#### **PROJECT TITLE:**

Project total costs in US dollars: Amount requested in US dollars: Start date: End date:

#### **APPLICANTS INFORMATION** Name of applicant and organization: Address:

Phone number Email: Citizenship: Organization:

#### "NO MAS NIÑOS CON CHAGAS"

\$ 62,705<sup>1</sup>.-\$ 41,424.-January, 2024 September, 2024

Rotary Club Santa Cruz de la Sierra Edificio Orienta, 4 piso, Calle Ballivian Esquina Chuquisaca 591 78565655 <u>oriettasacre@gmail.com</u> Bolivian please refer to application information

#### **APPLICATION INFORMATION**

GRANT PROPOSAL

below

## "NO MORE CHILDREN WITH CHAGAS"

## by the Women's Hospital Percy Boland Rodríguez in Santa Cruz sponsored by Rotary Club Santa Cruz de la Sierra

#### I. Summary

Bolivia is the country with the highest incidence of Chagas disease in relation to its population (22%), and although the number of people affected has been reduced from 1 million in 1999 to **607,186 in 2018** (of which 500,000 live in Santa Cruz), thanks to repeated campaigns aimed at eliminating the vector (vinchuca) in 6 endemic areas, the disease is the main cause of deaths from heart failures in the country, as in the rest of Latin American countries where the parasite is endemic. Furthermore, Chagas disease is a cause of disabilities and illness throughout life, with dear consequences for those affected, their families and society, as, a whole. The affected population is a burden on public health systems but also on the national economy. The Chagas disease was included in the **list of 17 neglected diseases by the World Health Organization** (WHO) in 2005. In 2019, the organizations General Assembly declared **April 14, the World Chagas disease day.** Since then, WHO and the Chagas Coalition have made yearly calls to the international community to "end neglect of the disease". The slogans: "let's beat Chagas" (2020),

<sup>&</sup>lt;sup>1</sup> With counterpart funding of \$US24,000 resulting from monetization of non payable 60 hours volunteer work by trainers from Cayetano Heredia University and Rotary Club.

"I wear the T-shirt of the Chagas disease Day" (2022) and more recently, "to arrive on time" (2023).

The problem was recognized by Bolivia's national government in 2004/2005 when it declared the fight against Chagas a national priority, launching an ambitious Chagas Control Program with IDB financing. The program was elevated to the rank of Law 3744 in 2006. It created a national agency based in La Paz and 6 regional agencies in 6 endemic regions, including Santa Cruz. Each region is responsible for the implementation of the National Program in the respective department under the aegis and with co-financing of the Departmental Autonomous Governments through the Departmental Health Services (SEDES) directorate. With irrefutable advances in the elimination of the vector, "transplacental transmission" or "congenital Chagas" from mother to child, during pregnancy, becomes increasingly important in the fight against Chagas. It accounts for 26% of all new infections. The project "No more children with Chagas" has three specific objectives: 1. To detect a greater number of newborns, with congenital Chagas through application of PCR diagnostic tests; 2. To contribute to strengthening and consolidating the bio molecular of the Public Women's Hospital Percy Boland Rodríguez and 3. To increase visibility and public awareness about the opportunity to treat children with Chagas. It is a priority of the Chagas Program and is perfectly aligned with international governmental efforts, although Bolivia is not yet a member of the Iberoamerican Initiative "Ningún bebé con Chagas". Bolivia's accession (through the Departmental Autonomous Government) to this Ibero-American initiative will be promoted as far as possible. Finally, it is also our response to WHO's call to "arrive on time".

