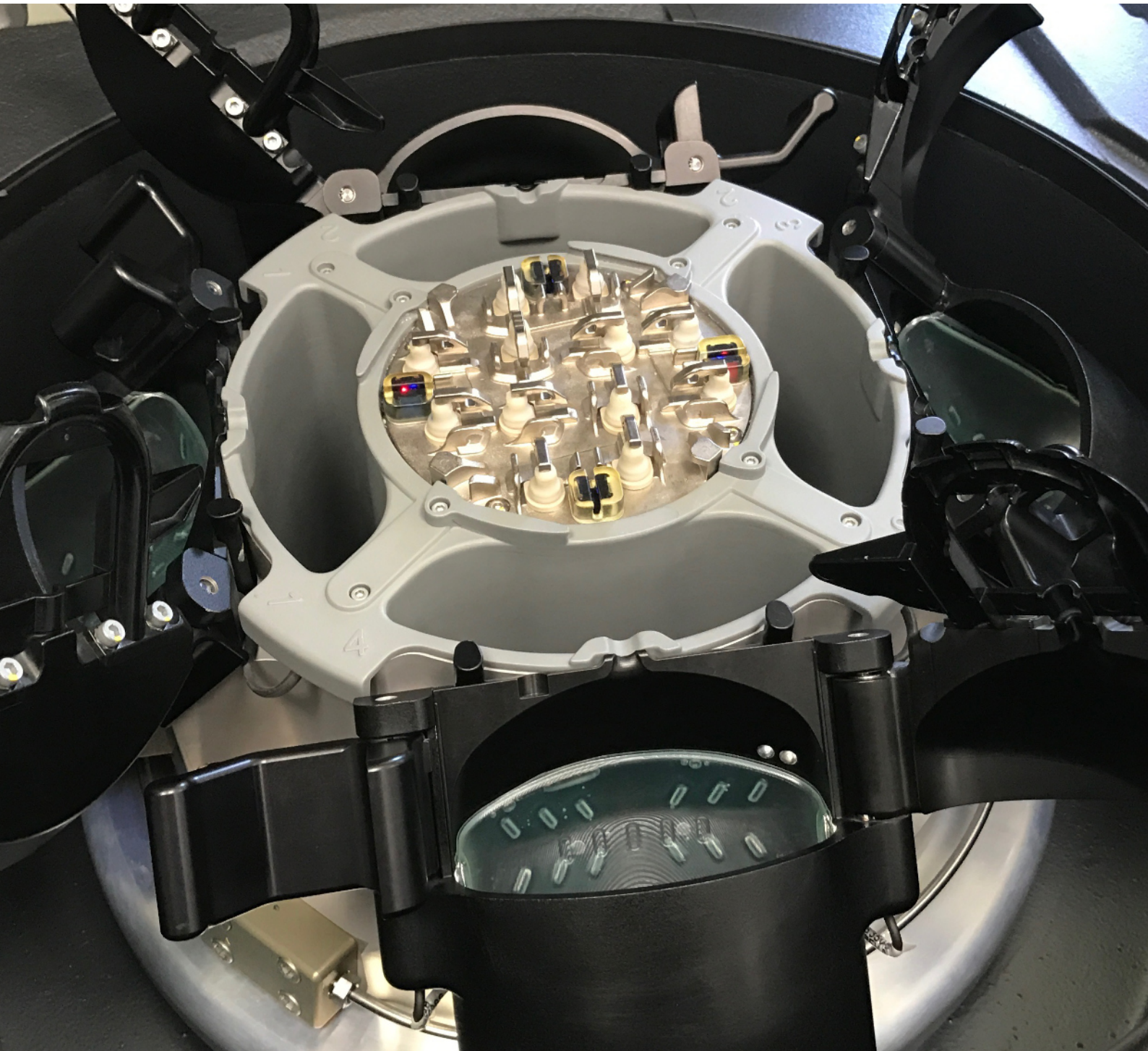


Dr. Zeyd Merenkov

MD, FCAP, FASCP

*Transfusion Medicine • Blood Bank Information Technology
Pathogen Inactivation • Plasma Fractionation
COVID-19 Convalescent Plasma Production*

www.drzeydbloodbank.com



What can I do for you?

I offer **remote consulting** and **on-site locums** in the following areas of **integrated** expertise.

Complex immunohematology problems requiring both technical and medical decision-making

Design, implementation, validation, and maintenance of customized blood bank software

Design and implementation of plasma fractionation industry

Solutions for pathogen-inactivation with or without platelet additive solution, either free-standing or integrated into blood bank software

Training for international staff (medical and technical) with reference sites for automated component processing, pathogen-inactivation, platelet additive solution, instrument interfaces

My operation sites have served as reference sites for combined IT and medical/technical processes, with visitors and students from all over the world.

Detailed examples from my past work can be found on drzeydbloodbank.com



About me

I have **multiple decades of medical and technical expertise** in transfusion medicine, particularly in the Arabian Gulf region. My residency training included SBB training as well. I have worked with laboratory information systems, especially blood bank systems (donor, component processing, donor marker testing, pathogen inactivation, platelet additive solutions).

I established **the first site in the world** combining automated blood component processing (Atrius, Reveos) with pathogen inactivation.

In my **medical practice**, I perform donor qualification, review abnormal marker testing, automated component production, pathogen inactivation, and use of platelet

additive solution—both manually and under the control of a sophisticated blood bank computer system (Medinfo Hematos IIG) to ensure good manufacturing practice GMP. I have **developed and set up instrument interfaces** to Reveos, Atrius, Mirasol, Trima and **direct linkage** to the Qatar Ministry of Interior database for donor demographics in both English and Arabic.

