Sida Evaluation 02/16

Network for Research and Training in Parasitic Diseases at the Southern Cone of Latinamerica (RTPD) 1995/1996–2001

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Executive Summary

Background

As an extention of the earlier (1986–1995) bilateral programs with Argentina, Chile and Uruguay (12) SAREC decided in 1995 to support a "Network for Research and Training in Parasitic Diseases at the Southern Cone of Latinamerica (RTPD)". The mains objectives of this program was to allow the earlier supported research group to maintain their network activities and their research collaborations, to expand network contacts to Bolivia, the southern region of Brazil, Paraguay and Peru to include the coordinated training of researchers and research personel from these countries. The major thrust of the program was thus on enlarging earlier successful programs to the benefit of smaller, and less advanced regions in Latinamerica. The support was given in two periods 1995/96–1998 and 1999–2001 with 9 miljon and 7 miljon SEK, respecitively (3,5). The agreements specified the items to be supported: Training of MSc and PhD students, post-doctorial training, travel, regional courses, tri-annual scientific meetings and administration and information.

The RTPD network was headed by a steering committee (SC) chaired by by the network coordinator and including different national representatives. An international scientific advisary board (ISAB) was also put together.

The RTPD network reported yearly to SAREC and has summarized the progress in reports from two tri-annual meetings (10 and 11).

Findings

We have found the RTPD program successful in keeping the original network groups together and in supporting high quality science mainly on the two parasites Trypanosoma cruzi (causing Chagas disease) and Echinococcus granulosus (causing hydatid disease), both of major importance in latin-america. The numbers of reported scientific papers, meetings, trained students and other training events from Argentina, Chile and Uruguay are impressive although it is difficult to clearly distinguish the SAREC contribution in any detail. These countries consumed most of the SAREC funding. The smaller countries benefited mainly from courses given within the program but also from other positive networks effects such as technical exchange, visits, transfer of scientific know-how and help with emerging MSc and PhD programs. Clearly the RTPD network had a number of good effects in Bolivia, Paraguay and Peru and laid a solid foundation for further progress in these countries. We have also found the RTPD program cost efficient.

Weak points in the program were the uneven distribution of funding between the old groups in the larger countries (that had a considerable amount of counterpart funding) and the new groups in the smaller countries. The low number of MSc and PhD students from the smaller countries enlisted in educational programs in the larger countries. The lack of transparancy in economic and scientific reporting. The lack of renewal within the RTPD network in terms of economic distribution and the incorporation of new groups.

Recommendations

We recommend that SAREC continue the networking and educational part of the program but stop supporting basic research in countries like Argentina, Chile and Uruguay.

We recommend that SAREC in addition work activly together with the RTPD network steering committee to raise local funds for the continuation and possible expansion of the project. There is an interest from the argentinian and the brazilian governments for this, as we have learned.

SAREC could consider, in context of an extended RTPD program, to start a new sandwich type of training program for MSc and PhD students in Bolivia, Paraguay and Peru and possibly also include Colombia and Venezuela in this.

We recommend SAREC to have a better control over the economic and scientific reporting so that it is possible to indentify in detail what the program actually has funded. Clearly defined items to be supported, responsible persons for accounting and specially designed report forms could be helpful. In this context, SAREC could consider the routines elaborated within the NeTropica program in centralamerica ("Administrational considerations with reference to NeTropica". Office for International Affairs. Karolinska Institutet).

Background

As the universities in Uruguay and Argentina had suffered badly during the military dictatorship years SAREC funded, during 1986–1995, the build-up of research capacity in these countries. The support was given for different areas of research, among which parasitic disease was the most important. Later, in 1990, Chile was included in this bilateral support network. The SAREC program was built on certain principles. There should be a direct collaboration with a swedish counterpart laboratory which was interested in the project and which could contribute high expertize in the area. The research focus should have a high relevance for poor developing countries. The research program should be designed jointly. The host country should cover the cost for the participating domestic institutions. Mostly, with the exception of the last point , these principles were adhered to (12).

This long term SAREC support was summed up in a meeting in Punta del Este in 1996 (6) and was considered very successful, particularily in the parasitic disease part of the program. For this reason, already in november 1994, the groups working in this area got together and planned for a continued support from SAREC in the form of a "Network for Research and Training in Parasitic Diseases at the Southern Cone of Latin America" (RTPD). Funding for this was formally requested and eventually granted in june 1995 (3).

The RTPD network program

The RTPD program had as major objectives:

- To enable the research groups in Argentine, Chile and Uruguay that were earlier supported by the bilateral SAREC programs to continue their scientific collaborations.
- To expand network contacts to other countries in the region.
- To use the network for the coordinated training of young researchers and research personel in the region.

The RTPD program included the three original countries Argentina, Chile and Uruguay and additional countries such as Paraguay, Peru, Bolivia and the southern part of Brazil, seven different countries. In all, the program comprised around 30 research groups (Annex 1).

The program was to be organized by a steering committee (SC) chaired by the RTPD program coordinator, professor Juan Jose Cazzulo, at the Institue for Biological Investigation at UNSAM in Buenos Aires. The SC consisted of the national coordinators who were responsible for setting up national committes to organize and coordinate program activities within, and between, the different countries. An international scientific advisory board (ISAB) for the network was also formed to advice and support the SC in running the RTPD program. This board includes at present Professors André Capron (Institut Pasteur, Lille, France), Ulf Pettersson (University of Uppsala, Sweden), Jerry Manning (University of California at Irvine, U.S.A.), Marcello Barcinski (Universidade de Sao Paulo, Brazil) and Carlos Hormaeche (University of Newcastle-upon-Tyne, U.K.). One important role of the ISAB was to evaluate the progress in the RTPD program.

The support was given yearly in two 3 year periods 1995/1996–1998 and 1999–2001. (1995/1996 covered 18 months). In the first period 3 miljon SEK were given yearly, in all 9 miljon SEK (3). In the second period 2, 3 and 2 miljon SEK were given, in all 7 miljon SEK (5). The total cost for the whole program between 1995/1996–2001 was thus 16 miljon SEK.

In the SAREC agreements (3, 5) the funding was broken down into the different items to be supported:

- Training of MSc and PhD students.
- Post-Doctorial training.
- Travel for coordination and meetings.
- Regional courses.
- Triannual scientific meetings.
- Administration and information.

The emphasis was on network activities and training but indirectly also on support of basic research projects support as MSc and PhD student are by definition involved in scientific projects and as scientific publications were defined as expected results (3).

The objectives of the evaluation

The consultants should evaluate SIDA/SAREC's support to the Network for research and training in parasitic diseases of the Southern Cone of Latin America with reference to the objectives, applications and reports presented by the programme (Annex 2).