In particular, the project "NO MORE CHILDREN WITH CHAGAS" / NO FINISH LINE, SANTA CRUZ – builds on the work of the "Hospital de la Mujer Percy Boland Rodríguez", with the guidance and support of the Johns Hopkins University /PRISMA led by scientist, Robert Gilman. The joint team conducted a landmark incidence study of congenital Chagas at the Women's Hospital that provided scientific evidence about the magnitude of the problem: "1 v 5 pregnant women giving birth at the Hospital have Chagas, 5% of them would transmit the disease to their babies. But the team did not stop at research, but went on, to build and equip the first Bio Molecular laboratory in a public hospital in Santa Cruz. Specialized training to local staff, as well as technical assistance was provided by scientists from Johns Hopkins' partner, Cavetano Heredia University in Lima, Peru and soon the Women's Hospital Bio Molecular lab had the infrastructure, the equipment, and the technical staff to perform the sophisticated PCR (Polymerase Chain Reaction) tests to diagnose congenital Chagas. The "incidence study", confirmed the serious shortcomings of the current "micro method" of diagnostic and showed us the way to cease the golden opportunity to treat newborn at a time when available treatment is effective and well tolerated. It was their work, the hospital directors' vision, and ownership of the project that provided us, a solid justification and strong motivation for the project. Its general objective is to reduce the number of Chagas infected people in Santa Cruz by improving diagnosis and treatment of congenital Chagas (and chronic Chagas of recent infection in children from 2 to 12 years old, siblings of newborn). Its most immediate impact, to diagnose and treat at least 140/150 cases of congenital Chagas and an equal number of children aged 2 to 12, that would be their siblings with chronic Chagas disease of recent infection<sup>2</sup>. In all, the project would treat **280 to 300 children** aged 0 to 12 years old, hopefully freeing them from the potentially deadly consequences of chronic Chagas disease later in life<sup>3</sup>. Other expected outcomes would result from

<sup>&</sup>lt;sup>2</sup> Mothers may transmit the disease in more than one pregnancy, however, not in all..

<sup>&</sup>lt;sup>3</sup> Chagas disease is the main cause of deaths from heart disease in Latin America

project activities to continue strengthening scientific capabilities at the Bio Molecular lab and wider public awareness raising about the opportunity to treat children.

## II. Brief description of the organization requesting the funding

Founded by influential visionary men in the now largest Bolivian city of Santa Cruz de la Sierra, Rotary Club Santa Cruz de la Sierra, celebrated last January 2023, its 85 years- old birthday. The Club which has currently more than 130 active members, has maintained over the years an uninterrupted work, gathering talent, human, in-kind and financial resources for the execution of projects that meet the most pressing needs of our community. Rotarians deploy hundreds of thousands of man hours of volunteer work each year under the direction of annually mandated presidents. Rotarians in every corner of the world, including ours, are motivated and inspired by Rotary's official mottoes, that can be traced back to the early days of the organization-"Service Above Self /One Profits Most Who Serves Best". Emblematic projects of our Rotary Club Santa Cruz de la Sierra, include CERNIQUEM (a health center dedicated to rehabilitation of children that have been seriously burnt), FULIEB (a training program that promotes leadership and entrepreneurship among "pre and promo students" attending public school, the 50-year old Rotary Student Exchange Program, MINGA DIGITAL which pioneered the set up tele- centers to facilitate access to TICs in public primary and secondary schools of Santa Cruz. Our Club runs a "wheel-chair donations program" and carries out, yearly campaigns to bring doctors and medical care closer to communities that do not have easy access to health care public facilities/doctors. Our campaign "re-construyendo sueños (restoring hope)", carried out once a year during the past 11 years, with specialized medical assistance by a team of German doctors, has made possible the treatment of at least 10,000 children and adults, with cleft lips and other tumors and malformations thus restoring hope to them that they can lead healthy lives. (see www.rotaryclubsantacruz.org). The Club membership make monthly contributions for its operations and are permanently organizing fundraising events, raffles and other activities to carry out its humanitarian work. The Damas Rotarias, Rotaract, Interact and Rotakids make up a robust Rotary Club's family. The Club may request and manage donations from the Rotary International Foundation for its "humanitarian projects" such as "No más niños con Chagas".

# III. General objective

As mentioned in paragraph one, the project's general objective is "to reduce the number of Chagas infected people in Santa Cruz, by improving diagnosis and treatment of congenital Chagas, thus advancing implementation of Law nro.3477/2006 that declared the fight against the Chagas disease a national priority. The project will work initially in the capital city of Santa Cruz de la Sierra, take stock of lessons learned and systematize them for replication to 30 other municipalities where there is active transmission via the vector (vinchuca).

