

**CURRICULUM VITAE**



**Dr. Eldad A. Hod**  
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**June 12<sup>th</sup>, 2026**

1. **Date of preparation of CV:** June 12, 2026

2. **Work Experience**

07/2023-Present	<b>Columbia University Irving Medical Center (CUIMC) Department of Pathology &amp; Cell Biology</b> <i>Professor with Tenure, Attending Physician</i>	New York, NY
07/2022-Present	<b>CUIMC Department of Pathology</b> <i>Vice Chair of Laboratory Medicine, Director of Clinical Laboratories</i>	New York, NY
11/2012-Present	<b>CUIMC Department of Pathology</b> <i>Director, Center for Advanced Laboratory Medicine (CALM)</i>	New York, NY
03/2021-Present	<b>New York-Presbyterian Hospital – CUIMC</b> <i>Director, Automated Core Laboratories</i>	New York, NY
11/2013-2021	<b>New York-Presbyterian Hospital – CUIMC</b> <i>Assistant Director, Automated Core Laboratories</i>	New York, NY
04/2020-Present	<b>New York-Presbyterian Hospital – CUIMC</b> <i>Assistant Director, Clinical Pharmacology and Toxicology Laboratory</i>	New York, NY
07/2019-07/2023	<b>CUIMC Department of Pathology &amp; Cell Biology</b> <i>Associate Professor with Tenure, Attending Physician</i>	New York, NY
07/2015-06/2019	<b>CUIMC Department of Pathology &amp; Cell Biology</b> <i>Associate Professor, Attending Physician</i> <i>Division of Transfusion Medicine and Stem Cell Therapy</i>	New York, NY
07/2010-06/2015	<b>CUIMC Department of Pathology &amp; Cell Biology</b> <i>Assistant Professor, Attending Physician</i> <i>Division of Transfusion Medicine and Stem Cell Therapy</i>	New York, NY
08/1999-05/2001	<b>SUNY at Stony Brook Department of Pharmacology</b> <i>Research Assistant</i>	Stony Brook, NY

01/1997-05/1999      **IBM Research Labs**      Haifa, Israel  
*Software Engineer*

**3. Education**

05/2011-05/2016      **Mailman School of Public Health, CUIMC**      New York, NY  
*M.Sc., Department of Biostatistics, Clinical Research Methods*

08/2001-05/2005      **Mt. Sinai School of Medicine**      New York, NY  
*MD, May 2005*

09/1994-05/1998      **Technion, Israel Institute of Technology**      Haifa, Israel  
*B.Sc., Computer Sciences, May 1998*

**4. Post Doctoral Training**

07/2024-07/2025      **Association for Academic Pathology Leadership  
Fellows program**      Washington, DC

10/2019-11/2019      **CUIMC Leadership and Management Course  
for Faculty**      New York, NY

07/2008-06/2010      **CUIMC-New York Blood Center**      New York, NY  
*Transfusion Medicine Fellow*

07/2008-06/2009      **CUIMC**      New York, NY  
*Shaffer-Wilk-Miller Fellow*

07/2005-06/2008      **Department of Pathology, CUIMC-NYPH**      New York, NY  
*Pathology Resident, Chief Resident 2007-2008*

**5. Gaps in work/training/education**

*None*

**6. Licensure and Board Certification**

Medical licensure:

2007-Present      **New York State Medical License: 244475**  
**NPI: 1417287608**

Board Certification:

2008      **Diplomate, American Board of Pathology**  
*Clinical Pathology*

2010 **Diplomate, American Board of Pathology**  
*Blood Banking/Transfusion Medicine*

Other:  
05/2009 – Present **New York State Department of Health; Certificate of Qualification**  
*Blood banking, Blood pH and Gases, Clinical Chemistry, Clinical Toxicology, Diagnostic Immunology, Endocrinology, Hematology, Immunohematology, Therapeutic Substance Monitoring/Quantitative Toxicology, and Transfusion Services.*

**7. Honors**

1994	Westinghouse Finalist
2004	Arnold P. Gold Humanism in Medicine Honors Society
2005	Alpha Omega Alpha (AOA)
2005	Medical Student Basic Science Research Award, Mt. Sinai School of Medicine
2007, 2008, 2009	Paul E. Strandjord Young Investigator Award, Academy of Clinical Laboratory Physicians and Scientists
2008	College of American Pathologists Research Scholar
2009, 2010	AABB-Fenwal Transfusion Medicine Fellow Scholarship Award
2010	Louis V. Gerstner, Jr., Scholar
2010-2015	National Institutes of Health (NIH) Clinical Loan Repayment Program (LRP) Award
2010	National Blood Foundation (NBF) Young Investigator Scholarship
2014	Clinical Pathology Resident Teaching Award
2014	Jean Julliard Prize - This high profile, international prize recognizes “clinicians or scientists less than 40 years of age, who have a noteworthy portfolio of published work and who have made an important, recent contribution to the literature of transfusion medicine and/or science.”
2014	National Blood Foundation (NBF) Scholar status
2014	Jack Latham Memorial Award for Innovative Research, National Blood Foundation (NBF)
2018	Ellis Benson Award for meritorious accomplishment in the field of laboratory medicine, Academy of Clinical Laboratory Physicians and Scientists (ACLPS)
2020	National Blood Foundation (NBF) Hall of Fame

**8. Professional organizations and societies**

**Membership:**

2013-present	International Society for Blood Transfusion
2009-present	American Society of Hematology

2006-present	Academy of Clinical Laboratory Physicians and Scientists
2006-present	American Association of Blood Banks
2008-2010	College of American Pathologists
2007-2010	American Society for Clinical Pathology
<b>Committees:</b>	
2024-present	Chair, Columbia University Biobank (CUB) sample and data access committee (SDAC)
2022-present	Member, New York Presbyterian Hospital Quality & Patient Safety (QPS) Executive Committee
2021-2025	Member, Program and Finance Committee Academy of Clinical Laboratory Physicians and Scientists (ACLPS)
2020-2024	Member, Columbia University Biobank (CUB) sample and data access committee (SDAC)
2021-2022	Co-Chair, NIH-NHLBI State of the Science (SoS) subcommittee for Transfusion Medicine priorities
2014-2017	Member, Education Committee, Academy of Clinical Laboratory Physicians and Scientists (ACLPS)
2017-present	ISBT abstract selection committee member
2017-present	AABB abstract selection committee member
2019-present	ACLPS abstract selection committee member
2025-present	ASH abstract selection committee member
2019-present	Co-chair, Recipient Epidemiology Donor Study (REDS)-IV-P Omics Committee
2019-2021	Co-chair, Recipient Epidemiology Donor Study (REDS)-III Omics Data Acquisition and Use Committee
2019-2023	Member, Recipient Epidemiology Donor Study (REDS)-IV-P Vein-to-vein database committee, pediatric oncology committee, and neonatal committee

2019-present	American Association of Blood Banks (AABB) Donor Health and Safety Committee
2019-2020	American Association of Blood Banks (AABB) Annual Meeting Education Committee
2016-	NIH-NHLBI Data Safety Monitoring Board (DSMB) member for the Myocardial Ischemia and Transfusion (MINT) Trial
2020-2021	NIH-NHLBI Data Safety Monitoring Board (DSMB) <u>co-chair</u> for the <i>Clinical-trial of COVID-19 Convalescent Plasma in Outpatients</i> (C3PO) Trial
1/20/2020	T32 Scholarly Oversight Committee for Dr. Daniel Choi, “Ascorbic Acid and Oxidative Stress in Pediatric Sickle Cell Disease”, Children’s National, Washington, DC

