

Curriculum Vitae

Michael A. Frölich, MD

Anesthesiology and Perioperative Medicine

University of Alabama at Birmingham

School of Medicine

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Citizenship:

German | American

Languages:

German | English | Italian | Portuguese

Academic Appointments

(reverse chronological order)

University of Alabama at Birmingham	
Professor of Anesthesiology with Tenure	2012 - current
Associate Professor of Anesthesiology with Tenure	2004 -2012
University of Florida	
Associate Professor of Anesthesiology with Tenure	2004
Assistant Professor of Anesthesiology	1998 -2004
Ludwig Maximilians Universität, München	
Facharzt für Anästhesie und Intensivmedizin	1996 -1998

Medical Training

(reverse chronological order)

Harvard University, Boston	
Fellowship in Obstetric Anesthesia	1995 -1996
Emory University, Atlanta	
Residency in Anesthesiology	1992 -1995
Internship in Medicine and Pediatrics (Transitional Year)	1991 -1992
Ludwig Maximilians Universität, Zentralklinikum Augsburg	
Arzt im Praktikum, Septische Intensivstation	1988 -1991
Universität Wien, Vienna, Austria	
Studium der Medizin	1982 -1988

Advanced Degrees

University of Alabama at Birmingham	
M.S., Masters in Science of Biostatistics	2008 – 2012
University of Florida	
M.S., Masters in Science of Clinical Investigation (NIH K-30)	2001 – 2004

University Appointments

University of Alabama System

Faculty Representative to the Board of Trustees 2013 - 2014

University of Alabama at Birmingham (UAB)

Chair, Faculty Policies and Procedures Committee 2016 - current

Faculty Representative, School of Medicine Dean's Council 2012 - current

Senator, UAB School of Medicine 2010 - current

Past Chair, UAB Faculty Senate 2014 - 2015

Chair, UAB Faculty Senate 2013 - 2014

Chair Elect, UAB Faculty Senate 2012 - 2013

Member, Center for Clinical and Translational Sciences (CCTS) 2010 - current

Clinical Science Representative, UAB Nascent Project Panel 2010 - current

Scientist, Center for the Development of Functional Imaging 2007 - current

Advisory Board Member, Clinical Research Unit of the CCTS 2010 - 2012

Member, UAB Center for Aging 2007 - 2012

Department of Anesthesiology and Perioperative Medicine

Faculty Advisor, Clinician Academic Achievement Program 2015 - current

Director, Obstetric Anesthesiology Fellowship Program 2010 - current

University of Florida (UF)

Director, Obstetric Anesthesiology 2010 - current

Licenses, Certifications and Society Memberships

Licenses

Medical License, Alabama, MD25856	2004 – current
Medical License, Florida, ME75268	1998 – current
Medical License, Georgia, 038761	1996 – current
Medical License, Germany	1996 – current

Certifications

Voluntary Recertification, American Board of Anesthesiology	2006
American Board of Echocardiography, TEE	2000
Diplomat, American Board of Anesthesiology	1997
Diplomat, European Academy of Anesthesiology	1997
Facharzt für Anästhesie und Intensivmedizin	1996

Professional Accreditations

Voluntary Recertification, American Board of Anesthesiology	2006
American Board of Echocardiography, TEE	2000
Diplomat, American Board of Anesthesiology	1997
Diplomat, European Academy of Anesthesiology	1997
Facharzt für Anästhesie und Intensivmedizin	1996

National and International Society Membership and Appointments

Society Memberships

American Society of Anesthesiology	1992 - current
Alabama Society of Anesthesiologists	2004 - current
International Anesthesia Research Society	1998 – 2012
European Academy of Anesthesiology	1997 - 2013
Society of Neuroscience	2007 - 2012
Florida Society of Anesthesiologists	1998 - 2004
New York Academy of Sciences	1998 - 2002
American Association for the Advancement of Science	1998 - 2000
Deutsche Gesellschaft für Anästhesie und Intensivmedizin	1996-1998
Berufsverband Deutscher Anästhesisten	1996 - 1998

Society for Obstetric Anesthesia and Perinatology

Member, Board of Directors	2010 - 2016
Newsletter Editor and Media Committee Chair	2010 - 2016
Member, Research Committee	2016 - current
Member, Fellowship Committee	2013 - current

Florida Society of Anesthesiologists

Education Committee	2000 - 2001
Strategic Planning Committee	2010 - 2016
Visiting Physician, State Capitol, Tallahassee, FL	2000 - 2001