## IV. Specific objectives

The project has 3 basic objectives:

1. (a) To detect and treat a larger number of newborn with "congenital Chagas" by application of PCR tests to newborn in selected health centers affiliated to the Chagas control departmental program; (b) to detect and treat their siblings aged 2 to 12 years that may have also inherited the disease from their mothers; and (c) to contribute to interrupting mother-to-child transmission by

providing incentives to mothers to undergo their own treatment <sup>4</sup> after they have finished breast-feeding;<sup>5</sup>

2. To consolidate the biomolecular laboratory of the Women Hospital Percy Boland Rodriguez as reference hospital for congenital Chagas diagnostic, thereby, expanding the coverage of the work of the molecular biology laboratory of the Percy Boland Rodríguez Women's Hospital, beyond the "Chagas incidence study" carried out with Johns Hopkins University of the United States".

3. To contribute to raising awareness among the general population (with focus on mothers and families) about the opportunity to treat children" while influencing regional/national policies. First among these, a formal requirement from health regional authority that pediatricians demand a Chagas diagnostic and treatment in routine check- ups together with vaccination.

## V. Project Activities (and estimated summary budget)

Main activities are:

- Supply of "DNA extraction and amplification kits" for biomolecular PCR testing by the biomolecular lab; (1200/1300 tests);
- Training of 4 biochemists and/or doctors and/or researchers at Cayetano Heredia University in Lima, Perú;
- 2 Training workshops and knowledge sharing by trainees upon return,
- Production of audiovisual materials for wider public awareness campaign

The major capacity building component of the project involves continuing training of local partner specialists at Johns Hopkins' partner, Cayetano Heredia University in Lima, Perú with a proposed budget of **US\$3,800.- as follows:** 

Budget in US dollars			
Training in Cayetano Heredia U / Lima, Peru			
Plane tickets 4 biochemists a/o other key staff	\$	1,200.0	
Lodging, food, transportation \$100xweekx6weeksx4pers.	\$	2,400.0	
Other travel related expenses\$50 x4	\$	200.0	
Sub total	\$	3,800.0	
note: 6 week lab rotarion training content defined by JHU/Cayetano H. U			

Specialized training would be made available to 4 biochemists and/or biologists working or willing to work at the Biomolecular Lab at the Women's Hospital. They would attend the 6-week lab rotation program – same as offered to previous trainees- at the Cayetano Heredia University's training center in Lima, Perú. Upon return, trainees would be required to conduct 2 training workshops for wider knowledge sharing among local staff and stakeholder directors. The estimated cost of 2 workshops is US\$1,000.--- In addition, \$US500.- are budgeted for the production of audiovisual material, thus bringing the project's capacity building component to **\$US5,300.-** .

The largest chunk of the budget would fund the supply of T cruzi DNA extraction and amplification

<sup>&</sup>lt;sup>4</sup> treatment is proven to stop transmission, in future pregnancies

<sup>&</sup>lt;sup>5</sup> with the caution that the latter would need close medical supervision for control of benznidazole (BZN) side effects.

kits to perform an estimate of **1200 to 1300 PCR diagnostic tests to newborn<sup>6</sup> from Chagas**+ **mothers.** This time, tests would be applied not just to newborn at the Hospital's maternity ward but also in 2 to 4 selected health centers affiliated to the Departmental Chagas control Program. The cost of kits is estimated at **\$U\$32,500.- of a total project budget of \$U\$39,200.-**(excluding admin. costs) and not considering counterpart funding of \$U\$24,400.- consisting mainly in 60 hours/volunteer by Cayetano Heredia U. staff and Rotary project implementation coordination.

Finally, our third but key objective: to raise awareness among the general population as well as draw the attention of regional/national policy makers and health practitioners to the need to, and golden opportunity to treat children, will underline all project activities. As publicly announced, the first version of NFL international (Monaco), in Latin America (June 21-25,2023) joined the campaigns of the WHO&/NTD and Chagas Coalition on the occasion, of, the 2023 celebration of the World Chagas Disease Day (on April 14). The project "No more children with Chagas" is our response to its call "to arrive on time", therefore, progress made will be published in NFL 's social media to keep the public informed and continuously engaged in the fight against Chagas.

