CURRICULUM VITAE: (Updated January, 2020) Henry L. Galan, M.D. Professor Department of Obstetrics & Gynecology University of Colorado School of Medicine

CURRENT POSITION Professor, Dept of Ob/Gyn

Colorado Fetal Care Center

Associate Program Director, Maternal-Fetal Medicine Fellowship

Department of Obstetrics and Gynecology University of Colorado Denver School of Medicine

12631 E. 17th Avenue, Mail Stop B198-5

Aurora, CO 80045

EDUCATION

Undergraduate August 1981 – May 1985

University of Texas at Austin, Austin, TX

Bachelor of Arts, Biology

August 1985 – May 1987

Texas A&M University, College Station, TX Bachelor of Science, Medical Sciences

Medicine August 1985 – May 1989

Texas A&M University - College of Medicine

College Station, TX Doctor of Medicine

Postgraduate Training June 1989 – July 1993

Residency, Obstetrics and Gynecology

Scott & White Hospital (TAMU-HSC), Temple, TX

July 1993 - June 1995

Fellowship, Maternal-Fetal Medicine

University of Texas Health Science Center at Houston, TX

July 1995 - June 1997

Research Fellowship, NIH Perinatal Research Training Grant

Department of Pediatrics, Division of Neonatology University of Colorado Denver School of Medicine

Other Training Academy for Leadership and Development

Society for Maternal Fetal Medicine

Course Directors: Daniel O'Keeffe, MD, Michael Foley, MD, Idahlynn Karre, PhD.

October 19-21, 2012 and April 12-14, 2013

ACADEMIC APPOINTMENTS

July 1995– June 1997

Instructor and Research Fellow

Department of Obstetrics and Gynecology

University of Colorado Denver School of Medicine

July 1997 – June 2003 Assistant Professor

Department of Obstetrics and Gynecology

University of Colorado Denver School of Medicine

July 2000 - present

Director, Maternal-Fetal Medicine Fellowship Department of Obstetrics and Gynecology

University of Colorado Denver School of Medicine

July 2003 – June 2009 Associate Professor

Department of Obstetrics and Gynecology

University of Colorado Denver School of Medicine

July, 2009 - present

Professor

Department of Obstetrics and Gynecology

University of Colorado Denver School of Medicine

July 2004 – 2012

Section Chief of Maternal-Fetal Medicine Department of Obstetrics and Gynecology

University of Colorado Denver School of Medicine

May, 2012 – present

Professor

Department of Obstetrics and Gynecology

University of Colorado Denver School of Medicine

PROFESSIONAL POSITIONS

Hospital Appointments

Staff Physician

Hermann Hospital and LBJ Hospital, Houston, Texas

Staff Physician Medical Director of Labor and Delivery

University of Colorado Hospital, Aurora, CO

Staff Physician

Exempla/Lutheran Medical Center, Denver, CO

1993-1995

1995-present

2005-present

1999-2003

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	Staff Physician HealthONE Systems/Columbia Rose Medical Center, Denver, CO	1999-2003
	Staff Physician Centura/St. Anthony's Hospital Systems, Denver, CO	1999-2003
	Staff Physician Exempla/St. Joseph's Hospital, Denver, CO	1999-2003
	Staff Physician Porter Hospital, Denver, CO	2004-2005
	Staff Physician Denver Health & Hospital Authority, Denver, CO	2004 – 2011
	Staff Physician Centura/Parker Adventist Hospital, Parker, CO	2004 – preser
	Staff Physician Centura/Littleton Adventist Hospital, Parker, CO	2009 – preser
	Staff Physician The Children's Hospital, Aurora, CO	2007 – preser
Consulting Positions	COPIC (malpractice insurance company) 100 day reviews Educational lectures for "COPIC points" (see "invited lecture)	es")

HONORS, SPECIAL RECOGNITIONS & AWARDS

Teaching	"2019 Mentor of the Year; District VIII". ACOG award for mentoring young members	2019
	CREOG National Faculty Award for Excellence in Resident Education	2004
	Stuart Gottesfeld Award for Outstanding Faculty Teaching	2002
	Outstanding Clinical Teachers; UCHSC Class of 2003 (MS III award)	2002
	APGO Excellence in Teaching Award	2002
	Resident Teaching Certificate of Appreciation	2000
	Stuart Gottesfeld Award for Outstanding Faculty Teaching	1999
	Stuart Gottesfeld Award for Outstanding Faculty Teaching	1997
	Certificate of Appreciation, Denver Health Medical Center	1999

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Best OBG Resident Teacher (given by Med. Students), Scott & White Hospital	1992
Best OBG Resident Teacher (given by Med. Students), Scott & White Hospital	1991
Research/ Academic Certificates for Outstanding Contribution in Reviewing: AJOG and Placenta	2019
"APS Select" Certificate for top ten articles featured in November, 2015: Title: Reduced placental amino acid transport in response to maternal nutrient restriction in the baboon. AJP-Regulatory, Integrative and Comparative Physiology Vol 309: R740-R746, 2015	2015
Dru Carlson Memorial Award for Best Research in Ultrasound and Genetics – Integration of venous Doppler and biophysical profile provides optimal delivery timing in fetal growth restriction. Oral presentation. 28th annual meeting of the Society for Maternal-Fetal Medicine, Dallas, TX	2008
James W. Kennedy AAOGF Travel Award to the annual American Gynecological and Obstetrical Society meeting, Victoria, BC, Canada	2005
NIH Young Investigator Award – Annual Perinatal Research Society Meeting, Asheville, NC	1997
Burroughs Wellcome Junior Fellow Section Chairman Clinical Meeting (\$1,000)	1995
AOA, Texas A&M University Health Science Center College of Medicine	1992
Clinical Scholar Award - Honorable Mention. Laparoscopic Insufflation in the Pregnant Baboon: Maternal & Fetal Effects. Scott & White Hospital, Temple, TX.	1993
Surfactant Replacement Therapy In Utero for Prevention of HMD in the	
Preterm Baboon: Best Paper - 5th Annual OB/GYN Resident Research Day Clinical Scholar Award - Best Postgraduate Resident Paper Scott & White Hospital, Temple, TX	1992 1992
Effect of Intra-Amniotic Administration of Exosurf in Preterm Rabbit Fetuses: 34th Annual National Student Research Forum. Excellence in. Clinical Research First Place - Resident/Intern Division (\$300 prize). 34th Annual National Student Research Forum. Roche Laboratories Travel Award for Excellence in Research. \$1500 Monetary Award for Educational Expenses, Galveston, TX	1993 1993
Effect of Intra-Amniotic Administration of Exosurf in Preterm Rabbit Fetuses: Best Paper, 4th Annual OB/GYN Resident Research Day	1991

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	Clinical Scholar Award - Best Postgraduate Paper.		1991
	Scott & White Hospital, Temple TX. Pritchard Prize (Best OB/GYN Resident Paper in Te Texas Association of Obstetricians & Gynecologists,		1992
Other:	Top Obstetrician Gynecologist selection by the Intern Obstetricians & Gynecologists	national Association o	of 2017
	5280 Magazine; "Best Doctors in Denver"	2005, 2006, 2007, 2 2011, 2012, 2013, 2 2017, 2018	
	Best Doctors for Executives (excerpt from The Best Doctors in America database	e)	2013, 2014
	Master of Ceremonies for the Graduating Chief Resi Banquet (Chiefs' selection)	dent	2006, 2007
MEMBERSHIP IN PROI	FESSIONAL ORGANIZATIONS		
	Texas Medical Association	Accopiation	1985-1995 1985-1989
	Class representative to the Texas Medical A Medical Student Section (TMA-MSS) Texas A&M University - College of Medicine President of the TMA-MSS		1987-1989
	Texas A&M University - College of Medicine, Class	Vice-President	1987-1989
	American Medical Association	1	1985-present
	Bell County Medical Society		1987-1993
	Texas Association of Obstetrics & Gynecology, Junio	or Fellow	1989-1995
	American College of Obstetricians & Gynecologists,	Junior Fellow	1993-1996
	Harris County Medical Society		1993-1995
	Society for Maternal-Fetal Medicine (formerly SPO), Associate Member		1995-1999
	American College of Obstetrics and Gynecology, Fellow Texas Section Junior Fellow Vice Chairman Texas Section Junior Fellow Chairman		1996-present 1994
	American Institute of Ultrasound in Medicine	1	1995-present

Henry L. Galan, M.D.		
Curriculum Vitae		

Colorado Gynecological and Obstetrical Society	1997-present
Society for Maternal-Fetal Medicine Associate Member Regular Member	1993-1998 1998-present
Society for Gynecologic Investigation	1998-present
Central Association of Obstetricians & Gynecologists	2002-2004
Perinatal Research Society American Gynecological and Obstetrical Society	2002-present 2016-present

MAJOR COMMITTEE, POSITIONS AND SERVICE RESPONSIBILITIES

• '	Director, Maternal-Fetal Medicine Fellowship		2000-2016
•	Associate Program Director, Maternal-Fetal Medicine Fellowship	1998-2000,	2016-present
•	Vice-Chair of Outreach	,	5/2011-2014
•	OB/GYN Research Advisory Committee - BRS Division		2006-2010
•	Platte River Perinatal Center, Board of Directors member, UCHSC		2004-2011
•	Director, Division of Maternal-Fetal Medicine,		2004-5/2011
•	Chair, UCHSC Perinatal Database Committee & PRA Search Committee		2004-2008
•	Women's Reproductive Health Research Scholar Program - Advisory Co	mmittee	2004
•	Residency Site Visit Review – core faculty		8/2001
•	Organizing committee for National Centers of Excellence in Women's Hea	alth	1998
•	Search committee for Director of the Basic Reproductive Sciences Division OB/GYN	on	1998
	Department of Obstetrics Gynecology and Reproductive Sciences UTHS	SC at Housto	n 1994

Department of Obstetrics, Gynecology and Reproductive Sciences, UTHSC at Houston 1994 Maternal Fetal Division Director Search Committee

Depart OB/GYN, Scott & White Memorial Hospital, Temple, Texas.
 Obstetric Ethics Committee

School of Medicine/University Physicians, Inc

Data Safety Monitoring Board Committee: "Double-blind trial of choline during	2009- present
Pregnancy and risk for schizophrenia study PI Randy Ross, MD	
UCH & UPI Joint Strategic Committee	6/2008-2011
Off-Campus Network Development Workgroup	
UPI subcommittee on revision of UPI By-laws	2007-2010
UPI Board of Directors – Ad Hoc Member	2006-2008
Search committee member for the Chairman of the Department of Pediatrics	2004-2005
Institution Animal Care and Use Committee	1997-2002