- The consultants should evaluate the background documents leading to the support of the Network activities. Against these documents and the decisions made by SAREC and later SIDA/SAREC (promemorias). The consultants should judge if the objects of the programme are fulfilled.
- The consultants should discuss the instruments chosen by the Network (Steering Committee, National Committees, International Advisory Board etc) in terms of efficacy and transparency.
- The consultants should also try to evaluate the cost-effectiveness of the programme and to judge how much of the training activities could be attributed to SIDA/SAREC support.
- The consultants should finally advise SIDA/SAREC if continued support to the Network is recommendable and also to look into the possibility to involve other means of funding for the Network.

Methodology

Different approaches were used to perform the evaluation:

- *Reading and review of the following back-ground documents*

  As listen in the Reference section (1–14)

- *Visits to RTPD network laboratories in Argentina, Uruguay and Brazil and scientific and adminstrative discussions with the project leaders*

  As listed in Annex 3 and 4. In addition, a visit to and discussions with Dr A.Zaha, brazilian node coordinator and director of the Centre of Biotechnology of Rio Grande do Sul, Federal University of Rio Grande do Sul, Porto Alegre, Brazil, 25 October 2001.

- *Attendance to scietific meetings, presentation and courses*

  Meeting with the Network national representatives from Paraguay, Peru, Bolivia and southern Brazil. Drs Graciela Russomando, Ysabel Montoya, Celeste Rodriguez and Arnaldo Zaha at Fundacion Campomar, Buenos Aires, 5 September 2001

  Meeting with the Secretary for Science and Technology in Argentine, Dr Adriana Puiggros and the president of the National Research Council (CONICET), Dr Andres Carrasco at the CONICET office, Buenos Aires, 7 September 2001.

  Course on Advances of Genomics and Proteomics, Centre of Biotechnology of Rio Grande do Sul, Federal University of Rio Grande do Sul, Porto Alegre, Brazil, 22 October 2001.

  Triennial Meeting of the Network, Centre of Biotechnology of Rio Grande do Sul, Federal University of Rio Grande do Sul, Porto Alegre, Brazil, 23–24 October 2001.

- *Discussions with members of the directing bodies of the network*

  Steering committee (SC) members and national node coordinators: Drs J. J. Cazzulo (Argentina), N.Galanti (Chile), R. Ehrlich (Uruguay), A. Zaha (Brazil), G. Russomando (Paraguay), Y. Montoya (Peru) and C. Rodríguez (Bolivia).

  International scientific advisory board (ISAB) members: Professor J.E. Manning (University of California); Professor M.P. Barcinski (University of Rio de Janeiro) and Dr C. Hormaeche (University of Newcastle, UK).

  Sida/SAREC officers: Dr Birgitta Carlsson in Geneva, Switzerland, June 2001,

  Dr Per Bolme in Stockholm and in Porto Alegre, Brazil October 2001. Program administrator Marianne Lindqvist in Stockholm.

We have thus studied a number of Sida/SAREC background documents (1–15). We have obtained relevant documentation regarding the RTPD network from the coordinator Dr Juan Jose Cazzulo, including the initial proposal (7), the proposal for the second period (8) and complete yearly academic and financial reports from all 7 countries included (9). In addition we have studied an earlier Sida Evaluation regarding the cooperation between Sweden and Uruguay (12) and two reports from the Inter-American development Bank (IADB) (13–14). We have received background documentation during two visits at the Sida head-office in Stockholm (MJ).

The evaluation was performed during a one week visit (september 3–7, 2001) to Buenos Aires, including one day in Montevideo. During this week we met with the principal coordinator of the program professor Juan Jose Cazzulo, different project leaders, mostly in Argentina and Uruguay, as well as

representatives from Chile, Peru, Paraguay, Bolivia and southern Brazil (Annex 3 and 4). Among the project leaders were scientists of major importance in their respective countries such as Carlos Frasch (Director of the Institute for Biological Research at UNSAM in Buenos Aires), Dr Andres Ruiz (Director of the National Institute for Parasitology in Montevideo), Dr Ricardo Ehrlich (Director of the Science Center in Montevideo) and Dr Alberto Nieto (Dean at the Republican University in Montevideo). The week ended with a high-level meeting at the Conicyt office in Buenos Aires with the Secretary for Science and Technology Dr Adriana Puiggros and the Conicyt president Dr Andres Carrasco.

Research within the RTPD network

Although the emphasis was on educational and networking activities, including courses and meetings, a large part of the budget was allocated for the support of research projects in the form of training of MSc and PhD students and post-docs in the area of parasitic diseases. Most work was done on two important parasites in latinamerica Echinococcus granulosus (EG) and Trypanosoma cruzi TC) and some work on parasites Leishmania and Fasciola hepatica. EG is a tapeworm from which ingested eggs form cysts, containing toxic fluid, in different organs. TC is an insect transmitted unicellular organism (protozoa) that can grow in many tissues, especially in the gastrointestinal tract and in the heart and cause Chagas disease. Leishmania is also an insect transmitted protozoa and Fasciola hepatica a liver fluke.

The research progress was reported in two triannual reports (10,11). Most of the basic research work was done in the three larger countries Argentina, Chile and Uruguay with focus on TC in all three and on EG mainly in Uruguay.

In Argentina three groups (Parodi, Cazzulo and Frasch) in the Biotechnological Research Institute at the National University at San Martin studied glycoprotein synthesis and protein metabolism in TC. One group at the Fundation Campomar research institute (Dr Algranati) studied polyamine metabolism and another, at the virology laboratory at the Childrens Hospital (Drs Grinstein, Corral and Petray), studied the role of cytokines in TC infection, adjuvants for vaccination against TC and developed a prognostic ELISA kit for the detection of responders and non-responders to chemotherapy treatment. At the National Institute for Parasitology "Dr Mario Fatala Chaben" several research lines were conducted, including molecular characterization of surface antigens, vaccine studies, new targets for chemotherapy, antiparasitic drugs as well as clinical studies on drug treated patients in different stages of the disease. Especially important was their work on a diagnostic ELISA assay for the follow-up of infected children and on the improvment of treatment of the chronic phase of Chagas disease. The San Martin research groups produced high quality papers in high impact journals (PNAS, Blood, EMBO J, JBC, Genome Research). For instance, one internationally recognized finding was done by Dr Carlos Frasch, showing that the TC parasite expresses a trans-sialidase enzyme which allow the parasite to incorporate cell derived sialic acid into its own mucin molecules and thereby protect itself from attack by the host immune system. The argentinian groups altogether reported 106 original papers, 14 review papers as well as short reports, book chapters and mannuals (10,11 and Annex 5). This represents an impressive productitivity in the area of TC research, spanning from molecular to clinical studies.

In Chile five groups from the University of Chile in Santiago de Chile and one from Austral University in Valdivia studied various aspects of TC parasitology. Mode of action of drugs against TC, the role of genetics in TC susceptiblity, molecular aspects of resistance to TC, molecular epidemiology of Chagas disease, cell and molecular biology of TC and antigenic markers for diagnosis and prognosis of Chagas disease. Chilean groups reported 77 original papers, many in local journals, many meeting reports and some book material (10,11 and Annex 5). Clearly a productive research programme although not on he same level as their argentinian collegues.

