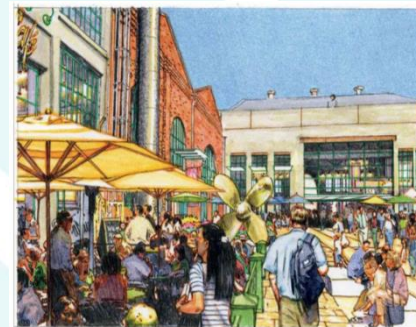


# Intro to Blood Systems Research Institute (BSRI)

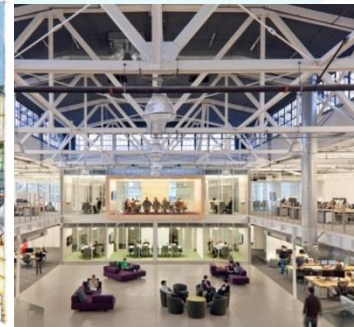
Satish K. Pillai, Ph.D.

Associate Investigator, BSRI

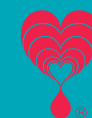
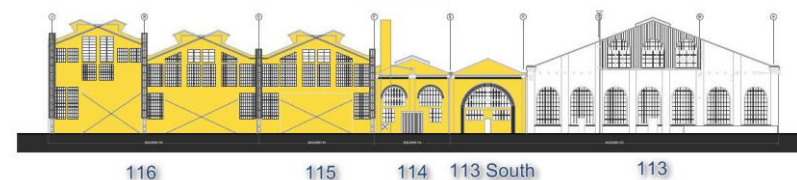
Associate Professor of Laboratory Medicine, UCSF



Pier 70



(East Side)



**Blood Systems  
Research Institute**

BSRI does not exist.

An introduction to...

# Vitalant Research Institute

*(The Institute Formerly Known As BSRI)*

**Satish K. Pillai, Ph.D.**

Associate Investigator, Vitalant Research Institute  
Associate Professor of Laboratory Medicine, UCSF

# 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

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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



## TRANSFUSION-TRANSMITTED HIV

First case of transfusion-transmitted AIDS to a child reported by investigators at BSRI and UCSF.

1983

1959



## SCIENTIFIC SERVICES OF IRWIN MEMORIAL ESTABLISHED

In 1959, Irwin Memorial Blood Bank established its research program, laying the foundation for BSRI.



## IRWIN MEMORIAL BLOOD BANK FOUNDED

The first non-profit community blood bank in the US was founded in June, 1941

1941

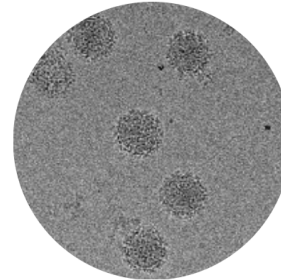
# Key moments in VRI history



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.

2004

1989



NHLBI REDS PROGRAM INITIATED

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



# Key moments in VRI history



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.

2015



US FDA LIFTS LIFETIME BAN ON MSM BLOOD DONATION

BSRI research supports safety of limited deferral period for men who have sex with men (MSM)

