



The Transplantation Society and  
the International Liver Transplantation Society

# Paired Transplant Centers Program



## APPLICATION FORM FOR NEW LEVEL 1 CENTERS LINKS

### GENERAL INFORMATION

Interested applicants are encouraged to read the detailed program information provided on the TTS-ILTS Paired Transplant Centers Program website : [www.TTS-ILTS.org](http://www.TTS-ILTS.org)

This form is intended only for new center partnerships that wish to join the program at entry level 1. The deadline for application is **December 31<sup>st</sup> every year.**

### NOMENCLATURE:

#### Pair applications

The Emerging Center (EC) is the center from the developing country.

The Supporting Center (SC) is the experienced training center (usually from a developed country)

PTC Program: Paired Transplant Centers program

### MEMBERSHIP:

It is expected that the liaison officer of the EC and SC are members of either TTS or ILTS

### PTC CENTERS INFORMATION

#### ■ EMERGING CENTER (EC): Hospital México

COUNTRY: Costa Rica

NAME OF PROJECT: Care optimization and quality improvement of liver transplant patients

GENERAL DESCRIPTION OF ACTIVITIES:

Care optimization and quality improvement of liver transplant patients

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#### ■ SUPPORTING CENTER (SC): University of California San Francisco (UCSF)

COUNTRY: USA

NAME OF PROJECT: Care optimization and quality improvement of liver transplant patients

GENERAL DESCRIPTION OF ACTIVITIES:

Care optimization and quality improvement of liver transplant patients

## EMERGING CENTER (EC) INFORMATION

### 1. CONTACT INFORMATION

#### ■ CLINICAL DIRECTOR TRANSPLANT PROGRAM

FIRST NAME: Maria Amalia

LAST NAME: Matamoros Ramírez

TTS MEMBERSHIP: YES  NO

ILTS MEMBERSHIP: YES  NO

DEPARTMENT NAME: Centro de Trasplante Hepático y Cirugía Hepatobiliar

STREET ADDRESS: Hospital México, la Uruca y Hospital Nacional de Niños, Paseo Colon

PO BOX: CITY: San Jose

STATE/PROV: San Jose

COUNTRY: Costa Rica

POSTAL CODE:

#### ■ PTC LIAISON OFFICER

FIRST NAME: Maria Amalia

LAST NAME: Matamoros Ramírez

EMAIL: valid email address

TELEPHONE:

FAX:

### 2. BASIC NATURE OF THE INSTITUTION

RESEARCH CENTER  SPECIALIZED MEDICAL CENTER  GENERAL HOSPITAL  DONOR CENTER

OTHER: Specialized Unit in a General Hospital

### 3. AFFILIATION/SPONSORSHIP

UNIVERSITY  STATE FACILITY  INSURANCE  NOT-FOR-PROFIT ORGANIZATION  PRIVATE FACILITY

OTHER:

### 4. LIVER AND TRANSPLANT SERVICE INFORMATION

#### ■ MEDICAL PERSONNEL: (PLEASE PROVIDE A NUMBER IN EACH CATEGORY)

HIGHLY QUALIFIED 1 FELLOWS 0 RESIDENTS 0 PARA-MEDICAL PERSONNEL 3

#### ■ SURGICAL PERSONNEL: (PLEASE PROVIDE A NUMBER IN EACH CATEGORY)

HIGHLY QUALIFIED 5 FELLOWS 0 RESIDENTS 0

#### ■ BREAKDOWN OF CURRENT ACTIVITY: (PLEASE PROVIDE APPROXIMATE PERCENTAGES)

% BASIC RESEARCH 0 % CLINICAL RESEARCH 0 % TEACHING 10 % PATIENT CARE 70

% EPIDEMIOLOGY % TRANSPLANTS LIVING DONORS 5 % TRANSPLANTS DECEASED DONORS 80

OTHER:

■ **BASIC/ CLINICAL RESEARCH**

MAIN AREAS OF INTEREST:

NUMBER OF PEER-REVIEWED PUBLICATIONS OVER THE PAST THREE YEARS:

(please quote three of the most significant publications produced by the institution over the last three years)

1:

2:

3:

PLEASE QUOTE THREE OF THE MOST SIGNIFICANT PUBLICATIONS PRODUCED BY THE INSTITUTION OVER THE PAST DECADE:

1:

2:

3:

PLEASE MENTION ANY GRANTS OR PRIZES AWARDED TO THE INSTITUTION OR ANY OF ITS FACULTY MEMBERS OVER THE PAST THREE YEARS:

1:

2:

3:

■ **INVOLVEMENT IN TEACHING:**

ANY FORMAL TEACHING ACTIVITY?

YES  NO

DESCRIBE:

ANY FORMAL TRAINING PROGRAMS FOR EXTERNAL TRAINEES?

YES  NO

DESCRIBE:

OTHER EDUCATIONAL FACILITIES/ACTIVITIES?

YES  NO

DESCRIBE:

■ **DIRECT PATIENT CARE: (PLEASE PROVIDE NUMBERS IN EACH CATEGORY)**

OUTPATIENT CLINICS PER WEEK: 30 NEW PATIENTS PER CLINIC: 10/W INPATIENT BEDS: 6

CRITICAL CARE BEDS: 2 LIVER BIOPSIES PER YEAR: 87 CLINICOPATHOLOGICAL MEETINGS PER WEEK: 1

DEDICATED HISTOPATHOLOGICAL MEETINGS PER WEEK: 0 OTHER ROUTINE INTERVENTIONAL PROCEDURES: 3/W

TOTAL NUMBER OF LIVER TRANSPLANTS IN THE LAST YEAR: 10

LIVE DONORS: 5

DECEASED DONORS: 5

DONATION SERVICES: ?

RETRIEVAL SERVICES: 9

TOTAL NUMBER OF LIVER TRANSPLANTS UNDER FOLLOW-UP: 82

■ **EPIDEMIOLOGY:**

ANY INVOLVEMENT IN EPIDEMIOLOGY PROGRAMS? YES  NO

DESCRIBE:

**5. HOW DID YOU FIND OUT ABOUT THE PTC PROGRAM**

ILTS WEBSITE  TTS WEBSITE  ILTS OR TTS BOOTH AT CONGRESS  ILTS OR TTS NEWSLETTER  A COLLEAGUE

OTHER:

## SUPPORTING CENTER (SC) INFORMATION

### 1. CONTACT INFORMATION

#### ■ CLINICAL DIRECTOR TRANSPLANT PROGRAM

FIRST NAME: Chris

LAST NAME: Freise

TTS MEMBERSHIP: YES  NO

ILTS MEMBERSHIP: YES  NO

DEPARTMENT NAME: Department of Surgery, Division of Transplantation

STREET ADDRESS: 505 Parnassus Ave

PO BOX: CITY: San Francisco

STATE/PROV: California

COUNTRY: USA

POSTAL CODE: 94143

#### ■ PTC LIAISON OFFICER

FIRST NAME 1.Shareef 2.Garrett

LAST NAME: 1.Syed 2.Roll

EMAIL: valid email address

TELEPHONE: phone number

FAX:

### 2. BASIC NATURE OF THE INSTITUTION

RESEARCH CENTER

SPECIALIZED MEDICAL CENTER

GENERAL HOSPITAL

DONOR CENTER

OTHER:

### 3. AFFILIATION/SPONSORSHIP

UNIVERSITY

STATE FACILITY

INSURANCE

NOT-FOR-PROFIT ORGANIZATION

PRIVATE FACILITY

OTHER:

### 4. LIVER AND TRANSPLANT SERVICE INFORMATION

#### ■ MEDICAL PERSONNEL: (PLEASE PROVIDE A NUMBER IN EACH CATEGORY)

HIGHLY QUALIFIED 10

FELLOWS 4

RESIDENTS 7

PARA-MEDICAL PERSONNEL 10

#### ■ SURGICAL PERSONNEL: (PLEASE PROVIDE A NUMBER IN EACH CATEGORY)

HIGHLY QUALIFIED 10

FELLOWS 4

RESIDENTS 5 (Rotating from a pool of 65)

#### ■ BREAKDOWN OF CURRENT ACTIVITY: (PLEASE PROVIDE APPROXIMATE PERCENTAGES)

% BASIC RESEARCH 100

% CLINICAL RESEARCH 100

% TEACHING 20

% PATIENT CARE 100

% EPIDEMIOLOGY

% TRANSPLANTS LIVING DONORS 20

% TRANSPLANTS DECEASED DONORS 80

OTHER: We have many members of the department with 100% clinical, basic science and clinical research appointments. Many members have a mixed appointment based and tenured positions. The clinical and research teams collaborate to provide high quality patient care and perform high quality research

## ■ BASIC/ CLINICAL RESEARCH

MAIN AREAS OF INTEREST: Living donor Liver transplant, HCC, Hep C, Normothermic perfusion, Liver regeneration, HIV

NUMBER OF PEER-REVIEWED PUBLICATIONS OVER THE PAST THREE YEARS:

(please quote three of the most significant publications produced by the institution over the last three years)

- 1: Delmonico FL, Ascher NL, Opposition to irresponsible global kidney exchange. Am J Transplant. 2017 Oct;17(10):2745-2746
- 2: Roll GR, Stock PG. Strategies to improve outcomes for hepatitis C virus/human immunodeficiency virus co-infected liver transplant candidates, Liver Transpl. 2016 Sep;22(9):1181-2
- 3: Mehta N, Heimbach J, Harnois DM, Sapisochin G, Dodge JL, Lee D, Burns JM, Sanchez W, Greig PD, Grant DR, Roberts JP, Yao FY. Validation of a Risk Estimation of Tumor Recurrence After Transplant (RETREAT) Score for Hepatocellular Carcinoma Recurrence After Liver Transplant. JAMA Oncol. 2017 Apr 1;3(4):493-500

PLEASE QUOTE THREE OF THE MOST SIGNIFICANT PUBLICATIONS PRODUCED BY THE INSTITUTION OVER THE PAST DECADE:

- 1: Roll GR et al. Left hepatectomy versus right hepatectomy for living donor liver transplantation: shifting the risk from the donor to the recipient. Liver Transpl. 2013 May;19(5):472-81
- 2: Yao FY. Liver transplantation for hepatocellular carcinoma: beyond the Milan criteria. Am J Transplant. 2008 Oct;8(10):1982-9
- 3: Hirose R, Yao F, Stock P, Roberts J, Ascher N. Liver transplantation at UCSF--a 20-year experience. Clin Transpl. 2008;119-25.

PLEASE MENTION ANY GRANTS OR PRIZES AWARDED TO THE INSTITUTION OR ANY OF ITS FACULTY MEMBERS OVER THE PAST THREE YEARS:

- 1: Filling a Void of Research (FAVOR) Training for Transplant Surgeons (NIH T32 Training Grant) Peter Stock MD PhD and Sarwal, Minnie M. MD PhD. UCSF
- 2: Solid Organ Transplantation in HIV: Multi-Site Study (Multi year NIH funded grant) Peter Stock MD PhD. UCSF
- 3: Donor-Alloantigen-Reactive Regulatory T Cell Therapy in Liver Transplantation (NIH funded grant) Feng, Sandy MD PhD, Bluestone, Jeffrey A. PhD, Kang, Sang-Mo MD, Tang, Qizhi PhD. UCSF

## ■ INVOLVEMENT IN TEACHING:

ANY FORMAL TEACHING ACTIVITY?