In Uruguay all groups were affiliated with the Republican University in Montevideo and the majority of these studied the EC parasite. The focus was on new natural anti-helmintic drugs, monoclonal antibody production, the immunobiology including diagnostic markers, the molecular biology of parasite-host adaptation and structural studies to improve the pharmacological properties of the currently used antiparasitic compounds. Two groups also studied the TC parasite, the role of free oxygen and nitrogen

species in TC infection and the structure of developmental proteins in TC. In all, the uruguayan groups reported 152 original papers, 8 reviews as well as chapters in books, demonstrating a very high productivity (10,11 and Annex 5). The leading groups in Uruguay were those of Drs Rafael Radi, Carlos Carmona, Alberto Nieto and Ricardo Ehrlich. Dr Radi made basic findings concerning the suppression of apoptosis in the TC parasite. Dr Carmona did basic studies on proteinases secreted by Fasciola hepatica and identified the expression of the carcinoma associate Tn antigen in EC. Dr Nieto established a broad program in parasite immunology and established a very active immunology center which also contributed with commercial products in the health care sector such as diagnostic kits. Dr Ehrlich firmly applied modern molecular biology for the characterization and cloning of new EC genes and the production of bacterial vaccine vectors and worked in close collaboration with Dr Nieto.

In Brazil, Dr Arnaldo Zahas group, in collaboration with Ricardo Ehrlich group in Uruguay characterized the diagnostic value of recombinant EC antigens, studied the polymorphism in specific DNA regions in isolates from Rio Grande del Sur area as well as performed some gene regulation stuides. They also did basic in vitro work on a small parasitic flatworm (Mesocestoides corti). They report 19 papers with 17 in international journals, two book chapters and one patent (10,11 and Annex 5).

In Bolivia, Dr Celeste Rodriguez group studied the interaction between TC and macrophages, the role of cytokines in natural TC infection and the effect of treatment on cytokine production in cutaneous leishmaniasis. They report 5 papers with 2 in international journals and two submitted manuscripts (10,11 and Annex 5).

In Paraguay, Dr Graciela Russomandos group studied chemotherapy of parasitic disease with natural products and established molecular biology methods (PCR) for the routine detection and clinical management of TC in Chagas disease. They also used PCR for the identification of leishmania at the genus level. They report 54 original papers, more than half in international journals (10,11 and Annex 5).

In Peru, a number of research laboratories were organized into a network by the national coordinator, Dr Ysabel Montoya. Research areas included isolation and characterization of leishmania species, PCR diagnosis and chemotherapy with natural products. In Chagas disease, two trypanosomes prevalent in Peru were characterizated with regard to histotropism and transmission. In malaria, drug resitant strains of P falciparium were studied. Some work was also done on Fasciolosis hepatica and Cisticercosis. In the later period the RTPD network funding was used for six MSc projects, at the Universities of Trujillo and Lima. They report 35 papers, roughly half in international journals (10,11 and Annex 5).

Epidemiological update

We considered that the current epidemiological picture of the countries involved in the Network has changed in the last ten year as a consequence of the control activities of the Ministries of Health. These epidemiological changes have to be taken into account when it comes to the recommendations regarding the future of the Network. In order to this, a summary of the trends observed in the decrease of incidence of Chagas disease in the Southern Cone countries is presented below.

Chagas disease exists only on the American Continent. It is caused by a flagellate protozoan parasite, *Trypanosoma cruzi* it is transmitted to humans by triatomine insects and by blood transfusion. The disease affects 16–18 million people and some 120 million, i.e. about 25% of the population of Latin America is at risk of acquiring Chagas disease. The strategy for the interruption of vectorial and transfusional transmission of this disease is aimed at the prevention of new cases in children and young adults. The interruption of vectorial transmission is made through spraying the infested houses with insecticides. The interruption of transfusional transmission is achieved by screening blood samples in blood banks using serological techniques and discarding the infected ones.

In 1991, the Ministers of Health of Argentina, Bolivia, Brazil, Chile, Paraguay and Uruguay launched the "Southern Cone Initiative for interruption of transmission of Chagas disease". In these countries there are 11 millions of infected persons and 50 millions are at risk. A total of US$ 390 million has been allotted to date from national sources of the six countries for control operations since the start of the initiative in 1991. Chagas disease has also been targeted for elimination by the World Health Assembly in Resolution WHA51.14 approved in May 1998. There are three countries that – based on entomological and epidemiological data – have reported interruption of vectorial transmission of Chagas disease in their territories, as confirmed by the International Certification Commission.

Uruguay was declared free of vectorial and transfusional transmission of Chagas disease in 1997 when the human infection rate in children less than 12 year old was 0.0%. (15) In Chile the overall infestation rate for the country has been reduced from 28.8% in 1982 to 0.005% in 1999, a reduction of 99.98% in the period. The infection rate in the age group of less than 4 years in 1999 was 0.16% which represents 98% reduction of incidence when compared with 5.9% found in this age group in 1982. In November 1999 an International Commission certified the interruption of transmission. (16) In Brazil, the prevalence of human *T.cruzi* infection in the 7–14 year group in 1998 was 0.04% as compared with 18.5% in 1980. This represents a 99.8% reduction in the number of new cases. Results of serological tests in a number of samples in the population of the 0–4 years in 1999 indicated that the prevalence in this age group is 0.0% which can be interpreted as a proof of the interruption of vectorial transmission of Chagas disease in Brazil. Eight of the ten endemic States of Brazil have been certified free of vectorial transmission. It is expected that the remaining two States will be certified in the coming months. (17). By cutting the transmission of this disease in all the countries of the Southern Cone by 2005, as planned, the incidence of Chagas disease in Latin America will be reduced by more than 75%. (See Table below).

Human Infection by *Trypanosoma cruzi* and reduction of incidence, Southern Cone Initiative, 1983–2000

Country	Age group	Prevalence of Infection	Prevalence of Infection	Reduction for the period
	(Years)	1983	2000	(%)
		(Rates x 100)	(Rates x 100)	
Argentina	18	4.5	1.2	85.0
Brazil	0–7	5.0	0.28	96.0
Chile	0–4	5.4	0.21	98.0
Paraguay	18	9.3	3.9	60.0
Uruguay	6–12	2.5	0.06	99.0

SOURCE: Reports from the Ministries of Health to the Meetings of the Inter-government Commission, PAHO/WHO, 1992–2000 (15–17).

It was not possible to get reliable epidemiological information for other diseases of interest to the network such as Cysticercosis, Toxoplasmosis or Leishmaniasis. It is clear for us that the current epidemiological situation of interruption of transmission of Chagas diseasein Brazil, Chile and Uruguay and hence the decrease in incidence of this disease has to be taken into account when defining new research priorities within the network.

