

Anton Mandrov, MD
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Education

Doctor of Medicine (M.D.)

Technion Israel Institute of Technology, The Ruth and Bruce Rappaport Faculty of Medicine, Haifa, Israel
Class of 2013

Bachelor of Science in Biochemistry

College of Arts and Sciences, Boston College
Class of 2007

Training

University of Mississippi Medical Center – Jackson, MS

Pediatric Critical Care Fellowship 7/2023 – 10/2023

Children’s Hospital of Georgia, Augusta University Health – Augusta, GA

Pediatric Cardiology Fellow 7/2020 – 7/2023 (Board Eligible)

SUNY Downstate Medical Center – Brooklyn, NY

Pediatric Resident 7/2014 – 12/2018 (Board Certified)

Employment

CHI St. Alexius Health, Williston Medical Center – Williston, ND

Pediatric Hospitalist (Locums Provider) - 2/2019 – 6/2020, 11/2023 - present

Admitted and consulted on pediatric patients and managed inpatients on the ward and ICU. Provided routine newborn care including circumcisions. Attended deliveries and C-sections. Stabilized and transferred patients to higher level of care when needed. Duties included supervision of family practice residents working in the unit.

Chantest Inc., Cleveland, OH

Electrophysiology Staff Scientist, 7/2007 – 7/2008

Conducted assays including whole cell manual patch-clamp and action potential studies on tissue and cell lines with overexpressed ion channels. Specific ion channels (calcium, sodium, potassium, ligand-gated channels) were studied in depth and detailed electrophysiological parameters were collected. Routine work also included FDA Step 2 Drug testing such as assessing a test compound’s effect on hERG blockade following Good Laboratory Practice.

Licensure / Board Examinations

- American Board of Pediatrics - General Pediatrics: Certificate #127176
- Pediatric Cardiology Board Eligible
- Ohio Medical Board - Doctor of Medicine (MD): License #35.136790
- Mississippi Medical Board - Doctor of Medicine (MD): License #31615
- North Dakota - Doctor of Medicine (MD): License #15577

Research / Laboratory Experience

Children's Hospital of Georgia - Augusta University Health – Augusta, GA 2022 – 2023 (Principal Investigator)

Aim of the study is to better understand and predict postsurgical complications using STS Congenital Heart Surgery Database (STS-CHSD). We utilized high-performance cloud computing resources to develop a wide spectrum of machine learning models that can accurately predict complications and identify distinct groups of patients at high risk for specific complications.

Clinical Research, Cleveland Clinic, Dept. of Colorectal Surgery – Cleveland, OH 5/2013 – 6/2014

Collaborated on *Cologene Project* which is an innovative online pedigree application. By collecting extensive clinical and genetic data, the application can visually represent data in pedigree form. It helps identify relatives at risk, assist in diagnoses, treatment and prevention of colorectal cancers.

Clinical Research, Cleveland Clinic, Dept. of Colorectal Surgery – Cleveland, OH 6/2011 – 6/2012

This clinical research project involved analyzing large patient databases and becoming familiar with various statistical techniques. Various tumor markers including BRAF, KRAS, MSI, were evaluated in their importance towards predicting disease-free survival of stage II and III colon cancer patients. An extensive database of 757 colon cancer patients was analyzed in order to improve the current survival predictions that are based on LNR, TNM, and ASA class.

Biochemistry Research, Boston College – Chestnut Hill, MA 2006 – 2007

PI-PLC enzyme mutants were investigated. Mutations were made using site-directed mutagenesis via PCR. Transformed *E. coli* were cultured and protein was purified using ion exchange chromatography. Enzyme activity was assayed using ³¹P NMR and kinetics were computed from the results.

Bioinorganic Research, Boston College – Chestnut Hill, MA, 2005 – 2006

Di-nuclear and mono-nuclear transition metal complexes were investigated. Active sites analogs of methane monooxygenase and hemerythrin were synthesized. Oligopeptides resembling active site were manually synthesized as were some ligands. Complex formation was confirmed by MS, NMR, dioxygen binding was assayed via UV/Vis spectroscopy and crystals were grown to obtain structure.

Clinical Research, Cleveland Clinic, Rheumatology Dept. – Cleveland, OH 6/2004 – 9/2005

The effects of secondary causes of osteoporosis were investigated using patient history, laboratory evaluations, and results of dual x-ray absorptiometry scans (DEXA). A corresponding database was created and analyzed. Additionally, primary care physician's follow-up to DEXA report recommendations was assessed.

Grants / Funding

Augusta University - Augusta, GA – 2022-2023 (Principal Investigator)

“Predicting Complications after Congenital Heart Disease Surgery with Machine-Based Learning”
\$10,000 grant from the Department of Pediatric Cardiothoracic Surgery, Pediatric Cardiology, and Pediatrics

Presentations

National Conference — Accepted for Oral Presentation

60th STS Annual Meeting – San Antonio, TX – 1/28/2024

“Predicting Complications after Congenital Heart Disease Surgery with Machine-Based Learning”

Grand Rounds

Augusta University – Augusta, GA – 6/23/2023

“Predicting Complications after Congenital Heart Disease Surgery with Machine-Based Learning”
<https://echo360.org/media/737d00ba-62a7-4e1a-bf02-93e02c8f9204/public>

Publications

Mandrov, A., Manilich, E., Stansfield, B., Murdison, K., Mosley, N., Vranicar, M., Bateson, B., St. Louis, J. (2024). Predicting Complications after Congenital Heart Disease Surgery with Machine-Based Learning. *60th STS Annual Meeting, January 28, 2024 San Antonio, TX.*

Ahmad, S.Q., Lee, P., **Mandrov, A.**, Manilich, E., Lee, H. (2016). Prevalence of Allergies, Asthma Severity, and Asthma Control in Inner-City Asthmatic Children and Adolescents. *American Thoracic Society International Conference, May 13.*

Manilich, E.A., Lavery, I., **Mandrov, A.**, Remzi, F.H. (2012). Contribution of Clinical, Histologic and Genetic Markers to Staging of Colon Cancer: A Data-Driven Approach. *American College of Surgeons 96th Annual Clinical Congress, October 2.*