UCTRAC

TUBERCULOSIS RESEARCH ADVANCEMENT CENTER

UCSF
Berkeley
University of California

ANNUAL REPORT

2022 / 2023

TABLE OF CONTENTS

UC TRAC INTRODUCTION

The UCSF-UC Berkeley Tuberculosis Research Advancement Center (UC TRAC) unites and expands the tuberculosis (TB) research programs of UCSF and UCB to accelerate discovery and develop new ways to detect, prevent and treat TB infection in humans. By creating a program that helps new researchers navigate the unique difficulties of working on this formidable pathogen and that fosters multidisciplinary collaborations, the UC TRAC aims to increase the vibrancy of TB research in the Bay Area and throughout the campuses of the University of California.

UC TRAC will provide research resources and infrastructure to foster, elevate and support TB research and provide exceptional mentorship and training to New Investigators, and established investigators new-to-TB. Administrative, Developmental, Clinical and Basic Science Cores will offer operations, facilities, services, resources, pilot awards, and mentoring opportunities to achieve the goals of the program.
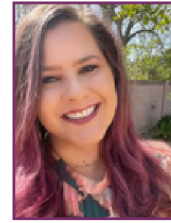
UCTRAC

UC TRAC CO-DIRECTORS

Payam Nahid, MD, MPH
UCSF

Jeff Cox, PhD
UC Berkeley

UC TRAC ADMIN CORE

Sarah Hutchinson
UCSF

BASIC CORE CO-DIRECTORS

Babak Javid, MB, PhD
UCSF

Sarah Stanley, PhD
UC Berkeley

UC TRAC BASIC CORE

Celine Perier, PhD
UC Berkeley

CLINICAL CORE CO-DIRECTORS

Priya Shete, MD
UCSF

Patrick Phillips, PhD
UCSF

UC TRAC CLINICAL CORE

Barbara Alonso
UCSF

DEVELOPMETAL CORE CO-DIRECTORS

Elizabeth Fair, PhD
UCSF

Art Reingold, PhD
UC Berkeley

UC TRAC DEVELOPMENTAL CORE

Thea Sigerman
UCSF

CORE ADVISORY COMMITTEE

Payam Nahid, MD MPH | UCSF
  UC TRAC Co-Director

Jeff Cox, PhD | UC Berkeley
  UC TRAC Co-Director

Sarah Hutchinson | UCSF
  UC TRAC Program Manager

Babak Javid, MB, PhD | UCSF
  Basic Science Core Co-Director

Sarah Stanley, PhD | UC Berkeley
  Basic Science Core Co-Director

Celine Perier, PhD | UC Berkeley
  Basic Science Core Lead Coordinator

Priya Shete, MD | UCSF
  Clinical Science Core Co-Director

Patrick Phillips, PhD | UCSF
  Clinical Science Core Co-Director

Barbara Alonso | UCSF
  Clinical Core Lead Coordinator

Elizabeth Fair, PhD | UCSF
  Developmental Core Co-Director

Art Reingold, PhD | UC Berkeley
  Developmental Core Co-Director

Thea Sigerman | UCSF
  Developmental Core Lead Coordinator

Joel Ernst, MD | UCSF
  Basic Science Representative

Russel Vance, PhD | UC Berkeley
  Basic Science Representative

Adithya Cattamanchi, MD | UCI
  Clinical Science Representative

Gustavo Velásquez, MD, MPH | UCSF
  Developmental & Clinical Science Representative

Mike Frick, MSc | TAG
  Community Advisory Board Consultant

TBD
  Community Advisory Board Chair

EXTERNAL ADVISORY COMMITTEE

Kelly E. Dooley, MD, PhD
Professor and Addison B. Scoville, Jr.
Chair in Medicine
Director, Division of Infectious Diseases
Department of Medicine
Vanderbilt University Medical Center

Andrea Ruff, MD
Associate Professor, Depts of International
Health and Pediatrics
Johns Hopkins University Bloomberg School of
Public Health and School of Medicine

Thomas R. Hawn, M.D., Ph.D.
Professor, Division of Infectious Diseases
Department of Medicine
University of Washington School of Medicine

UC TRAC Y1 OVERVIEW

The UC TRAC's first annual report reflects activities between August 1, 2022 through March 31, 2023. As of March 31, 2023, UC TRAC has been in operation for eight months. UCSF-UC Berkeley received its notice of award on August 1, 2022.