Training activities within the RTPD network

Training activities included PhD, MSc and Degree projects, post-Doc training, training of technicians and personell as well as courses and workshops. All training events for the two periods are summarized (10,11 and Annex 5). The numbes are impressive 14 post-Docs (first period), 53 PhDs (second period), 16 MSc, 68 Degree students were completed with many more in progress. In all 159 courses (the major courses listed in Annex 6) and workshops were given and 145 training events for technicians and professionals performed. This represented the total sum of training of all groups involved, including the SAREC part.

There were few students from Bolivia, Paraguay or Peru that obtained a PhD degree (in any of the other countries), one MsC and several Degree student from these countries. In fact, there were not many students from the smaller countries that actually benefited from higher training in any of the larger countries although there was quite a lot of exchange at a lower level. However, each year a major course was held with the participation of professors and researchers from all the different network countries (Annex 6). These major courses were particularily important events in Bolivia and Paraguay for local students and researchers. Two tri-annual meetings, reporting each period in full (10,11), were held the first in Santiago de Chile (1998) and the second in Porto Alegre (2001).

Findings

We have found that the SAREC background documents for the RTPD project were extensive and relevant. SAREC had a long-term earlier experience of the major groups involved in the RTPD network from the preceeding bilateral support period (since 1986) with Uruguay, Argentine and Chile. In the initial proposal from the RTPD group (7) it was especially attractive for SAREC to allow an earlier successful program to spread from comparativly strong countries to neighbouring smaller countries. Also, it would give the opportunity for students in the smaller countries to enter into educational programmes in the larger countries. The major thrust of the RTPD network was thus on networking, training and education and not on support of basic research projects.

The results of the network activities during the period have been highly encouraging and a number of the activities have been made possible, or at least highly facilitated, by the existence and activities of the RTPD network. This has been particularly important for the Bolivian, Paraguayan and Peruvian nodes, where the availability of funds for research is much lower than in the other countries. The performance of major courses of the network in the countries incorporated after 1995 has been a highly significant activity, which has contributed to the training of many students (Annex 6). The participation of professors of different countries in these courses has increased the links among groups, and has resulted in joint Ph.D. and M.Sc. projects. This fact is particularly relevant for countries like Bolivia and Paraguay, where PhD programs in the biomedical sciences have not been set up yet by the local universities.

In addition, the expansion of the RTPD network to Bolivia, Peru and Paraguay has permitted the interaction of these groups with investigators from other countries of the region. The post-graduated students have benefited with allowances for their theses and attendance to the courses organised by the network. Furthermore, the practical courses permit the transfer of relevant technology to be applied in future projects and have also been important for the possibility of sending manuscripts for critical revision. The Network has opened the possibility for visits of students to foreign laboratories for training purposes and to professors who also visited laboratories of the network for planning experiments, discussing the results and teaching in courses of the network.

The RTPD network has been successful in keeping the parasitology groups from the earlier SAREC program together by joint regional courses, meetings and scientific collaborations. The most intense collaborations have been between Argentina, Uruguay and southern Brazil, less with the research groups in Chile and even less (for obvious reasons) with groups in the smaller countries. The productivity of the research groups in Argentina and Uruguay is impressive considering the difficult beginning in the middle of the 1980s. Also the whole spectrum of the research program is impressive, spanning from production of diagnostic kits and clinical studies to very basic studies in parasitology. Whether these groups would have continued their contacts without the RTPD program is difficult to say. They certainly had the economical strength to do so as their counterpart funding, for instance in the last period, was closed to 40 miljon SEK and thus exceeded the SAREC contribution with a factor of almost 6 (see Annexes 5 and 7). However, we were repeatedly told that the SAREC funding was unique in the sense that it could be used, within limits, more freely than other external grants.

In the first Agreement (june 1995) the support was thus given for seven items: 1. Training of MSc and PhD students. 2. Post-doctorial training. 3. Sustaiment and maintenance of laboratory structure (only for the first period). 4. Travel for coordination and meetings. 5. Regional courses. 6. Tri-annual meetings. 7. Administration, information and publication. Economical limits were set for the different

activities (total funding 16 miljon SEK) 46%, 12%, 7%, 12%, 14%, 6% and 3%, respectivly. In some cases there were deviations from the original SAREC budget, for instance in 1999 and 2000 Chile had a travel budget amounting to 32% of the total amount received from the RTPD network coordinator (see Annex 8). In fact the budget reporting in many instances did not conform to the defined items in the original SAREC budget. We find this problematic. Why did not SAREC enforce better accounting routines, along the SAREC "Guidelines for project progress report", before releasing the yearly funding? In the RTPD program the reporting is not transparent. However, we have no reason to belive that there was any misuse of money, that it was used for any other puporses than those which benefited the RTPD program as a whole.

The SAREC funding was transferred from Stockholm to the program coordinator who chaired the steering committee, consisting of representatives for the different countries, the national nodes. The program coordinator then distributed slots to the national nodes. At the end of each year the national representatives sent a budget report to the RTPD coordinator who then summarized these and forwarded the whole yearly RTPD report to SAREC. The allocation of funding was strongly in favour of the three larger countries which received around 90% of the money in comparision with the smaller countries which only got around 2% each (example taken from year 2000). However, students from the smaller countries benefited from courses organized, and paid for, by the larger countries. Over the years the distribution of funds (with the exception of Chile that received smaller amounts 1995–1997), and the groups involved in the RTPD network, did not change much, but followed the principle "same procedure as last year". Also, there was probably little direct influence from the national coordinators on the distribution of money by the program coordinator. We find this a weak point in the RTPD program. It would have been better to allocate funding according to more flexible principles over time, such as peer-review of joint projects or identified educational activities. Also, during such a long support period, some additions or renewals in the RTPD network would probably have been beneficial.

However, although most of the funding was allocated for the larger countries we have found that the benefit of the RTPD program for the smaller countries was extensive. The regional courses, out of which the three last were given in Bolivia, Paraguay and sounthern Brazil were highly appreciated (Annex 6). Also, the fact that the RTPD network greatly expanded scientific links of local scientists to all network members was very important. Just to belong to a network of qualified scientists working in the same area of research boosted the morale and increased the efficiency of research groups in Bolivia, Peru and Paraguay. On the educational side, we would have liked to find more MSc and PhD students from the smaller countries in the argentininian,uruguayan and chilean labs. Probably there was too little efforts within the program to recruit students from the smaller to the larger countries.

We consider the RTPD program as very cost efficient judging from all the activities reported and from the small adminstrative budget involved. The cost effectivness is probably related to the fact that many groups had a long-standing earlier tradition of working together and to the great impact that the small funding had in the smaller countries. For instance, the total administrative costs for the network for 1999–2000 is 3% which is very low (USD 16733/US 527 228).

