Intro to Blood Systems Research Institute (BSRI)

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BSRI does not exist.
What is Vitalant Research Institute (VRI)?

Established: 1959 (Scientific Services department - Irwin Memorial Blood Bank)
Number of Employees: 70

Facilities
The Research Institute is housed within Blood Centers of the Pacific in San Francisco, CA. Our Research Institute has state-of-the-art equipment to support research related to blood and blood product safety in the areas of molecular biology, immunology, virology, tissue culture, cell processing and epidemiology. Staff have 9000 sq. ft. of labs (including a biosafety level 3 lab), and a 2200 sq. ft. freezer room with capacity to store more than one million specimens.

Collaborations
University of California, San Francisco; The Clinical & Translational Science Institute (CTSI) at UCSF; University of California, Davis; UCSF Benioff Children's Hospital, Oakland; US Department of Veterans Affairs; The American Red Cross; Public Health England; Fundação Faculdade de Medicina BRAZIL; Duke University; South African National Blood Service; Emory University; and the University of Georgia

Industry Collaborations
Cerus; Roche; Grifols; Ortho-Clinical Diagnostics, Inc.; Gen-Probe, Inc.; Abbott Laboratories; TerumoBCT; Immunetics; Integral Molecular

Grantors
National Institutes of Health (NIH); US Food and Drug Administration (FDA); US Army Medical Research and Materiel Command (USAMRMC); Blood Systems

Research Areas
- Epidemiology/Donor Behavior
- Molecular Virology
- Molecular Transfusion Medicine
- Immunology
- Repository and Testing Services
- Molecular Diagnostics
- Cell Therapy
What do we do at VRI?

OUR MISSION

The Vitalant Research Institute (VRI) is dedicated to advancing blood safety world-wide through scientific research, education and the promotion of evidence-based policies.

OUR VISION

VRI, an integral part of Vitalant, is the premier transfusion medicine research institute in the US focused on scientific and policy advances relevant to transfusion therapy and blood product availability, with particular focus on mechanisms underlying and prevention of infectious and immunological complications of transfusions. VRI contributes to and engages other Vitalant divisions in research, policy development and application of new practices.
Key moments in VRI history

**1959**
- **IRWIN MEMORIAL BLOOD BANK**
  - Founded
  - The first non-profit community blood bank in the US was founded in June, 1941

**1983**
- **TRANSFUSION-TRANSMITTED HIV**
  - First case of transfusion-transmitted AIDS to a child reported by investigators at BSRI and UCSF.

**SCIENTIFIC SERVICES OF IRWIN MEMORIAL ESTABLISHED**
- In 1959, Irwin Memorial Blood Bank established its research program, laying the foundation for BSRI.
Key moments in VRI history

1989

NHLBI REDS PROGRAM INITIATED

The Retrovirus Epidemiology Donor Study (REDS) was created to improve transfusion safety.

2004

BLOOD SYSTEMS RESEARCH INSTITUTE CREATED

BSRI formally founded from the Scientific Services of Blood Centers of the Pacific.

2015

SCIENTISTS IDENTIFY EFFECTIVE AND NOVEL MECHANISMS TO BLOCK CHIKUNGUNYA VIRUS

Scientists looking at the antiviral mechanisms of two previously identified human monoclonal antibodies have found they potentially inhibit chikungunya virus (CHIKV) at multiple stages of infection.
Key moments in VRI history

- 2015
  
  US FDA Lifts Lifetime Ban on MSM Blood Donation

AMFAR Establishes San Francisco-Based Institute for HIV Cure Research

amfAR, The Foundation for AIDS Research, today announced the establishment of the amfAR Institute for HIV Cure Research, an innovative collaborative enterprise based at the University of California, San Francisco.
Key moments in VRI history

BLOOD SYSTEMS BECOMES VITALANT

On September 24, 2018, BSRI announced our new name: Vitalant Research Institute.

BSRI-DENVER CAMPUS WELCOMES DR. LARRY J. DUMONT AS SENIOR INVESTIGATOR AND ASSOCIATE DIRECTOR

Dr. Larry J. Dumont brings to BSRI-Denver the important program to develop licensable platelet cryopreservation techniques under the sponsorship of the United States Army. This program, currently in Phase 1 clinical trials, is expected to extend the 5-day shelf life of platelets to more than 2 years.

BLOOD PROCESSING METHODS AFFECT MICROPARTICLES AND MTDNA LINKED TO BLOOD TRANSFUSION REACTIONS

Scientists from BloodSystems Research Institute in San Francisco, California, and Canadian Blood Services' Centre for Innovation lab in Edmonton, Alberta, report that specific red blood cell manufacturing methods may be less damaging to cells than others.
One more key moment (in 2013)...