MENTORSHIP

Mentorship and training opportunities are at the center of UC TRAC's activities. At the time of this report, UC TRAC offers one formal mentorship program under the Developmental Core (TB RAMP) and one mentorship project in brainstorm phase by intra-TRAC collaborators to compliment the Developmental Core and provide low barrier entry to mentorship activities and foster NI community.

The UC TRAC Developmental Core program has **9 new investigators enrolled**, spanning expertise across both clinical and basic science research. The UC TRAC Basic Core has **engaged 5 scholars** in programmatic activities apart from the Developmental Core program. The UC TRAC Basic and Clinical Cores are brainstorming complimentary activities to foster NI community outside of formal programming. The UC TRAC as a whole has **identified 10 new investigators not yet engaged in formal programming (TB RAMP)**.

CONSULTATION, VOUCHER & PILOT AWARDS

UC TRAC Clinical Core consultation service launched on January 27, 2023. The Basic Core consultation service launched February 24, 2023. **31 consultants**, including UCSF-UCB faculty and external experts, have been onboarded. As of March 31, 2023, only one consultation service was requested by an established investigator.

The Basic Core launched its Accelerating TB Basic Research Voucher Program on January 27, 2023, resulting in **2 applications** by the deadline in late February. The Basic Core **granted 1 voucher award** to an early-stage investigator at UCSF, providing 2-months 100% FTE salary to a BSL-3 trained research associate to support the investigator's research. Funding begins May 1, 2023.

The Developmental Core announced call for applications for pilot awards under the UC TRAC funding mechanism in winter 2023. **7 new investigators applied to pilot awards**. Peer-review and selection of awardees will be determined by June 2023.

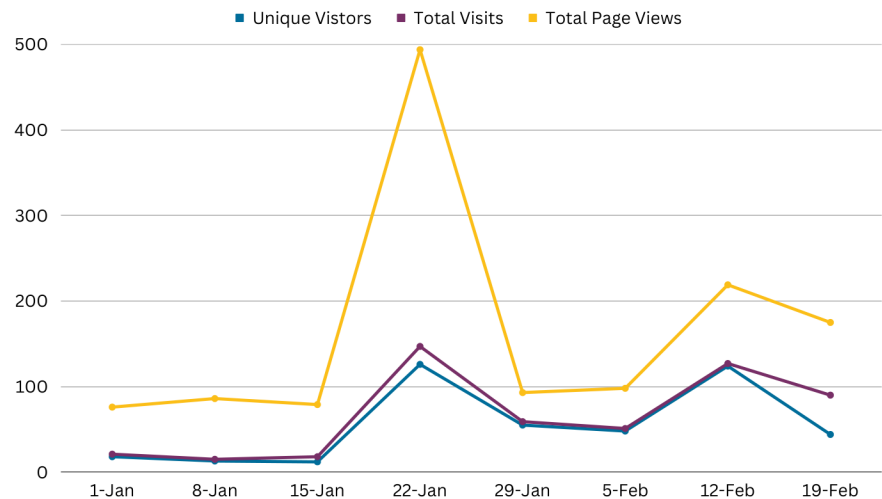**1** VOUCHER AWARD

2 CONSULTATION SERVICES

7 PILOT AWARD APPLICANTS

31 CONSULTANTS ONBOARDED

UCTRAC

UCTRAC.ORG

The website launched on January 27, 2023 promoting the Basic Core Voucher Program, Clinical Core Consultation Service, & Developmental Core Pilot Award. Analytics for the website as of March 31, 2023:

437 UNIQUE VISITORS

533 TOTAL VISITS

1.3K TOTAL PAGE VISITS

Line chart legend: Unique Vistors, Total Visits, Total Page Views. X-axis: 1-Jan, 8-Jan, 15-Jan, 22-Jan, 29-Jan, 5-Feb, 12-Feb, 19-Feb. Y-axis: 0 to 500.

COLLABORATION

The UC TRAC Clinical Core has **led inter-TRAC collaboration** with SEATRAC and Emory-Georgia TRAC to identify data sharing opportunities, while UC TRAC Admin Core initiated an inter-TRAC Slack account to share ideas, solicit support, and deepen TRAC community. UC TRAC has **sponsored three local events** that harness and showcase local TB research with an emphasis on ESI contributions. UC TRAC co-sponsored Bay Area TB Science Symposium 2022 at UCSF, World TB Day 2023 at UCSF, and PacTB 2023 at UC Berkeley. PacTB is a collaboration between UC Berkeley, University of Washington (SEATRAC), and Oregon Health and Science University.