Hospital Children's Hospital of Colorado

Co-Director, Colorado Fetal Care Center 5/2011-present

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	MFM Blood Utilization Task Force University of Colorado Hospital & The Children's Hospital MFM Partnership	2013-present
	Executive Committee	2010-5/2011
	Clinical Care Operating Committee	2010-present
	University of Colorado Hospital	
	Medical Director of Labor and Delivery	2007-2011
	Co-Director of the Colorado High-Risk Maternity and Newborn Program (jointly supported by UCH and The Children's Hospital)	2004-2011
	Obstetric Division and Family Medicine Liaison	2001-2010
	Fetal Concerns Program (a palliative care & perinatal loss program) OB consultant	2004-2010
	Planning Groups & Building Advisory Committee Co-Leader, Anschutz Inpatient Pavillion – Phase I and II. UCHSC	2004-2007
	Search committee for Director of Women and Infants University of Colorado Hospital	8/2001
	Parker Adventist Hospital Foundation; Board Member	2011-present
State	Consultant to COPIC Insurance for development of NNE Guideline Lecture	2004
	Centura Hospital System; Perinatal Patient Safety Task Force Committee Community Service/ Public Health	2008-present
	Colorado Perinatal Care Counsel – counsel member	2006-present
	(Colorado Department of Public Health)	2000 procont
	Colorado Department of Public Health; Maternal Morbidity and Mortality	2003-present
	Committee Member (review of morbidity/mortality in Colorado)	
National	Society for Maternal-Fetal Medicine;	
	Member, Board of Director member	2008-2011
	Chairman, Fellowship Affairs Committee	2009-2011
	Past Chair, Fellowship Affairs Committee	2011-2012
	Chair, Fellowship Retreat Committee	2011-2013
	Member, Membership Committee	2012-2014
	Member, Education Committee	2012-2014
	Member, Bylaws/Credentials/Committee	2012-2014
	Member, Global Health Committee	2016-2018
	Maternal-Fetal Medicine Unit Network Grant Associate PI	2010-2016
Community	2018 Denver Chair for March for Babies (March of Dimes) fundraiser	2017-2018
LICENSURE / BOARD	/ OTHER CERTIFICTIONS	
Licensure	Federation Licensing Examination (1989)	
	State of Texas (Active)	
D 10 "" "	State of Colorado (Active)	
Board Certification	Board Certified, Maternal-Fetal Medicine, April 4/8/1998, (Active)	A - 42 \
	Board Certified, Obstetrics and Gynecology, November, 11/15/1996 (ARC Reportification, 2006, 2017)	Active)
DI C	ABC Recertification 2006-2017	
BLS	Expires 2019	

LEADERSHIP COURSES/TRAINING

Society of Maternal-Fetal Medicine – Academy for Leadership and Development Two part course: October, 2013 and April 2013; Certificate Provided 2012-2013 Reunion Meeting Course: April, 2014

INNOVATIVE TEACHING OR OTHER CREATIVE EFFORTS

Clinical Efforts	AMA/SMFM CPT coding justification for the precordial venous Dopplers	2006
	Platte River Perinatal Center; Designed and operated by the Division of (MFM and UPI owned)	2004
	Colorado Sonographics Inc.; Perinatal outreach ultrasound program with web-based Interpretation.	2007-2009
Research Efforts	Perinatal Database; Web-based	2004-2012
Educational Efforts	Maternal-Fetal Physiology Course; multidisciplinary lectures for	2000- 2018

REVIEW, EDITORIAL AND REFEREE WORK

Study Sections/Workshops/MFMU

SMFM/NICHD/HRSA/ACOG Workshop: Quality measures in High Risk 2016

Fellows from both MFM and neonatology; given every 3 years

Pregnancy. Co-Moderator w/ Brian Mercer for the Preterm Birth Session

NIH Workshop: Prenatal and Perinatal Lung NHLBI Workshop. Presented 2015 "Impact of IUGR/SGA-On Lung Abnormalities & Recovery". NHLBI Prenatal workshop report. 2016, JAMA-Peds.

MFMU Concept Proposal Presentation. "The Growth Restriction Early Term Trial (GREaTT study). Galan HL, Chauhan, SP. MFMU Steering Committee Meeting. January 15-16, 2015. Bethesda, Maryland.

Ireland Health Research Board grant reviewer. "Sildenifil treatment in UGR." (HRA-2014-DI-620). Invitation by Liam Burke. HRB Grants Administrator

NICHD Concept reviewer: "Fetal Body Composition and Volumes in the NICHD Fetal Growth Studies".

Invitation by Sathasiva B. Kandasamy, PhD

NIH Workshop on Timing of Indicated Late Preterm and Early Term Birth
Co-sponsored by Eunic Kennedy Shriver NICHD and SMFM

Curriculum Vitae		rage to
	NIH Scientific Review (Special Emphasis Panel) for RFP "The National Standard for Normal Fetal Growth". Invitation by Peter Zelazowski, PHI Scientified Review Officer	
	NIH Pregnancy and Neonatology Study Section – Ad Hoc reviewer	2/2006;1/2008
	NICHD; Workshop on Prenatal Imaging (presented uterine artery Doppler and pregnancy outcomes)	9/2006
	NICHD; Workshop on Amniotic Fluid (presented Intraamniotic Fetal Treatments; Ross et al. NICHD Conference summary: amniotic fluid biology—basic and clinical aspects J Matern Fetal Med 2001;10(1):2-19)	4/2000 s.
Editorial Work	Editor: Obstetrics: Normal and Problem Pregnancies	2009-present
	Associate Editor: Obstetrics: Normal and Problem Pregnancies (5th Ed; Invitation by Steven G. Gabbe, MD)	2003-2009
	Guest Editor: Emergencies in Obstetrics and Gynecology Ob-Gyn Clinics of North America. Vol 34(3);2007	2007
	Guest Editor: Topic: Intrauterine Growth Restriction Seminars in Perinatology. Vol 32(3);2008	2008
	Editor & Contributor: Advanced Medical Systems – Perinatal Updates	1998-2001
Referee	American Journal of Obstetrics and Gynecology Prenatal and Neonatal Medicine Reproduction, Fertility and Development Ultrasound in Obstetrics and Gynecology Biology in Reproduction American Journal of Physiology American Journal of Physiology - Heart and Circulatory Physiology British Journal of Obstetrics & Gynaecology Journal of Maternal Fetal Neonatal Medicine Pediatric Research Placenta Science & Sister Journals Ultrasound in Obstetrics & Gynecology	2001-present 1998-present 2000-present 2001-present 2005-present 2007-present 2010-present 2017-present 2004-present 2016-present 2016-present 2016-present
Abstract Referee/Judge:	SMFM; Abstract referee; Poster Presentation Judge SMFM; Abstract referee; Poster Presentation Judge SMFM; Judge for Fellow Oral Plenary and Fetal Therapy Oral sessions Society for Maternal-Fetal Medicine; Poster Judge Society for Maternal-Fetal Medicine; Oral Concurrent Judge Society for Gynecologic Investigation – Poster Judge	2017 2016 , 2015 2013, 2014 2012, 2015 2010, 2011

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	Society for Maternal-Fetal Medicine; Fellow Plenary Judge	2011
	Society for Maternal-Fetal Medicine; Oral Presentation Judge	2010
	Society for Maternal-Fetal Medicine - Abstract Referee	2001-present
	Society for Gynecologic Investigation - Abstract Referee	2004-present
	Society for Maternal-Fetal Medicine; Oral Presentation Judge	2010
	Society for Maternal-Fetal Medicine, Poster Presentation Judge	2013-present

INVITED LECTURES, PRESENTATIONS, VISITING PROFESSORSHIPS & COURSE DIRECTORSHIPS

17th Annual High Risk Fetal Imaging and Perinatal Medicine Course with Hands-On Fetal Echocardiography and OB Ultrasound Course. Role-Course Co-Director (Jennifer Hodges, MD Co-Director). Speaker: 1. Evaluation of the Hydropic Fetus. 2. Application of Doppler Velocimetry. University of Colorado School of Medicine. Children's Hospital of Colorado. Aurora, CO. September 9-10, 2019.

ACOG Update: IUGR Management. Audio Recording with Uma Reddy and Ahmet Baschat. Recording in Las Vegas, NV, February, 2019.

34th Annual Steamboat Perinatal Conference. Invited Speaker. Normal Small Baby or Growth Restriction: How to Tell the Difference. Steamboat, CO. January 24-26,2019.

Northwest Perinatal Center and Legacy Maternal-Fetal Medicine Joint Perinatal Symposium. Invited Speaker. Controversies in IUGR and Management. September 15, 2018, Portland, OR

2018 Women's Health Symposium. Invited speaker. 1. Update on Current Status of Fetal Surgery, and 2. Management of IUGR: Controversies & Recommendations. October 5, 2018, Billings, MT.

Maternal Fetal Medicine Faculty Dinner Presentation – The High Risk Pregnancy Center. Lecture: 1) Controversies in the Management of IUGR. 2) Development of an IUGR Algorithm. Las Vegas, NV. September 10, 2018.

16th Annual High Risk Fetal Imaging and Perinatal Medicine Course. Course Co-Director (Joyce Sung, MD Co-Director): University of Colorado School of Medicine. Aurora, CO. September 21-22, 2018.

Society for Maternal-Fetal Medicine Fellow Lecture Series. Invited Speaker. Management of Intrauterine Growth Restriction: Controversies and Recommendations. National web-based lecture also given at MFM Division Meeting at University of Colorado School of Medicine. Aurora, CO, October 15th, 2017.

20th Annual Mid-Atlantic Ultrasound Symposium in Obstetrics and Gynecology. Course Director Alfred Abuhamad, MD. 1) Diagnosis and Management of Twin-Twin Transfusion, 2) Ultrasound in the management of Multiple Gestations, and 3) An Update on Fetal Surgery Through Case Presentations. Virginia Beach, VA. November 10-11, 2017.

Pediatric Rehabilitation Conference. Speaker. Myelomeningocele: prenatal evaluation and

treatment options. Director Dennis Matthews, MD. Children's Hospital of Colorado, Aurora CO, October 11, 2017.

15th Annual Fetal Imaging and Perinatal Medicine Course. Course Co-Director (Meghan Donnelly, MD Co-Director): University of Colorado School of Medicine. Aurora, CO. September 22-23, 2017.

American Gynecological and Obstetrical Society (President Donald Dudley, MD). Invited Speaker. "Future of Fetal Surgery and Innovations". The Drake Hotel. Chicago, IL. September 15-16, 2017.

Women's Health Research Symposium. Resident research day judge and presenter (Update in Fetal Surgery). University of New Mexico. June 9th, 2017.

Update in Obstetrics & Gynecology - Former Residents in Obstetrics & Gynecology (FROG). Resident research day judge and presenter (Controversies in the management of IUGR). University of Texas HSC – Houston, June 23rd, 2017.

Denver Health Department of OB/GYN; Grand Rounds. Fetal Surgery Update, January 1st, 2017.

19th Annual Mid-Atlantic Ultrasound Symposium in Obstetrics and Gynecology. Course Director Alfred Abuhamad, MD. 1) Update on the Current Status of Fetal Surgery, 2) Ultrasound in the management of Multiple Gestations, and 3) Diagnosis and Management of Fetal Growth Restriction: Controversies and Recommendations. Virginia Beach, VA. October 28-29, 2016.

14th Annual Fetal Imaging and Perinatal Medicine Course. Course Co-Director (Teresa Harper, MD Co-Director): University of Colorado School of Medicine. Aurora, CO. September 23, 2016.

CDH Educational Series for NICU Nurses: Director: Jason Gien, MD. Ultrasound Evaluation of CDH. Children's Hospital of Colorado, August 31st, 2016

Armed Forces MFM Network Box Lunch Meeting speaker; Controversies in IUGR. Society for Maternal Fetal Medicine – The Pregnancy Meeting. Atlanta, GA. February 4th, 2016.

Master's Series Luncheon Roundtable. Monitoring of the IUGR Fetus – UA Dopplers, CPR, and More. Society for Maternal Fetal Medicine – The Pregnancy Meeting. Atlanta, GA. February 5th, 2016.