**Major Contributions:**

6/6/24-6/8/24	Hosted the Annual National Academy of Clinical Laboratory Physicians and Scientists (ACLPS) meeting at Columbia University in NY. Raised >\$100,000 and stayed on budget (total budget of ~\$250,000). <a href="https://www.aclps.org/aclps-2024">https://www.aclps.org/aclps-2024</a>
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<b>Editorial boards:</b>	Editorial Intern for Laboratory Investigation (2010-2011) Transfusion, Editorial Board (2016-present) Frontiers in Immunology: Inflammation (2016-present)
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<b>Ad hoc reviewer:</b>	Anesthesiology Anesthesia and Analgesia Archives of Disease in Childhood Archives of Internal Medicine Biophysical Journal Blood Blood Transfusion British Journal of Haematology Haematologica JAMA Laboratory Investigation Lancet Haematology PLOS One Transfusion Vox Sanguinis
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**Grant review:**

2025	<b>ERC Consolidator Grant 2025</b> Ad hoc reviewer of one grant
2024-present	<b>Irving Scholars Selection Committee</b> Reviewer for 3-year scholarship award for full-time assistant professors in VP&S Clinical Departments; CUIMC
2020-2021	<b>NIH, NHLBI COVID-19 Protocol Review Committee (PRC)</b> Emergent study section for rapid review of COVID-19 proposals for clinical study protocols addressing the SARS CoV2/COVID-19 pandemic.
2017-2021	<b>Canadian Blood Services Study Section review panel</b> Reviewer for intramural grant applications and Program Support Award applications
2012-present	<b>National Blood Foundation (changed to AABB Foundation in 2023)</b> <i>Study Section Member</i>
2020	<b>Vidi-programme NWO/ZonMw, The Netherlands</b> <i>External grant reviewer</i>
2019	<b>Landsteiner Foundation for Blood Transfusion Research</b> Scientific Advisory Council, External grant reviewer (Dutch)
2017	<b>U.S. Army, and the Army Medical Research and Material Command</b> <i>External grant reviewer</i>
05/2013	<b>Canadian Blood Services Intramural Program</b> <i>External grant reviewer</i>
03/2012	<b>Israel Science Foundation</b> <i>External grant reviewer</i>
06/2010	<b>Portuguese Foundation for Science and Technology</b> <i>External grant reviewer for Immunology and Inflammation</i>
<b>Consultative:</b>	
06/2014	<b>Allied Innovative Systems (Hillsborough, NJ)</b> <i>2-hr consultation on novel blood typing method</i>

**Inspection:**

01/12/2023	<b>CAP inspection of University of Virginia, Charlottesville, VA</b> Team leader
09/09/2024	<b>CAP inspection of Stanford University, Stanford, CA</b> Team leader

**9. Departmental and University Committees**

2022-2024	CUIMC Genomic Medicine Taskforce
2010-present	Columbia University Medical Center <i>Transfusion Medicine Committee (quarterly meetings)</i>
2015-present	Annual Program Evaluation (APE) residency program evaluation committee, Department of Pathology & Cell Biology
2017	Charles H. Revson Senior Fellows in Biomedical Science Program advisory committee member
2020-	CUIMC COVID-19 Sample Accession, Distribution and Data Access Sub-Committee (Chair as of 07/2024)
11/2018-06/2022	Scientific Member, Institutional Animal Care and Use Committee (IACUC), Columbia University Medical Center

**10. Fellowship and grant support**

**Current Grant Support**

As Principal Investigator of National Grants/Contracts:

None

As Co-Investigator of National Grants:

NIH/NHLBI 1R01HL173606 (David Roh, PI)  
 “Functional coagulation and Hemostasis after Intracerebral Hemorrhage (FIGHT-ICH)”  
 Annual Direct Cost: \$645,501 (Total: \$829,103)  
 7/20/25-4/30/30  
 Role: Co-Investigator (10% effort)

NIH/NHLBI K23HL151901 (David Roh, PI)  
 “Erythrocyte contribution to coagulopathy and cerebral oxygenation after

intracerebral hemorrhage”  
09/01/2021-08/31/2026  
Role: Mentor (0% salaried effort)

NIH K23GM152933 (Lisa Eisler, PI)  
“Efficacy of Preoperative Oral Iron Supplementation in Adolescents Undergoing  
Scoliosis Surgery”  
09/01/2023-08/31/2028  
Role: Mentor (0% salaried effort)

As Principal Investigator of Industry Grants (CALM):

Sysmex America, Inc.  
“4-color T-Cell and 6-color TBNK Assays – Evaluation Protocol using the Sysmex XF-  
1600 IVD Flow Cytometer”  
8/29/25-8/31/26  
\$ [REDACTED] Total Costs

Horiba Medical  
“Yumizen H550 Clinical Performance Study”  
8/29/25-8/31/26  
\$ [REDACTED] Total Costs

As Co-Investigator of industry grants (CALM):

Roche Inc.  
“Real World Data for SARS-CoV-2 Serological Testing”  
04/28/21-12/31/2026  
\$ [REDACTED] Total Costs  
The goal of this study is to obtain real-world data from the electronic medical record  
system to support the accuracy of the SARS-CoV-2 nucleocapsid serologic test  
developed by Roche.  
Role: Co-Investigator (PI: Alex Rai)

Cepheid  
“Preclinical Study for the Evaluation of the Xpert® GI Panel”  
09/07/22-  
The goal of this study is to validate the Cepheid Gastrointestinal panel for FDA approval.  
\$ [REDACTED] Total Costs  
Role: Co-Investigator (PI: Greg Berry)

Cepheid  
“Preclinical Study for the Evaluation of the Xpert® RTI Panel”  
06/22/2022-

The goal of this study is to validate the Cepheid respiratory pathogen panel for FDA approval.

\$ [REDACTED] Total Costs

Role: Co-Investigator (PI: Greg Berry)

As Principal Investigator of local grants:

“Hemolysis-Induced Risk of Infection and Thrombosis Following RBC Transfusion (HINT) Study”

Columbia University Research Stabilization Fund Award

7/1/2025 – 6/30/2026

\$100,000 Total Costs

Role: Principal Investigator

## **Pending Grant Support**

As Principal Investigator of National NIH Grants/Contracts:

NIH 75N92025R00027

09/01/26-08/31/33

\$7,416,000 (total costs)

“Recipient Epidemiology and Donor Evaluation Study Regional Hub”

The overall goal of this contract is to serve as a domestic hub for the Recipient Epidemiology and Donor Evaluation Study, which is a structure to evaluate and improve the safety and availability of the blood supply, as well as the safety and effectiveness of transfusion therapies, with attention to not only adults, but also to neonates and children requiring transfusion.

Role: Principal Investigator (20% effort)

## **Previous Grant Support**

As Principal Investigator of National Grants:

NIH HHSN26819HB00003R

04/01/19-03/31/26 (Terminated prematurely 03/2025 due to political environment)

\$7,416,000 (total costs)

“Recipient Epidemiology and Donor Evaluation Study–IV-Pediatric (REDS-IV-P) Domestic Hubs”

The overall goal of this contract is to serve as a domestic hub for the Recipient Epidemiology and Donor Evaluation Study, which is a structure to evaluate and improve the safety and availability of the blood supply, as well as the safety and effectiveness of transfusion therapies, with attention to not only adults, but also to neonates and children requiring transfusion.

Role: Principal Investigator (25% effort)

NIH/NHLBI R01 R01HL148151 (Spitalnik, PI)

“The Impact of Oxidative Stress on Erythrocyte Biology”

9/25/2019-8/31/2023

This research will examine the mechanisms for how genetic and environmental factors affect the ability of red blood cells to handle oxidative stress and affect the quality of transfused blood. We will also directly examine the effects of elevated oxidant stress in sickle cell disease recipients on the biology of the transfused red blood cells.