#### **Summary Project budget**

Budget in US dollars	
Extraction&amplification kits (1200/1300 PCR tests)	\$32,500.0
Sample transportation from health centers other than	
Hospital Percy Boland R. maternity wards	\$800.0
6-week lab rotation training at Cayetano 4 pers	\$3 <i>,</i> 800.0
Training workshops upon return including \$500 budgeted	
for production of audiovisual materials	\$1,500.0
Total	\$38,600.0
Miscellaneous	\$600.0
	\$39,200.0
5% cash admin RIFoundation \$4.773 dollars	264
5% admin costs RC Santa Cruz	1960

<sup>&</sup>lt;sup>6</sup> It is estimated that there are about 35,000 to 45,000 new births per year in the capital municipality of Santa Cruz. 25 to 35,000 of them are delivered in public health institutions. If we consider that 1 in 5 are mothers with Chagas, that means that health staff need to be attentive to cases of congenital Chagas in about 5500 and 6000 deliveries. The Bio lab's algorithm contemplates applying PCR tests to 3.000 newborn having tested (presumably false) negative with the "micro-method" currently used by the national Chagas Program.

Training in Cayetano Heredia U / Lima, Peru				
Plane tickets 4 biochemists a/o other key staff	\$	1,200.0		
Lodging, food, transportation \$100xweekx6weeksx4pers.	\$	2,400.0		
Other travel related expenses\$50 x4	\$	200.0		
Sub total	\$	3,800.0		
note: 6 week lab rotarion training content defined by JHU/Cayetano H. l				
Workshops upon roturn including audiovisual materials	ć	1 000 0		
workshops upon return including audiovisual materials	Ş	1,000.0		
Productos audiovisualtes for wider dissemination		\$500.0		
Sub total	\$	1,500.0		
Total institutional strenghtening	\$	5,300.0		

#### Funding structure and funding needs

Funding structure			
FDD Rotary SC		Funding needed	
Distrito 4690	\$ 5,200.0	Project budget	\$ 41,424.0
FDDs Distrito 4895	\$ 5,000.0	Budget before admin costs	\$ 39,200.0
(devolucion)		Funds secured	\$ 23,633.0
Cash 5 Argentinian Clubs		Funding request	\$ 15,567.0
Distritcs 4895 & 4851	\$ 500.0	plus 5% FRI cash admin costs	\$ 264
Cash RC SC / NFL	\$ 4,773.0	plus 5% RC SC admin costs	\$ 1,960.0
Global Grant IRF	\$ 8,160.0	Total funding request	
Funding secured	\$ 23,633.0	including admin costs	\$ 17,791.0
Project budget	\$ 41,424.0		

#### VI. Project design and methodology

The need for better diagnosing of congenital Chagas was raised to project designers by the directors of the Hospital de la Mujer Percy Boland Rodríguez and Dr. Tinajeros, local project coordinator of the **Molecular Biology Laboratory, a joint effort by the Women's Hospital PBR/ and the Johns Hopkins university,** during our visit at the end of 2018.<sup>7</sup> The incidence study had been completed confirming what was already suspected: 1 y 5 women giving birth at the Hospital<sup>8</sup> have Chagas and 5% may transmit the disease to their babies. In spite, of the work of the departmental Chagas control program, up to 70% of cases of congenital Chagas were not being detected, thus, missing a unique opportunity to treat them at a time when treatment is 99% effective and well tolerated. The incidence study provided a solid scientific justification and strong

<sup>&</sup>lt;sup>7</sup> a visit by the Orietta Sacre, project team leader, who then wanted to see if the Association monegasque pour

l'Amerique latine (AMLA) in Monaco could send a small US\$3,000 donation to the hospital.