Senior Course Co-Director (Ramesha Papanna, MD; Junior Course Co-Director): Post-Graduate Course: Debates in Fetal Intervention. 35th Annual Meeting. Society for Maternal Fetal Medicine – The Pregnancy Meeting. San Diego, CA. February 4th, 2015.

Course Co-Director (Betina Cuneo, MD Co-Director): Fetal Imaging and Perinatal Medicine Course. University of Colorado School of Medicine. Aurora, CO. May 8, 2014

Course Director, AIUM: Special Interest Course: Fetal Doppler: Beyond the Umbilical Artery. Director of Session and Speaker. NY, NY. April 8, 2013.

Course Director, AIUM: Obstetrical Doppler: Cases and Management: Director of Session and Speaker. Phoenix, AZ. March 29th, 2012.

2nd Annual: Perinatal Medicine and Ultrasound Course. Co-Director (with John Hobbins, MD) September 9-10, 2010, Denver, CO

1_{st} Annual: Perinatal Medicine and Ultrasound Course. Co-Director (with John Hobbins, MD) October 15-16, 2009, Denver, CO

Fetal Growth and Programming. Annual meeting of the Society for Maternal-Fetal Medicine - Postgraduate Course. Co-Director with George Saade, MD. January 29, 2009, San Diego, CA

Advanced Obstetrical Ultrasound – Pie in the Sky 3D and Practical Applications. Course Co-Director (with John Hobbins, MD). May 15-16, 2008, Denver, CO

<u>Basic and Advanced Obstetrical Ultrasound – A Hands-On Experience</u>. Am College of Obstetricians and Gynecologists – 060 Postgraduate Course. May 8-9, 2008. San Diego, DC.

Advanced Obstetrical Ultrasound – A Practical Approach to OB/GYN Ultrasound for the Clinician. Course Co-Director (with John Hobbins, MD). May 17-18, 2008, Denver, CO

Obstetric Emergencies: Recognition and Management. American College of Obstetricians and Gynecologists – 060 Postgraduate Course. May 8-9, 2007. San Diego, DC.

Advanced Obstetrical Ultrasound – An Obstetrical and Gynecologic View by Ultrasound. Course Co-Director (with John Hobbins, MD). May 18-19, 2006, Denver, CO

Obstetric Emergencies: Recognition and Management. American College of Obstetricians and Gynecologists – 060 Postgraduate Course.

May 9-10, 2006. Washington, DC

Advanced Obstetrical Ultrasound – An Obstetrical and Gynecologic View by Ultrasound. Course Co-Director (with John Hobbins, MD).

May 12-13, 2005, Denver, CO

<u>Ultrasound and Prenatal Diagnosis: An Update.</u> Annual meeting of the Society for Maternal-Fetal Medicine - Postgraduate Course. February 9, 2005, Reno, NV <u>Doppler Ultrasound in the High Risk Pregnancy</u>. Annual meeting of the Society for Maternal-Fetal Medicine - Postgraduate Course Lecture. *Doppler in the High Risk Pregnancy*. February 5, 2003, San Francisco, CA

Course Speaker

15th Annual Fetal Imaging and Perinatal Medicine Course. Course Co-Director (Meghan Donnelly, MD Co-Director): *Fetal Surgery: Cases, US and Video*. University of Colorado School of Medicine. Aurora, CO. September 22-23, 2017.

17thth Annual: Obstetric Ultrasound in the High Risk Patient. Institute for Advanced Medical Education course faculty and preconference NTQR faculty. 1) Advances in First Trimester Risk Assessment, 2) Technical Aspects of the NT and Nasal Bone, 3) IUGR: Controversies and Non-Controversies. 4) Preterm Birth Prevention Strategies: Cx, Prog, Cerclage, Pessary. 5) Twins: Placenta, Membranes and TTTS. Las Vegas, NV, Sept 9-11, 2016

Fetology Conference (Inaugeral). Faculty Planning Committee and Controversies/Debates Speaker Session: 1): Prenatal Screening (serum analytes and cf fDNA; Henry Galan, MD) and Prenatal Diagnosis (karyotype, microarray, whole exom sequencing David Manchester, MD). 2) Cerclage for Short Cervix in TTTS (Pro-Galan; Con-Ken Moise, MD). Vail, CO. March 13-15, 2016.

42_{nd} Annual Vail Obstetrics & Gynecology Conference. *Fetal Therapy (2 breakout sessions)* Course Directors-N. Santoro, R. Gibbs, C Thompson, M Gottesfeld. Vail, CO February, 2016

16thth Annual: Obstetric Ultrasound in the High Risk Patient. Institute for Advanced Medical Education course faculty and preconference NTQR faculty. 1) Advances in First Trimester Risk Assessment, 2)NTQR course facultyFetal Growth: Not Living up to One's Potential, 2) Technical Aspects of the NT and Nasal Bone, 3) Management of IUGR: Use of Dopplers and other methods to monitor and Determinine Timing of Delivery, 4) Use of Ultrasound on The Labor and Delivery Floor. Las Vegas, NV, October 30-November 1, 2015

American College of Obstetricians and Gynecologists 63rd ACM – Postgraduate Course. Basic Obstetrical Ultrasound –A Hands-On Experience. 1) First and second trimester biometry, 2) Antepartum Testing, AFI and Doppler Velocimetry & ½-day hands-on teaching. May 3, 2015, . San Francisco, CA.

41st Annual Vail Obstetrics & Gynecology Conference. *Complications of Multiple Gestations – MFPR, Twin-Twin transfusion, and Mal-presentation.* Course Director-Nanette Santoro, MD & Ron Gibbs, MD. Vail, CO February, 2015

Post-Graduate Course (Course Director): Debates in Fetal Intervention. 1) In Utero Repair of MMC Outside of the MOMS Criteria (Pro Argument; Con by Julie Moldenhauer, MD). 2) Future of Fetal Surgery Centers: every Major City Should Have One (Pro Argument; Con by Ken Moise, MD). 35th Annual Meeting. Society for Maternal Fetal Medicine – The Pregnancy Meeting. San Diego, CA. February 4th, 2015.

15th Annual: Obstetric Ultrasound in the High Risk Patient. Institute for Advanced Medical Education course faculty. 1) Fetal Growth: Not Living up to One's Potential, 2) Fetal Growth: How to Use Ultrasound to Manage Macrosomia, 3) Twins, 4) Use of Ultrasound on The Labor and Delivery Floor is Only Limited By One's Imagination. The Aria Resort and Casino, Venetian Hotel - Las Vegas, NV, October 24-26, 2014

25th Ultrasound Symposium. Course Director: William Ott, MD. Arterial and Venous Doppler Velocimetry in the IUGR Fetus. September 19, 2014. St. Louis, MO

38th Annual Conference of District VIII Section on Perinatal Pediatrics. Management of Intrauterine growth restriction. May 29-June1, 2014, Denver, CO

The Fetal Imaging and Perinatal Care Conference: 1) Use of Ultrasound in IUGR Management, 2) Break-out session: Postpartum Hemorrhage. May 8-10, 2014. Aurora, CO.

35th Annual Perinatal Clinical Update – Recent Advances and Current Controversies. Operative Vaginal Delivery – An Update. May 8, 2014, Children's Hospital of Colorado, Aurora, CO

American College of Obstetricians and Gynecologists 62_{nd} ACM – 060 Postgraduate Course. Hands-On Basic Obstetrical Ultrasound. 1) Basic Biometry and AF Volume, 2) Placenta Evaluation and Doppler Velcoimetry & ½-day hands-on teaching. April 26, 2014, Chicago, IL

40th Annual Vail Obstetrics & Gynecology Conference. *Management of Postpartum Hemorrhage*. Course Director-Nanette Santoro, MD & Ron Gibbs, MD. Vail, CO February, 2014

American College of Obstetricians and Gynecologists 61_{st} ACM – 060 Postgraduate Course. Hands-On Basic Obstetrical Ultrasound. 1) Biometry, Placenta and Amniotic Fluid Assessment & ½-day hands-on teaching. May 4, 2013. San Diego, CA

2013 Annual Convention of the AIUM. Special Interest Course: Fetal Doppler: Beyond the Umbilical Artery. Doppler Physics and the Umbilical Artery. Director of Session and Speaker. NY, NY. April 8, 2013.

39th Annual Vail Obstetrics & Gynecology Conference. *Doppler Management of IUGR: When to deliver...When to wait.* Course Director-Nanette Santoro, MD & Ron Gibbs, MD. Vail, CO February, 2013

33rd Annual Meeting of the Society for Maternal-Fetal Medicine. Post-graduate course: Ultrasound Controversies. Directors Isabelle Wilkins and Karin Fuchs. San Francisco, CA, February, 2013. (1) Management of IUGR lecture, and (2) Uterine artery debate with Ahmet Baschat, MD. (Galan "con").

American College of Obstetricians and Gynecologists 60th ACM – 060 Postgraduate Course. Hands-On Basic Obstetrical Ultrasound. 1) Biometry, Placenta and Amniotic Fluid Assessment

& 1/2-day hands-on teaching. May 6, 2012. San Diego, CA.

2012 Annual Convention of the AIUM. Preconvention Course Director. Obstetric Doppler Ultrasound: Case Studies (Mari, Reeves, Galan) – Diagnosis and Management. March, 2012.

32_{nd} Annual Meeting of the Society for Maternal-Fetal Medicine. Debates in Ultrasound Lecturer. *Doppler in IUGR- Galan & Mari.* Dallas, Texas, February, 2012.

38th Annual Vail Obstetrics & Gynecology Conference. *Neonatal Encephalopathy: What you need to know for your practice.* Course Director-Nanette Santoro, MD & Ron Gibbs, MD. Vail, CO February, 2012.

33_{rd} Western Conference on Perinatal Research. Sponsored by AAP. Guest Faculty and Discussant. Speaker: *IUGR cases and management*. Indian Wells, CA, January 11-13, 2012.

40th Annual Vail Obstetrics & Gynecology Conference. *Postpartum Hemorrhage*. Course Director-Nanette Santoro, MD & Ron Gibbs, MD. Vail, CO February, 2011.

American College of Obstetricians and Gynecologists 59th ACM – 060 Postgraduate Course. Basic and Advanced Obstetrical Ultrasound – Hands-On Experience. 1) Basic Biometry, Placenta and Amniotic Fluid Assessment. April 30, 2011. Washington, DC.

37th Annual Vail Obstetrics & Gynecology Conference. 1) Postpartum Hemorrhage, 2) Operative Vaginal Delivery – An Update. Course Director-Ron Gibbs, MD. Vail, CO February 17-22, 2008

54th Annual T. Hart Baker, MD Obstetric and Gynecology Symposium. *Improving the outcomes of your pregnant hypertensive patient*. Santa Barbara, CA. October 1-2, 2010.

2nd Annual: Perinatal Medicine and Ultrasound Course. 1) IUGR management, algorithm, cases, 2) Magnesium for neuroprotection. October 15-16, 2009, Denver, CO

American College of Obstetricians and Gynecologists ACM – 58th 060 Postgraduate Basic and Advanced Obstetrical Ultrasound – Hands-On Experience. 1) Basic Biometry, Placenta and Amniotic Fluid Assessment. May 15, 2010. San Francisco, CA.

Western Slope Women and Infants Conference. *Ultrasound, Cervical Length and Preterm Birth*. Course Director-Scott Gray, MD. March 19, 2010.