American Society of Anesthesiologists

Ad Hoc Specialty Renaming Committee	2016 - current
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Leadership Experience

University of Florida Minority Mentoring Program [UMMP]

From 1999 to 2004, I was mentor, cluster leader and Vice Chair of a university-wide program for incoming undergraduate students to enhance their collegiate experience. This program, an initiative of the Provost's Office, matches a first-year undergraduate student with a faculty or staff mentor to assist with the student's transition to college. With approximately 15,000 minority students, this program is one of the largest university wide programs. As mentor I directly engaged students in several scheduled one-to-one meetings to learn about potential challenges and ways to facilitate success. As cluster leader I organized activities that provided students exposure to various research laboratories across campus. After being a successful cluster leader, I was asked to co-chair the program to provide guidance on programmatic decisions and the future direction of the program which is now considered a key element of student retention at the University of Florida.

Chair, UAB Faculty Senate

After having served on UAB's Faculty Senate, I was elected senate chair in 2013. The senate of UAB consists of 64 senators which represent over 2,400 faculty members from eleven schools. During my tenure, I chaired thirteen monthly general Faculty Senate meetings and an equal number of face-to-face meetings with UAB's President and Provost. I represented UAB's faculty in many formal and informal gatherings and to the Board of Trustees of the University of Alabama system. My proudest accomplishment is my key role in fashioning an agreement by the University of Alabama system which is of pivotal importance to safeguard our university and community for the potentially devastating effect of a surface coal mine at the Shephard Bend of the Black Warrior River, a victory for the university as well as the primarily African-American community that would have suffered from contamination of the drinking water. Most recently, I received the highest number of votes in senate elections again representing the School of Medicine once again.

Director of the Division in Obstetric Anesthesia

I have directed the anesthesiology division of Obstetric Anesthesia at the University of Florida (1999-2004) and was hired to implement the same type of program at UAB (2004-2006). This involves a coordinated approach to working with an interdisciplinary team of physicians (Obstetricians, Neonatologists, Anesthesiologists) nurses, nurse practitioners and administrative staff to provide a collaborative approach to the care of the pregnant patient and her newborn. In addition to clinical care, this involves the development and implementation of various educational and research programs as well as providing guidance on budgetary matters.

Program Director of the Division in Obstetric Anesthesia

Starting in 2010, I established a Fellowship program in Obstetric Anesthesiology at UAB. After successfully graduating two fellows, I led the program through the accreditation process by the American College of Graduate Medical Education (ACGME) which was completed in 2014. On a national level, I am advising the fellowship committee for the Society for Obstetric Anesthesia and Perinatology on efforts to share regulatory and educational resources for program directors across academic institution.

Board of Directors Member, Society of Obstetric Anesthesia and Perinatology

I advise the Society of Obstetric Anesthesia and Perinatology on strategic decisions about budgets, membership services, and scientific and programmatic goals and coordinate all media related affairs in my role as board of directors member and media committee chair. In that capacity I have reviewed large (> \$ 1 million) budgets and developed student and professional society programs and utilized and analyzed data to arrive at strategic decisions as rational basis for strategic changes.

Media Committee Chair and Newsletter Editor

As one of the largest anesthesiology subspecialty societies, the Society of Obstetric Anesthesia and Perinatology publishes three newsletters each year. This process requires close collaboration with our management company, the development of thematic priorities for articles and the coordination of a team of editors and authors as well as the dissemination of content promoting the society's three national meetings. Another important responsibility is in oversight of our website and the direction of the subcommittees for social media (primarily Facebook and Twitter).

Community Relationships

Key characteristics of a leader in diversity, equity and inclusiveness require close relationships with the Community. To that end, I have established close relationships with various key constituents of the Birmingham community, most importantly a very close relationship with Mayor William H. Bell in my role as Multicultural Affairs Advisor. Diversity and Inclusion programs do not stop at the edge of a college campus. They have to be coordinated with community leaders. Having established those ties will be invaluable for the university representative of diversity, equity and inclusion.

Diversity, Equity and Inclusion

City of Birmingham and UAB Community

Multicultural Affairs Advisor, Mayor's Office City of Birmingham	2008 – current
Lecturer, Guide Right Youth Development Program	2004 – current
Contributor, T.L. Hale Minority Advancement Program	2004 – current
Contributor, National Advancement of Colored People	2012 – current

University of Florida Office for Diversity and Equity

Assistant Chair, University Minority Mentoring Program (UMMP)	2003 – 2004
Office of the Vice Provost for Minority Affairs	
UMMP, Faculty Coordinator and Cluster Leader	2002 – 2003
UMMP, Mentor	2000 – 2002

Kappa Alpha Psi Fraternity, Inc.