<sup>&</sup>lt;sup>8</sup> The largest in the country with more than 6,200 births per year

motivation for the project. Chagas is indeed a problem in Santa Cruz and yet, there is an opportunity to do something about it. Moreover, there is the organization with the capacity and the commitment to do it (the Women's Hospital, with its Bio molecular laboratory). The local team had the support of a team of scientists from Johns Hopkins university that are determined to develop new ways to beat Chagas. At the same time, we had been approached -through the Association monegasque pour l'Amerique latine (AMLA), by members of the Chagas Coalition based in Barcelona. Their work influenced greatly our approach to the project. Chagas Coalition was created in 2013 to respond to a call to action by WHO to "end neglect" of Neglected diseases, one of which is Chagas. The organization has brought the disease back into the public eye and agenda of governments and civil society organizations. Its powerful founding partners included international drug companies, health research centers, NGOs and the federation of national associations of people affected by the disease FINDECHAGAS. Its major accomplishment, among many, is undoubtedly, the 2019 WHO General Assembly's declaration of April 14, as the Chagas world disease day. Their campaigns provided great inspiration to our team while the Johns Hopkins team provided the scientific evidence. Furthermore, there was a perfect coincidence in their views about the way to go about "defeating" Chagas, between the two organizations, each from its own very different perspective. So, based on their views, we had no doubt that the project "No more children with Chagas" was the right strategic approach. By then, we knew what to do in strategic terms, but needed to learn about the special needs of local actors in order, not just to take them, into account, when proposing project interventions and activities but, to make them a part of project design from inception to encourage the necessary ownership for project implementation and sustainability. With that purpose, we held multiple interviews with local actors engaged in the fight against Chagas. They are our current partners: SEDES, Chagas Program, Women's Hospital, Health Centers affiliated to the Chagas Program besides individual doctors, including rotarians. who have worked on Chagas and similar diseases and knew not only the programs but also the people involved. At the same time, that we conducted the interviews, we were given additional documentation and references, including PAHO evaluations of the Bolivian Chagas Program by international teams.

Once the project draft document was prepared, including objectives goals and activities, it was the subject of consultations with three stakeholder groups. We organized workshops with health managers, with international experts and with affected people, members of the Bolivian Association of people affected by the disease (part of FINDECHAGAS, the world federation of national associations of affected people). Our mutual agreements are reflected in an "Inter-institutional Cooperation Agreement" with the Departmental Health Service (SEDES) that was signed on April 14, 2023. Its two attachments describe the project (A) as well as standardized operating procedures, the algorithm for PCR diagnosing and other technical aspects of the laboratory (Attachment B).

With regard, to project dimension and impact, the following data estimates provided our basic assumptions for project design. There are about 35,000 to 45,000 births per year in the capital municipality of Santa Cruz de la Sierra. Of these, 30,000 to 35.000 are born in public institutions. If we consider that, according to scientific evidence produced by the "Johns Hopkings University Incidence Study"<sup>9</sup> (attached to this letter), 1 in 5 are mothers with Chagas, we were able to predict that health staff at maternity wards, would need to be attentive to cases of congenital

<sup>&</sup>lt;sup>9</sup> 5% of Chagas positive mothers transmit the disease to their babies. The Women's Hospital -JHU study provided the basic assumptions and justification of our project.

**Chagas in approximately 6.000 to 6.500 births throughout the year.** Furthermore, the biomolecular laboratory at the Women's Hospital has designed an algorithm that foresees application of PCR tests to 3.000 to 3.500 women with babies having tested negative to the diagnostic micro method currently used by the departmental / national Chagas control program. Therefore, it is estimated that the project, will help diagnose and treat at least 140/150 cases of congenital Chagas and 1 of their siblings probably also infected, thus, saving 280 to 300 children aged 0 to 12 years old, from the potentially deadly consequences of chronic Chagas disease later in life<sup>10</sup>.