Medical Legal Issues in Obstetrics Practice. 1) *Operative Vaginal Delivery. 2) Shoulder Dystocia.* Course Director-Ron Gibbs, MD. Aurora, CO, November 19-20, 2009.

1_{st} Annual: Perinatal Medicine and Ultrasound. 1) Shoulder Dystocia: An Update, 2) Ultrasound in the management of IUGR. Denver, CO October 15-16, 2009.

53rd Annual T. Hart Baker, MD Obstetric and Gynecology Symposium. 1) Preterm Labor: To Mag or Not to Mag, that is the Question. 2) A simple cervical length: Preterm labor and PPROM. San Diego, CA. September 4-6, 2009.

American College of Obstetricians and Gynecologists 57th ACM – 060 Postgraduate Basic and Advanced Obstetrical Ultrasound – Hands-On Experience. 1) Basic Biometry, Placenta and Amniotic Fluid Assessment. May 1, 2009. Chicago, IL.

The Colorado Section of the ACOG. Mountains, Music & Hot Topics in OB/GYN. *Doppler Management of IUGR*. June 26 & 27, 2009. Aspen, CO

35th Annual Vail Obstetrics & Gynecology Conference. 1) Fetal acid-Base Balance and FHR Monitoring, 2) New Approaches to Third Trimester Bleeding. Course Director-Ron Gibbs, MD. Vail, CO February 15-20, 2009.

Perinatal Medicine 2009. 1)Postpartum Hemorrhage, 2) *Ultrasound assessment of the placenta cord and amniotic fluid, and 3) Use of Doppler in the Management of IUGR.* University of Southern California / Keck School of Medicine. Kaanapali Beach, Maui, Hawaii February 7-13, 2009.

9th_{th} Annual: Obstetric Ultrasound in the High Risk Patient. Institute for Advanced Medical Education course faculty. 1) NTQR Course: Technical aspects of nuchal translucency measurements, 2) NTQR Course: Technical aspects of nasal bone measurements, 3) Doppler Management of IUGR and Cases, 4) A simple cervical length examination: How it helps in preterm labor and premature labor Venetian Hotel - Las Vegas, NV, October 17-19, 2008

<u>Advanced Obstetrical Ultrasound</u> – Pie in the Sky 3D and Practical Applications. 1) Obstetrical Ultrasound Coding., 2) Assessment of IUGR. Course Co-Director (with John Hobbins, MD), Denver, CO May 15-16, 2008

American College of Obstetricians and Gynecologists 56th ACM – 060 Postgraduate Basic and Advanced Obstetrical Ultrasound – Hands-On Experience. <u>Obstetric Emergencies:</u> Recognition and Management. *Obstetrical Emergencies: i) Postpartum Hemorrhage, ii) Shoulder Dystocia, iii) Trauma in Pregnancy.* May 8-9, 2008. San Diego, DC.

Basic and Advanced Obstetrical Ultrasound – A Hands-On Experience. 1) Ultrasound Coding – doing it right, 2) Placenta and Amniotic Fluid Assessment. American College of Obstetricians and Gynecologists – 060 Postgraduate Course. May 8-9, 2008. San Diego, DC.

T.F. Bunkley Lectureship and 21st Annual Resident Research Day. Operative Vaginal Delivery: An Update; Doppler Management of IUGR; Judge of resident papers and presentations. Scott & White Hospital, April 19 and 20, 2008, Temple, TX

2008 AIUM Annual Convention. Course: Doppler Applications in OB/GYN. Course Director-Ahmet Baschat. Lecture: *Doppler view from both sides of the placenta*. March 13, 2008, San Diego, CA

Maternal Mortality Mini-Symposium – Panel Member with Drs. Heyborne, Zarlengo, D'Dalton. Colorado Ob/GYN Society. March 3, 2008. Denver, CO

34th Annual Vail Obstetrics & Gynecology Conference. *Use of Doppler Ultrasound in Obstetrics*. Course Director-Ron Gibbs, MD. Vail, CO February 17-22, 2008

Fetal Growth Restriction: Evaluation and Treatment. Master's Series Roundtable Luncheon. Society for Maternal-Fetal Medicine 28th Annual Meeting, Dallas, TX, January, 2008

Nuchal Translucency Education and Quality Monitoring Program. Faculty. 1) Combining first and second trimester screening, 2) Additional benefits of first trimester screening, first trimester risk assessment in multiple gestations, the genetic sonogram – summary. Supported by SMFM through the IAME - 8thth Annual: Obstetric Ultrasound in the High Risk Patient. Venetian Hotel - Las Vegas, NV, October 26-28, 2007

8th_{th} Annual: Obstetric Ultrasound in the High Risk Patient. Institute for Advanced Medical Education course faculty. 1) Doppler and IUGR: Its ability to monitor the fetal condition, 2) Biometry, 3) Preterm Labor, 4) Coding: It seems to change every month, 5) Coding in Obstetrics: How to do it appropriately. Venetian Hotel - Las Vegas, NV, October 26-28, 2007

What's New, What's Next in OB High Risk Care? *Trauma in Pregnancy.* University of Colorado Hospital. Aurora, CO May 19, 2007

Advanced Obstetrical Ultrasound – A Practical Approach to OB/GYN Ultrasound for the Clinician. 1) Doppler Applications in Pregnancy, 2) Coding the Obstetrical examination. Denver, CO May 17-18, 2007.

55th Annual Clinical Meeting of the American College of Obstetricians and Gynecologists. – Saturday Post-Graduate Course: Obstetrical Emergencies: i) Postpartum Hemorrhage, ii) Shoulder Dystocia, iii) Trauma in Pregnancy. San Diego, CA, May 5, 2007.

33_{nd} Annual Vail Obstetrics & Gynecology Conference. *Postpartum Hemorrhage*. Course Director-Ron Gibbs, MD. Vail, CO February 18-23, 2007

7th Annual: Obstetric Ultrasound in the High Risk Patient. Institute for Advanced Medical Education course faculty. 1) Uterine artery Doppler and adverse pregnancy outcome, 2) The Placenta and Cord – What do they tell us?, 3) Amniotic Fluid: Re-Appraisal of Methods: What oes polyhydramnios and oligohydramnios really mean, 4) Managing the undergrown fetus, 5) Coding in Obstetrics: How to do it appropriately. Venetian Hotel - Las Vegas, NV, October 26-28, 2006

Universidad Complutense. Cursos de Verano 2006; Invited Speaker. *Management of IUGR (in Spanish)*. El Escorial. Spain. July 10-14, 2006.

Advanced Obstetrical Ultrasound – An Obstetrical and Gynecologic View by Ultrasound. 1) Obstetrical Coding – How to do it right?, 2) Doppler in the Management of IUGR. Denver, CO May 18-19, 2006.

54th Annual Clinical Meeting of the American College of Obstetricians and Gynecologists. Tuesday/Wednesday 060 Course: Obstetrical Emergencies: i) Postpartum Hemorrhage, ii) Shoulder Dystocia, iii) Trauma in Pregnancy. Washington, DC, May 9-10, 2006.

32_{nd} Annual Vail Obstetrics & Gynecology Conference. 1) Operative Vaginal Delivery – An Update, 2) Modern Management of Rh Disease. Course Director-Ron Gibbs, MD. Vail, CO February 19-24, 2006.

ACOG District VII and District VIII Annual District Meeting. Ultrasound Course Faculty: 1) Use of Doppler in Pregnancy, 2) Optimizing Ultrasound Coding, 3) Live Demonstration of Doppler Ultrasound. Hyatt Regency Hill Country Resort and Spa, San Antonio, TX September 23-25, 2005.

6th Annual: Obstetric Ultrasound in the High Risk Patient. Institute for Advanced Medical Education course faculty. 1) Use of uterine artery Doppler in predicting adverse pregnancy outcome, 2) Use of Doppler assessment of the fetal circulation in the management of IUGR, 3) The fetal urinary tract, 4) The Practical: Coding – how to understand the rules. Venetian Hotel - Las Vegas, NV, September 9-11, 2005.

2005 AIUM Annual Convention and 50th Anniversary Celebration. New Developments in Fetal Doppler Sonography – Categorical Course (Director: Giancarlo Mari, MD). *The Venous System in Normal and Intrauterine Growth-Restricted Fetuses*. Orlando, FL June 19-22, 2005.

Advanced Obstetrical Ultrasound – An Obstetrical and Gynecologic View by Ultrasound. Lecture: *IUGR Management*. Denver, CO May 12-13, 2005.

2005Annual meeting of the American College of Obstetricians and Gynecologists – Tuesday/Wednesday 060 Course: Obstetrical Emergencies: i) Postpartum Hemorrhage, ii) Shoulder Dystocia, iii) Trauma in Pregnancy. San Francisco, CA 10-11, 2006.

9th Annual Fetal & Women's Ultrasound 2005 Institute for Advanced Medical Education. 1) IUGR Breakout Session: Biometric Pearls, 2) IUGR Breakout Session: Doppler in IUGR Management, 3) RH Disease: Role of Ultrasound and Doppler, 4) The Fetal Genitourinary System: Role of Ultrasound. The Westin Buckhead, Atlanta, GA. April 1-3, 2005.

2005 Annual meeting of the Society for Maternal-Fetal Medicine - Postgraduate Course: Ultrasound and Prenatal Diagnosis: An Update. Lecture Titles: 1) Management of Rh Disease, 2) Doppler in the Management of IUGR. Reno, NV, February 9, 2005.

Grand Rounds – Department of OB/GYN, University of Colorado Health Sciences Center. $\it Management of Rh Disease. February 24th, 2005.$

Autumn In New York Conference – "An Ultrasound and Perinatal Medicine Tribute to John C. Hobbins, MD". *Diagnosis and Management of IUGR*. NY Helmsley Hotel. NY, NY. November 12-14, 2004.

5th Annual: Obstetric Ultrasound in the High Risk Patient. Institute for Advanced Medical Education course faculty. 1) Consequences of abnormal fetal growth, 2) Doppler of the fetal arteries, 3) The fetal veins – how investigation aids in clinical managment, 4) Evaluation of the cervix in preterm labor and PROM. Venetian Hotel - Las Vegas, NV, October, 2004

The American Gynecological Club/Gynaecological Visiting Society. *Application of Doppler Velocimetry in the management of IUGR*. Aspen Meadows Resort, Aspen, CO, Sept. 30 – Oct. 2, 2004.

Colorado High Risk Maternity and Newborn Program. *Emergency Medicaid in CO and Panelist with Robert Resnik, MD and Lynn Barbour, MD.* Denver, CO August 20th, 2004.

North American Society for the Study of Hypertension in Pregnancy in conjunction with ERIPED and NASOM Societies. Co-leader (with Francine Tessier, MD) of the break-out session on *Ultrasound Evaluation in Pre-Eclampsia Pregnancies*. July 23-26th, 2004. The Gage Towers, University of British Columbia, Vancouver, BC, Canada.

Fetal Assessment: Ultrasound, Doppler and Heart Rate Monitoring. ACOG Postgraduate Course. 1) Rh Isoimmunization: New Modalities for an Old Disease, 2) Fetal Heart Rate Monitoring: Lessons Learned, 3) Intrauterine Growth Restriction: Biometric Pearls, 4) Venous/Arterial Doppler in IUGR Management. July 8-10, 2004 Fairmont Waterfront Hotel. Vancouver, BC, Canada.