\$2,233,538 annual total costs

Role: Co-investigator (15% effort)

NIH R01 HL139489

“Neurocognitive effects of iron deficiency in blood donors”

7/1/17-6/30/21

\$2,935,453 (total costs for entire period)

Role: Principal investigator (20% effort)

NIH NHLBI R01HL133049

“Red blood cells from iron-deficient donors: recovery and storage quality”

08/15/2016 – 04/30/2021

\$496,956 annual direct costs

Role: Principal investigator (30% effort)

NIH R21 HL145319

“Harmful effects of transfusion-induced iron overload”

12/01/2018-11/30/2020

\$275,000 (total direct costs)

This research will examine the mechanisms for how transfusion-induced iron overload affects hematopoietic stem cell transplant outcomes. Thus, the effects of iron on the bone marrow niche and the gut microbiota will be characterized to determine how iron status impacts transplant outcome.

Role: Principal investigator (7.5% effort)

NIH NHLBI R01 HL121275

“The safety of red blood cell transfusions”

9/1/2014-5/31/2018

\$250,000 annual direct costs

Role: Principal investigator (40% effort)

2016 ASH Research Training Award for Fellows (trainee: Amy Tang, MD)

“Transfusional iron overload in a mouse model of chemotherapy conditioning followed by allogeneic stem cell transplant”

\$55,000 (annual total costs) + \$1,000 (travel costs)

Role: Mentor

New England Research Institutes, Inc.

NIH-NHLBI U01 HL072268

Red Cell Storage Duration Study (RECESS)

Multicenter Randomized Controlled Trial

2013-2014  
\$6,310 fixed price payment per evaluable study subject  
Role: Site principal investigator for Columbia University Medical Center

K08 HL103756-05  
NIH/NHLBI  
“Mechanisms underlying the harmful effects of stored red blood cell transfusions”  
2010-2015  
\$131,085 (annual direct costs)  
Role: Principal investigator (75% effort)

AKC Canine Health Foundation (Co-PI)  
“Effect of duration of red blood cell storage on transfusion-associated inflammation in dogs with immune-mediated hemolytic anemia”  
2013-2015  
\$113,499 (total for entire period)  
Role: Co- Principal investigator with Dr. Mary Beth Callan, VMD (University of Pennsylvania)

National Blood Foundation Scientific Research Grant  
“Effect of repeat blood donation on atherosclerosis and cancer risk in murine models”  
2011-2013  
\$75,000 TDC for entire period  
Role: Principal investigator

CAP Foundation Award  
“Characterizing and developing a model of the humoral immune response to ABO-incompatible renal transplantation”  
2008-2009  
\$25,000 TDC for entire period  
Role: Principal investigator

As Co-Investigator of National Grants:

NIH/NINDS U01 NS095869 (Mitch Elkind, PI)  
“Atrial Cardiopathy and Antithrombotic Drugs In prevention After cryptogenic stroke (ARCADIA).”  
05/01/2017-04/30/2022  
Role: Lab Core Director (5% effort)

NIH R01 HL115557  
“Harmful effects of red blood cell transfusions are mediated by iron”  
2013-2017  
\$342,382 (annual direct costs)  
Role: Co-investigator (10% effort)

NIH R01 HL098014

“Harmful effects of transfusion of older stored red cells: iron and inflammation”

2009-2013

\$1,000,000 TDC for entire period

Role: Co-investigator (10% effort)

NIH U01 HD064827

“Mechanisms of effect of iron status & interventions on malaria & other infections”

2009-2013

\$792,815 TDC for entire period

Role: Co-investigator (10% effort)

As Principal Investigator of local grants:

Taub MRI seed grant

01/01/2017-12/31/2017

\$11,750 Total Costs for entire period (10-hours of scan time + analysis)

The goal of this study is to test the hypothesis that iron repletion alters activity and connectivity in specific functional networks at resting state to improve processing speed and episodic memory and to test whether iron repletion affects brain iron levels.

Role: Principal investigator

Louis V. Gerstner, Jr. Scholar Award

“The harmful effects of red blood cell transfusions are mediated by iron”

2010-2013

\$180,000 TDC for entire period

Role: Principal investigator (10% effort)

As Principal Investigator of industry grants (CALM):

Becton Dickinson Clinical Study

“BD PAS035 Clinical Study”

1/18/22-12/1/23

\$██████ Total Costs for entire period

The goal of this study is to perform an FDA validation study of BD vacutainer tubes for coagulation and platelet count testing.

Becton Dickinson Clinical Study

“BD PAS039 Clinical Study”

12/16/21-12/1/23

\$██████ Total Costs for entire period

The goal of this study is to perform an FDA validation study of BD vacutainer tubes for coagulation and platelet count testing.

Abbott Clinical Study

“Alinity Reference Range Study”

3/22/22-9/1/23

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform an FDA validation study of complete blood counts for the Abbott Alinity HQ instrument.

Horiba ABX SAS Clinical Study

06/07/21-01/01/24

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform an FDA validation of Horiba system for whole blood and body fluid testing.

Siemens Clinical Study

“INNOVANCE Anti-Xa to measure rivaroxaban or apixaban in citrated human plasma”

01/01/20-01/01/24

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform a FDA validation study of the new anti-Xa tests to measure rivaroxaban and apixaban.

Role: Principal investigator

Siemens Clinical Study

“Everolimus and Sirolimus Specimen Collection”

02/28/20-02/01/24

\$ [REDACTED] Total Costs for entire period

The goal of this study is to provide everolimus and sirolimus blood samples from patients with kidney, liver, or cardiac transplants for an FDA validation study.

Role: Principal investigator

GestVision, Inc. Study

GestAssured Validation Study II

11/01/21-12/30/2022

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform an FDA validation of the GestAssured Test

Siemens Clinical Study

“von Willebrand Factor (vWF) Validation”

10/13/20-6/30/22

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform a FDA validation study of the new vWF test.

Role: Principal investigator

SightDx Clinical Study

“Sight OLO Analyzer Abnormal Leukocyte Testing”

06/01/20-06/30/22

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform additional testing for abnormal leukocytes to support the FDA validation study of the new Sight Diagnostics, Ltd. Sight OLO instrument for complete blood count testing.

Role: Principal investigator

Abbott Clinical Study

“Alinity Design Validation Study”

3/9/21-9/1/21

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform an FDA validation study of complete blood counts for the Abbott Alinity HQ instrument.

Abbott Clinical Study

“Alinity h-Series Beta Study”

8/20/20-12/1/20

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform a method comparison study of complete blood counts between the Abbott Alinity and Sysmex XN10 instruments.

Advanced Instruments, Inc. GloCyte Clinical Evaluation Study

“A Multicenter Comparison Study to Evaluate the Equivalency of Advanced Instrument’s GloCyte® Automated Cell Counter and the Standard of Care Hemocytometer for Total Nucleated and Red Blood Cell Counts in Cerebrospinal Fluid”

05/22/15-09/01/15

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform a full FDA validation study of the new GloCyte CSF cell count analyzer.

Role: Principal investigator

Aptatek Clinical Study

“Development of aptamer technology”

10/01/16-12/31/17

\$ [REDACTED] Total Costs for entire period

Role: Principal investigator (1% effort)

GestVision, Inc. Study

GestAssured Validation Study

1/29/20-12/30/2021

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform an FDA validation of the GestAssured Test

Role: Principal investigator

Siemens Clinical Study

“Atellica UAS 800 Analyzer Clinical Trial Protocol-External Site Testing”

02/01/18-12/31/18

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform a FDA validation study of the new Atellica UAS 800 analyzer for urine testing.