Lifetime Member, Grand Chapter	2000 - current
Lifetime Member, Southern Province	2000 - current
Undergraduate Chapter Advisor, University of Florida	2010 – 2004

Gainesville Chapter of the National PanHellenic Council (NPHC)

Gainesville Alumni Chapter Representative of KAΨ	2010 – 2004
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National Medical Association [NMA] Speaker

The National Medical Association (NMA) is the largest and oldest national organization representing African American physicians and their patients in the United States, an organization that is the collective voice of African American physicians and the leading force for parity and justice in medicine and the elimination of disparities in health. I have been supporting research of African American students, trainees and faculty to engage in relevant research and present at the annual meeting of the NMA. I have also been invited as honorary guest lecturer to the NMA conference and promoted African American investigators at that event. Part of my research has been dedicated to racial disparities in maternal care, a topic of

particular interest to the NMA.

National Pan-Hellenic Council, Inc.

I served on the Gainesville chapter of the National Pan-Hellenic Council, Inc. (NPHC) from 2001 to 2003. The organization is currently composed of nine historically African American International Greek letter Sororities and Fraternities. The NPHC promotes interaction through forums, meetings and other mediums for the exchange of information and engages in cooperative programming and initiatives through various activities and functions.

Kappa Alpha Psi Fraternity, Inc.

I am a current member and past officer and executive board member of the Gainesville alumni chapter of Kappa Alpha Psi, Inc., a historically African American college Fraternity. In these roles I have been the undergraduate student adviser to several classes of college students, I have raised funds from local businesses and corporations to support scholarships and community projects, helped develop national health initiatives and programs to increase college participation of minority students.

Prince Hall Freemasonry

As Prince Hall Freemason - the first African American fraternal organization in North America - I have promoted the organization's principle that tolerance of another's view of government and nature is to be preserved. I facilitated a conversation between the African American Grand Lodge of Alabama and the traditionally Caucasian Grand Lodge of Alabama by forging an alliance initiated by the Supreme Council, Scottish Rite (Southern Jurisdiction, USA).

Minority Health & Health Disparities Research Center

I am a mentor of UAB's Minority Health & Health Disparities Research Center (MHRC) is a comprehensive educational, research and community outreach center focused on eliminating the health disparities of racial/ethnic minorities. I have mentored Tuskegee university students as part of the summer enrichment program to provide an avenue for exposure to the medical field and the field of anesthesiology and research in general.

Community Initiatives and Engagement

I have supported the United Negro College Fund [UNCF] and Historically Black Colleges and Universities (HBCUs) in general since 1992. Independently, I have raised funds for scholarships to benefit those in financial need. In Gainesville, FL and

Lake City, FL, I have initiated and coordinated a community program with the goal of purchasing and delivering Christmas gifts to foster children. As part of the community outreach, I have visited K1-12 schools located in economically disadvantaged neighborhoods to inspire children to value education and make the right choices in their lives.

Women's Advocacy

As Chair of the Faculty Senate, I moderated the consideration of several Women's issues. Chief among them was the issue of childcare, which remains a potential challenge for women with young children. The discussions revealed that, at UAB, more needs to be done to support women, but more generally families with young children. As an anesthesiologist with specialty training in Obstetric Anesthesiology, I have been promoting access to pain relief during childbirth for over two decades on a national and international level through my research and leadership in the Society of Obstetric Anesthesia and Perinatology. Once believed to be an optional treatment that was reserved for some women and denied to others, pain relief is now considered a Women's right. Yet another important women's and minority issue is the racial disparity in maternal deaths noted by researchers across the US. I initiated a study at UAB to investigate this topic. Published in 2014, we discovered that maternal death data did not support racial disparity in maternal deaths but suggested that access to a tertiary care medical facilities in terms of the residential distance is a predictor of maternal death. These results help us focus on health care policy changes needed to improve maternity care, a fundamental issue of Women's Rights in the US and worldwide.

Jewish Community Advocacy

During my tenure as Senator and Chair of the Faculty Senate, the Academic boycott of Israel was discussed. I personally pushed for a clear statement against a politically motivated discrimination against this boycott at UAB as a profoundly unjust system of discrimination.

LGBT Community Advocacy

As Chair of the Faculty Senate I worked with my appointed representative. Several issues of the LGBT community were raised but particular concern arose around the issue of qualified counseling services to LGBT individuals. As a result of this discussion and the forethought of others we now have dedicated support in the student health center. This is an example of a change that served a need of the LGBT student community at UAB. I envision those types of support services to become available to the university community in general.