Over-all the RTPD network was highly productive, with most of the activity in Argentina, Uruguay and Chile and less in the smaller countries. However, it was difficult, if not impossible, to distinguish the exact contribution of SAREC funding to the larger groups in Argentina, Chile and Uruguay as they, in addition, received an extensive amount of counterpart funding and reported group financing and scientific progress on a whole group level (10,11 and Annexes 5 and 7) However, we have no reason to believe that the SAREC funding was not very valuble for research projects performed in the area of parasitology and within context of ongoing MSc and PhD programes.

Research grants for a total amount US$ 3.9 million have been obtained as a counterpart for the SEK 7.000.000 granted by SAREC for the latest period. It must be taken into account, however, that funding from national sources is widely different in the various countries involved. It is also clear that the countries have performed in a different way when it comes to their ability to obtain research funds from other sources as can be estimated by the Ratio SAREC funds/Other sources funds which varies from 1:19 to 1: 0.9 (see Annex 7). Brazil (RGS) for instance has been very efficient in getting research funds as for each US dollar invested by SAREC the groups of this country have been able to obtain 19 US dollars from other sources. On the opposite side is Bolivia who has needed 1 US dollars from SAREC to get only 0.9 US dollar for research from other sources. The average for the Network has been 1:9 for the period under evaluation. (see Annex 7).

The organization of the RTPD network, with a coordinator and a steering committee, consisting of national representatives, as well as an international advisory board was logical and relevant. Hopefully, the network will prosper and expand in the future with an increasing contribution from local funds.

The links with swedish research groups, developed during the preceeding period of support from SAREC to Uruguay, Argentine and Chile were maintained to some extent, more intense in the first period as compared to the second. The most important, productive and sustainable contacs seemed to be with professors Ulf Peterson, Alwyn Jones and Ulf Hellman at Uppsala university and professor Ewert Linder at SMI. During the whole period there were 26 visits of latinamerican scientists to Sweden and 17 visits of swedish researhers to latinamerica. Except visits between sweden and latinamerican countries, many trips were made to laboratories, meetings and courses in other countries, all reported (10,11). The extent of travelling was reflected in the budget, for instance in Chile 44% of the total national budget for 1999 (51.813 USD) was spent on travel, coordination and meetings. The same year the corresponding numbers for Argentine and Uruguay were 35% and 16%, respectivly and very little for the smaller countries.

Although not formally required in the RTPD program, some groups in the network extended their activities to include public health work and contacts with the local industries. In Chile, under the direction of the ministry of health, studies were done on cogenital Chagas disease. In Argentina, within the "Fatala Chaben" national institute and the Childrens Hospital studies on the diagnosis and treatment of Chagas disease were done. In Uruguay, studies were done within the context of the National Health Institute to improve the diagnosis of EC disease and for this purpose a kit was produced. In Paraguay, work was also done to improve the diagnostic tools for Chagas disease. In southern Brazil, a patent was filed for a diagnostic kit.

Recommendations

- To continue the support for the networking and educational parts of the RTPD program with an emphasis on courses, meetings and travel, mostly for students from the smaller countries and for professors taking an active part in courses.
- To end the funding for basic research projects. The groups in Argentina, Uruguay and Chile should now obtain this funding from their own governments or from other external sources.
- To focus future RTPD network activities in areas which may have a high social and economical impact such as diagnosis, prognosis evaluation and vector eradication in parasitic disease, including the veterinary sector. For this it is important to take into account the recent successful elimination of the vectorial transmission of Chagas disease in Brazil, Chile and Uruguay. In this context, an extended RTPD program could also consider to work more closely with the local biotechnology industry.
- SAREC could consider, in context of an extended RTPD program, to start a new sandwich type of training program for MSc and PhD students (like the earlier NeTropica program in centralamerica) for Bolivia, Peru,Paraguay and also consider to include Colombia and Venezuela. In both of these countries there are strong groups in the area of parasitic disease (Malaria and Chagas). Clearly, there is a great need for such a program and the impact in these countries could be considerable.
- We recommend SAREC to have a better control over project progress and economic reporting by insisting that expences should be accounted for in context of the items specified in the project budget, along the lines in SARECs own "Guidelines for project progress report". Also, at the start of the project, it probably would be useful to identify institutions directly responsible for accounting as discussed in "Administrational considerations with reference to NeTropica" Office for International Affairs. Karolinska Institutet.
- We recommend SAREC to further work with the RTPD steering committee in its ambition to secure national funding for the future support and enlargement the network to other countries in latinamerica. We heard from the brazilian representative, Dr Arnaldo Zaha (the new network coordinator) that the brazilian government had expressed an interest in this direction and also from the argentinian minister for science and technology, Dr Adriana Puiggros, and the president of the Conicyt in Argentina, Dr Andres Carrasco, that this was clearly considered very interesting for them, The high prestige that SAREC enjoys in the region would probably be very helpful to secure local support for the succssful continuation of the RTPD network. To achieve this, a visit by a high-ranking SAREC official would most likely be helpful

In summary, we do hope that the RTPD Network will continue in the future, eventually to cover most latinamerican countries. We are supported in this positive view of the project by two ISAB members, Drs Manning and Barcinski (see Annex 9). Continuation of the activities of the RTPD Network would be very difficult if the SAREC support is interrupted, although some support from national agencies involved in the promotion of science in some of the countries involved is likely to be obtained. In any case, both types of funding sources would complement each other, since national funds are seldom applicable for training of foreign students or for research trips abroad. If the Network activities are strongly reduced, or stopped altogether, the most affected would be the young scientists from Bolivia and Paraguay, and to a lesser extent from Peru, who presently benefit from training activities in well-equipped laboratories within the RTPD network. If the RTPD network succeed in keeping and expanding its activities it is likely to make a significant contribution to the improvement of higher education and public health in these countries and also to strengthen the international cooperation within latinamerica.

References

Sida/SAREC documents

1. Diskussionpromemoria. Regional satsning på forskning kring parasitsjukdomar i Latinamerika. Per Bolme. Oktober 1994.
2. Insatspromemoria. Stöd till nätverk för forskning rörande parasitsjukdomar i Sydamerika. Per Bolme och Rolf Ericsson. Mars 1995.
3. Agreement. Support to the research project "Network for research and training in parasitic diseases in the southern cone of Latin America". June 1995.
4. Insatspromemoria. Fortsatt stöd till närverk för forskning rörande parasitsjukdomar i Sydamerika. Per Bolme. April 1999.
5. Agreement. Final grant to the network for research and traning in parasitic diseases in the southern cone of Latin America. July 1999.
6. Conference summing up 10 years of bilateral research cooperation. Uruguay, Argentina and Sweden. Sida/SAREC document. November 1996.