Role: Principal investigator

Siemens Clinical Study

“The Establishment of Reference Intervals of Assay Applications on Sysmex® CS-2500 and CS-5100 Analyzers (Waves E and Wave F)”

03/21/18-12/31/18

\$ [REDACTED] Total Costs for entire period

The objective of this study is to establish new reference intervals for the Sysmex® CS-2500 and CS-5100 Analyzers.

Role: Principal investigator

Siemens Clinical Study

“The Establishment of Reference Intervals of Assay Applications on Sysmex® CS-2500 and CS-5100 Analyzers (Wave G)”

11/01/18-6/30/19

\$ [REDACTED] Total Costs for entire period

The objective of this study is to establish new reference intervals for the Sysmex® CS-2500 and CS-5100 Analyzers.

Role: Principal investigator

Siemens Clinical Study

“External Performance Evaluation of assay applications on CS-2500 and CS-5100 Analyzers (Wave C)”

09/03/16-04/01/17

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform a FDA validation study of the new CS-2500 and CS-5100 analyzers for coagulation testing.

Role: Principal investigator

Siemens Clinical Study

“External Performance Evaluation of assay applications on CS-2500 and CS-5100 Analyzers (Wave D)”

01/01/17-04/01/17

\$ [REDACTED] Total Costs for entire period

The objective of this study is to establish new reference intervals for the Sysmex® CA-1500 System analyzer.

Role: Principal investigator

Siemens Clinical Study

“External Performance Study For Innovance® Free Protein S Antigen”

03/03/17-04/01/18

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform a FDA validation study of the new CS-2500 and CS-5100 analyzers for coagulation testing (Free Protein S assay only).

Role: Principal investigator

Siemens Clinical Study

“External Performance Evaluation of assay applications on CS-2100i and CS-5100 Analyzers (Wave B)”

09/03/15-04/01/16

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform a full FDA validation study of the new CS-2100i and CS-5100 analyzers for coagulation testing.

Role: Principal investigator

SightDx Clinical Study

“Sight OLO Analyzer Clinical Trial Protocol-External Site Testing”

06/01/18-12/31/20

\$ [REDACTED] Total Costs for entire period

The goal of this study is to perform a FDA validation study of the new Sight Diagnostics, Ltd. Sight OLO instrument for complete blood count testing.

Role: Principal investigator

As Co-Investigator of industry grants (CALM):

SeLux Diagnostics, Inc.

“CLIN-019 Clinical Performance Evaluation of the Selux Positive Blood Culture Separator and Selux System for AST Performed from Positive Liquid Cultures”

11/14/22-12/31/25

The goal of this study is to validate anti-microbial susceptibility testing using the Selux system.

\$ [REDACTED] Total Costs

Role: Co-Investigator (PI: Greg Berry)

## **11. Educational Contributions**

### **At Columbia University**

Laboratory Medicine (1<sup>st</sup> year Medical School course): Small group moderator, present and discuss issues in laboratory medicine (2 contact hours), Fall 2021.

Advanced Clinical Pathology (4<sup>th</sup> year Medical School course): Small group moderator, present and discuss unknown clinical case (2 contact hours), Fall 2008, 2009.

Advanced Clinical Pathology (4<sup>th</sup> year Medical School course): lectures on immunohematology and blood component therapy, October 2010, October 2011, September 2012, September 2013, September 2014 (5 contact hours).

Pathology Resident Orientation: Lectures on: “Transfusion Therapy in Sickle Cell Disease,” 2010, 2011, 2012, 2013; “Blood component therapy,” 2010, 2011, 2012, 2013; “Special component therapy,” 2010, 2011, 2012, 2013 (8 contact hours).  
Immunohematology hands-on experience 2012, 2013, 2014, 2015, 2016, 2017, 2018 (10 contact hours per year).

CME Lectures for Medical Technologists: “Risks of Transfusing Blood,” 2011, 2012 (2 contact hours).

Clinical Pathology resident didactic series: Lectures on “Iron homeostasis and hemochromatosis,” “Sickle Cell Disease Management,” and “Protein Blood Group Antigens,” 2011, 2013, 2015, 2017, 2019, 2021 (2 contact hours each, given every 2 years).

Mechanisms of Medicine and Principles of Practice (3<sup>rd</sup> year Medical School course): “Transfusion Medicine Basics”, lecture/live demonstration, 2012, 2013, 2014 (4 contact hours).

Hematology module (1<sup>st</sup> year Medical School course): “The Body: In Health...and in Disease” Transfusion Medicine lecture, 2013, 2014, 2015, 2016, 2022, 2023 (2 contact hours each year).

Mechanisms in Human Disease (Graduate School): “Therapy I: RBC transfusion”, September 2014 (2 contact hours).

Adult Hematology Fellow Lecture: “Red Blood Cell Transfusions”, January 2015 (2 contact hours)

Pediatric Hematology Fellow Lecture: “Red Blood Cell Transfusions”, June 2015, September 2015, July 2016 (2 contact hours each)

Department of Nutrition, Biochemistry Lecture: “Iron Metabolism”, April 2016 (3 contact hours)

Laboratory Medicine, 1<sup>st</sup> year medical students, small group leader, October, 2021 (2 contact hours)

### **At The New York Blood Center**

Current Practices in Transfusion Medicine (lecture series in transfusion medicine for residents in clinical pathology, fellows in hematology or pediatric hematology, and other interested physicians):

“Management of Acquired Bleeding Disorders,” Spring 2010, Summer 2010 (2 contact hours).

“Red cell transfusions,” 2012, 2013, 2015 (2 contact hours).

## **At University of Pennsylvania**

School of Veterinary Medicine, lectures on iron biology and introduction to transfusion medicine (2 contact hours), October 2014.

## **At National Meetings**

- 10/2011 Education session invited speaker, 2011 Annual National Meeting of American Association of Blood Banks (AABB), San Diego, CA, “Iron, innate immunity, and alloimmunization.”
- 10/2017 Educational Session, 2017 Annual National Meeting of American Association of Blood Banks (AABB), San Diego, CA, proposed, session speaker, and moderator of session entitled: “Is It Time to Change the Outdate for Red Cells to 35 Days?”
- 10/2017 Educational Session, 2017 Annual National Meeting of American Association of Blood Banks (AABB), San Diego, CA, proposed and moderator of session entitled: “Metabolomics Studies in Transfusion Medicine.”
- 10/2018 Educational Session, 2018 Annual National Meeting of American Association of Blood Banks (AABB), Boston, MA, session speaker: “The inflammatory side of red blood cell transfusions.”
- 12/2018 Educational Session, 2018 Annual National Meeting of American Society of Hematologists, San Diego, CA, session speaker: “Macrophage Recycling of Red Blood Cells and Iron Following Transfusion.”