Teaching and Lectures

Director, Fellowship Program in Obstetric Anesthesia

Accreditation Council for Graduate Medical Education (<u>ACGME</u>)	2014
Application for ACGME accreditation	2012
Obstetric Anesthesia Residency Core Teaching Curriculum	2000

Invited Lectures

Anesthesia in the Neonate. Perinatal Grand Round Lecture. Women's and Infants Center. Birmingham, AL	11-23-2016
New Frontiers of Pain Research in the 21st Century, University of Alabama Pain Symposium Lecture. Birmingham, AL	10-14, 2016
Difficult Airway in Obstetrics, Moderation of Current Research. Society of Obstetric Anesthesiology and Perinatology. Annual Meeting. Boston, MA.	05-19, 2016
Longitudinal Data Analysis in Anesthesia Research National Online Webinar, Society for Obstetric Anesthesia and Perinatology. Birmingham, AL	05-11, 2016
Intrapartum Maternal Temperature Key Note Lecture for the Japanese National Center for Child Health and Development. Tokyo, Japan	02-17, 2014
Mechanisms of Anesthesia Graduate Student Lecture, Department of Pathology at UAB. Birmingham, AL	09-12, 2013
Functional Imaging of Pain. Visiting Professor at the University of California, San Francisco (UCSF). San Francisco, CA.	19-17, 2013
Maternal Temperature During Labor. Research Hour Lecture. Society of Obstetric Anesthesiology and Perinatology. Annual Meeting. St. Juan, Puerto Rico.	04-27, 2013

Introductory Lecture on Pain. Neurosciences Lecture. Campbell Hall, University of Alabama at Birmingham, Birmingham AL	03-05, 2013
New Measures of Coagulation. National Online Webinar, Society for Obstetric Anesthesia and Perinatology. Birmingham, AL	02-13, 2013
Challenges in Obstetric Anesthesiology. Lecture and Panel Discussion. American Society of Anesthesiology. 2012 Annual Meeting. Washington, D.C.	10-13, 2012
Maternal Mortality at the University of Alabama. Keynote Lecture: Anesthesiology Division. National Medical Association. 2012 Annual Meeting. New Orleans, LA	07-30, 2012
Nuts and Bolts to Cutting Edge: A Seminar on Coagulopathy. Symposium Lecture. Society of Obstetric Anesthesiology and Perinatology. 2012 Annual Meeting. Monterey, CA.	05-02, 2012
Functional Imaging of Pain. Pain Symposium Lecture. Bradley Lecture Center, Children's Hospital, University of Alabama at Birmingham, Birmingham AL	03-27, 2012
Functional Imaging in Pain Research. Keynote Lecture: Anesthesiology Division. National Medical Association. Annual Meeting. Washington, D.C.	07-24, 2011
Scientific Review Session. Meeting Poster Review Presentation. Society of Obstetric Anesthesiology and Perinatology. Annual Meeting. Henderson, NW.	04-15, 2011
Experimental Design for Pain Imaging. Invited Honorary Member of the Faculty for the Statistical Parametric Mapping. Wellcome Trust Centre for Neuroimaging, London, UK.	10-22, 2010
Pain Imaging. Neuro-engineering Conference Lecture. Spain-Wallace Conference Center. University of Alabama at Birmingham, Birmingham AL	09-22, 2010
Career Development Awards. Inaugural K-Club Lecture. Spain-Wallace Conference Center. University of Alabama at Birmingham, Birmingham AL	09-22, 2010