Given **my IT expertise**, I am Head of the Medinfo Hematos IIG Software Users Group worldwide. I also serve as **a technical/medical consultant to Terumo BCT** for automated blood component production, pathogen-inactivation, and platelet additive solution, especially in conjunction to maintaining GMP through a dedicated blood bank computer system.

*It has been my philosophy
to start with an international framework (e.g. FDA, CE)
and localize it for the country's particular needs.*



General activities

As a **transfusion physician**, I reviewed all non-negative antibody and positive direct antiglobulin test workups and transfusion reactions across Qatar. I also supervised and wrote orders for all therapeutic apheresis cases including stem cell and column absorption.

Over a nine-year period at HMC, I prepared and implemented **over 200 interim policies and procedures** to upgrade donor and patient blood bank/transfusion service processes to comply with international AABB and CE standards

As an **IT consultant**, I selected the blood bank computer system, **designed the processes** (no turnkey system), trained super-user staff, and validated the initial system and all upgrades. The system was frequently updated due to emerging infectious diseases. On the patient side, I developed algorithms to prophylactically match specific antigens (e.g. Kell and c, R1R1 blood for R1R1 patients) to minimize alloimmunization and prevent release of unphenotyped units in patients with a known

history of clinically significant antibodies. An electronic crossmatch was implemented using these rules. Special rules applied to cases with positive direct antiglobulin tests. I **ran the therapeutic apheresis service in Qatar** which included therapeutic plasma exchange, red cell exchange, reductive leukapheresis, reductive thrombapheresis, stem cell collection, and column absorption plasma exchange for ABO-incompatible renal transplants. I triaged all requests and wrote orders for the patients' procedures.

I adapted the automated ABO antibody titration on the Ortho MAX and validated against the manual gel method for ABO-incompatible renal transplants used at Karolinska Institutet in Stockholm, resulting in **labor-savings and rapid throughput of results**.

I worked with **several private consortiums** to determine the feasibility of starting a plasma fractionation industry that would use local and purchased plasma and be linked to the blood bank computer system Medinfo.



Past projects

Hamad Medical Corporation

Doha, Qatar

HMC is the principal tertiary patient care center in the State of Qatar.

2020	Expedited setup (two weeks total) of COVID-19 convalescent plasma production, initially manual and then fully integrated into the Medinfo computer system as a customized module with separate quarantine collection, production, and transfusion service functions
2019	Established column absorption technology using Terumo Optia for treatment of ABO-incompatible renal transplants: I validated using the Ortho Vision MAX to perform ABO antibody titers for this system and correlated it with the reference method at Karolinska Institutet in Stockholm (manual gel) to bring rapid throughput and labor savings
2015	Replaced and updated Atreus with Reveos automated component production to allow faster throughput and capacity with a full bidirectional interface (world's first), introduced platelet additive solution PAS with pathogen inactivation (Mirasol)—Medinfo interfaces updated to Reveos for all equipment
2013	Implemented custom build of the multilingual blood bank computer system (Medinfo) for both patient and donor services, including development of interfaces to all production equipment including Atreus and Mirasol (world's first) and a direct link to Ministry of the Interior to obtain patient demographics in English and Arabic
2011	Established automated component production using Atreus technology, plasma and platelet pathogen inactivation (Mirasol)

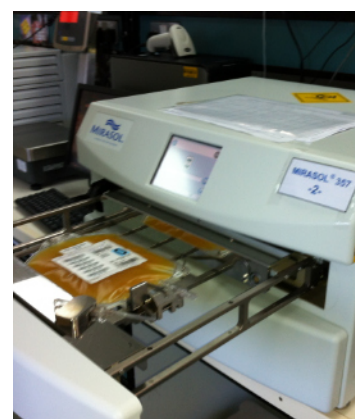
*HMC served as a **world reference site** for
Grifols Tigris and later Panther dedicated
blood bank NAT donor testing
as well as
automated blood component production
(Reveos and Atreus) combined with pathogen
inactivation and platelet additive solution*

Awards

2019	Star of Excellence for ABO-incompatible transplants (first use of A and B antigen columns attached directly to Terumo Optia during plasmapheresis)
2013	Star of Excellence for liver transplantation support by transfusion services
	Award as the top division of the laboratory by the Department Chairman



Mirasol pathogen-inactivation machines



Final Mirasol product
(pooled platelets)

National Guard Health Affairs

King Abdulaziz Medical City, Riyadh

NGHA is the premier tertiary hospital system serving the Saudi Arabian National Guard across the Kingdom.

2010	Selected and custom-built blood bank computer system (Medinfo) for both patient and donor services across the entire National Guard system, for all regions
2005–2008	Designed plasma self-sufficiency project, expanding into plasma fractionation plant for the Gulf region I developed and implemented a strategy for a plasma fractionation program covering KSA and surrounding Gulf countries in phases: first plasma self-sufficiency from local sources for difficult-to-obtain plasma derivatives, and then recruitment of additional outside plasma to make a plasma fractionation plan cost-effective.

Work with me

I am willing to consider permanent positions as well as short-term projects.

Contact me at drzeyd@gmail.com so we can arrange to talk.

Since my work is customized to accommodate complex requirements and constraints, we must discuss your situation to come up with a mutually agreeable plan and terms of work.

No blood bank computer system, automated blood component equipment, or pathogen-inactivation available?

I can still help you optimize your manual processes to improve safety and throughput.

[illegible]

Anti-Jka reacting only with polyspecific AHG in homozygous Jka+ cells