**TOP INSTITUTIONS IN THE U.S.**

<table>
<thead>
<tr>
<th>RANK 2013</th>
<th>RANK 2012</th>
<th>INSTITUTION LOCATION</th>
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<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>La Jolla Institute for Allergy and Immunology, California</td>
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<tr>
<td>2</td>
<td>8</td>
<td>Blood Systems Research Institute, San Francisco, California</td>
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<tr>
<td>3</td>
<td>3</td>
<td>Stowers Institute for Medical Research, Kansas City, Missouri</td>
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<td>4</td>
<td>14</td>
<td>University of Pittsburgh, Pennsylvania</td>
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<tr>
<td>5</td>
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<td>Carnegie Institution for Science, Department of Plant Biology, Stanford, California</td>
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<td>6</td>
<td>7</td>
<td>St. Jude Children’s Research Hospital, Memphis, Tennessee</td>
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<tr>
<td>7</td>
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<td>Fox Chase Cancer Center, Philadelphia, Pennsylvania</td>
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<td>8</td>
<td>12</td>
<td>Scripps Institution of Oceanography, La Jolla, California</td>
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<td>9</td>
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<td>ECR Institute, Plymouth Meeting, Pennsylvania</td>
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<td>10</td>
<td>17</td>
<td>Oklahoma Medical Research Foundation, Oklahoma City, Oklahoma</td>
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The impact of VRI / transfusion medicine research

Emerging Infectious Disease Threats

- ICL
- bacteria
- vCJD
- T. cruzi
- PTLV
- SFV
- WNV
- SARS
- Monkey Pox
- Leishmania
- influenza
- DENV
- Babesia
- CHIKV
- XMIV
- PARV
- SFTSV
- MERS-Cov

Risk per Unit

- HCV
- HBV
- HIV


Revised Donor Deferral Criteria
HBsAg Screening
HIV Ab Screening
HCV Ab Screening
p24 Ag Testing
HCV and HIV NAT
WNV NAT
HBV NAT
NANB Hepatitis Surrogate Testing
vCJD Deferral Criteria
T. cruzi Ab Screening
VRI is highly focused on education and training

The Vitalant Research Institute has since inception, been firmly committed to the advanced training of young scientists in the areas of transfusion medicine, infectious disease, immunology and epidemiology.
Transfusion Medicine/Blood Banking Fellowship

The Herbert Perkins Transfusion Medicine Fellowship is an ACGME accredited program offered jointly by University of California, San Francisco (UCSF), Blood Centers of the Pacific (BCP), and Blood Systems Research Institute (BSRI). The fellow gains experience in all aspects of blood banking and transfusion medicine by spending 6 months at one of this country’s foremost university medical centers and 4 months in one of its premier blood banks. Additional rotations provide training opportunities in therapeutic apheresis.

The UCSF rotation offers the experience of an academic multi-hospital unified transfusion service providing care to a wide variety of pediatric and adult patients and offering a wealth of complex services. UCSF has a very active hematopoietic stem cell transplant program and training in Cellular therapy is also provided during the 6 months fellows spend at UCSF hospitals.

BCP distributes approximately 145,000 RBC, 46,000 platelet, and 45,000 plasma units each year for hospitals in a large segment of northern California and has an AABB accredited immunohematology reference laboratory. Fellows rotate through all blood center departments, assuming increasing responsibility as they learn. Instruction is through tutorials, conferences, department meetings, and assigned reading. Fellows also have a unique opportunity to collaborate with investigators at BSRI, one of the country’s foremost research laboratories in transfusion medicine.

Requirements
Applicants must be eligible for California medical licensure.
We train South African professionals in transfusion medicine and hematology to be leaders in blood safety and HIV-related blood disease treatment.

TRANSFUSION MEDICINE AND HEMATOLOGY RESEARCH TRAINING

This 5-year training program in HIV-related transfusion medicine and hematology research trains blood bankers and hematologists to perform high-quality HIV research to address relevant research questions in South Africa. Training approaches are tailored to promising candidates at various levels on the research career ladder. The training and research opportunities range from short courses to PhD and postdoctoral fellowships, mini-grants to mentorships.

The US National Institutes of Health, Fogarty International Center has awarded a training grant to a consortium including the University of California San Francisco (UCSF), Blood Systems Research Institute (BSRI), the University of Cape Town (UCT) and the South African National Blood Service (SANBS) to develop in-country research capacity.

Related Links

- Responsible conduct of research
- Assure the highest standards of ethics in research
- Mini grants
- Gain funding for your own research project

Short Courses
Gain an introduction to research in courses given annually in South Africa
VRI Investigators

Michael P. Busch, MD, PhD
Philip J. Norris, MD

Brian S. Custer, PhD, MPH
Larry J. Dumont, MBA, PhD

Eric Delwart, PhD
Rachael Jackman, PhD
Tamir Kianias, PhD

Shannon Kelly, MD
Edward L. Murphy, Jr., MD, MPH
Satish K. Pillai, PhD

Nareg Roubinian, MD, MPHTM
Graham Simmons, PhD
VRI Cores

Bioinformatics
Directed by Xutao Deng

Cell Therapy
Directed by Marcus Muench

Epidemiology
Directed by Roberta Bruhn and Anne Guiltinan

Immunology
Directed by Sheila Keating

Molecular Transfusion
Directed by Sonia Bakkour

Viral Reference Lab and Repository
Directed by Mars Stone
Why the name change all of a sudden??

Our parent company (Blood Systems) grew too big and acquired too many blood banks with different names…
With 127 donation locations from coast to coast, Vitalant is near you.

Click an icon below for more information or zoom in.

Vitalant, one of the nation’s oldest and largest nonprofit community blood service providers, supplies comprehensive transfusion medicine services to nearly 1,000 hospitals and health care partners for patients in need across 40 states.
An exciting (likely) addition to our campus soon!
Thank you