CTSI

UC TRAC is leveraging the [UCSF Clinical and Translational Science Institute](#) (CSTI) to facilitate Clinical Core's consultation service and provide triage infrastructure to requests made from ESI and new-to-TB investigators at UCSF and UC Berkeley.

2 UC TRAC-INITIATED CROSS-TRAC ACTIVITIES

3 CO-SPONSORED EVENTS

1 NIH-FUNDED UCSF PARTNER COMMUNITY-BASED ACTIVIST PARTNER

The UCSF CTSI is part of the Clinical and Translational Science Award (CTSA) program funded by the National Center for Advancing Translational Sciences (NCATS) at the National Institutes of Health (NIH), Grant Number UL1 TR001872.

TAG

Mike Frick, TB Project Co-Director for [Treatment Action Group](#), is working with the UC TRAC Admin Core to provide consultation for launching and managing an effective Community Advisory Board, including CAB onboarding training through "TAG University" and orientation for UC TRAC faculty and trainees that have minimal experience working with community advisory boards. The UC TRAC CAB will be informed by and developed with a framework that incorporates evidence-based approaches through an activist lens.

UCTRAC

ADMIN CORE AIMS

To provide the governance and management structure, and the monitoring and evaluation required for smooth operation of the UCTRAC, with the ultimate aim of facilitating exciting new multidisciplinary TB research activities, mentorship and career development across the Basic, Clinical and Developmental Cores.

1 Provide scientific **leadership** and administrative coordination within UCTRAC.

2 Develop and provide access to a global virtual TB **Community Advisory Board** for all UCTRAC investigators.

3 **Monitor and evaluate** the UCTRAC to drive effective decision-making.

ADMIN CORE EVALUATION

Guidance and evaluation offered by the UC TRAC External Advisory Committee on March 3, 2023.

1 LEADERSHIP

- Encouraged activities to cross-pollinate with UCSF CFAR. UCSF CFAR is offering lessons learned and consultation guidance, however UC TRAC agrees that deepening our integration and cross-pollination of activities is essential to leverage the P30 investments.
- Praised the clean, thorough website, sponsored events and collaboration initiatives across TRACs.
- EAC is pleased with the leadership and programmatic support structure of the coordinators/manager.

2 COMMUNITY ADVISORY BOARD

- CAB plans seem to be on target. The EAC is interested to learn how UC TRAC will engage its CAB once launched to ensure the CAB contributes in a meaningful way on changing or challenging research directions. EAC requests careful attention to this process and discussion on Year 2 progress.

3 MONITOR AND EVALUATION

- Appreciated the review process, annual report draft, and looks forward to hearing more about evaluation process at Year 2.

Y1 PROGRESS & GOALS

UC TRAC ADMIN Core Year 1 Progress and Goals for Aim 1

AIM 1   PROGRESS + GOALS   LEADERSHIP

- ✓ Implemented programmatic support structure for all Cores, with weekly communication and updates to Co-Directors, Admin Core.

- ✓ Coordinating monthly Core Management Committee meetings to provide scientific and programmatic direction. CMC meetings meet in-person on a bi-monthly basis.

- ✓ Coordination of External Advisory Committee's membership, first annual meeting, and first annual report.

AIM 2   PROGRESS + GOALS   CAB

- ✓ Created project plan and internal deadlines for CAB launch with TAG consultation, including CAB roles and responsibilities, member compensation, member demographics, onboarding plan, and recruitment plan.

- ◔ Recruitment for CAB members begins April 2023; invitations to join UC TRAC CAB in May 2023; onboarding via "TAG University" in or by July 2023.

- ◔ Implement request triage practices from Core faculty and trainees, evaluate CAB practices with CAB members and Clinical Core.

AIM 3   PROGRESS + GOALS   M + E

- ✓ Providing administrative leadership for Annual Report and RPPR.

- ◔ Evaluate and refine metrics and success of monitoring for future reporting.

UCTRAC

BASIC CORE AIMS

To address the need to accelerate innovative, multidisciplinary research in tuberculosis research that spans the spectrum of disciplines from basic to clinical research. We expect to catalyze innovation and multidisciplinary work in TB research by:

1 Establish a novel **voucher program** designed to lower barriers of entry for new investigators and new-to TB investigators to perform innovative, high-risk/high-reward fundamental TB research.

2 Provide a **consultation service** in basic TB research regarding study design, optimal collaborative partners, analysis, and interpretation.