## **Outside involvement**

03/2019 Bergen County Academies Research Expo 2019 (High School), Judge

## **General Teaching Activities**

- 07/2010-07/2016 **Attending in Transfusion Medicine**  
*Resident training in transfusion medicine*
- 11/2013-06/2022 **Director, Automated Core Laboratories**  
*Resident training in lab medicine*

## **Advisory and Mentorship**

- 7/2021-7/2025 **Research Advisor**  
*Marianne Nellis, MD; Associate Professor of Pediatrics and Critical Care*

- Project title: "Platelet Dysfunction and the Role of Platelet Transfusion in Extracorporeal Membrane Oxygenation (ECMO)"*  
*Role: Mentor*  
*Current: Associate Professor of Pediatrics and Critical Care - Weill Cornell Medical College, Cornell University*
- 7/2021-present      **Research Advisor**  
*Elizabeth Stone, MD, PhD; Assistant Professor of Pathology and Cell Biology*  
*Project title: "Animal models of platelet transfusion effectiveness"*  
*Role: Mentor*  
*Current: Assistant Professor of Pathology and Cell Biology at Columbia University Irving Medical Center*
- 1/2021-present      **Research Advisor**  
*Lisa Eisler, MD; Assistant Professor of Pediatric Anesthesiology*  
*Project title: "Patient blood management for pediatric patients."*  
*Role: Mentor; Society for the Advancement of Blood Management Grant Recipient 2021*  
*NIH-K23 mentor (9/1/23-8/30/28; K23 GM152933)*  
*Current: Assistant Professor of Anesthesiology at Columbia University Irving Medical Center*
- 1/2017-present      **Research Advisor**  
*David Roh, MD; Assistant Professor of Neurology and Critical Care*  
*Project title: "Effect of anemia and transfusion on intracranial hemorrhage outcomes."*  
*Role: NIH-K23 mentor (K23HL151901).*  
*Current: Assistant Professor of Neurology and Critical Care at Columbia University Irving Medical Center*
- 1/2019-6/2021      **Research Advisor**  
*Stacie Kahn, MD; Pediatric Critical Care Fellow*  
*Project title: "Developing a murine platelet storage model."*  
*Role: Mentor.*  
*Current: Assistant Professor in Pediatric Critical Care at Maimonides Hospital*
- 6/2018-8/2018      **Research Advisor**  
*Lauren Suarez; 1st year medical student*  
*Project title: "Effect of iron overload on the bone marrow niche."*  
*Role: NIH-NHLBI T35 National Research Service Award Summer mentor.*  
*Current: Medical Student, Class of 2021 Columbia University Medical Center*

- 07/2015-02/2018      **Research Advisor and Scholarly Project Mentor**  
*Will Simmons, MD Class of 2018, Columbia University Medical Center*  
*Project title: “Inflammatory cytokine response following transfusion of stored red blood cells in healthy human volunteers.”*  
*Role: Mentor*  
*Current: Medical Student, Class of 2018*  
*Columbia University Medical Center*
- 07/2015-07/2017      **Research Advisor and Scholarly Oversight Committee (SOC)**  
*Amy Tang, MD; Pediatric Hematology/Oncology Fellow*  
*Recipient of 2016 ASH Research Training Award for Fellows*  
*based on Project title: “Transfusional iron overload in a mouse model of chemotherapy conditioning followed by allogeneic stem cell transplant.”*  
*Role: Co-mentor with Dr. Steven Spitalnik*  
*Current: Assistant Professor,*  
*Aflac Cancer and Blood Disorders Center*  
*Emory, Department of Pediatrics,*  
*Children’s Healthcare of Atlanta*
- 06/2017-06/2019      **Research Advisor**  
*Magdalena Jurkiewicz, MD, PhD; Pathology Resident*  
*Project title: “Iron status of frequent blood donors.”*  
*Current: Fellow, Molecular Pathology, CUIMC.*
- 06/2016-09/2017      **Research Advisor**  
*Natalie Gorr, Student. Fiorello H. LaGuardia High School, New York, NY*  
*Summer research project entitled “Iron and biofilms”.*  
*Current: Freshman at NYU.*
- 06/2021-09/2022      **Research Advisor**  
*Ella Bao, Student. Tenafly High School, Tenafly, NJ*  
*Summer research project entitled “Evidence-based ferritin cutoffs for iron deficiency”.*  
*1<sup>st</sup> place Junior Science and Humanities Symposium (JSHS), Rutgers, Medicine and Health category, 2023*  
*Current: Senior at Tenafly High School.*
- 06/2022-09/2022      **Research Advisor**  
*Joseph Lipschitz, Summer Intern. Brown University.*  
*Summer research project entitled “Developing a method for tracking transfused red blood cells”.*  
*Current: Junior at Brown University.*

- 01/2013-07/2016      **Scholarly Oversight Committee (SOC)**  
*Tamara Kalhan, MD; Neonatology Fellow*  
*Project title: "Effects of storage time of packed red blood cells on iron and inflammatory cytokine concentrations in very low birth weight infants."*  
*Current: Assistant Professor, Department of Pediatrics (Neonatology), Albert Einstein College of Medicine*
- 6/2016-8/2016      **Research Advisor**  
*Maya Petashnick; 1st year medical student*  
*Project title: "The safety of red blood cell transfusions."*  
*Role: NIH-NHLBI T35 National Research Service Award Summer mentor.*  
*Current: 4th year medical student at Tuft's Medical School, Boston, MA*
- 1/2015-1/2016      **Research Advisor**  
*Francesca Rapido, MD; Post-doctoral Anesthesiology Fellow*  
*Project title: "The effect of red blood cell storage on iron parameters and inflammatory markers in transfused healthy volunteers."*  
*Current: Anesthesiologist and Critical Care Physician Centre Hospitalier Universitaire de Montpellier, Montpellier, France.*
- 12/2013-1/2015      **Research Advisor**  
*Camilla L'Acqua, MD; Post-doctoral Anesthesiology Fellow*  
*Project title: "The effect of red blood cell transfusions on iron parameters and inflammatory markers in a Pediatric Intensive Care Unit."*  
*Current: Anesthesiologist and Critical Care Physician Centro Cardiologico Monzino, Milano, Italy*
- 07/2013-07/2016      **Research Advisor**  
*Nicole Herndon, DVM, Post-doctoral Laboratory Animal Veterinary Resident, Institute of Comparative Medicine, CUIMC*  
*Project title: "Comparison of Survival, Cytokine Levels, and Behavioral Scoring in C57/BL6 mice undergoing Cecal Ligation and Puncture Given Buprenorphine SR or Buprenorphine HCL."*  
*Current: 3<sup>rd</sup> year veterinary resident at Columbia University Irving Medical Center*
- 07/2013-07/2014      **Practicum Advisor**  
*Elizabeth Margolskee, MD; Pathology Resident*  
*Master's of Public Health, Mailman School, CUIMC*

*Project title: "Transfusion Practices and Infections at Four Level III Neonatal Intensive Care Units."*

*Current: Hematopathologist, Assistant Professor, University of Pennsylvania.*

05/2013-12/2015

**Research Advisor**

*Urshulaa Dholakia, DVM, Post-doctoral Laboratory Animal Veterinary Resident, Institute of Comparative Medicine, CUIMC*  
*Project title: "A method for assessing red blood cell lifespan in a mouse."*

*Current: Veterinarian, University of Tennessee*

08/2012-12/2013

**Research Advisor**

*Andrea Slate, DVM, Post-doctoral Laboratory Animal Veterinary Resident, Institute of Comparative Medicine, CUIMC*  
*Project title: "Efficacy of enrofloxacin in a mouse model of sepsis."*

*Current: Veterinarian, University of Florida*

06/2013-09/2013

**Research Advisor**

*Emily Nagler, Student. Horace Greeley High School, Chappaqua, NY*

*Winner of Philips Research Centennial Award for exceptional research, Westchester Science and Engineering Fair (WESEF) based on summer research project entitled "Iron and biofilms".*

*Currently: Duke University, Senior.*

06/2012-04/2013

**Scholarly Project Mentor**

*Ashley Pritchard, 4<sup>th</sup> year medical student, CUIMC*

*Project title: "Baseline neonatal non-transferrin-bound iron levels are different than adult levels."*

*Currently: Ob/Gyn resident at Yale University*

06/2012-04/2013

**Research Advisor**

*Andrea Hubbard, DVM, Laboratory Animal Veterinary Resident, Institute of Comparative Medicine, CUIMC*

