	20	Jose Osvaldo Previato	1979	76
Beatriz Rossetti Ferreira	2005	21	Jose Roberto Meyer Fernandes	1996	77
Bernardo Galvão Castro Filho	1979	22	Jose Rodrigues da Silva	1957	78
Bianca Silvana Zingales	1979	23	Joseli Lannes-Vieira	1986	79
Carlos Alberto Pereira Tavares	1992	24	Juliana Lopes Rangel Fietto	2004	80
Carlos Chagas	1909	25	Julio Pudles	1995	81
Carlos Eduardo Pereira Corbett	1984	26	Julio Scharfstein	1982	82
Carlos Eduardo Tosta da Silva	1982	27	Laerte Grisi	1976	83
Carlos Mauricio de Figueiredo Antunes	1985	28	Lain Carlos Pontes de Carvalho	1985	84
Carlos Medicis Morel	1977	29	Lea Ferreira Camillo Coura	1993	85
Carlos Renato Machado	2001	30	Leda Quercia Vieira	1993	86
Carlos Wilson Gomes Lopes	1980	31	Leila de Mendonça Lima	2007	87
Célia Regina da Silva Garcia	1995	32	Leonidas Deane	1955	88
Celuta Sales Alviano	1980	33	Leucio Camara Alves	2001	89
Cezar Martins de Sá	1980	34	Lizandra Guidi Magalhaes	2011	90
Claudia Maria Leal Beviláqua	1998	35	Lucia Helena O'Dwyer de Oliveira	1997	91
Claudio Tadeu Daniel-Ribeiro	1981	36	Lucia Mendonça Previato	1986	92
Clea Nazare Carneiro Bichara	2004	37	Luciano Andrade Moreira	2000	93
Conceição Ribeiro da Silva Machado	1975	38	Lucile Maria Floeter-Winter	1990	94
Cristiana Ferreira Alves de Brito	2005	39	Luiz Alberto Santana	2001	95
Débora Pereira Garcia Melo	2006	40	Luiz Carlos Alves	2013	96
Denise da Silveira Lemos	2008	41	Luiz Fernando Rocha Ferreira da Silva	2004	97
Edna Freymuller Haapalainen	1977	42	Luiz Ricardo Orsini Tosi	1996	98
Edson Rondinelli	1984	43	Luiz Rodolpho Raja Gabaglia Travassos	1986	99
Eloy Guillermo Castellón Bermúdez	1989	44	Luiz Vicente Rizzo	2004	100
Erney Felicio Plessmann de Camargo	1961	45	Manoel Otávio da Costa Rocha	2002	101
Eveline Gomes Vasconcelos	2001	46	Marcello Andre Barcinski	1984	102
Fernando Dias de Avila Pires	1998	47	Marco Tulio Antonio Garcia Zapata	1985	103
Firmino Torres de Castro	1977	48	Marcos Pinheiro Franque	2004	104
Francisco Juarez Ramalho Pinto	1994	49	Marcos Vinícius da Silva	2010	105
Frederico Guilherme Coutinho Abath	1986	50	Maria da Gloria Bonecini de Almeida	2009	106
George Alexandre dos Reis	1980	51	Maria de Fatima Ferreira da Cruz	2003	107
Gerhard Wunderlich	1999	52	Maria Vos Paumgartten Deane	1955	108
Glaucius Oliva	1988	53	Mariangela Carneiro	2009	109
Gloria Regina Franco	2006	54	Marinete Marins Povoa	1994	110
Guilherme Loureiro Werneck	2002	55	Mario E Camargo	1964	111
Hatisaburo Masuda	1979	56	Mauro Celio de Almeida Marzochi	1980	112

Name	Year ^a	ID	Name	Year ^a	ID
Michel Pinkus Rabinovitch	1982	113	Samuel Goldenberg	1984	135
Mucio Flavio Barbosa Ribeiro	2012	114	Samuel Pessoa	1943	136
Nádia Regina Pereira Almosny	2012	115	Santuza Maria Teixeira	1994	137
Nilton Barnabé Rodrigues	2015	116	Selene Maia de Morais	2006	138
Olindo Assis Martins Filho	1999	117	Selma Maria Bezerra Jeronimo	1992	139
Osvaldo Marinotti	2005	118	Sergio Danilo Junho Pena	1992	140
Osvaldo Pompilio de Melo Neto	2006	119	Sergio Schenkman	1986	141
Otavio Henrique Thiemann	2001	120	Silvana Maria Elói Santos	2002	142
Patricia Sampaio Tavares Veras	2003	121	Sonia Soares Costa	1999	143
Paulo Eduardo Martins Ribolla	2004	122	Thales de Brito	1962	144
Philip Davis Marsden	1980	123	Valéria Marçal Felix de Lima	2002	145
Rafael Maciel de Freitas	2004	124	Vanete Thomaz Soccol	2001	146
Raimundo Wilson de Carvalho	2003	125	Walter Colli	1974	147
Raymundo Martins de Castro	1971	126	Wanderli Pedro Tadei	1982	148
Regina Helena Saramago Peralta	2007	127	Washington Luis Conrado dos Santos	1993	149
Reginaldo Peçanha Brazil	1983	128	Washington Luiz Tafuri	1957	150
Renato Arruda Mortara	1988	129	Wilson Savino	1989	151
Renato Augusto Damatta	2000	130	Wim Maurits Sylvain Degrave	2003	152
Rodrigo Correa de Oliveira	2002	131	Wladimir Lobato Paraense	1949	153
Rosa Maria Esteves Arantes	2004	132	Yara de Miranda Gomes	1995	154
Rosangela Locatelli Dittrich	2001	133	Yara Maria Traub-Cseko	1988	155
Rosângela Maria Rodrigues	2005	134	Zigman Brener	1951	156

a: the year that scientist published his first paper in Brazil after his PhD; bolded names: persons who did develop PhD in protozoology outside Brazil.