Advanced Obstetrical Ultrasound – Ultrasound for the Enlightened Practitioner-Revisited. John Hobbins, MD – Director. 1) Use of Venous Doppler in IUGR, 2) Algorithm for the management of IUGR, and 3) Management of Rh Disease. May 13-14, 2004. Denver, CO.

Perinatal Care – Update conference at The Children's Hospital. *Operative Vaginal Delivery: An Update*. May 6th, 2004

2004 Annual meeting of the American College of Obstetricians and Gynecologists – Two 060 Postgraduate courses: 1) Saturday 060 Course: Ultrasound in Obstetrics: i) Role of Ultrasound in Multiple Gestation, ii) Doppler in Obstetrics, iii) 3D Ultrasound. 2) Wednesday 060 Course: Obstetrical Emergencies: i) Postpartum Hemorrhage, ii) Shoulder Dystocia, iii) Trauma in Pregnancy. Philadelphia, PA. May 1-5, 2004.

2004 Annual meeting of the Society for Maternal-Fetal Medicine - Postgraduate Course (Director: Alfred Abuhamad, MD). *Doppler vlocimetry in the management of IUGR.* New Orleans, LA 2004.

Obstetric Ultrasound in the High Risk Patient. Institute for Advanced Medical Education. 1) Doppler Velocimetry: The best way to evaluate the IUGR fetus. 2) Algorithm for IUGR, 3) Ultrasound and the Twin Pregnancy, 4) Noninvasive monitoring of the anemic fetus. Las Vegas, NV, October, 2003

Colorado High Risk Maternity and Newborn Program. March of Dimes and 3rd Annual Joseph Butterfield Lecture. *Trauma in Pregnancy*. Laramie, WY. October, 2003.

Advanced Obstetrical Ultrasound. Director-John Hobbins, MD. 1) How Doppler Helps Manage the IUGR Fetus, 2) Maternal Uterine Arteries – View by Doppler, 3) Diagnosis and Management of Fetal Anemia by Ultrasound. Westin Tabor Center Hotel. Denver, CO May 14-16, 2003.

2003 Annual meeting of the American College of Obstetricians and Gynecologists – 060 Postgraduate Course. Obstetrical Emergencies Course: 1) Postpartum Hemorrhage, 2) Shoulder Dystocia, 3) Trauma in Pregnancy. New Orleans, LA. April 29-30, 2003.

Studies in Maternal and Perinatal Mortality (Director: Harvey Cohen, MD). *Panelist with Watson Bowes, MD. on Instrumental Delivery.* Denver, CO March, 2002.

Vail Obstetrics & Gynecology Conference. 1) Management of Twin Pregnancy – An Update, 2) Postpartum Hemorrhage – panel discussion. Course Director-Ron Gibbs, MD. Vail, CO February, 2002.

Colorado Gynecologic and Obstetrical Society Meeting. *Management of the IUGR Fetus: An Update*. February 10, 2003.

2003 Annual meeting of the Society for Maternal-Fetal Medicine - Postgraduate Course Lecture. *Venous Doppler velocimetry in the management of IUGR*. San Francisco, CA.

Advanced Obstetrical Ultrasound. 1) The Dating Game: How to Use it Wisely, 2) Amniotic Fluid Regulation-Too Much? Too Little? 3) The Fetal Circulation System, 4) Management of Rh Disease – The ABO's- Negative and Positive. Holiday Inn-Denver Downtown. Denver, CO May 8-10, 2002.

Vail Obstetrics & Gynecology Conference (Course Director-Ron Gibbs, MD). 1) Operative Vaginal Delivery: An Update; 2) IUGR: Diagnostic and Management Pearls. Vail, CO February, 2002.

Obstetric Ultrasound in the High Risk Patient. Institute for Advanced Medical Education course faculty. 1) Nuchal translucency and other first trimester ultrasound features. 2) Doppler in the management of IUGR. Las Vegas, NV, November, 2001.

Advanced Obstetrical Ultrasound. John Hobbins, MD - Director. 1) Umbilical and Middle Cerebral Artery Doppler 2) IUGR Management-An Algorithm, 3); Doppler Live Demonstration. Denver, CO July, 2001

Bunkley Day Proceedings (Resident Research Day) and Baker Society – Guest Faculty. 1) Nitric Oxide and the Uteroplacental-Fetal Unit, 2) Doppler and the IUGR Fetus, 3) Judging of resident research projects and presentations. Texas A&M University System Health Sciences Center/Scott & White Hospital.March, 2001.Temple, Texas.

Ultrasound Diagnosis and Management of Fetal Growth Abnormalities. American Institute of Ultrasound and Medicine course faculty. Lectures: 1) Current Research in IUGR, 2) The

Umbilical Artery Story, 3) The Venous Side of the Fetal Circulation. 4) Live Demonstration/Cases. LV, Nevada. November, 2001.

Obstetric Ultrasound in the High Risk Patient. Institute for Advanced Medical Education course faculty.: 1) "Other Features of the First Trimester Pregnancy"; 2) "The Diagnosis of IUGR: Biometric Pearls"; 3) "Doppler in the Management of IUGR." Las Vegas, Nevada. September, 2000.

Advanced Obstetrical Ultrasound. John Hobbins, MD - Director. Adam's Mark Hotel. *Doppler in Obstetrics: Who? What? When? Where? and Why?*. Denver, Colorado. May, 2000

The 2000 New Mexico Women's Health Care Seminar. New Mexico Section of ACOG District VIII. 1) Operative Vaginal Delivery: An Update, 2) Level II Ultrasound - Workshop. Hilton Hotel. Albuquerque, New Mexico. February, 2000.

NICHD Conference-Amniotic Fluid Biology: Basic and Clinical Aspects. Co-Chairs: Michael Ross, MD, and Robert Brace, Ph.D. *Clinical correlate: Use of amniotic fluid cavity to deliver therapeutic agents: antibiotics, hormones, nutrients, digoxin.* Hutzel Hospital. Detroit, Michigan. September, 1999

American Gynecological and Obstetrical Society Annual Meeting. AAOGF Scholar Presentation. Role of nitric oxide in the heat-stressed ovine model of intrauterine growth restriction. La Costa Resort, CA. September, 1999

Burroughs Wellcome Fund – Career Awards Meeting. Early gestation eNOS protein content in the placenta, uterine and umbilical vessels in the heat-stress ovine model of intrauterine growth restriction. Coronado, CA. July, 1999

20th Annual Perinatal Clinical Update. 1) Management of Meconium. 2) Forceps Use in Delivery. The Children's Hospital, Denver, CO. May, 1999

40th Annual T.F. Bunkley Lectureship, 12th Annual Resident Research Day, and 9th Annual Meeting of the Baker Society. Guest Alumni Faculty. Resident Paper and Presentation judge. *Ethics in Obstetrics*. Scott & White Hospital, Temple, TX. March, 1999.

7th Annual OB/GYN Ultrasound Update for Clinical Practice. *Intrauterine Growth Restriction*. Fort Lauderdale, FL. December, 1998.

44th Family Practice Review, *Basic Obstetrical Ultrasound*. UCHSC, Estes Park, CO - June, 1998.

Ultrasound: A Practical Approach (Director: John C. Hobbins, M.D.). 1) Amniotic Fluid. 2) Intrauterine Growth Restriction. Denver, CO. May, 1998

43rd Family Practice Review, *Basic Obstetrical Ultrasound*. UCHSC, Estes Park, CO - June, 1997.

43rd Family Practice Review, Basic Obstetrical Ultrasound. UCHSC, Denver, CO - October, 1997.

10th Annual Scott and White Resident Research Day and 3rd Annual Baker Society Meeting. Operative Vaginal Delivery: An Update. Temple, Texas, April, 1996.

9th Annual Scott and White Resident Research Day and 2nd Annual Baker Society Meeting. Research at the University of Colorado - "Ewe won't believe it." Temple, Texas, March, 1996

21st Annual Perinatal Seminar. Common Viral infections in Pregnancy, Scott & White Hospital, Temple, Texas, November 10,1994

7th Annual Scott & White Resident Research Day. Life After Residency as a Fellow. Temple, Texas, April, 1994.

Grand Rounds / Invited presentations

University of Missouri, Dept of OB/GYN, Grand Rounds. Controversies in the Management of IUGR. October 15, 2017.

Cheyenne Regional Medical Center. Grand Rounds. Management of Twins: An Update. August 13, 2015. Cheyenne, WY

The University of Colorado School of Medicine; Dept of Pediatrics. Neonatal Noon Conference. Management of IUGR - An Update. March 19, 2014.

Colorado Institute for Maternal & Fetal Heath Grand Rounds. IUGR Management. Children's Hospital of Colorado. March 19, 2013.

The University of Colorado School of Medicine; Dept of OB/GYN Grand Rounds. Management of IUGR – an update. September 19, 2012.

Texas A&M Health Sciences Center College of Medicine, Department of OB/GYN 53rd Annual T.F. Bunkley Lectureship & 25th Annual Resident Research Day: 1) Guest Faculty for Resident Research Day Judging, and 2) Guest Lecturer for the 4th Annual F. Lurry Leavelle Lecturehip. Temple, TX, April 27, 2012.

University of Massachusetts, Department of OB/GYN, Grand Rounds. IUGR: Update on Management. May 18, 2011

St. Joseph's Hospital. Department of OB/GYN. Resident Lecture. *IUGR Lecture* Denver, CO May, 2011.

St. Joseph's Hospital. Department of OB/GYN. Resident Lecture. Cervical Length and PTB Denver, CO March 14, 2010.

Valley View Hospital. Department of OB/GYN Grand Rounds. *Ultrasound and Cervical Length*. Glenwood Springs, CO. March 18, 2010

49th Annual T.F. Bunkley Lectureship, 21st Annual Resident Research Day and 17th Annual Baker Alumni Society Meeting. Visiting professor invitation and resident research judge.

1) Operative Vaginal Delivery-An Update, 2) management of Intrauterine growth restriction.

31_{st} Annual Graffino-Collins Memorial Lecturship. Visiting professor invitation. *Obstetrical Emergencies: 1)Operative Vaginal Delivery , 2) Trauma In Pregnancy.* Women's Hospital. Baton Rouge, LA. January 11_{th}, 2008.

UCDHSC; Neonatology Noon Conference. Trauma in Pregnancy. AMC. December 6, 2007

UCDHSC; CNM Journal Club. FHR Monitoring; Denver, CO December 4, 2007

Rose Medical Center, Department of OB/GYN; Grand Rounds. *Shoulder Dystocia*, Denver, CO September 18, 2007

Wayne State University/Detroit Medical Center. Department of OB/GYN. Grand Rounds. 1) Management of Rh Disease, and 2) Doppler in the Management of IUGR. Detroit, MI September 13th, 2005

University of Colorado Health Sciences Center. Department of OB/GYN. Grand Rounds. *Management of Rh Disease*. Denver, CO February 24th, 2005.

University of Colorado Health Sciences Center. Department of OB/GYN. Grand Rounds. *Operative Vaginal Delivery: An Update*. Denver, CO October, 2004.

University of Colorado Health Sciences Center. Department of OB/GYN. Grand Rounds. *Operative Vaginal Delivery: An Update*. Denver, CO April 21, 2003.

University of Colorado Health Sciences Center. Department of OB/GYN. *Venous Doppler Velocimetry in the IUGR Fetus*. Grand Rounds. Denver, CO February 10, 2003.

University of Colorado Health Sciences Center. Department of Anesthesia. Grand Rounds. *Intrapartum Fetal Assessment.* Denver, CO May, 2001.