3 **Mentor** new investigators in the conduct of basic TB research.

BASIC CORE EVALUATION

Guidance and evaluation offered by the UC TRAC External Advisory Committee on March 3, 2023.

1 VOUCHER PROGRAM

- EAC acknowledged the difficulties of creating a basic science core.
- Challenged the Basic and other cores to do inventory across basic sciences, regardless of TB-specific research, and do targeted invitation to apply to voucher program (or other funding opportunities).
- Discussion of the challenge and opportunity of advertising the voucher program, including lack of cash may turn investigators off. UC TRAC may be in need to rethink advertising the level of effort for BSL-3 trained technicians that would be very helpful to NI's.

2 CONSULTATION SERVICE

- EAC expressed interest in Basic Core's challenges with CTSI and the impending challenge to track and charge for consultations.

3 POSTDOC MENTORSHIP

- Postdoctoral mentorship work and social networking for ESI's is exciting as they attempt to bring people not in TB into the TB research arena.
- Appreciative of engaging many ESI's in J1 visas that were not previously supported by the mentorship program.

VOUCHER PROGRAM

UCTRAC Basic Science Core Year 1 Progress and Goals for Aim 1

1

PROGRESS

✓ Conducted inventory on human resources (i.e.BSL-3 trained SRA's) at UCSF/UCB that have available time and effort to contribute to the voucher program. Identified **7** SRA's for the Voucher Program.

✓ Call for proposals for the Voucher Program launched in January 2023. In March 2023, two applications were received. Review process was designed and implemented in March 2023.

✓ One voucher was announced awarded at World TB Day to an early-stage investigator at UCSF. Funding to cover two-months 100% FTE for a research associate will be awarded in May 2023.

GOALS

✓ Currently strategizing how best to promote the voucher program to the broader UCSF/UCB research community.

✓ Track financial administration of awards, follow-up of awarded/non-awarded proposals in terms of outputs after first round.

CONSULTATION SERVICE

UC TRAC Basic Science Core Year 1 Progress and Goals for Aim 2

2

PROGRESS

✓ Identified consultation mechanism and metrics with some challenges, launched consultation service in February 2023. Basic Core set up its own internal consultation request form to be monitored and tracked internally. For Year 1, only Core faculty enrolled as consultants to work out recharge system.
CHALLENGE: UCSF's Clinical and Translational Science Institute offers a consultation service mechanism, however rejected the request to process basic science consultation service.

✓ Strategize consultation service that benefits and reaches the local basic research community. The Basic Core team consulted with the needs of early-stage basic science investigators. The basic science consult service is targeted to the trainee community at UCSF and UCB, however further promotion is needed.

GOALS

○ Quarterly evaluation of volume of requests; strategize for successful promotion of the service; respond to feedback by consultees/consultants on success of program. First round evaluation will be conducted in June 2023.

POSTDOC MENTORSHIP

UC TRAC Basic Science Core Year 1 Progress and Goals for Aim 3

3

PROGRESS

✓ Identified **9** UCSF-UCB basic science mentors for trainings, small group career development. Identified **15** mentees interested in participating in the various forms of a mentorship program.

✓ Held a postdoc focus group on January 26, 2023. **5** mentees attended the first meeting which also served as a networking opportunity. Mentees brainstormed interests, needs, and challenges to participate in mentorship and training.
CHALLENGE: A second meeting, scheduled for February 16, 2023, was cancelled due to scheduling conflicts and transportation barriers.

GOALS

✓ The Basic Core team provided findings from the focus group to Developmental and Clinical Core teams, including barriers of entry to mentorship program for J1 Visa holders, time commitment barrier for two-year program, transportation barriers for meetings held on opposite sides of the Bay.

✓ The Basic Core team is working with Developmental and Clinical Core teams to expand mentorship, training, networking, and community-seeking opportunities for basic science scholars.

CLINICAL CORE AIMS

To augment existing UCSF and UCB resources to accelerate clinical research by engaging New Investigators and established investigators new-to-TB, and by reducing the barrier to conducting high-quality, innovating clinical research.

1 Provide expertise in the clinical and population sciences related to TB clinical research via **consultation** regarding conception of research questions, study design, regulatory aspects of study initiation, and data management, analysis, and interpretation.

2 Link new investigators with internal and external **resources for existing data and biological specimens** from well-characterized participants as well as research tools and templates to support the efficient conduct of newly proposed TB clinical research studies.