#### V. Project implementation plan

Main activities and key dates including fundraising efforts

	Activity	Key dates
1.	Signing of Inter-institutional Agreement with Servicio Departamental De Salud (SEDES) of the Autonomous Government of Santa Cruz	April 14, 2023
2.	Submission of letter of commitment to provide Bs.33,220 counterpart funds to complete request for a donation by the International Rotary Foundation	June 25, 2023
3.	Grant proposal submission to the Rotary Int. Foundation in the amount US\$41,434 (1,200/1,300 PCR tests)	August 31, 2023
4.	Grant proposal submission to the US La Paz Embassy in the amount Of \$US38,305 (1,200/1,300 PCR tests)	August 21, 2023
5.	Other fundraising activities to complete funding of at least 3,000 to 3500 PCR tests to be applied to babies born in 19 health centers affiliated to the Departmental Chagas program, including the idea of setting up a "Bank for "reactivos" to pay for kits for extraction and amplification of <i>T cruzi</i> DNA for PCR tests of newborn -to be provided by private companies (kits for 1000 or more PCR tests)	September 30, 2023
6.	Signing of Memoranda of Understanding (MOU) with the Women's Hospital and the Chagas departmental Program including Plan of Action. once grant from Rotary Foundation secured	December 4, 2023
7.	Signing of similar MOU upon approval of grant from US GOV Small Grant Program for Public diplomacy.	December 4, 2023
8.	Initiation of project implementation with Rotary foundation grant (hire 2 short term consultants and invitation to bid for provision of <i>T cruzi</i> DNA extraction and amplification kits)	January 15, 2023

<sup>&</sup>lt;sup>10</sup> Chagas disease is the main cause of deaths from heart disease in Latin America

<ol> <li>Initiation of project implementation US gov grant (selection and departure of first 2 trainees, invitation to provide extraction and amplification kits to at least 2 companies)</li> </ol>	January 15, 2024
<ol> <li>Launching of "Banco para reactivos" (Board of directors set up and functioning, participation agreements from selected health centers signed and letters of commitment from funding companies obtained).</li> </ol>	October 15, 2023
11. Increasing number of cases of congenital Chagas detected and treated	January/September,2024
12. Project year one implementation with monthly monitoring and Follow- up	January/September,2024
13. Project Assessment and taking stock of lessons learned to incorporate them in eventual second year project extension	January 2025
14. Negotiation of eventual Project extension for 12 additional months	January/February 2025

#### VI. Implementation arrangements and Key personnel

The project will not need to hire any additional staff, on the contrary, it will contribute to making full use of the biomolecular lab's installed capacity. On the one hand, it will generate new demand from selected health centers affiliated to the departmental Chagas program, other than the maternity ward of the Women's Hospital; and, on the other hand, it will provide the necessary Chagas DNA extraction and amplification kits for PCR congenital Chagas diagnostics, with the view to "institutionalize" -on a pilot basis- the new diagnostic method for congenital Chagas within the departmental Chagas program.

A project coordination committee will be set up with members from Rotary Club, Johns Hopkins, the departmental Chagas control Program and the Women's Hospital. The committee will have primary responsibility for preparation of project implementation plans and reporting including Each member will have unique individual responsibilities, namely, the results monitoring. Women's Hospital and Johns Hopkins for selection of trainees, training program design, implementation and supervision together with Cayetano Heredia university in Lima, Peru; the Chagas departmental Program will take responsibility for the design and oversight of implementation of new protocols to introduce optional PCR tests into the program. Mothers would be freely, decide, whether to participate or not in the program<sup>11</sup>. To the Women's Hospital and Johns Hopkings on the performance of standardized operational procedures, quality controls and other requirements by the "Servicio Departamental de Salud (SEDES)" for the continued certification of the Biomolecular lab by the competent health authorities. Rotary Club would in turn, be responsible for project acquisitions and disbursements of funds, based on terms of reference, product descriptions and list of potential suppliers recommended by the Committee. The project committee may decide to conform an advisory group made up of other like-minded

<sup>&</sup>lt;sup>11</sup> Eligible babies would those having testes negative to diagnosis by micro method

organizations such as the Damas Argentinas, the Santa Cruz association of pediatricians, among other. Finally, the **Rotary family**, and 4 universities make up a permanent pool of volunteers which will be called to work on as needed basis, including results monitoring.