St. Joseph's Hospital, Department of OB/GYN. Grand Rounds. *Doppler and the IUGR Fetus*. Denver, CO, 2/23/01.

University of Colorado Health Sciences Center. Department of OB/GYN. *Doppler and the IUGR Fetus*. Denver, CO December 5, 2000.

University of Colorado Health Sciences Center. Department of OB/GYN. *Operative Vaginal Delivery: An Update*. Grand Rounds. Denver, CO January 13th, 1998

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> Denver Health Medical Center. Department of OB/GYN. Operative Vaginal Delivery: An Update. Denver, CO October 12, 1998

> University of Texas Health Sciences Center. Department of OB/GYN. Grand Rounds. The Ins and Outs of Fetal Breathing. Houston, TX May 2nd, 1995.

Resident Research

6th Annual Scott & White Resident Research Day, Temple, TX, March 1993

1) Hyaline Membrane Disease Surfactant Prophylaxis in the Preterm Baboon: A Comparison of Postpartum and In Utero Therapy, and 2) Laparoscopic Insufflation in the Pregnant Baboon: Maternal & Fetal Effects.

5th Annual Scott & White Resident Research Day, Temple, TX, March 1992 Surfactant Replacement Therapy In Utero for Prevention of Hyaline Membrane Disease in the Preterm Baboon.

4th Annual Scott & White Resident Research Day, Temple, TX, April 1991 Effects of Intra-amniotic Administration of Exosurf in Preterm Rabbit Fetuses.

18th Annual Perinatal Seminar. Effects of Intra-amniotic Administration of Exosurf in Preterm Rabbit Fetuses. Scott & White Hospital. September 1992

Texas Branch American Medical Association for Laboratory Animal Science. Annual Meeting. Effects of Intra-amniotic Administration of Exosurf in Preterm Rabbit Fetuses. San Antonio. Texas, May 1991

Perinatal Outreach Lectures

Northwest Perinatal / Legacy MFM. CME lecture. Prenatal diagnosis and Management of Myelomeningocele. Portland Oregon. July 8th, 2017.

Cheyenne Regional, Late Preterm Steroid Administration, August 9th, 2016

Parker Adventist Hospital, CME Lecture, Late Preterm Steroid Administration.

Parker Adventist Hospital: CME Lecture. Cervical Length and Management of Twins. August 13, 2015.

Platte Valley Medical Center. CME Lecture. Management of Twins: An Update. July 8th, 2015. Brighton, CO.

CIMFH Aspen Outreach Lecture: Joint lecture with Jeanne Zenge via Telemedicine conference at CHC Teleconference Center; Obstetrical and Neonatal Congenital Heart Disease and Management Around Birth. May 13, 2015.

CIMFH Outreach Lecture: Fetal Medicine: Innovations, Diagnosis & Treatment Strategies. (Dr. Crombleholme, Dr. Howley and Dr. Galan). Grand Junction, CO. March 16, 2015.

North Colorado Medical Center. Management of IUGR: An Update, Greely CO, April 22, 2014 Longmont United Hospital Grand Rounds, Management of Rh Disease, October, 2013.

Lutheran Hospital Grand Rounds. Management of IUGR. Denver, CO. April, 2013.

Cheyenne Regional Medical Center. *IUGR Lecture*. Cheyenne WY, February, 2012.

Management of Hypertension in Pregnancy. Yampa Valley Med Ctr, Steamboat Springs, CO December, 2011.

Management of Hypertension in Pregnancy. Platte Valley Medical Center, Brighton, CO November, 2011

Ultrasound, PTB and Short Cervix. Cheyenne Regional Med Ctr, Cheyenne, WY, July 28, 2011

Hypertension In Pregnancy: An Update. Platte Valley Medical Center, Brighton, CO June 17, 2011

To Mag or Not to Mag? Cheyenne Regional Med Ctr, Cheyenne, WY, January 13, 2011 Operative Vaginal Delivery: An Update. Northern Colorado Medical Center, Greeley, CO September 10, 2010

Trauma in Pregnancy. McKee Medical Ctr. Loveland, CO March 7, 2010.

Postpartum Hemorrhage. St. Anthony's Summit Hospital, Frisco, CO March 18, 2010.

Ultrasound of the Cervix and Preterm Labor. Valley View Hospital CME Lecture. Glenwood Springs, CO. March 18, 2009

Trauma In Pregnancy. Delta County Memorial Hospital CME lecture. June 5, 2009, Delta, CO Ultrasound of the Cervix and Preterm Labor. Valley View Hospital CME Lecture. Glenwood Springs, CO. June 4, 2009

FHR Monitoring/Acid-Base Balance. Montrose Memorial Hospital CME lecture, June 5, 2009. Montrose, CO.

FHR Monitoring/Acid-Base Balance. Boulder Community Hospital, April 24, 2009

Shoulder Dystocia, Estes Park Hospital, Estes Park, CO, February 19, 2009

Trauma in Pregnancy. Swedish Hospital, Denver, CO, December, 21 2008

Trauma in Pregnancy. Estes Park Hospital, Estes Park, CO, August 8, 2008

Trauma in Pregnancy. Littleton Adventist Hospital, Littleton, CO, July 25, 2008

Trauma in Pregnancy. Northern Colorado Medical Center, Greeley, CO, July 8, 2008

Trauma in Pregnancy. Aurora Regional Hospital, North Campus, Aurora, CO, April 25, 2008

Shoulder Dystocia. An Update. Boulder Community Hospital, CO April 23rd, 2007

Preterm Labor. Mag vs. No Mag. Parker Adventist Hospital, Parker, CO March 14th, 2007

Shoulder Dystocia. Parker Adventist Hospital, Parker, CO November 8th, 2006

Doppler velocimetry in pregnancy. Glenwood Springs, CO June 16th, 2005

Trauma in Pregnancy. NCMC, Greeley Colorado, March 11th, 2005

Neonatal Encephalopathy. St. Anthony's Central, February 16th, 2005

Encephalopathy. Aurora South Campus. October 25, 2004

Operative Vaginal Delivery-An Update. Valley View Hospital, Glenwood Springs, CO October 20, 2004.

Neonatal Encephalopathy, Longmont United Hospital, November 19, 2004

Operative Vaginal Delivery. McKee Women's Center. April 21, 2004

Operative Vaginal Delivery, Longmont United Hospital, September, 2002

Operative Vaginal Delivery. Platte Valley Hospital, Greeley Colorado; November, 1999

Neonatal/Perinatal Conferences

Neonatal Noon Conference; Management of IUGR: An Update. Children's Hospital of Colorado, Aurora, CO, 2014

Role of Placenta in IUGR: A Clinical Perspective. Reproductive Development Lecture

Series, Basic Reproductive Sciences Division, UCHSC, April 27th, 2006

Prenatal Diagnosis Conference. The Fetal Urinary Tract. UCHSC. Denver, CO September, 2005

Neonatology Conference; Intrapartum Fetal Assessment. UCHSC. Denver, Colorado. September, 2001.

Neonatology Conference; Doppler and the IUGR fetus. UCHSC. Denver, Colorado. December, 2000.

Neonatology Conference; Management of Meconium -Stained AF, UCHSC, Denver, CO, Nov., 1999

Neonatology Conference; Operative Vaginal Delivery & Fetal Outcome; UCHSC, June, 1998 Neonatology Conference; Amniotic Fluid Balance; UCHSC, April, 1996.

Obstetrical Conference;: Management of Meconium. St. Anthony's Central. Denver, CO, March. 1999

Perinatal Conference; Fetal Lung Maturation; UTHSC at Houston, Houston, TX February, 1995

Perinatal Conference; Hydrocephalus; UTHSC at Houston, Houston, TX September, 1994 L&D Nursing In-Service; Operative Vaginal Delivery & Nursing Role, UCHSC, May, 1998

TEACHING RECORD

Resident/Student Lectures

CUSOM Dept OB/GYN Resident Lecture: Management of IUGR, December 13, 2017. CUSOM Dept OB/GYN Resident Core Lecture; Management of Twins, November, 2013 MS III Lectures. FHR Monitoring. UCHSC. 4/00, 5/00, 6/00. 8/00, 9/00, 11/00, 3/01, 4/02, 8/03, 8/04, 2/05, 5/05

"Great Escape" 2nd year resident lecture: Antepartum testing, FHR monitoring, Acid-Base Balance; UCHSC 10/98, 7/01

Resident Lecture; Basic OB Usg; UCHSC, 6//07, 6/08, 6/09, 6/10, 6/11

Resident Lecture; Fetal Heart Rate Monitoring; UCHSC, 7/96, 7/98, 8/00, 8/04, 8/05, 8/06, 6/07, 6/08, 6/09, 6/10

Resident Lecture; Fetal Acid-Base Balance; UCHSC, 10/96, 9/99, 7/01, 8/04, 8/05, 8/06, 6/07, 6/08, 6/09, 6/10

Resident Lecture; Shoulder Dystocia; UCHSC, 8/96, 6/06, 5/08, 5/28/2010

Resident Lecture; PPH; UCHSC, 8/96, 5/08, 5/28/2010 Resident Lecture; Oligohydramnios; UCHSC, March, 1996

Resident Lecture; Herpes and Pregnancy; UTHSC at Houston, June, 1994 Resident Lecture; Diabetes in Pregnancy; UTHSC at Houston, 6 lectures, 1993-5.

Courses/Syllabi

New intern hands-on ultrasound course (lectures followed by (hands-on Ultrasound experience with patients on the antepartum service)

2000-present

2007-2010

Course Director "Maternal-Fetal Physiology" lecture series. A post-graduate level course created for Maternal-Fetal Medicine (MFM) and Neonatal Medicine fellows conducted in the spring of every three years. This course addresses the basic science, physiology and clinical perspectives of high-risk maternal and obstetrical conditions and the impact these conditions have on the neonate. Lectures are given by faculty from a variety of departments including, but not limited to MFM, neonatology, cardiology, pathology, and immunology divisions/departments. This course is approved by the American College of Obstetricians and Gynecologists (ABOG). The MFM fellows receive credit for one of two postgraduate course that are required by the ABOG.

Page 28 Henry L. Galan, M.D. Curriculum Vitae

Fellowship Director, Maternal-Fetal Medicine Fellowship 2000-present

Department of Obstetrics and Gynecology, UCDSOM

Attending Duties: Obstetrical attending on labor and delivery, antepartum (AP) and postpartum

> (PP) services approximately 10 weeks per year that includes twice daily (0730 and 1700) 30-45 minute Labor and Delivery Board (check-out) rounds (1 MFM fellow, 2 chief residents and 3-4 junior residents, 1-4 medical students), daily AP and PP bedside rounds with the 3rd year resident and the MFM fellow on the antepartum service (plus any 4th year medical student sub-intern). In 2006, our department made a change from didactic resident teaching Monday mornings to "rotation based learning. In this new format, chapters are given as reading assignments. On the OB rotation, this learning/teaching activity occurs every Monday morning from 0830 to 1030 and is run by the OB attending of the week. I am the primary instructor of invasive fetal procedures to the MFM fellows, specifically fetal blood sampling and fetal blood transfusions which may be scheduled for any day of the week while on or off service. Approximately, 4-6 times per year I serve as the attending for the resident's High-Risk or

Diabetes clinic. I spend ½ day per week (Tuesday afternoons) at the AOP Prenatal Diagnosis Unit performing and teaching ultrasounds to fellows and residents as

they rotate through the ultrasound unit.