*Project title: "Effect of Dietary Iron on Fetal Growth in the Pregnant Mouse."*

*Current: Veterinarian in Institute of Comparative Medicine, Columbia University Irving Medical Center*

## 12. Other professional activities

- Moderator:** Session moderator, Transfusion Medicine abstract session, Academy of Clinical Laboratory Physicians and Scientists, Milwaukee, WI, 6/1/2012.
- Session moderator, Basic Sciences in Transfusion Medicine abstract session, American Society of Hematology, San Francisco, CA, 12/9/2014.
- Session moderator, Transfusion Technologies: Red Cell Storage abstract session, International Society of Blood Transfusion, Dubai, United Arab Emirates, 9/6/2015
- Invited seminars:** (excluding local presentations and abstracts submitted to professional meetings)
- 10/24/2009 AABB Annual Meeting, New Orleans, LA; Invited symposium speaker: “‘What Went Wrong’- A Quiz and Interactive Presentation.”
- 11/10/2009 HBSSA meeting, NY Blood Center: “The Harmful Effects of Older Stored RBC Transfusions.”
- 4/10/2010 HBSSA Spring Symposium, NY, NY: “The harmful effects of stored red blood cell transfusions.”
- 10/10/2010 Transfusion Medicine Physicians Career Development Session invited speaker: “Mechanisms of Effect of Iron Status and Iron Repletion on Bacterial and Malarial Infection - Implications for Transfusion of Older, Stored RBCs.”
- 3/17/2011 Invited seminar, NY Blood Center, “From iron deficiency and malaria to transfusing old blood: The harmful effects of excess iron.”
- 10/25/2011 Invited panel member, 2011 national AABB meeting, San Diego, CA, “How to obtain a National Blood Foundation grant.”
- 12/14/2011 Invited Grand Rounds Speaker, The Harvard Medical School Fellowship Program in Transfusion Medicine, Boston, MA, “Harmful effects of transfusion are mediated by iron.”
- 12/21/2011 Invited Seminar Speaker, Neonatal ICU Research Conference, Columbia University Medical Center - CHONY, New York, NY, “Harmful effects of transfusion are mediated by iron.”

- 2/09/2012 Speaker, NIH 3<sup>rd</sup> RRC meeting, “Iron and Malaria: Pulling it all Together,” Rockville, Maryland, “Mechanisms of Effect of Iron Status and Interventions on Malaria and Other Infections.”
- 3/27/2012 Invited seminar speaker, Walter Reed Army Institute of Research (WRAIR), Silver Springs, MD, “Potential effects of massive transfusion on wound infections.”
- 4/23/2012 Invited Seminar Speaker, Peds Heme/Onc/BMT Research Conference, Columbia University Medical Center - CHONY, New York, NY, “Harmful effects of transfusion are mediated by iron.”
- 5/29/2012 Invited Seminar Speaker, Blood Center of Wisconsin, Milwaukee, WI, “Harmful effects of transfusion are mediated by iron.”
- 6/30/2012 Invited Seminar Speaker, Thalassemia Patient-Family Conference, Cooley’s Anemia Foundation, Cambridge, MA, “Storage and Safety of Blood Products.”
- 7/9/2012 Invited Speaker, 32<sup>nd</sup> International Congress of International Society of Blood Transfusion (ISBT), Cancun, Mexico, “Hemolysis of compatible older, stored red cells following transfusion.”
- 12/8/2012 Invited Scientific Program speaker, 2012 annual meeting of the American Society for Hematology (ASH) in Atlanta, GA, “Toxicologic Effect of Blood Transfusion.”
- 5/3/2013 Invited Grand Rounds Speaker, Columbia University Medical Center, Department of Pediatrics, New York, NY, “Harmful effects of transfusion are mediated by iron.”
- 5/19/2014 Invited Speaker, American Thoracic Society International Conference in San Diego, CA, “Red, White, and Blood: The Heme-Pulmonary Circulation Axis of Inflammation, Injury, and Hemolysis.”
- 6/3/2014 Jean Julliard Prize Lecture, International Society for Blood Transfusion Conference in Seoul, Korea, “Red blood cell transfusion-induced inflammation: myth or reality”.
- 9/9/2014 Invited speaker, PerkinElmer Imaging User Group Meeting: In Vivo Imaging Track, Hopkinton, MA, “Assessing the safety of red blood cell transfusions using in vivo imaging systems.”

- 10/23/2014 Scott Murphy Memorial Lecture at the XLVIII meeting of the Biomedical Excellence for Safer Transfusion (BEST) Collaborative, Philadelphia, PA.
- 3/14/2015 Invited lecture on “Hands-on management of transfusion therapy” at the Global Iron Summit, Berlin, Germany.
- 3/15/2015 Expert panel on “Sickle Cell Disease Management” at the Global Iron Summit, Berlin, Germany.
- 3/23/2015 Invited Seminar Speaker, Peds Heme/Onc/BMT Research Conference, Columbia University Medical Center - CHONY, New York, NY, “The side effects of RBC transfusions.”
- 5/12/2015 Invited Seminar Speaker, BloodWorksNW Research Institute, Seattle, Washington, “The side effects of RBC transfusions.”
- 7/28/2015 Invited Grand Rounds Speaker, The Harvard Medical School Department of Pathology, Boston, MA, “The adverse effect of red cell transfusions: after RECESS and ABLE.”
- 9/10/2015 Invited Speaker, 2nd Annual Pathology Translational Research Retreat (PTRR), Department of Pathology and Cell Biology, Columbia University Medical Center, New York, NY, “Adverse Effects of Blood Transfusions & How Can the Center for Advanced Laboratory Medicine (CALM) Help You?”
- 9/17/2015 Invited Speaker, 27th Annual National Center for Clinical Laboratories meeting, Fuzhou, China, “Hematology Analyzers: Special Considerations for Pediatric Patients.”
- 10/21/2015 Invited Speaker, 10<sup>th</sup> Cooley’s Anemia Symposium, Chicago, IL, “Age of Transfused Blood and Bloodstream Infections.”
- 11/4/2015 Invited Grand Rounds Speaker, Yale School of Medicine, Department of Laboratory Medicine, New Haven, CT, “The adverse effect of red cell transfusions: after RECESS and ABLE.”
- 11/24/2015 Invited Grand Rounds Speaker, Johns Hopkins School of Medicine Department of Pathology, Baltimore, MD, “The adverse effect of red cell transfusions: after RECESS and ABLE.”
- 4/12/2016 Invited Speaker, 5<sup>th</sup> Annual Norman Bethune Symposium, Vancouver, B.C. “Potential harmful effects of red cell transfusions: after RECESS and ABLE.”