YES  NO

DESCRIBE: Top Ranked US medical school, ACGME approved surgical residency (60+ residents), 4 transplant ASTS approved surgery fellows

ANY FORMAL TRAINING PROGRAMS FOR EXTERNAL TRAINEES?

YES  NO

DESCRIBE: 10+ External visiting students and residents from other medical schools and residency programs in the USA. International visiting scholars from Japan, India, Spain and Columbia in the last 2 years

OTHER EDUCATIONAL FACILITIES/ACTIVITIES?

YES  NO

DESCRIBE: T32 research training grant for transplant surgeons

## ■ DIRECT PATIENT CARE: (PLEASE PROVIDE NUMBERS IN EACH CATEGORY)

OUTPATIENT CLINICS PER WEEK: 5 NEW PATIENTS PER CLINIC: up to 50 INPATIENT BEDS: 600

CRITICAL CARE BEDS: 60 LIVER BIOPSIES PER YEAR: 50-100 CLINICOPATHOLOGICAL MEETINGS PER WEEK: 1

DEDICATED HISTOPATHOLOGICAL MEETINGS PER WEEK: 1 OTHER ROUTINE INTERVENTIONAL PROCEDURES:

TOTAL NUMBER OF LIVER TRANSPLANTS IN THE LAST YEAR: 180

LIVE DONORS: 30

DECEASED DONORS: 150

DONATION SERVICES:

RETRIEVAL SERVICES: 100

TOTAL NUMBER OF LIVER TRANSPLANTS UNDER FOLLOW-UP: 1000+

## ■ EPIDEMIOLOGY:

ANY INVOLVEMENT IN EPIDEMIOLOGY PROGRAMS? YES  NO

DESCRIBE:

## 5. HOW DID YOU FIND OUT ABOUT THE PTC PROGRAM

ILTS WEBSITE  TTS WEBSITE  ILTS OR TTS BOOTH AT CONGRESS  ILTS OR TTS NEWSLETTER  A COLLEAGUE

OTHER:

## 6. POTENTIAL DONATIONS/SUPPORT ITEMS TO THE EMERGING CENTER

Can the Supporting Center provide items such as a journal subscription, textbooks, software, equipment or provide cash support for educational activities? Please describe any such forms of tangible support that your center is able or willing to provide to the benefit of the Emerging Center's development. (Limited to 500 words):

The division of transplant surgery at UCSF is invested in making this relationship flourish with the overall aim of improving the care of liver transplant patients in Costa Rica. Over the last few months the SC and EC have drafted a multiyear plan, initially focusing on protocol driven patient care, acute liver failure, living donation and later on deceased donor organ processes and allocation to achieve this aim.

The SC pledges to provide travel support for team members to travel between the centers, on a yearly basis. The SC division of transplant is excited to be participating in this initiative and is open to sharing all of its practices and processes with the EC to improve the care of patients with liver disease in Costa Rica. In this regard, all of the pre and post-operative management and immunosuppression protocols have already been shared with the EC. We have also begun discussing the implementation of these at the EC. However we still see significant value in the EC being able to experience and learn first-hand about pre transplant evaluation and selection processes, intraoperative techniques and post-operative protocol driven care. Travel from the EC to the SC will be maximized to take full advantage of the ECs ability to benefit from the relationship. However senior leadership in SC, with regional, national and international organ allocation experience are committed to revisit Costa Rica to continue to engage the Ministry of Health and develop a robust, policy driven organ donation and allocation system, which will benefit the Costa Rican population.

The SCs transplant surgeons, hepatologists, liver anesthesiologists, intensivists, transplant pharmacists and social workers (See appendix) have freely pledged their time and expertise to participate in ongoing, scheduled and real time case review via teleconferences. The EC will be advised on ways to enact protocols and clinical decisions to reduce waitlist and post-transplant morbidity and mortality. Many of the barriers faced by the EC have been historically overcome by the SC. We anticipate this perspective will allow the SC to offer practical advice to assist in the ECs development and sustainability.