Anesthesia for Labor and Delivery. Perinatal Grand Round Lecture. Hillman Conference Auditorium. University of Alabama at Birmingham, Birmingham AL	06-02, 2010
New Research in Obstetric Anesthesia. Society of Obstetric Anesthesiology and Perinatology. Annual Meeting. San Antonio, TX.	05-14, 2010
New Research in Obstetric Anesthesia. Society of Obstetric Anesthesiology and Perinatology. Annual Meeting. San Antonio, TX.	05-19, 2007
Strategies to Prevent Hypotension with Spinal Anesthesia. Visiting Professor. The Royal London Hospital, Whitechapel London E1 1BB, London, UK.	11-09, 2007
The History of Neuraxial Blockade. Visiting Lecturer. Obstetric Anesthesiology Registrar Conference. The Royal London Hospital, Whitechapel London E1 1BB, London, UK.	07-12, 2003
Benzodiazepines, Sedation and Recall in Pregnancy. Visiting Lecturer. Department of Anesthesiology. University of Alabama at Birmingham, Department of Anesthesiology, Birmingham, AL.	04-01, 2003
Pioneers in Epidural Needle Design. A Journey Through the Development of Neuraxial blockade. Visiting Lecturer. Department of Anesthesiology. UAB	10-14, 2003
The Effect of Propofol on Pain Perception. Results of a Pilot Study. Research Fellow Lecturer. Advanced Post-graduate Program in Clinical Investigation. University of Florida, Department of Medicine, St. Simon's Island, GA.	06-20, 2003
La Storia dell'anestesia epidurale. Visiting Lecturer. Università di Genova, La Spezia, Italia. Servizio Anestesia, Rianimazione e Medicina Preoperatoria. Ospedale S. Andrea.	07-15, 2002
Prediction of Post-spinal Hypotension in Obstetrics. Meeting Presentation. American Society of Anesthesiologists. Annual Meeting. San Francisco, CA.	07-15, 2002

Atrial natriuretic peptide (ANP) and spinal anesthesia (SA) for cesarean section. Meeting Presentation. American Society of Anesthesiologists. Annual Meeting. San Francisco, CA.	10-15, 2000
Atrial natriuretic peptide (ANP) and Hydration Prior to Spinal Anesthesia (SA) for Cesarean Section. Meeting Presentation. Society of Obstetric Anesthesiology and Perinatology. Annual Meeting. Montreal, CA.	06-01, 2000
Increased Atrial Natriuretic Peptide After Intravenous Fluid Bolus. European Society of Anaesthesiology. Annual Meeting. Vienna, Austria	04-02, 2000
Pioneers in Epidural Needle Design. Meeting Lecture. European Society of <u>Anaesthesiology</u> . Annual Meeting. Vienna, Austria.	04-03, 2000
Normal and Pathological Coagulation in the Pregnant Patient. Visiting Lecturer. Department of Anesthesiology. University of Florida, Department of Anesthesiology. Annual Update in Obstetrics and Gynecology. Lake Buena Vista, FL.	04-09, 1999
The Predictive Value of Changes in Effective Connectivity for Human Learning. Visiting Lecturer. KcKnight Brain Institute. University of Florida, Department of Anesthesiology, Gainesville, FL.	04-15, 1999
Propofol attenuates pCO ₂ -mediated increase in cerebral blood flow (CBF) in normal volunteers. Meeting Presentation. Society for Neuroscience. 1996 Annual Meeting. Washington, DC.	11-17, 1996
Normal and Pathological Coagulation in the Pregnant Patient. Visiting Lecturer. Department of Anesthesiology. University of Florida, Department of Anesthesiology, Gainesville, FL	10-14, 1997
Cesarean Section as a Code Does Epidural Anesthesia Decrease the Incidence of Operative Delivery? Meeting Presentation. Society of Obstetric Anesthesiology and Perinatology. Bermuda, UK	04-02, 1997
Complications in Obstetric Anesthesiology. International Refresher Course Lecture. Abteilung für Anästhesie und Intensivmedizin. Leopold-Franzens-Universität, Seefeld, Österreich.	12-06, 1996

Physiology of Pregnancy. International Refresher Course Lecture. Abteilung für Anästhesie und Intensivmedizin. Leopold-Franzens-Universität, Seefeld, Österreich.	12-05, 1996
Seminar für Geburtshilfliche Anästhesie. Gastvorlesung. Abteilung für Anästhesie und Intensivmedizin. Leopold-Franzens-Universität, Seefeld, Österreich.	05-20, 1996
Sufentanil in der Geburtshilflichen Anästhesie. Gastvorlesung. Abteilung für Anästhesie. Ludwig-Maximilians- Universität, Klinikum Großhadern, München, Germany.	05-21, 1996
Thrombopoietin in Pregnancy. Meeting Presentation. Society of Obstetric Anesthesiology and Perinatology. Annual Meeting. Tucson, AZ.	05-02, 1996
Management of Fetal Distress. Perinatal Grand Round Lecture. Hillman Conference Auditorium. Harvard University, Boston MA.	03-12, 1996
Fundamentals of Mechanical Ventilation. Senior Resident Presentation. Anesthesiology Grand Rounds Lecture Emory University, Atlanta, GA.	01-12, 1994