3 Facilitate feedback from TB-affected communities on the conception, design and/or implementation of TB clinical research through the UC TRAC **Community Advisory Board** (CAB).

4 **Mentor** new investigators (NIs) in the conduct of TB clinical research.

CLINICAL CORE EVALUATION

Guidance and evaluation offered by the UC TRAC External Advisory Committee on March 3, 2023.

1 CONSULTATION SERVICE
- Integration with CTSI program fits seamlessly at this stage.
- Promotion is needed.

2 DATA REPOSITORY
- Applauded leadership of UC TRAC Clinical Core to initiate collaboration with SEATRAC and Emory-Georgia TRAC to synergize with inter-TRAC partners to expand access to datasets for NI's.
- It is suggested to work with inter-TRAC partners to appeal for more funding specifically for the data catalogue aim, to be shared across participating TRACs. Possible data repository in future years.
- It is suggested to launch what is possible, which is a data catalogue that lists available data versus curating a data repository, which is an unlikely aim at the price and capacity available.

3 CAB FACILITATION
- Challenged Clinical and Admin Cores to ensure the CAB contributes in a meaningful way on changing or challenging research directions.

4 CLINICAL RESEARCH MENTORSHIP
- Challenged clinical core to not duplicate services, and work with Developmental and Basic Cores to reassess needs versus what is currently offered by TB RAMP.

CONSULTATION SERVICE

UC TRAC Clinical Science Core Year 1 Progress and Goals for Aim 1

1

PROGRESS

✓ Identified and confirmed participation for 27 consultants across both campuses (16 at UCSF, 8 at UCB) as well as three external experts, across seventeen fields of expertise. **31** consultants total.

✓ Established workplan with **UCSF Clinical and Translational Science Institute** (CTSI), and shared guide/ SOP with consultants. Recharge mechanism in place with CTSI and through the campus vendoring system for external consultants. CTSI is a NIH-funded project, Grant Number UL1 TR991872.

✓ Beta form created and launched in January 2023 to collect data as the Clinical Core team waited for the intake form at CTSI to be updated. CTSI integrated form launched in mid-March 2023. Calendar was created to track triage requests for Core leads.

GOALS

◯ Quarterly evaluation of volume of requests; strategize for successful promotion of the service; respond to feedback by consultees/ consultants on success of program. First round evaluation will be conducted in June 2023.

DATA REPOSITORY

UC TRAC Clinical Science Core Year 1 Progress and Goals for Aim 2

2

PROGRESS

✓ The Clinical Core team has identified Dataverse as software to manage data catalog and has secured server space at UCSF to house data. CHALLENGE: finding a system appropriate for the needs of the Clinical Core aims. A demonstration was arranged with the NIH TB Portals group to explore possibilities for using their data repository system.

✓ The UC TRAC Clinical Core team has led efforts with their counterparts at SEATRAC and Emory-Georgia TRAC to discuss possibilities. UC TRAC is scheduling quarterly inter-TRAC Clinical Core meetings to brainstorm solutions for issues faced by all Clinical Cores. The first meeting, to be held in April 2023, will address the appetite for a centralized data catalog of publicly available, yet restricted, TB datasets, and if there is interest in using the platform to curate datasets available only to specific TRACs, or to make them available across all TRACs.

GOALS

✓ The Clinical Core team will continue working collaboratively across-TRACs to find mutually beneficial systems for a centralized data catalogue.

○ The Clinical Core team plans to build the UC TRAC data catalogue in Spring-Summer 2023.

COMMUNITY ADVISORY

UC TRAC Clinical Science Core Year 1 Progress and Goals for Aim 3

3

PROGRESS

✓ The Admin Core team is establishing process and implementation plan for onboarding and orientation of new CAB members and UC TRAC Core members. The Clinical Core team, as well as TAG, is providing consultation to UC TRAC Admin Core for CAB guidelines and set up.

✓ The UC TRAC CAB recruitment is in progress and onboarding will occur with TAG University's debut in July 2023.

GOALS

○ The Clinical Core team will launch CAB engagement and feedback activities; integrate community engagement and CAB recommendations into the clinical research ecosystem of UC TRAC upon CAB onboarding in or after July 2023.

CLINICAL MENTORSHIP

UC TRAC Clinical Science Core Year 1 Progress and Goals for Aim 4

4

GOALS

○　The Clinical Core team is working with Developmental and Basic Core teams to expand mentorship, training, networking, and community-seeking opportunities for clinical science scholars.