Furthermore a reproducible live donor checklist has also already been created. This checklist has been constructed using established core principles that have been successful at other ECs around the world in limiting donor coercion. We now plan to assist the EC form a fairly representative live liver transplant evaluation committee, resulting in a transparent process that contains a system to document decisions and outcomes which can be used for later self-evaluation.

In addition, the SC will provide support for subscription to the ILTS / TTS website to allow access to all online education platform resources. This includes among other resources, the International Online course on Organ Donation and Transplantation journal. Additional online educational resources, which the emerging center (EC) may benefit from will be sought.

The SC will also be personally available and also ultimately establish a collaboration with their department of surgery academic department, which includes the services of a statistician and a medical educator, to assist the EC with manuscript editing and grant writing.

## MOTIVATION AND PLANS FOR DEVELOPMENT

**This is the most important section in your application; the needs of the Emerging Center and the potential to address these have the strongest impact on the review.**

If your Paired Transplant Centers partnership embarks upon a successful path within the program your relationship could be supported during a minimum of 6 years; TTS and ILTS aim to support those links who can demonstrate that there is a real will between the centers to actively work on the development of liver transplantation at the Emerging Center that will benefit the community at large. In order to evaluate this potential, we ask you to motivate the current reasons for your application by detailing the needs that must be addressed at the Emerging Center, how the Supporting Center can assist and what the desired outcome would be.

### WHAT ARE THE PRINCIPLE AREAS AT THE EMERGING CENTER THAT REQUIRE ATTENTION AND IMPROVEMENT? (Limited to 250 words)

1. Principle aim: - Improve patient care and increase living donor and deceased donor liver transplantation at the EC in Costa Rica.

2. Initial aim: - Improve the protocol driven preoperative and perioperative care of patients, with special attention to ALF patients with Wilson's disease patients.

There is a very high incidence of Wilsons disease (WD) in Costa Rica (4.9/100000 inhabitants). Notably, in Costa Rica the majority of patients with WD exhibit a liver-predominant disease, with more than 5% of these people presenting with fulminant liver failure. Currently they have several patients with ALF from WD per year that could be considered for transplant, but currently do not make it to transplant.

The EC has good outcomes currently, but has identified the need to standardize their preoperative, perioperative and postoperative liver transplant care, as well as the need to institute transplant quality control.

3. Mid-term aim: - Ceasing coercion of living donors in Costa Rica.

To construct a reproducible, transparent and ethical live donor liver transplant selection process to increase living donation while concomitantly creating firm barriers to coercion of donors and transplant tourism. Collaboration of expertise and resources will be used to implement a checklist (Which has been created) and systematic processes to enable safe, ethical and transparent live liver donation selection between both living related (genetic and marital) and unrelated donors and recipients.

4. Long term aim: - Increase deceased liver donation and standardize local donor selection, consent, management, and procurement processes.

### WHAT ARE THE PROPOSED MEASURES TO ADDRESS THE ABOVE NEEDS? (Limited to 250 words)

As mentioned, the SC's liver transplant multidisciplinary team willingly pledged to participate in teleconferences to discuss clinical cases, including ALF from WD at the EC. A core group from all of these specialties pledge to be available real time to address clinical questions. Conference calls will also be used to discuss organ selection, donor management, technical considerations, and review surgical complications. These calls will be recorded in a log of interactions. Also a reproducible donor checklist for all potential living donor cases, which has been created, will be implemented. The implementation will be of the check list will be paired with the formation of a fairly representative live liver transplant evaluation committee. Together this will lead to a fairer and more transparent selection process and aim to protect donors against coercion.