## VII. Project partners

The project has 4 partners which are the health sector organizations responsible for Chagas disease control in Santa Cruz and the Johns Hopkins University as close partner of the Women's Hospital and therefore, also our partner. These are:

• Gobierno Autónomo Departamental de Santa Cruz (SEDES) (<u>www.santacruz.gob.bo</u>) Ave. Omar Chavez s/no. y/o Casa de Gobierno Plaza 24 septiembre

• Programa departamental de Chagas (<u>www.minsalud.gob.bo</u>)

Calle Diego de Mendoza esquina Ave Las Américas

 Hospital de la Mujer Percy Boland Rodríguez/ Johns Hopkins University (www.hospitalmujerhmpbr.wixsite.com) Calle Rafael Peña s/n

As mentioned, the 4 entities mentioned are the projects main partners. In the first place, the "Departmental Health Service (SEDES) of the Autonomous Departmental Government of Santa Cruz, is the regional government authority responsible for health in the department of Santa Cruz. Then is, the Departmental Chagas Program, responsible for implementing Law No.3477/2006 on the control of Chagas disease in the department of Santa Cruz. It is a regional agency of the National Chagas Program and as such reports to it. However, it also responds to the SEDES because of its regional jurisdiction. Our main partner and stakeholder is the Women's Hospital PBR with its the "Molecular Biology laboratory". It is the lab that will perform the PCR tests including collecting and handling of samples. Johns Hopkins University is the closest partner of the Biomolecular lab and as such, scientific advisors, and strategic partner of the project. All of them, have had a leading role in the design of the project and intervention strategy reflected in the objectives and expected impact, and above all they agree on the activities that must be carried out to achieve them.

Measure	Collection Method	Frequency	Beneficiaries
1.Project implementation committee set up and functioning – Work and Results Monitoring Plans approved	Project implementation reports	Once	All 280 – 300 children aged 0 to 12 years old
2. Completion of Rules and procedures for selected health center and patient participation in the program, training program participation requirements and selection criteria, identification of suppliers of Chagas PCR diagnostic	Idem	Once	idem

# VIII. Monitoring and Evaluation Plan (once funding secured)

3. Trainees selected and bids to suppliers sent	Idem	Once	4 trainees
4. Number of first and second level health center affiliated to "Programa departamental de Chagas" that sign participation agreement	Idem	Monthly	2 to 4 health centers
5. Number of mothers that sign the letter of interest to have their newborn PCR diagnosed	Idem	Monthly	1000 and more
6. Number of mothers that bring their other children to their next birth control check up to have diagnosed and treated if infected	Project implementation reports	Monthly	600 and more
7. Number of, newborn, from Chagas positive mothers that are detected and treated	Idem	Monthly	140/150
8. Number of workshops by trainees at Cayetano Heredia U. carried out upon return with key stakeholder participation	Idem	Quarterly	2 workshops
9. Media coverage of project activities	Publications in the media, mainly, social media	Quarterly	20/25 news articles/posts

## IX. Communications, dissemination and press coverage plan

The Project team will ensure that project launching and training and other events are adequately publicized and shared with local and international partners and stakeholders but also with the general public. Project accomplishments and results will be published in the institutional platforms and social media of all 4 partner organizations. They will also be shared in our NO FINISH LINE Santa Cruz website, and NFL international networks.

# X. Future funding and sustainability

While sustainability in the longer term would require that the Chagas national/departmental **Program incorporate the PCR as method of diagnostic** – not a realistic expectation because PCR testing is generally non accessible because of its high cost-<sup>12</sup> we are proposing alternative sound and realistic sustainability plans for the short and medium term. One of them, the creation of a "bank" for PCR testing kits, to be sponsored by private companies modeled after a prior

<sup>&</sup>lt;sup>12</sup> Kit de Extracción: Marca: Thermo Fisher Scientific, Pure Link, Genomic DNA Mini Kit. Procedencia: USA.Cantidad de muestras a extraer: 50 muestras. Kit de Amplificación: Marca: VIASURE.Procedencia: España.Kit de Amplificación:Cantidad de Muestras a Amplificar: para 48 muestras. Several offers will be obtained.

experience by Rotary Club "Las Palmas", that run a program to install second hand "marca-pasos" for heart disease. At the same time, we are confident that new developments will come sooner than expected and thus be adopted by the project. We refer, specifically, to current research work to develop a PCR alternative diagnostic test which would be less expensive and equally sensitive: "recombined polymerase amplification methods (RPA)" are in a final trial phase by the Johns Hopkins teams. In sum, to treat congenital Chagas and chronic Chagas of recent infection (in children) is the way forward. It is, the focus, of the project "No más niños con Chagas".