- 9/6/2016 Invited Speaker, International Society of Blood Transfusion bi-annual meeting, Presidential Award Session, Dubai, United Arab Emirates, “Preclinical evaluation of stored blood versus fresh blood.”
- 9/9/2016 Invited Speaker, Istituto Superiore di Sanita, Centro Nazionale Sangue meeting, Rome, Italy, “The destruction of transfused red blood cells: preliminary study results.”
- 12/10/2016 Invited Speaker, Joint Congress of American Association of Blood Banks (AABB) and Asian Association for Transfusion Medicine (AATM), Benguluru, India, “Basic Research in Transfusion Medicine – Animal Models,” “Effects of Red Cell Storage,” and panel discussion entitled “Challenges of clinical research in transfusion medicine.”
- 1/11/2017 Invited Speaker, Penn-CHOP Blood Seminar Series, Philadelphia, PA, “Adverse effect of red blood cell transfusions.”
- 5/12/2017 Invited Speaker, 12<sup>th</sup> International Seminar of Blood Safety, Lisbon, Portugal, “In vitro and clinical analysis of RBC function as a result of storage.”
- 6/6/2017 Invited Speaker, TriBranch Symposium 2017, Atlantic City, NJ, “Mimicking human polymicrobial sepsis in an animal model”
- 1/26/2018 Invited Speaker, 1<sup>st</sup> Annual AABB Highlights, Abu Dhabi, UAE, “RBC Storage Lesion: The End of the Beginning”, “Is it time to change the outdate of RBC’s to 35 days?” and “Meet the experts – Round table discussions”
- 3/07/2018 Invited Webinar Speaker, “Current issues relating to the red cell storage lesion,” International Society for Blood Transfusion (ISBT).
- 4/19/2018 ASCLS – New Jersey Spring Seminar & Expo, “Clinical consequences of the Red Cell Storage Lesion”, Imperia Conference Center, Somerset, NJ.
- 4/26/2018 An updated overview in Transfusion Medicine, BEST Collaborative, “Post-transfusion recovery and non-transferrin bound iron techniques and red blood cell storage,” Florence, Italy.
- 7/30/2018 Invited Seminar, Séminaire INSERM-INTS, “Transfusion Medicine-Related Perturbations to Systemic Iron Homeostasis,” Paris, France.

- 12/17/2018 Invited Seminar, 1st International Meeting on Hemolytic Transfusion Reaction in Sickle Cell Disease, “Consequences of Hemolysis,” Créteil, France.
- 1/26/2019 Invited Speaker, 2<sup>nd</sup> Annual AABB Highlights, Abu Dhabi, UAE, “Iron from vein to vein” and “Sickle cell anemia and hemoglobinopathies.”
- 2/5/2019 Invited Grand Rounds Speaker, Memorial Sloan Kettering Cancer Center, New York, NY, “Transfusion Medicine-Related Perturbations to Systemic Iron Homeostasis.”
- 3/8/2019 Invited Grand Rounds Speaker, Albert Einstein College of Medicine, New York, NY, “Transfusion Medicine-Related Perturbations to Systemic Iron Homeostasis.”
- 3/15/2019 Invited Speaker, National Institutes of Health (NIH) – Transfusion Medicine/Hematology sections, Bethesda, MD, “Transfusion Medicine-Related Perturbations to Systemic Iron Homeostasis.”
- 4/16/2019 Invited Speaker, Columbia University Irving Medical Center, Institute of Comparative Medicine, 3rd annual Biomedical Research Awareness Day celebration (B.R.A.D) – New York, NY, “Animal models in transfusion medicine research.”
- 4/1/2020 COVID-19 Virtual Symposium (CUIMC) – Building Biorepositories from Scratch in the Midst of a Crisis
- 4/22/2020 COVID-19 Virtual Symposium (CUIMC) - Status of Serological Testing for COVID-19
- 6/25/2020 Invited Keynote Speaker, virtual annual meeting of the Academy of Clinical Laboratory Physicians and Scientists (ACLPS), “Serologic Testing for SARS-CoV-2: A Learning Experience”
- 7/8/2020 Invited Grand Rounds Speaker, Department of Psychiatry, Columbia University Irving Medical Center, New York, NY, “A Clinical Pathologist’s Experience from the COVID-19 Pandemic.”
- 9/17/2020 Invited Speaker, Neurologic Intensive Care Unit Seminar, Columbia University Irving Medical Center, New York, NY, “Transfusion Medicine-Related Perturbations to Systemic Iron Homeostasis.”

- 10/5/2020 AABB Annual Meeting, Virtual, LA; Invited NBF Research Symposium speaker: “Transfusion Medicine-Related Perturbations to Systemic Iron Homeostasis.”
- 12/11/2020 ISBT Annual Meeting, Virtual, Barcelona, Spain; Invited Plenary Session Jean Julliard Award introductory speaker: “Metabolomics pathways that correlate with RBC quality.”
- 03/09/2021 Invited Speaker, Department of Anesthesia, Columbia University Irving Medical Center, New York, NY, “Transfusion Medicine-Related Perturbations to Systemic Iron Homeostasis.”
- 04/22/2021 Invited Speaker, 2021 NYP/CU National Medical Laboratory Professionals Week Lecture Schedule – “COVID antibody testing.”
- 04/23/2021 Invited Grand Rounds Speaker, Albert Einstein College of Medicine, New York, NY, “The Red Cell Storage Lesion.”
- 06/15/2021 Invited Speaker, World Blood Donor Day, Rome, Italy, “Donor and recipient: an iron alliance.”
- 03/18/2022 Invited Grand Rounds Speaker, Internal Medicine, State University of NY at Stony Brook, “Transfusion Medicine-Related Perturbations to Systemic Iron Homeostasis.”
- 04/28/2023 Invited Grand Rounds Speaker, Division of Hematology, Albert Einstein College of Medicine, New York, NY, “Effects of Blood Donor Iron Deficiency.”
- 05/11/2023 Invited Keynote Speaker, Blood Banks Association of New York State (BBANYS), Saratoga Springs, NY, “The effect of blood donor iron deficiency on red blood cell quality, donor cognition and wellbeing.”
- 04/01/2025 Invited Speaker, New York consortium for interdisciplinary training in: Kidney, urological, & hematological research (KUHR), New York, NY, “Careers in biomedical research.”
- 06/23/2025 Organizer and Program Chair, *Lattes Symposium and Drs. Fink and Kratz Memorial Lecture in Laboratory Quality*, Columbia University Irving Medical Center. Gave talk entitled: “Center-related Bias in MELD Scores: Implications for Liver Transplantation”.
- 05/14/2026 Frontiers in Transfusion Medicine Symposium, Mass General Brigham, Boston, MA: “Does the storage lesion matter?”

### 13. Patents and Inventions

12/1/2011 Methods, kits and compositions for ameliorating adverse effects associated with transfusion of aged red blood cells  
Patent # US 20120294826 closed, patent not awarded  
Inventors: Steven L. Spitalnik, Eldad A. Hod, Gary M. Brittenham  
Organization: Columbia University

### 14. Publications

#### **A. Original, peer-reviewed articles**

1. Weston C, Yee B, **Hod E**, Prives J. Agrin-induced acetylcholine receptor clustering is mediated by the small guanosine triphosphatases Rac and Cdc42. *J Cell Biol.* 2000; 150:205-12.
2. Weston C, Gordon C, Teresa G, **Hod E**, Ren XD, Prives J. Cooperative regulation by Rac and Rho of agrin-induced acetylcholine receptor clustering in muscle cells. *J Biol Chem.* 2003;278:6450-5.
3. Reeves HL, Narla G, Ogunbiyi O, Haq AI, Katz A, Benzeno S, **Hod E**, Harpaz N, Goldberg S, Tal-Kremer S, Eng FJ, Arthur MJ, Martignetti JA, Friedman SL. Kruppel-like factor 6 (KLF6) is a tumor-suppressor gene frequently inactivated in colorectal cancer. *Gastroenterology.* 2004;126:1090-103.
4. Narla G, Difeo A, Reeves HL, Schaid DJ, Hirshfeld J, **Hod E**, Katz A, Isaacs WB, Hebring S, Komiya A, McDonnell SK, Wiley KE, Jacobsen SJ, Isaacs SD, Walsh PC, Zheng SL, Chang BL, Friedrichsen DM, Stanford JL, Ostrander EA, Chinnaiyan AM, Rubin MA, Xu J, Thibodeau SN, Friedman SL, Martignetti JA. A germline DNA polymorphism enhances alternative splicing of the KLF6 tumor suppressor gene and is associated with increased prostate cancer risk. *Cancer Res.* 2005;65:1213-22.
5. Narla G, DiFeo A, Yao S, Banno A, **Hod E**, Reeves HL, Qiao RF, Camacho-Vanegas O, Levine A, Kirschenbaum A, Chan AM, Friedman SL, Martignetti JA. Targeted inhibition of the KLF6 splice variant, KLF6 SV1, suppresses prostate cancer cell growth and spread. *Cancer Res.* 2005;65:5761-8.
6. Kremer-Tal S, Narla G, Chen Y, **Hod E**, Difeo A, Yea S, Lee JS, Schwartz M, Thung SN, Fiel IM, Banck M, Zimran E, Thorgeirsson SS, Mazzaferro V, Bruix J, Martignetti JA, Llovet JM, Friedman SL. Downregulation of KLF6 is an early event in hepatocarcinogenesis, and stimulates proliferation while reducing differentiation. *J Hepatol.* 2007;46:645-54.