Documents from the RTPD network

7. Network for Research and Traning in Parasitic Diseases at the Southern Cone of Latin America. Molecular, biochemical and immunological approaches to parasitic diseases. A first proposal for the RTPD network. November 1994.
8. Network for Research and Training in Parasitic Diseases at the Southern Cone of Latin America. Proposal and Budget. January 1999–december 2001. Proposal for the second period of the RTPD network.
9. Academic and financial reports.
   Yearly reports from the RTPD network for the period 1995–2000, and part of 2001, including separate reports from all 7 countries.
10. Network for Research and Training in Parasitic Diseases in the Southern Cone of Latin America. Triannual Report 1995–1998. Sida/SAREC document.
11. Network for Research and Traning in Parasitic Diseases in the Southern Cone of Latin America. Triannaul report 1999–2001. Sida/SAREC document.

Other documents

12. Research Cooperation between Sweden and Uruguay 1986–1995. Sida Evaluation 99/14.
13. Uruguay: Science and Technology Program. Inter-American Development Bank. Evaluation Office. PPR-8/1997.
14. Evaluation of IDBs Science and Technology Prograns in Chile, Costa Rica and Uruguay. Final Report. Inter-American Development Bank. Evaluation Office. WP-6/1998.
15. World Health Organization (1998) Weekly Epidemiological Record, Geneva, 73:2, 1–4
16. World Health Organization (2000) Weekly Epidemiological Record, Geneva, 75:2, 10–12
17. World Health Organization (2000) Weeekly Epidemiological Record, Geneva, 75:19, 153–155

Annex 1

Research groups members of the network

ARGENTINIAN GROUPS

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Buenos Aires, Argentina.
Project leader: Israel D. Algranati

INSTITUTO DE INVESTIGACIONES BIOTECNOLOGICAS, UNIVERSIDAD NACIONAL DE GENERAL SAN MARTIN.
San Martín, Provincia de Buenos Aires, Argentina.
Project leaders: Juan José Cazzulo, Alberto Carlos C. Frasch and Armando J. Parodi.

HOSPITAL DE NIÑOS "RICARDO GUTIERREZ".
Buenos Aires, Argentina.
Project leaders: Saúl Grinstein and Ricardo Corral.

INSTITUTO NACIONAL DE PARASITOLOGIA "DR. MARIO FATALA CHABEN".
Buenos Aires, Argentina.
Co-ordinator: Andrés Mariano Ruiz

BOLIVIAN GROUPS

INSTITUTO BOLIVIANO DE BIOLOGIA DE ALTURA
Facultad de Medicina.
La Paz – Bolivia
Project leaders: Celeste Rodriguez and M. Luz Roxana Carrasco Lorini

CENTRO NACIONAL DE ENFERMEDADES TROPICALES (CENETROP)
Santa Cruz – Bolivia.
Project leader: Carlos Peredo.

BRAZILIAN GROUP

CENTRO DE BIOTECNOLOGIA DO ESTADO DO RIO GRANDE DO SUL.
Universidade Federal do Rio Grande do Sul
Porto Alegre RS – Brazil.
Project leader: Arnaldo Zaha.

CHILEAN GROUPS

INSTITUTO DE CIENCIAS BIOMEDICAS, FACULTAD DE MEDICINA (CAMPUS NORTE Y OCCIDENTE), UNIVERSIDAD DE CHILE.
Santiago, Chile.
Project leaders: Arturo Ferreira, Norbel Galanti, Myriam Lorca, Antonio Morello, Aldo Solari and Ulises Vergara.

PARAGUAYAN GROUPS

INSTITUTO DE INVESTIGACIONES EN CIENCIAS DE LA SALUD
Universidad Nacional de Asunción.
Asunción – Paraguay.
Project leaders: Graciela Russomando (Department of Molecular Biology); Esteban Ferro (Department of Biochemistry); Antonieta Rojas de Arias (Department of Tropical Medicine) and Agueda Cabello (Department of Cellular Immunology)

PERUVIAN GROUPS

UNIVERSIDAD MAYOR DE SAN MARCOS.
Facultad de Medicina,
Instituto de Medicina Tropical "D.A. Carrión"
Lima, Peru.
A consortium of groups, led by César Náquira, as Co-ordinator.

URUGUAYAN GROUPS

UNIVERSIDAD DE LA REPUBLICA.
Montevideo, República Oriental del Uruguay.

FACULTAD DE QUIMICA.
Project leaders: Alberto Nieto, Eduardo Manta and Margot Paulino.

FACULTAD DE CIENCIAS.
Project leader: Ricardo Ehrlich.

INSTITUTO DE HIGIENE.
Project leader: Carlos Carmona

FACULTAD DE MEDICINA.
Project leader: Rafael Radi.

EXTRA-REGIONAL GROUPS

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Dr. Francisco Gamarro

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Lyon, France.
Dr. Anne-Françoise Petavy

INSTITUT PASTEUR DE LILLE
Lille, France.
Dr. Jean-François Dubreme

Annex 2

Terms of Reference

Evaluation of the Network for Research and Training in Parasitic Diseases in the Southern Cone of Latin America.

1. Background

Sarec (Swedish Agency for Research Co-operation with Developing Countries) gave financial support to research co-operation, within its bilateral programme, between Sweden and Uruguay as well as Argentina during ten years, 1986–1995. From 1990–1997 also Chile was included in Sarec support within the bilateral programme. In all these three programmes, research in the field of the Parasitology with an emphasis on Chagas disease caused by *Trypanozoma cruzi*, was an important component. Therefore, researchers in the three countries started to discuss, with participation of Sarec officials, the possibility of continuing the collaboration that had started as a consequence of the contacts with Swedish researchers and through the financial support of Sarec.

The idea to create a Network led to a formal agreement with researchers from Argentina, Chile and Uruguay in 1995, and resulted in an application to Sida/SAREC.

This application included research groups from the initial three countries, but now also researchers from Bolivia, Paraguay and Peru were included. This was a request from SAREC since these countries, besides having a greater health problem with Parasitology diseases also suffered from a less developed research infrastructure. Thus, SAREC wanted to include other countries in South America into the network and thereby spreading the experience from the results coming from the bilateral research co-ordination between Sweden and the three initial co-operating countries. Eventually, also a research group from Brazil became part of the Network activities.

The Network decided to create a Steering Committee with one member from each country. The Steering Committee took responsibility for the distribution of funds to the National committees, and to arrange Network activities as Regional Post-Graduate courses, Training programmes for MSc. and PhD. degrees as well as post-doctoral training.

A triennial scientific meeting was also to be held, organised by the Steering Committee. The first triennial meeting was held in Santiago, September 1999. An International Scientific Advisory Board (ISAD) was also created to advise the Steering Committee and also help Sida/SAREC to continuously evaluate the programme. The members of the ISAD have remained the same since the Network was formed and are researchers of international high reputation in the field and also familiar with the research situation in the countries of the Network.