2015



# Key moments in VRI history



## BLOOD SYSTEMS BECOMES VITALANT

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

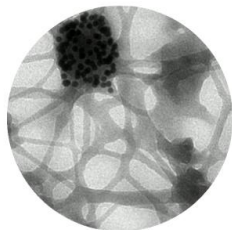
2018

2016



## 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.

2016

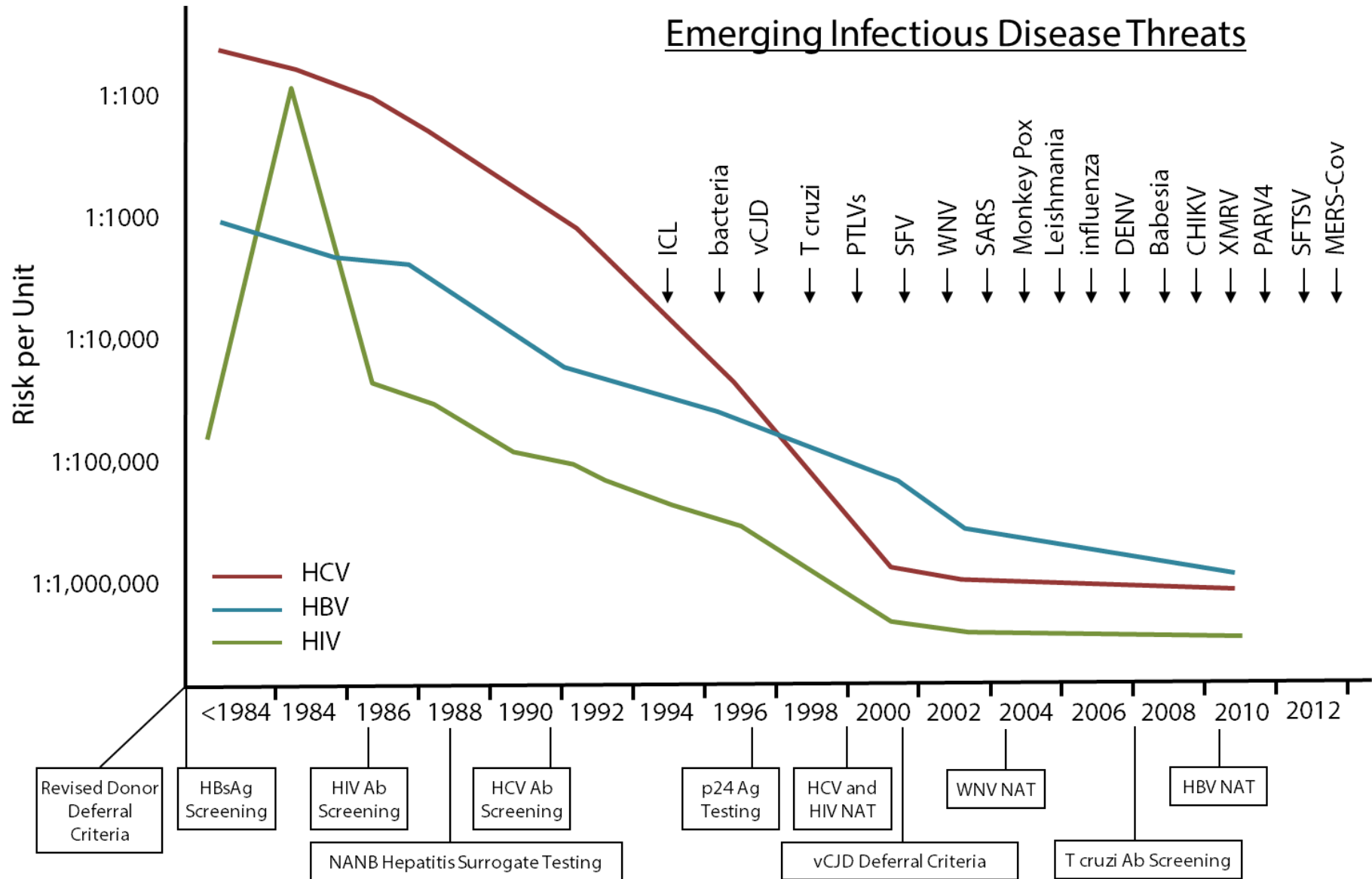
One more key moment (in 2013)...



## TOP INSTITUTIONS IN THE U.S.

RANK 2013	RANK 2012	INSTITUTION LOCATION
1	5	La Jolla Institute for Allergy and Immunology, California
2	8	Blood Systems Research Institute San Francisco, California
3	3	Stowers Institute for Medical Research Kansas City, Missouri
4	14	University of Pittsburgh Pennsylvania
5	-	Carnegie Institution for Science, Department of Plant Biology Stanford, California
6	7	St. Jude Children's Research Hospital Memphis, Tennessee
7	-	Fox Chase Cancer Center Philadelphia, Pennsylvania
8	12	Scripps Institution of Oceanography La Jolla, California
9	-	ECRI Institute Plymouth Meeting, Pennsylvania
10	17	Oklahoma Medical Research Foundation Oklahoma City, Oklahoma

# The impact of VRI / transfusion medicine research



# 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.

## Education

### Residency Programs

### Fellowship Programs

- Application Information
- Fellowships
  - ABMGG Laboratory Fellowship Program
  - Clinical Chemistry
  - Cytopathology
  - Dermatopathology
  - Dermatopathology Visiting
  - Gastrointestinal & Hepatobiliary Pathology
  - General Surgical Pathology
  - Gynecologic Pathology
  - Hematopathology
  - Molecular Genetic Pathology
  - Neuropathology
  - Transfusion Medicine

- Current Fellows

### Recent Resident and Fellow Publications

### Clinical Lab Scientist Training

### Medical Student Electives

## 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.

### For More Information

#### Fellowship Director

[Morvarid Moayeri, MD, PhD](#)

#### Associate Program Director

Salima Shaikh, MD

#### Contacts

Jessica Bailey

[Jbailey2@bloodsystems.org](mailto:Jbailey2@bloodsystems.org)

Phone: 415-354-1388

Blood Systems Research Institute  
270 Masonic Avenue  
San Francisco, CA 94118





PHOTO: EDWARD MURPHY

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 HIV-related Transfusion Medicine and Hematology Research training program is open to South African professionals with leadership potential who are already working in transfusion medicine or hematology. Our overarching goal is to develop human research capacity to improve blood safety and the treatment of HIV-related hematologic diseases in South Africa.