7. Yea S, Narla G, Zhao X, Garg R, Tal-Kremer S, **Hod E**, Villanueva A, Loke J, Tarocchi M, Akita K, Shirasawa S, Sasazuki T, Martignetti JA, Llovet JM, Friedman SL. Ras promotes growth by alternative splicing-mediated inactivation of the KLF6 tumor suppressor in hepatocellular carcinoma. *Gastroenterology*. 2008;134:1521-31.
8. Kerkel K, Spadola A, Yuan E, Kosek J, Jiang L, **Hod E**, Li K, Murty VV, Schupf N, Vilain E, Morris M, Haghighi F, Tycko B. Genomic surveys by methylation-sensitive SNP analysis identify sequence-dependent allele-specific DNA methylation. *Nat Genet*. 2008;40:904-8.
9. Narla G, Difeo A, Fernandez Y, Dhanasekaran S, Huang F, Sangodkar J, **Hod E**, Leake D, Friedman SL, Hall SJ, Chinnaiyan AM, Gerald WL, Rubin MA, Martignetti JA. KLF6-SV1 overexpression accelerates human and mouse prostate cancer progression and metastasis. *J Clin Invest*. 2008;118:2711-21.
- \*10. **Hod EA**, Cadwell CM, Liepkalns JS, Zimring JC, Sokol SA, Schirmer DA, Jhang J, and Spitalnik SL. Cytokine storm in a mouse model of IgG-mediated hemolytic transfusion reactions. *Blood*. 2008;112:891-4.
11. Gilson CR, Kraus T, **Hod EA**, Hendrickson J, Spitalnik SL, Hillyer CD, Shaz B, Zimring JC. A novel mouse model of red blood cell storage and post-transfusion in vivo survival. *Transfusion*. 2009;49: 1546-53.  
  
Accompanying editorial: AuBuchon JP. Of mice and men and red cell storage systems. *Transfusion*. 2009;49:1528-31.
12. Hendrickson JE, **Hod EA**, Spitalnik SL, Hillyer CD, Zimring JC. Stored murine HOD RBCs induce a stronger alloimmune response than freshly collected and transfused RBCs. *Transfusion*. 2010;50(3):642-8.
- \*13. **Hod EA**, Zhang N, Sokol SA, Wojczyk BS, Francis RO, Ansaldi D, Francis KP, Della-Latta P, Whittier S, Sheth S, Hendrickson JE, Zimring JC, Brittenham GM, Spitalnik SL. Transfusion of red blood cells after prolonged storage produces harmful effects that are mediated by iron and inflammation. *Blood*. 2010;115: 4284-92. PMID: 20299509 PMCID: PMC2879099.  
  
Reviewed in Jackson Laboratory Newsletter, 7/13/2010, [http://jaxmice.jax.org/news/2010/RBC\\_Storage.html](http://jaxmice.jax.org/news/2010/RBC_Storage.html).
- Reviewed in The Hematologist, "Tired Blood: How Stored RBCs Can Promote Inflammation Mediated by Iron," Gregory M. Vercellotti, September 1, 2010.
- \*14. \*Jang J, \***Hod EA**, Spitalnik SL, Frenette P. CXCL1 and its receptor, CXCR2, mediate murine sickle cell vaso-occlusion during hemolytic transfusion reactions. *J Clin Invest*. 2011;121(4):1397-401. PMCID: PMC3069787.

\*shared first authorship

15. Zimring JC, Welniak L, Semple JW, Ness PM, Slichter SJ, Spitalnik SL; NHLBI Alloimmunization Working Group. Current problems and future directions of transfusion-induced alloimmunization: summary of an NHLBI working group. *Transfusion*. 2011;51(2):435-41. PMID: 21251006.
  16. Hendrickson JE, **Hod EA**, Cadwell CM, Eisenbarth SC, Spiegel DA, Tormey CA, Spitalnik SL, Zimring JC. Rapid clearance of transfused murine RBCs is associated with recipient cytokine storm and enhanced alloimmunogenicity. *Transfusion*. 2011; 51(11):2445-54. PMID: 21569043. PMCID: PMC3175302.
  17. Hendrickson JE, **Hod EA**, Perry JR, Ghosh S, Chappa P, Adisa O, Kean LS, Ofori-Acquah SF, Archer DR, Spitalnik SL, Zimring JC. Alloimmunization to transfused HOD red blood cells is not increased in mice with sickle cell disease. *Transfusion*. 2012 Feb;52(2):231-40. PMID: 21790627. PMCID: PMC3218203.
  18. Hendrickson JE, **Hod EA**, Hudson KE, Spitalnik SL, Zimring JC. Transfusion of fresh murine red blood cells reverses adverse effects of older stored red blood cells. *Transfusion*. 2011;51(12):2695-702. PMID: 21645005. PMCID: PMC3175330.
  19. Ansaldi D, **Hod EA**, Stellari F, Kim JB, Lim E, Roskey M, Francis KP, Singh R, Zhang N. Imaging Pulmonary NF-kappaB Activation and Therapeutic Effects of MLN120B and TDZD-8. *PLoS One*. 2011;6(9):e25093. PMCID: PMC3178604
  - \*20. **Hod EA**, Brittenham GM, Billote GB, Francis RO, Ginzburg YZ, Hendrickson JE, Jhang J, Schwartz J, Sharma S, Sheth S, Sireci A, Stephens HL, Stotler BA, Wojczyk BS, Zimring JC, Spitalnik SL. Transfusion of human volunteers with older, stored red blood cells produces extravascular hemolysis and circulating non-transferrin-bound iron. *Blood*. 2011;118(25):6675-82. PMID: 22021369. PMCID: PMC3242722.
- Reviewed in Bottom Line Health, Volume 26(2), February 2012.
21. Smith NH, **Hod EA**, Spitalnik SL, Zimring JC, Hendrickson JE. Transfusion in the absence of inflammation induces antigen specific tolerance to murine RBCs. *Blood*. 2012 Feb 9;119(6):1566-9. PMID: 22077064. PMCID: PMC3286217.
  22. Liepkalns JS, **Hod EA**, Stowell SR, Cadwell CM, Spitalnik SL, Zimring JC. Biphasic clearance of incompatible red blood cells through a novel mechanism requiring neither complement nor Fcγ receptors in a murine model. *Transfusion*. 2012 Dec;52(12):2631-45. PMID: 22502635.
  23. Francis RO, Jhang J, Hendrickson JE, Zimring JC, **Hod EA**, Spitalnik SL. Frequency of glucose-6-phosphate dehydrogenase-deficient red blood cell units in a metropolitan transfusion service. *Transfusion*. 2013 Mar; 53(3):606-11. PMID: 22738400. PMCID: PMC3461237.

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