Sarec and the integrated Sida/SAREC decided to support the Network first for a three year period, 1995–1998 with three million SEK per year and from 1999–2001 with an addition of 2 million SEK, 3 million SEK and 2 million SEK, respectively for the three years.

When the Research Board of Sida took decision for the present three year period (1999:2) the grant was given under the condition that the Network activities should be evaluated during 2001 and that the eventual support from Sida/SAREC was going to be based on the evaluation and, anyhow, be given for more strict Network activities than before, excluding support research projects.

2. Objectives of the evaluation

General

- the consultants should evaluate Sida/SAREC's support to the Network for research and training in parasitic diseases of the Southern Cone of Latin America with reference to the objectives, applications and reports presented by the programme.

Specifics

- the consultant should evaluate the background documents leading to the support of the Network activities. Against these documents and the decisions made by Sarec and later Sida/SAREC (promemorias). The consultant should judge if the objects of the programme are fulfilled.
- the consultant should discuss the instruments chosen by the Network (Steering Committee, National Committees, International Advisory Board etc) in terms of efficacy and transparency.
- the consultant should also try to evaluate the cost-effectiveness of the programme and to judge how much of the training activities could be attributed to Sida/SARECs support.
- the consultant should finally advise Sida/SAREC if continued support to the Network is recommendable and also to look into the possibility to involve other means of funding for the Network.

3. Methods, Organization and timing of the evaluation

The evaluation will be carried out by Alvaro Moncayo and Mikael Jondal.

Both consultants should read the background documents. As the promemorias underlying Sida/SARECs decision procedure are written in Swedish, Mikael Jondal will take responsibility for that part.

Both consultants should visit the co-ordinator of the Network, Professor Juan Jose Cazzulo in Buenos Aires and read the documents available leading to decisions of fund distribution, in graduate course arrangements and correspondence of importance. Professor Cazzulo will assist the evaluators in that part of the task.

The consultants may consider to visit some other laboratory or research group, either in Argentina or in some of the other involved countries.

The consultant/s, Dr. Alvaro Moncayo alone or both, will participate during the triennial scientific meeting in Porto Alegre, Brasil, in October 2001. During that meeting the consultant will have a possibility to meet the members of the Steering Committee and also members of the International Advisory Board as well as get the report of the scientific activities during the last years within the Network Programme.

The consultants should deliver to Sida/SAREC their Evaluation Report, not exceeding 40 double-spaced typed papers. The report should start with an Executive Summary and end with conclusions and recommendations.

The preparation for the evaluation will start in June 2001 and the visit to Buenos Aires, Argentina, will be performed in August/September 2001 and last for one week.

The triennial meeting lasts for three days but are preceded by a graduate course with many of the key people present. That part of the task will also include 5–7 days.

Finally the written report should be presented not later than November 30, 2001.

The consultants will make their own travel arrangements. The site visits will be facilitated through contacts from the Secretariat of SAREC.

Annex 3

Program for the RTPD evaluation

September 3–7,

Monday	Meeting with the RTPD program coordinator Professor Juan Jose Cazzulo in the Institute for Biological Investigations at the National Universty San Martin, UNSAM. Interviews with project leaders Drs Carlos Frasch and Armando Parodi at UNSAM. Studying of documents at the RTPD head-office at UNSAM.
Tuesday	Meeting with project leader Israel Algranati and his group at Fundation Campomar. Meeting with group members from The Childrens Hospital, Drs Saul Grinstein, Ricardo Corral and Patricia Petray at Fundation Campomar. Meeting with project leader and director Dr Andres Ruiz, and his group members, at the National Institute for Parasitology “Dr Mario Fatala Chaben”.
Wednesday	Meeting with the chilean representative, Dr Antonio Morello at UNSAM. Studying of documents at UNSAM.
Thursday	Meeting with project leader and director Dr Ricardo Ehrlich at the Science Center in Montevideo. Meeting with project leaders Drs Rafael Radi and Eduardo Manta at the Department of Biochemistry, Republican University in Montevideo. Meeting with the project leader and Dean, Dr Alberto Nieto in the same department.
Friday	Meeting with national representatives for Paraguay, Peru, Bolivia and southern Brazil. Drs Graciela Russomando, Ysabel Montoya,Celeste Rodrigez and Arnaldo Zaha at Fundation Campomar. Meeting with the Secretary for Science and Technology in Argentine, Dr Adriana Puiggros and the president for Conicyt, Dr Andres Carrasco at the Conicyt office.

Annex 4

List of interviewed persons

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Annex 5

Overview of the Triennial Meeting

Overview of the Triennial Meeting of the Network for Research in Training in Parasitic Diseases in the southern Cone of LatinAmerica

This is the fourth Triennial Meeting of the Network that I have had the privilege of attending. The original Network included the countries of Argentina, Chile and Uruguay. The Network has expanded to now include the countries of Bolivia, Paraguay, Peru and the southernmost state of Brazil, Rio Grande Do Sul. In my opinion, the resources provided to the Network by SAREC have had a tremendously positive influence on the establishment of a broad training program for the young scientists and students in these countries. They also have been particularly helpful for establishing scientific interactions between scientists and students in the original three countries and well-established scientists in Sweden. Without the support funds from SAREC, I am confident that these multi-national training courses and the valuable scientific links would not now be in place.

It is evident that the initial goals of the program have been achieved within the three founding countries. In contrast, the scientific training and research programs in Peru, Paraguay and Bolivia are only now beginning to show the types of benefits provided by the program that so greatly enhanced student training and research in Argentina, Chile and Uruguay. I believe that three additional years of support for the existing program would result in major advances in both the training programs for young investigators as well as the research efforts of existing faculty in those countries that most recently became members of the Network. It is also worth noting that the types of funds provided to the Network are particularly useful in advancing these programs, since they allow for extensive interactions between scientists and students in South American that do, and do not, have advanced research facilities. If continued funding for the Network is provided, it is hoped that a strong emphasis will be placed on funding training and research programs that will bring together students and faculty from those countries in the Network that have advanced research programs with those from countries with less advanced programs.

Annex 6

Courses since 1995

Courses delivered by the Network since July 1995.

1) Major Courses of the Network:

"Characterization, structure and functions of macromolecules from parasites".
October 14th to 31st, 1996. Buenos Aires, Argentina. Instituto Nacional de Chagas "Dr. Mario Fatala Chaben". Co-ordinator: Dr. Andres Mariano Ruiz.
16 students, 3 from Argentina, 3 from Chile, 3 from Uruguay, 2 from Perú, 2 from Bolivia, 2 from Paraguay and 1 from Colombia.

"Molecular, Biochemical and Immunological basis of the host/parasite interaction".
Montevideo, Uruguay, December 1st to 13th, 1997. Director: Dr. Carlos Carmona.
15 students, 2 from Argentina, 1 from Bolivia, 1 from Brazil, 2 from Chile, 1 from Paraguay, 2 from Perú and 6 from Uruguay.