DEVELOPMENTAL CORE AIMS

To be the principal vehicle used to attract and support new investigators (NIs) pursuing tuberculosis (TB) research and investigators wanting to enter the TB field through an active mentoring program and innovative developmental pilot awards program.

1 Develop and refine a comprehensive two-year structured **mentoring, training, and career development program** for New Investigators (NI) that is TB-specific and offers sustained mentoring from "ideas to independence."

2 Support innovative multidisciplinary research and the development of TB research scientists through peer-reviewed **pilot awards**.

3 Develop a community of practice for TB researchers that fosters equitable **international research partnerships** and mentoring in TB.

DEVELOPMENTAL CORE EVALUATION

Guidance and evaluation offered by the UC TRAC External Advisory Committee on March 3, 2023.

1 ESI MENTORSHIP PROGRAM

- EAC expressed that the R35 TB RAMP program provides a strong program foundation to build the house, bringing in international partnerships, mentees, allows for so many opportunities.

2 PILOT AWARDS

- EAC members involved in SEATRAC and JHU TRAC asked the question: How do you balance how big awards can be versus how many NI's to bring into the program and fund?
  - Answer: TB RAMP Scholars aren't using the whole $10,000 reimbursable awards over the two years of their commitment (for direct costs, publications, conferences, etc). UC TRAC Developmental Core is currently considering pooling savings toward another pilot award, or another Scholar reimbursable award. Considering reducing reimbursable award.

3 INTERNATIONAL PARTNERSHIPS

- EAC encouraged UC TRAC to apply for a D43 to support international mentorship and partnerships, acknowledging Dr. Art Reingold has experience managing a D43. Discussion to launch the current project and standard operating procedure with international partners, JHU CFAR warned of lengthy delays with their process.
- Discussion to possibly create an inter-TRAC program with international partners to cross-fertilize TRACs in this endeavor.

MENTORSHIP PROGRAM

UC TRAC Developmental Core Year 1 Progress and Goals for Aim 1

1

PROGRESS

✓ The Developmental Core team merged the TB RAMP program under the umbrella of UC TRAC Developmental Core, however is able to offer international partnership, CAB training and access, and non-US resident mentorship for those under the Dev Core ESI Mentorship Program.

✓ UC TRAC hired a coordinator who will dedicate 100% effort to lead Developmental Core activities. The Developmental Coordinator will provide continuity between the mentorship needs of the Basic and Clinical Cores, and monitor cross-core collaboration opportunities.

GOALS

✓ Continue working with Basic and Clinical Cores to develop UC TRAC ESI engagement opportunities complimentary to TB RAMP without duplicating Developmental Core activities.

PILOT AWARDS

UC TRAC Developmental Core Year 1 Progress and Goals for Aim 2

2

PROGRESS

✓ Added new Mentored Scientist in TB Research pilot awards to the Resource Allocation Program (RAP) in winter 2023. UC TRAC offered an Under-Represented Minority (URM) RAP award as well via the TB RAMP R25 mechanism. By March 31, 2023, we received 7 applicants in total. Peer-reviewed scores will be available to the Developmental Core team in May, with award announcements in June 2023.

✓ UC TRAC is now able to offer the Mentored Scientist in TB award and other pilot awards with no U.S. residency restrictions, opening funding pathways to many UC TRAC ESI's appointed on a J1 visa.

GOALS

✓ RAP awards will be peer-reviewed, and scores will be delivered to the Developmental Core team by May 2023 for selection of awardees.

○ Add new Resource Allocation Program (RAP) pilot awards in TB research including International ESI, Team Science, and New Directions. Reconfigure RAP Selection Committee to represent UC TRAC Core faculty.

○ The Developmental Core team will develop SOP's on International ESI awards by summer 2023 in advance of the Fall 2023 RAP Award round.

INTERNATIONAL PARTNERSHIPS

UC TRAC Developmental Core Year 1 Progress and Goals for Aim 3

3

GOALS

✓ The Developmental Core team is working with UCSF DEIA experts in designing a workshop for UCSF-UCB faculty and trainees of all levels, identities and experiences. The workshop will incorporate aspects of building equitable international partnerships. The Developmental Core team plans to implement the first DEIA workshop by June 2023.

◯ The Developmental Core team is planning a half-day meeting in May 2023 with UC TRAC CMC to propose clear criteria for international partnerships, brainstorm initial partners for this work, and recruit for scientific review panel.

UCTRAC

TUBERCULOSIS RESEARCH
ADVANCEMENT CENTER

UCSF
Berkeley
University of California