### [Short Courses](#)

Gain an introduction to research in courses given annually in South Africa

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

# 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 Kanias, PhD



Shannon Kelly, MD



Edward L. Murphy, Jr., MD, MPH



Satish K. Pillai, PhD



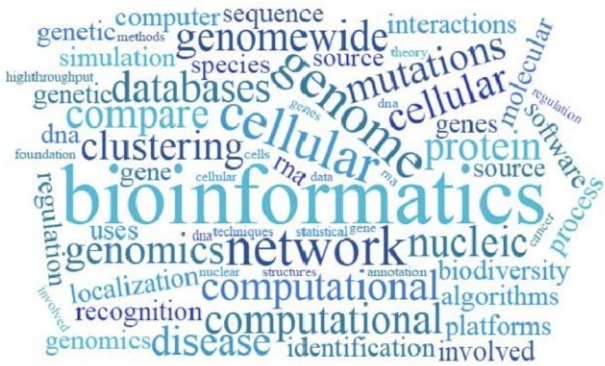
Nareg Roubinian, MD, MPHTM



Graham Simmons, PhD

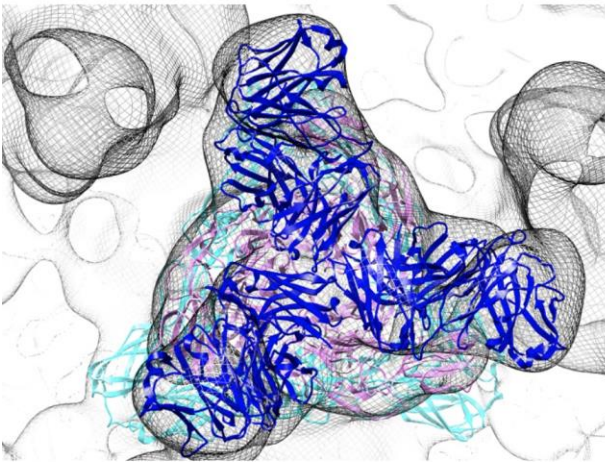


# VRI Cores



## Bioinformatics

Directed by Xutao Deng



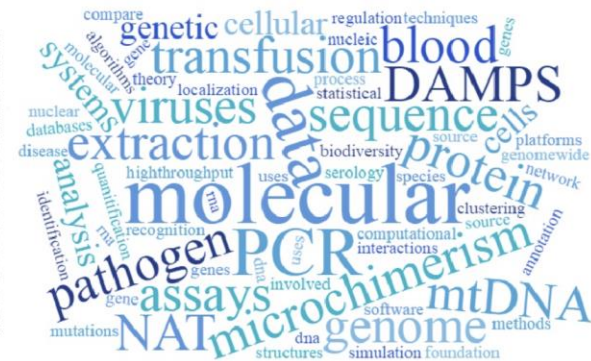
## Immunology

Directed by Sheila Keating



## Cell Therapy

Directed by Marcus Muench



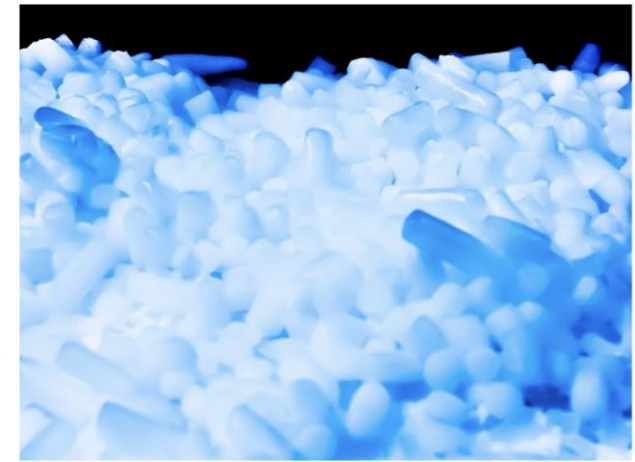
## Molecular Transfusion

Directed by Sonia Bakkour



## Epidemiology

Directed by Roberta Bruhn and Anne Gultinan



## 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...

## OUR ORGANIZATION

### Locations

With 127 donation locations from coast to coast, Vitalant is near you.

Click an icon below for more information or zoom in





An exciting (likely) addition to our campus soon!



+



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Thank you