Teaching Awards Listed above

Trainees and mentees Listed in the teacher's portfolio

GRANT SUPPORT

On-Going Research Support

1UO1HFD087216-01 (PI: Dinesh Shah, MD)

Source: NIH

Title: Advanced MRI for Uteroplacental Flow, Perfusion, Oxygenation & Inflammation

Role: Consultant: My specific role involves the use of triplex mode ultrasound to measure umbilical volume flow in

this study population and for correlation to MRI detected flow.

Completed Research Support

1 R01 DK 076648-01A2 (PI: Dana Dabelea, PhD,

8/1/2009 -7/31/2014

Title: Exploring the Fuel-Mediated Programming of Neonatal Growth

Role: Co-investigator (3% FTE)

Source: NIH

Role: Co-investigator in this project involves the medical oversight of participants, participation in

the interpretation of results, review and editing of reports and publications.

1 R01 DK 078645 (PI: Linda A. Barbour, MD, MSPH)

3/13/10-3/14/2015

Title: Regulation of Maternal Fuel Supply and Neonatal Adiposity Source: NIH Role: Co-investigator (8% FTE). My role in this project involves clinical assessment of fetal subcutaneous (fat) and lean mass accretion with 2D and 3D ultrasound which is to be correlated with

neonatal DEXA scans of fetal fat stores.

1 K99 HD55054-01A2 (PI: Juan Arroyo, PhD)

6/1/2009-5/31/2009

Source NIH Title: Apoptosis in an ovine model of intrauterine growth restriction (IUGR)
Role: Mentor for first two years of the K99 award with Dr. Arroyo assuming independence in years 3-5, and continued participation in the interpretation of results, review and editing of reports and publications.

1 R01 HL71990-01A1 (PI: Henry L. Galan, MD)

Source: NIH:

Source: NIH

9/1/03-8/31/07 (1-year no cost extension)

\$250,000/year

Title: Fetal and Neonatal Hemodynamics in IUGR Pregnancies

Role: PI (40%). This project investigates mechanisms of blood flow control in an ovine model of IUGR

K12HD01271 Women's Reproductive Health Research Scholar Award

7/1/00-8/31/03

Source: NIH;

\$100,000/year

Department of OB/GYN, University of Colorado School of Medicine

Title: Vasoregulation in the IUGR fetus.

The purpose of this grant is to investigate nitric oxide synthase mRNA expression in the ovine placenta involving the isolation of the eNOS gene isolation in the sheep.

2-RO1HD34837-06. (PI: Frederick C Battaglia, MD;

2/02 - 2/07; (1-year no cost extension)

\$250,000/year

Title: Fetal Velocimetry & Amino Acid Transport in Pregnancy

Role: Co-investigator (yrs 1-3 @ 10%); PI (yrs 4&5 @ 30%) This project involves clinical studies of amino acid and carbohydrate transport in pregnant women. Galan's efforts are geared at the management of the obstetrical components of the protocols. He will become PI for this project at 30% effort in year 3 of the grant.

RO1 HD41505 (PI: Randall B. Wilkening, MD)

07/02 - 06/07; (1-yr no cost extension)

Source: NIH \$250,000/year

Title: Fetoplacental amino acid metabolism in IUGR pregnancies

Role: Co-Investigator (10%). Dr. Galan's research efforts in this grant are to assess fetal growth in these projects using an ovine model of IUGR.

Bridge Funding Grant. Dean's Office. UCDHSC.

2009-2010

\$50,000

SIRC Funding. Clinical Translational Research Core. UCHSC.

2006-2008

Co-PI with Ches Thompson, MD

\$300,000

Academic Enrichment Fund. Department of Ob/Gyn, UCHSC

1996

Distribution of Intra-amniotic Iron Dextran in the Preterm Rabbit Fetus.

\$9,000

American Association of Obstetricians and Gynecologist Foundation Fellow and Burroughs-Wellcome Award. Dept of Obstetrics and Gynecology,

1997-2000 \$50,000/year

University of Colorado Health Sciences Center. "Role of endothelial Nitric Oxide in the Uteroplacental Circulation in an Ovine Experimental Model of Severe Intrauterine Growth Restriction".

Berlex Scholar Award. Award declined for acceptance of AAOGF award.	1997-98 \$60,000
Underrepresented Minority Investigator Supplement-Long Term PI: Dr. F.C. Battaglia. NIH Program Project grant (Project II and III) PO 1 HD20761Metabolic Regulation of Fetal Growth \$419,714.00.	1997-2000 \$50,000/year.
ACOG/Healthdyne Perinatal Fellowship Award. "Combination In Utero and Postnatal Surfactant Therapy for the Prevention of RDS in the Preterm Lamb.	1996-97 \$25,000
Ross Laboratories. Survanta Supply - 600cc. (\$2,500)	1996
Academic Enrichment Fund. University of Colorado Health Sciences Center, Dept. of OB/GYN. Distribution of Intra-amniotic Iron Dextran in the Preterm Sheep Fetus.	1996 \$7,000
NIH Perinatal Research Grant (T32) Department of Pediatrics, Division of Neonatology University of Colorado Health Sciences Center	1995-1997 \$35,000/yr
Southern Medical Association-Research Award. Surfactant Replacement Therapy In Utero for Prevention of Hyaline Membrane Disease in the Preterm Baboon.	1992 \$2,500
ADR Ultrasound Educational Grant, Bothell, Washington. Effects of Intra-amniotic Administration of Exosurf in Preterm Rabbit Fetuses.	1990 \$1500

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Peer Reviewed Publications:

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- 4. **Galan HL**, Cipriani C, Coalson JJ, Bean JD, Collier G., and Kuehl TK. Surfactant Replacement Therapy *In Utero* for Prevention of Hyaline Membrane Disease in the Preterm Baboon. Am J Obstet Gynecol 169(4):817-824, 1993.
- 5. **Galan HL**, McDowell AB, Johnson PR, and Knight AB. A Case Study of Cerebral Vein Thrombosis Associated with Decreased Free Protein S. J Reprod Med 40:859-862, 1995..
- Reedy MB, Galan HL, and Patterson K. Acute Pelvic Inflammatory Disease Following Tubal Sterilization. J Reprod Med 39:752-754, 1994

- Galan HL, Reedy MB, Bean JD et al. Maternal and fetal effects of laparoscopic insufflation. Anesthesiology 81:1159-1163, 1994.
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- Kinsella JP, Parker TA, Galan HL, Sheridan BC, Halbower AC, Abman SH. Effects of Inhaled Nitric Oxide on Pulmonary Edema and Lung Neutrophil Accumulation in Severe Experimental Hyaline Membrane Disease. Ped Res 41(4):457-463, 1997.
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- Ivy DD, Parker TA, Ziegler JW, Galan HL, Kinsella JP, Tuder RM, Abman SH. Prolonged Endothelin: A Receptor Blockade Attenuates Chronic Pulmonary Hypertension in the Ovine Fetus. J Clin Invest 99(6):1179-1186, 1997.
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- 17. **Galan HL**, Baiza R, and Knight AB. Chiari Malformation and Eclampsia: Case Report and Review of the Literature. Prenat Neonat Med 2:376-8, 1998.
- 18. **Galan HL**, Hussey M, Chung M, Hobbins JC, Battaglia FC, Meschia G. Doppler velocimetry of growth retarded fetuses in an ovine model of placental insufficiency. Am J Obstet Gynecol 178:451-6, 1998.
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- 81. Arroyo J, Anthony R, Parker T, Roe G, Pandipati S, **Galan HL**. Increase in Placental eNOS Expression in an Ovine Model of Fetal Growth Restriction. Oral Presentation. Society for Maternal-Fetal Medicine 26th Annual Meeting, Miami, FL. February, 2006.
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- 83. **Galan HL**, Marconi AM, Paolini CL, Cheung A, Battaglia FC. Placental transport of essential amino acids in human pregnancy: An *in vivo* study. <u>Oral Presentation</u>. Society for Gynecologic Investigation 53rd Annual Scientific Meeting. Toronto, Canada. March 22-25, 2006. J Soc Gynecol Investig 13(2):77A, 2006.
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- 94. Park M, Arroyo JA, and **Galan HL**. Effect of hypoxia on proliferative activity and apoptosis in human term trophoblast. <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 28th Annual Meeting, Dallas, TX, January, 2008.
- 95. Arroyo JA, Anthony RV, and Galan HL. Hypoxia and hyperthermic effects on signal transduction and

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- 102. Arroyo JA, Ziebell BT, Park M, and **Galan HL.** Hypoxia does not affect mTOR pathway in cultured. human trophoblast cells. Accepted for <u>Poster Presentation</u>. Society for Gynecologic Investigation 55th Annual Scientific Meeting. San Diego, CA, March, 2008.
- 103.Arroyo JA, Ziebell BT, Park M, and **Galan HL.** Increased expression of phospho-mTOR, poshpho-p70, phosphor-AKT and phosphor-ERK in an ovine model of fetal growth restriction. Accepted for <u>Poster Presentation</u>. Society for Gynecologic Investigation 55th Annual Scientific Meeting. San Diego, CA, March, 2008.
- 104.Dohnal L, Barry JS, **Galan HL**, Wilkening RB and Anthony RV. Early gestation utero-placental hemodynamics in an ovine model of fetal growth restriction. Accepted for <u>Poster Presentation</u>. Society for Gynecologic Investigation 55th Annual Scientific Meeting. San Diego, CA, March, 2008.
- 105. Garcia-Jones P, **Galan HL**, Ziebell B, Battaglia B, Arroyo JA. Does Placental Insufficiency Trigger the Adaptive Response to Osmotic Stress? Enhanced NFAT5 mRNA abundance during early gestation in an ovine model of fetal growth restriction. Accepted for <u>Poster Presentation</u>. Pediatric Academic Society (PAS) and Society for Pediatric Research (SPR) National Conference. May 2-6 2008. Honoluly, Hawaii, and for an Oral Presentation for the Mead Johnson Nutritionals 72nd Perinatal & Developmental Medicine Symposium The Neonatal Lung: Waiting to Inhale. May 29-June 2, 2008. The Sky Hotel, Aspen, Colorado.