Teaching and Mentoring

UNIVERSITY OF ALABAMA AT BIRMINGHAM

Resident Teaching

Academic Advisor to Anesthesia Residents 1998 - current

Facilitator for General Anesthesia and
Obstetric Anesthesia Keyword Lectures

Research Advisor to Resident Physicians

Core Curriculum Lecture Series 2004 - current

Physiological Consequences of Regional Anesthesia (2014)

New Measures of Coagulation in Obstetrics (2013)

Obstetric Anesthesiology Review (2012)

Technical Aspects of Epidural and Spinal Anesthesia (2011)

Thromboembolic Disease in Pregnancy (2010)

The Anesthesia Machine (2008, 2009, 2010)

The Complicated Obstetrical Patient (2009)

The Anesthesia Machine Checkout Procedure (2008)

Anesthetic Considerations of the Preeclamptic Parturient
(2007)

Faculty, Difficult Airway Workshop 01-30, 2010

Undergraduate and Graduate Student Teaching

Guest Lecturer, Department of Mathematics (UAB) 2015

Medical Student Academic Advisor 2008 - 2010

Medical Student Research Mentor 2009 - 2013

Maternal Mortality (2013)

Hormonal Effects of Pain Perception (2010)

Oxytocin and Maternal Temperature (2009)

Introduction to Clinical Medicine (ICM), 4 credit hours Fall 2010

UAB Minority & Health Disparity Research Center

Summer Enrichment Program, Faculty Mentor 2012 - current

UNIVERSITY OF FLORIDA (UF)

Simulation, Undergraduate and Graduate Student Teaching

Resident Physician Advisor 1998 - 2004

Medical Student Preceptor

Medical Simulation Faculty

Statistics Lecture Series

Fall 2003

Biostatistics: Lecture Series for Medical Students

Study Design, Statistical Concepts, Research questions about one or two groups, Regression and Correlation, Analysis of Variance, Multiple Comparisons.

Joint Departments of Anesthesia & Obstetrics and Gynecology

1980 - 2004

Lecture Topics Covered: Maternal Physiology, Fetal and Placental Physiology, Neonatal Physiology, Physiology of Labor, Non-elective Cesarean Section, Local Anesthetics for Obstetrics, Neuraxial Opioids in Obstetrics, General Anesthesia for Obstetrics, Obstetrical Complications and their Management, Hypertensive Disorders of Pregnancy, Morbid Obesity, Respiratory Problems in Pregnancy, Cardiac Disease in Pregnancy, Endocrine Disease in Pregnancy.

Grand Round Lectures

Critical Care Obstetrics, Complications of Obstetric Anesthesia/Analgesia Obstetric Anesthesia Board Review The Difficult Airway in Obstetrics, Local Anesthetics in Obstetrics Trauma in Pregnancy	2002
Muscle Relaxants	2001
Neuromuscular Blocking Drugs Single-lung Ventilation in the Pediatric Patient	2000
Complications of Obstetric Anesthesia Fetal Monitoring Cortical Vein Thrombosis - a Case of Presumed Post-dural Puncture Headache Neuromuscular Blocking Agents Obstetric Anesthesia Trauma in the Pregnant Patient Spontaneous Recovery After Unsuccessful Intraoperative CPR Anesthesia for Liver Transplantation in a Recipient with Multiple Organ Failure	1999
Regional Anesthesia	1998

Critical Care Lectures

Thromboembolic Disease of Pregnancy Trauma in the Obstetric Patient ICU issues in the Preeclamptic Patient	2000
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HARVARD UNIVERSITY SCHOOL OF MEDICINE

Obstetric Anesthesia Lecture Series

Fellow Lectures

Endocrine disorders in Pregnancy, Difficult Airway and Aspiration in Pregnancy, Cardiac Disorders in Pregnancy, Neurological Complications in Pregnancy, Perinatal Pharmacology, Neonatal Resuscitation, Peripartum	1995-1996
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Hemorrhage, Preterm Labor and Tocolysis, Fetal Monitoring
Pregnancy Induced Hypertension, Physiology of Pregnancy,
Embolic Complications during Pregnancy Non-obstetrical
Surgery during Pregnancy, Anesthetic Management of Fetal
Distress.