Lastly, UCSF is composed of many leaders who have played critical roles in the evolution of donor management and organ allocation in the United States. This expertise together with the significant experience and local knowledge and network of the ECs team, and the support from the International society of Organ Donation and Procurement and Donor Network West (local organ procurement organization) will position to group well, to engage the Ministry of Health, and bring about change in the availability and allocation of organs in Costa Rica. Increasing the number of organs and fair allocation of them, to enable more patients to benefit from liver transplantation in Costa Rica, is the ultimate goal. The ministry of health (Secretary of Organ donation and Transplantation: Cesar Gamboa) has already been engaged by both the EC and SC and are interested in working to develop the organ and donor system.

**ACCORDING TO YOU WHAT ARE THE POSITIVE FACTORS IN YOUR RELATIONSHIP/SITUATION THAT COULD LEAD TO A SUCCESSFUL OUTCOME:(Limited to 250 words)**

The SC is motivated to share its vast experience in liver transplant. The SC team is made of two enthusiastic junior transplant surgery faculty, under the oversight of senior surgeons, who are experienced in the global practices of transplantation. They all share an immense interest in global surgery and transplantation. Though the primary objective is to aid the development of the EC, the investigators at the SC will gain insight into the international practices of transplantation and are motivated to take on initiatives in the future. The EC has vast surgical skills and training, however are motivated to structure their program and create a collaborative and multidisciplinary system. This model of care has been established and championed at UCSF, hence making the collaboration fitting. All members of the EC, where despite the difficult social and economic conditions that hinder their work, have been able to reliably maintain a program for over 19 years to provide continuous care for patients. The stability of the EC program, shows the solid foundations that are present, and that this economic and time investment will be safe over multiple years.

UCSF has already established a collaboration with the ISODP and DNW. Both of these organizations are excited to assist with the partnership to help it succeed. Furthermore, members of the SC and EC have interacted with the Ministry of Health in Costa Rica. An additional visit is already planned in early 2019. This preexisting relationship will only mature over the course of the partnership. We feel that our motivations align with our aims, which are achievable, enabling us to strengthen the existing relationship and continue to evolve over the course of the collaboration.

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**ADDITIONAL COMMENTS THAT YOU WOULD LIKE TO PROVIDE IN ORDER TO STRENGTHEN YOUR APPLICATION: (Limited to 250 words)**

These members of the SC and EC have freely pledged their time to aid this important initiative.

UCSF PTC team:- Nancy L Ascher MD PhD, Professor of Surgery, Division of Abdominal Transplantation. Peter G Stock MD PhD, Professor of Surgery, Division of Transplantation. Ryutaro Hirose MD, Professor of Surgery, Division of Transplantation. Francis Yao MD, Professor of Medicine, Division of Hepatology. Bilal Hameed MD, Associate Professor of Medicine, Division of Hepatology. Linda Liu MD, Professor of Anesthesia. Dieter Adelman, Assistant Professor of Anesthesia. Aileen Chi PharmD, Transplant / Hepatitis C Clinical Pharmacist. Davina Martinez MSW, MPH, Clinical social worker Liver transplant. Zev Weinberg LCSW, Clinical social worker, Liver transplant.

Support letters from The ISODP (Susan Gunderson) Donor Network West and the department of Anesthesia at UCSF are attached.

Costa Rican PTC team:- Ministry of Health, Secretary of Organ donation and Transplantation: Cesar Gamboa, Gastroenterology: Marianela Madrigal Borloz, ICU: Dr. Oscar Palma Rodríguez, Anesthesiology: Gabriela Herrera, Pediatric Anesthesiology: Flory Parra, Pediatric ICU: Santiago Ramírez Castro, Pediatric gastroenterology: Fiorella Rimolo, Chief nurse: David Hernandez, Pediatric chief nurse: Josefa Gómez.

## SIGNATURES

### EMERGING CENTER LIAISON OFFICER

EC LIAISON OFFICER NAME: **Maria A. Matamoros**

SIGNATURE:

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### SUPPORTING CENTER LIAISON OFFICER

SC MAIN CONTACT NAME: **Shareef M Syed**

SIGNATURE:

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