"Technologies applied to diagnosis and research in parasitic diseases".
Santiago, Chile, August 24th–September 1st, 1998. Co-ordinator: Dr. Norbel Galanti.
20 students, 3 from Argentina, 3 from Bolivia, 1 from Brazil, 4 from Chile, 1 from Honduras, 2 from Paraguay, 3 from Perú, 2 from Uruguay and 1 from Venezuela.

"Curso de Actualización en Inmunología".
An Immunology Course was held in Asunción, Paraguay, from July 24th to August 4th, 2000.
Co-ordinators: Drs. Graciela Russomando and Margarita Cabral. Four Uruguayan Professors delivered the Course. 75 students, 2 from Perú, 2 from Bolivia, 1 each from Argentina and Brazil, and 69 from Paraguay.

"Inmunología y Biología Molecular de Parásitos".
An Immunology and Molecular Biology Course was held in Lima in September, 2000.
Co-ordinator: Dr. José Espinoza. 19 Peruvian Professors and assistant teachers, with the collaboration of one Uruguayan and one Argentinean Professor delivered the Course. 18 students (practicals) and 140 students (lectures).

"Genetic markers utilised in epidemiology and molecular taxonomy of parasites".
Co-ordinator: Dr. Karen Luisa Haag. The Course was held at the Centro de Biotecnología do Rio Grande do Sul, Porto Alegre, Brazil, from 15th to 20th October, 2001.

"Expression of recombinant proteins in Escherichia coli".
Co-ordinator: Dr. Henrique B. Ferreira. The Course was held at the Centro de Biotecnología do Rio Grande do Sul, Porto Alegre, Brazil, from 15th to 20th October, 2001.

"Recent advances in Genomics and Proteomics".
Co-ordinator: Dr. Arnaldo Zaha. The Course was held at the Centro de Biotecnología do Rio Grande do Sul, Porto Alegre, Brazil, on October 22nd, 2001.

2) Other Courses with participation of Professors from several Countries in the Network:

Aspects of Molecular Parasitology.
Santiago, Chile, October 21st, 1995. Pre-Congress Course, XII Congreso Latinoamericano de Parasitología.
Co-ordinator: Dr. Norbel Galanti. Secretary: Dr. Myriam Lorca.
46 students, from Argentina, Bolivia, Brasil, Colombia, Chile, Mexico, Paraguay, Perú, the United Kingdom and Uruguay.

Biology of the host-parasite relationship in Trypanosoma cruzi and Echinococcus granulosus.
Santiago, Chile, July 22nd to 27th, 1996.
Co-ordinator: Dr. Norbel Galanti.
35 students, including 4 from Argentina, 3 from Bolivia, 3 from Perú, 3 from Paraguay, 2 from Uruguay, 1 from Colombia and 1 from Panama, and 18 from Chile.

"Selected topics of Biochemistry, Molecular and Cell Biology of Trypanosoma cruzi and Echinococcus granulosus".
September 1st to 12th, 1997, with 12 students.
Director: Dr. J. J. Cazzulo.
12 students, including 1 from Perú, 1 from Brazil, 2 from Paraguay and 8 from Argentina.

"Molecular Biology and Immunology of Parasites".
Pre-Congress Course, III Peruvian Congress of Parasitology, held in Arequipa, Perú, on September 15th and 16th, 1997.
Director: Dr. César Náquira Velarde. Fifty students.

Course on "Advances in the diagnosis of parasitic diseases. Chagas disease: alternatives for its diagnosis and epidemiological study",
associated to the III Congreso Peruano de Parasitología (Arequipa, Perú, 15 and 16 September, 1997).
Director: Dr. Myriam Lorca.
100 students from Peru, Bolivia, Paraguay, Argentina and Chile.

"International Course on Parasitology".
La Paz, Bolivia, Abril 27th to May 8th, 1998.
Director: Dr. Celeste Rodriguez.
60 students, from Argentina, Paraguay, Perú and Bolivia.

"Topics in Molecular Parasitology".
Co-ordinator: Dr. Juan José Cazzulo.
The Course was held at the Instituto de Investigaciones Biotecnológicas, Universidad Nacional de General San Martin, on October 23rd and 24th, 2000. Seventeen lectures by invited Professors from Chile, Brazil, U.S.A., Sweden, France, Belgium, Germany and Argentina.
40 post-graduate students.

"Chemistry and structure of peptides and proteins".
Directors: Drs. Juan José Cazzulo and José A. Santomé.
The Course was held at the Instituto de Investigaciones Biotecnológicas, Universidad Nacional de General San Martin,and at the IQUIFIB and LANAIS-Pro, Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires, on October 16th to 19th, 2001.
Fourteen lectures by invited Professors from Sweden and Argentina. 25 graduate students.

Annex 7

Funds received from SAREC and other research funds

By country, 1999–2000 (in USD)

Country	Funds received from SAREC in 1999–2000	Research funds obtained from other sources in the same period	Ratio SAREC/ Other sources
ARGENTINA	130 092	1 984 300	1:15
BOLIVIA	11 039	10 000	1:0.9
BRAZIL	6 928	132 000	1:19
CHILE	121 959	757 343	1:6
PARAGUAY	7 874	105 000	1:13
PERU	7 200	ND	ND
URUGUAY	148 410	890 380	1:6
Total	433 502	3 933 023	1:9

Annex 8

Statements by Scientific Board members

by Dr M.P. Barcinski and Dr J. Manning, members of the International Scientific Advisory Board

Subject:
Re: Assessment of the Network for Research and Training in Parasitic diseases.

Date:
Mon, 29 Oct 2001 10:34:05 -0000

From:
"barcinsk" <barcinsk@inca.org.br>

To:
"Alvaro Moncayo" <amoncayo@uniandes.edu.co>

Dear Alvaro. It was a great pleasure being with you again. I am answering briefly your request, since I am leaving again by the end of the week and have lots to do. I certainly agree with everybody that the program is a success and should not stop. However I also understand SAREC/SIDA arguments that they cannot grant this program forever and that the own countries should take care of the program at a certain point. I think that this can be made immeadiatly by Chile and Brazil and that the Argentinian groups also can manage to get money from different sources. However for the other countries involved, a break now would mean the end of the program and a lost of all the effort made up to the moment. So, if it can not continue as it is, my suggestion would be to grant Bolivia, Peru, Paraguai and Uruguai with money essentially for courses, meettings and Ph.Ds programs in Chile, Argentina and Brazil. This three last countries should also receive money for their participation in these aspects of the program. Resuming, ideally the program should continue as it is. If impossible it should be transformed in a training program with emphasis on the interaction of researchers and students, including eventually, as stated at the meetting, other groups from Brazil besides RGS. I hope this will be usefull.

Best regards, Marcello

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