Grant Support

Department of Defense

Intranasal Oxytocin for the Treatment of Pain Associated with Interstitial Cystitis. 2011-2013
Role: Co-Investigator
Amount: \$ 276,934
Project Number: W81XWH-11-1-0452

National Institute of Health

The Effect of Sedation on Pain Perception 2006-2010
Role: Principle Investigator
Total Amount: \$ 757,320
Project Number: K23-RR021874

Brain Mapping of Cold Sensation 2006
Role: Principle Investigator
Agency: NCRR
Institution: University of Alabama at Birmingham GCRC\\
Amount: \$ 6,110
Project Number: M01-RR000032

Maternal Analgesedation for Cesarean Section Under Spinal Anesthesia 2004-2005
Role: Principle Investigator
Agency: NCRR
Institution: University of Florida GCRC
Amount: \ \$ 23,826
Project Number: M01-RR000032

The Effect of Propofol, a Sedative-Hypnotic Drug on Thermal Pain 2004
Role: Principle Investigator
Agency: NCRR.
Institution: University of Florida CCTS
Amount: \$ 11,255
Project Number: M01-RR000032

Independent Funding Agencies

Central and Peripheral pain syndromes studied by CASL MRI 2011-2013
Role: Co-Investigator

Amount: \$ 20,000

Agency: UAB Department of Radiology Research Initiatives
Pilot Award

Brain Mapping of the Effect of Intravenous Lidocaine on Cold Allodynia 2006-2011

Role: Principle Investigator

Amount: \$ 37,500

Agency: American Society of Regional Anesthesia- Carl Koller
Grant

Multidisciplinary Neuromaging Resource Core for Clinical Neuroscience 2006-2007

Role: Co-Investigator

Amount: \$ 309,500

Agency: UAB Health Services Foundation

Clinical Protocol for a Double-blind Comparison of the Analgesic Activity of Parecoxib 40 mg IM, with Morphine 2002-2003

Role: Principle Investigator

Total Amount: \$ 45,053

Agency: Scirex Research Corporation

Does the Orthostatic Response Predict Hypotension Associated with Spinal Anesthesia? 2002

Role: Principle Investigator

Total Amount: \ \$ 13,000

Agency: I. Heerman Anesthesia Research Foundation

Antisepsis and Epidural Catheter Placement 2001

Role: Principle Investigator

Total Amount: \ \$ 5,000

Agency: I. Heerman Anesthesia Research Foundation

Maternal Analgesedation for Cesarean Section under Spinal Anesthesia 1999

Role: Principle Investigator

Total Amount: \ \$ 5,000

Agency: I. Heerman Anesthesia Research Foundation

The Effect of Propofol, a Sedative-Hypnotic Drug on Thermal Pain 2002-2003

Role: Principle Investigator

Total Amount: \$ 10,083

Agency: Civatech Medical Systems

The History of Continuous Neuraxial Blockade

1999

Role: Principle Investigator

Total Amount: \$ 3,500

Agency: Wood Library-Museum of Anesthesiology

Bibliography

Peer Reviewed Publication

Frölich MA, Banks C, Ness TJ. [The Effect of Sedation on Cortical Activation. A randomized study comparing the effects of sedation with midazolam, propofol and dexmedetomidine on auditory processing.](#) *Anesth Analg* [submitted, in revision]

Kukraljac N, White DS, **Frölich MA**, Tran S, Lahti A, [Ketamine Modulates Hippocampal Neurochemistry and Functional Connectivity – A Combined Magnetic Resonance Spectroscopy and Resting State fMRI Study in Healthy Volunteers.](#) *Molecular Psychiatry* 2016 [accepted for publication]

Frölich MA, Banks C, Warren W, Robbins M, Ness TJ. [The Association Between Progesterone, Estradiol, and Oxytocin and Heat Pain Measures in Pregnancy: An Observational Cohort Study.](#) *Anesth Analg* 2016 Mar 29. [Epub ahead of print] PMID: 27028773.

Deutsch G, Deshpande H, **Frölich MA**, Lai HH, Ness TJ. [Bladder Distension Increases Blood Flow in Pain-Related Brain Structures in Subjects with Interstitial Cystitis.](#) *J Urol.* 2016 Mar 24 [Epub ahead of print] PMID: 27018508.

Frölich MA, Jung P, Starr S. [Target Frequency Analysis of functional MRI Data.](#) *Int J Clin Biostat* 2015; 1:2.

Frölich MA, Banks C, Brooks A, Sellers A, Swain R, Cooper L. [Why do pregnant women die? A review of maternal deaths from 1990 to 2010 at the University of Alabama at Birmingham.](#) *Anesth Analg* 2014;119:1135-9.

Powell M, Mathru M, Brandon A, Patel R and **Frölich MA**. [Assessment of endothelial glycocalyx disruption in term parturients receiving a fluid bolus before spinal anesthesia: a prospective observational study.](#) *Int J Obstet Anesth* 2014;23:330-4.

Busettini C and **Frölich MA**. [Effects of mild to moderate sedation on saccadic eye movements.](#) *Behavioural Brain Research.* 272:286-302.

Frölich MA. Labor [Epidural Fever and Chorioamnionitis.](#) *International Anesthesiology Clinics.* 2014;52:101-9.

Frölich MA, Zhang R, Ness TJ. [The Effect of Sedation on Pain Perception.](#) *Anesthesiology.* 2013;118:611-21

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Journal Reviewer

Journal of Pharmacology and Experimental Therapeutics	2013 - curent
British Journal of Anaesthesia	2013 - curent
Archives of Gynecology and Obstetrics	2008 - curent
Anesthesia & Analgesia	2007 - curent
International Journal for Obstetric Anesthesia	2007 - curent
Journal for Clinical Anesthesia	2007 - curent
Anesthesiology	2006 - curent

Patient Care

Clinical Service

Anesthesia for the Pregnant Patient

Evaluation, Labor Analgesia, Surgical Anesthesia and Perioperative Care

Anesthesia for Reproductive Surgery

Approximately 24 Physician-on-call Assignments/Year

Anesthesia for Surgical Specialties with focus on Pediatric, Neuro anesthesia, Thoracic Anesthesia, Anesthesia for Obstetrics and Gynecology, General Surgery, Gynecology, General ENT and Complex Airway Surgery, Interventional Radiology, Cardiology and Gastroenterology, Solid Organ Transplantation, Trauma Surgery, Thoracic and Vascular Surgery, Neurosurgery, Orthopedic Surgery, Ophthalmology, Urology.

Advanced Expertise

Remote Anesthesia (Radiation-Oncology) for in Infants and Small Children

Perioperative Echocardiography in General Anesthesia

Perioperative Echocardiography in General Anesthesia\\

Medical Emergency Response Team (MET)

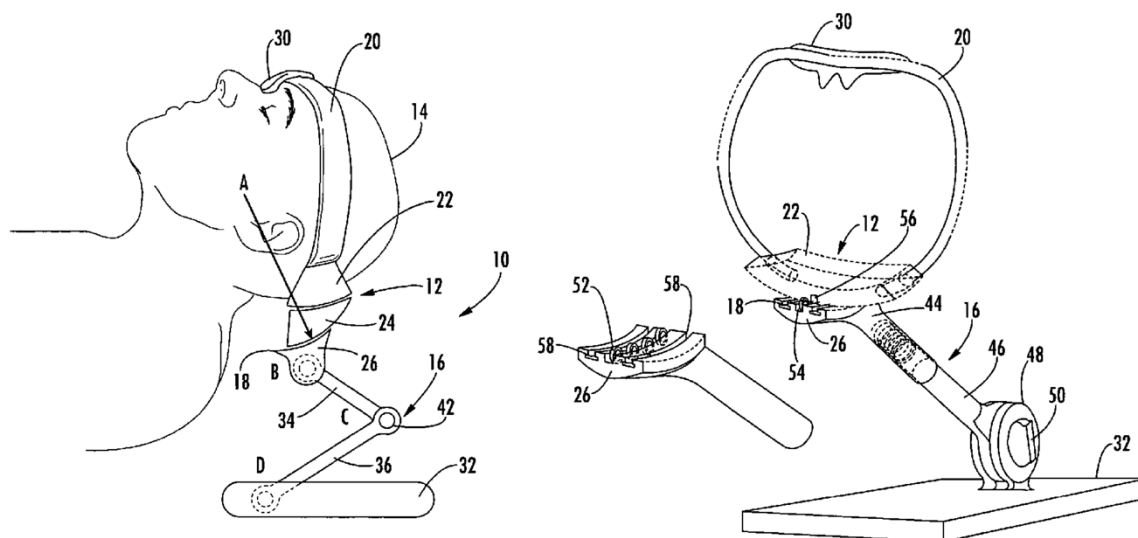
Advanced Cadiac Life Support Certified, Member of the MET team

Patient Care

United States Patent Office

Frölich MA. Head positioning device for endotracheal intubation.

US patent 7,350,250, date awarded: April 1, 2008\\



University Intellectual Property Disclosure

Frölich MA. Continuous transthoracic intraoperative echocardiography.

University of Florida Invention Disclosure # 10042.

Frölich MA. Temporary wedge for uterine displacement.

University of Florida Invention Disclosure # 10466.

Frölich MA. , Melker RJ: Corrected central venous pressure and corrected pulmonary artery wedge pressure. University of Florida Invention Disclosure # 11026.

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