- 106.Arroyo JA, Winn V, Ziebell BT, **Galan HL**. XIAP, caspase 3 and adoptosis in the preeclamptic placenta. Accepted for <u>Poster</u> Presentation. Society for Maternal-Fetal Medicine 29th Annual Meeting, San Diego, CA, January, 2009.
- 107.Arroyo JA, Ziebell BT, **Galan HL**. Increased placental apoptosis is an early event in an ovine model of intrauterine growth restriction. Accepted for <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 29th Annual Meeting, San Diego, CA, January, 2009.
- 108.Arroyo JA, Ziebell BT, Garcia-Jones P, **Galan HL**. Increase in placental aldose reductase but not NFAT5/TONEBP transcription factor in an ovine model of IUGR. Accepted for <u>Poster</u> Presentation. Society for Maternal-Fetal Medicine 29th Annual Meeting, San Diego, CA, January, 2009.
- 109.Arroyo JA, Li C, Schlabritz-Loutsevitch N, McDonald T, Ziebell BT, Nathanielsz P, **Galan HL**. Increased placental apoptosis protein in a baboon model of maternal nutrient restriction. Accepted for <u>Poster</u> Presentation. Society for Maternal-Fetal Medicine 29th Annual Meeting, San Diego, CA, January, 2009.
- 110.Baschat A, Berg C, Turan O, Turan S, **Galan HL**, Thilaganathan B, Nicolaides K, Genbruch U, Harman C. Natural history of stillbirth in plaenta based fetal growt5h restriction implications for surveillance. Accepted for Poster Presentation. Society for Maternal-Fetal Medicine 29th Annual Meeting, San Diego, CA, January, 2009.
- 111.Hoffman MC, Mahony R, Foley M, O'Herlihy C, Gibbs, R, **Galan HL**, Lynch A. A comparison of the incidence of preterm birth <34 weeks gestation among women in Dublin, Ireland and Denver, Colorado. Accepted for <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 29th Annual Meeting, San Diego, CA, January, 2009.
- 112.Schlabritz-Loutsevitch N, Barley D, Arroyo J, Jenkins S, Nijland M, Nathanielsz P, **Galan HL**. Umbilical vein volume blood flow A unique evolutionary adaptation. Accepted for Poster Presentation. Society for Gynecologic Investigation 56th Annual Scientific Meeting, Glasgow, Scotland, March, 2009.
- 113.Kahn BF, Hernandez TL, Reece MS, **Galan HL**, Barbour L. Sonographic predictors of fetal fat accretion. Accepted for <u>Poster</u> Presentation. Society for Maternal-Fetal Medicine 30th Annual Meeting, Chicago, II, February, 2010.
- 114.Arroyo JA, Oka Masahiko, **Galan HL**. Vasoreactivity in umbilical and uterine arteries in an ovine model of intrauterine growth restriction. Accepted for <u>Oral Presentation</u>. Society for Maternal-Fetal Medicine 30th Annual Meeting, Chicago, II, February, 2010.
- 115. Dugoff L, Hancock N, Melendez B, Schneider J, **Galan HL**, Wheeler M, Davies J, Lynch A, Hobbins JC. Second trimester uterine artery Doppler in women with abnormal quad screen analytes. Accepted for <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 30th Annual Meeting, Chicago, II, February, 2010
- 116.Metz TD, Lynch AM, Wolfe PJ, Barry JS, **Galan, HL**. The Effect of Small for Gestational Age on Hemodynamic Parameters in the Neonatal Period: A Case-Control Study. Accepted for <u>Poster</u> Presentation. Society for Gynecologic Investigation 58th Annual Scientific Meeting, Orlando, FL, March 2010.
- 117. Gagnon AJ, Arroyo JA, Schaack J, **Galan HL**. Enhanced Retrovirus Transduction with Late Gestation Amniotic Fluid: A Step toward *In Utero* Gene Therapy? Accepted for <u>Poster</u> Presentation. Society for Gynecologic

Investigation 58th Annual Scientific Meeting, Orlando, FL, March 2010.

- 118.Lee GT, **Galan HL**, Teng C, Battaglia F, Arroyo JA. Hyperosmolarity Increases Inositol, Sorbitol and NFAT5/TonEBP Concentrations in Trophoblast Cells. Accepted for <u>Poster Presentation</u>. Society for Gynecologic Investigation 58th Annual Scientific Meeting, Orlando, FL, March 2010.
- 119.Lee GT, Arroyo JA, Dodson RB, Marconi AM, Battaglia F, **Galan HL**. Heterogeneous Distribution of Oxygen Consumption and Amino Acid Transporters in the Human Placental Villous Tree. <u>Poster Presentation</u>. Society for Gynecologic Investigation 58th Annual Scientific Meeting, Orlando, FL, March 2010.
- 120.Parker TA, Grover TR, Arroyo JA, **Galan HL**. Altered Pulmonary Vasoregulation in Fetal and Neonatal Lambs with Intrauterine Growth Restriction (IUGR). Accepted for <u>Oral</u> Presentation. Society for Gynecologic Investigation 58th Annual Scientific Meeting, Orlando, FL, March 2010.
- 121.Lovgren TR, Arroyo JA, Oka M, **Galan HL**. Vasconstriction in Umbilical Arteries in an Ovine Model of Intrauterine Growth Restriction. Accepted for <u>Poster</u> Presentation. Society for Gynecologic Investigation 58th Annual Scientific Meeting, Orlando, FL, March 2010.
- 122.Lee G, Oka M, Statwick J, Arroyo J, Galan, HL. Vasoconstriction in uterine arteries in an ovine model of IUGR. <u>Poster</u> Presentation. Society for Gynecologic Investigation 58th Annual Scientific Meeting, Miami, FL, March 2011.
- 123. Moore G, Barbour L, Fisher B, Kahn B, Hernandez T, Reynolds R, Reece M, Anderson M, Friedman J, Lee W, **Galan, HL**. Neonatal adiposity is predicted by ultrasound estimates of the fetal thigh volume at 28 weeks gestation. Regular Concurrent Oral Presentation. . Society for Gynecologic Investigation 60th Annual Scientific Meeting. Orlando, FL, March 2013.
- 124. Behrendt, N, Meyers M, **Galan HL**, Crombleholme T. Ultrasound versus Fetal MRI: Is there a difference in fetal brain ventricular measurements. <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 34th Annual Meeting, New Orleans, February, 2014.
- 125. Howley L, Behrendt N, Jone P, Beaty B, **Galan HL**, Crombleholme T. Increased atrioventricular valve inflow durations in donor twins: novel evidence of hemodynamic variance from the normal population. <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 34th Annual Meeting, New Orleans, February, 2014.
- 126. Moore GS, Allshouse AA, Post AL, **Galan HL**, Heyborne KD. Early initiation of Iwo-dose aspirin decreases lateonset preeclampsia, especially in women with chronic hyptertension. <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 34th Annual Meeting, New Orleans, February, 2014.
- 127. Moore GS, Allshouse AA, Post AL, Winn V, **Galan HL**, Heyborne KD. Preeclampsia risk with low placental growth factor (PIGF) levels in the first trimester is not modified by early aspirin prophylaxis. <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 34th Annual Meeting, New Orleans, February, 2014.
- 128. Moore G, Allshouse A, Fisher B, Kahn B, Hernandez T, Reynolds R, Reece, M, Barbour L, **Galan HL**. Do 28 week ultrasound measurements of the fetal limb soft tissue predict adiposity at birth? <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 35th Annual Meeting, San Diego, February, 2015.

- 129. Behrendt N, Jessel R, Allshouse A, Zaretsky M, **Galan H** Liechty K, Marwan A, Crombleholme T. The donor twin survival score (dtss): a model to predict donor twin survival following laser photocoagulation for twin-to-twin transfusion syndrome complicated by placental insufficiency. <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 35th Annual Meeting, San Diego, February, 2015.
- 130.Zaretskyy MV, Liechty KW, **Galan HL**, Behrendt NJ, Reeves S, Marwan R, Wilkinson C, Handler M, Crombleholme TM. Modified hysterotomy closure technique for prenatal myelomeiningocele repairs. <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 36th Annual Meeting, Atlanta, February, 2016.
- 131.Ehrig J, Meyers M, Behrendt NJ, Howley L, Cuneo B, Mirsky D, Zaretsky MV, Liechty K, Crombleholme TM, Galan HL. Abnormal fetal vascular studies in Twin-Twin Transfusion Syndrome (TTTS) and their association to abnormalities in fetal brain MRI. <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 36th Annual Meeting, Atlanta, February, 2016.
- 132. Howley L, Patel SS, Zaretsky M, Weisenborn E, Crombleholme TM, Cuneo B, **Galan HL**. Systolic to diastolic time index in assessment of cardiac function in Twin Transfusion Syndrome cardiomyopathy. <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 36th Annual Meeting, Atlanta, February, 2016.
- 133. Tucker BD, Zaretsky MV, **Galan HL**, Reyndolds RM, Marwan AI, Browne LP, Montgomery KR, Schneider MB Manchester DK. Low fetal fraction prevents detection of fetal triploidy by cell-free DNA screening. Abstract accepted as <u>Poster</u> at National Soc of Gen Counselors. 2016.
- 134.Son SL, Gumina D, Pinter M, Gillan A, Behrendt N, Reevees S, Zaretsky MV, Hobbins JC, Galan HL. Correlation of 3D fractional limb volumes of the fetal thigh in fetal growth restriction (FGR) with normal and abnormal Doppler studies. <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 37th Annual Meeting, Las Vegas NV, January, 2017.
- 135. Galan HL, Gumina D, Pinter M, Gillan A, Behrendt N, Reeves S, Zaretsky M, Hobbins JC. Relationship between umbilical vein volume flow, umbilical artery and MCA Doppler in late preterm growth restricted fetuses. <u>Poster Presentation</u>. Society for Maternal-Fetal Medicine 37th Annual Meeting, Las Vegas NV, January, 2017.
- 136. Zaretsky MV, Liechty KW, Galan HL, Behrendt NJ, Reeves S. Marwan AI, Wilkinson C, Handler M, Lagueux, Crombleholme TM. Modified hysterotymy closure technique for open fetal surgery. <u>Poster Presentation</u>. Botswana, Aftrica, August, 2017.
- 137. Hodges MM, Mirsky DM, Handler M, Wilkinson CC, Galan HL, Zaretsky MV, Behrendt N, Marwan AI, Wagner JL, Jacot JG, Crombleholme TM, Liechty KW. In utero primary repair of myelomeningocele is associated with increased improvement of hindbrain herniation compared to patients undergoing in utero patch repair. American Pediatric Surgical Association Annual Meeting, 2017.
- 138. Gumina D, Behrendt N, Pinter M, Gillan A, **Galan H**, Hobbins J. Umbilical vein flow calculation methods: correlation with each other and umbilical artery pulsatility index. <u>Poster Presentation</u>, SRI March 2017.
- 139.Hilton SA, Hodges MM, Dewberry LC, Mirsky DM, Handler M, Wilkinson CC, **Galan HL**, Zaretsky MV, Behrednt N, Marwan AI, Pyle L, Wagner JL, Jacot JG, Zgheib C, Crombleholme TM, Liechty KW. Preoperative use of three dimensional printed templates in the repair of large fetal myelomeningoceles. Accepted to ASC 2018

- 140.Ehrig J, Paulsen K, Tong S, Meier, Laguez, **Galan HL**, Zaretsky MV, Behrendt N. Use of virtual organ computeraided analysis (VOCAL) for volume calculation compared to traditional volume calculations of fetal thoracic tumors. Poster Presentation, SMFM, 2018. Dallas, TX.
- 141. Schuchardt EL, Patel SS, Cuneo BF, **Galan HL**, Zaretsky MV, Park D, Gilbert L, Hauptman R, Paulson K, Howley LW. Assessment of fetal myocardial function: experience matters. Poster Presentation, SMFM, 2018. Dallas. TX.
- 142.Zaretsky MV, Behrendt NJ, Lagueux M, Pan Z, Marwan AI, Liechty KW, **Galan, HL**. Best predictors of duration of pregnancy and gestational age at delivery after fetoscopic laser photocoagulation for TTTS. Poster Presentation, SMFM, 2018. Dallas, TX.
- 143.Son SL, Gumina DL, Driscoll BE, Gillan A, Harper T, Hobbins JC, **Galan HL**. Discrepant Doppler values in paired umbilical arteries in the growth restricted fetus and the relationship to fetal biometry. <u>Poster Presentation</u>. SMFM, Dallas, TX, 2018.
- 144.Ehrig J, Behrendt N, Lagueux M, Liechty KW, Zaretsky MV, Crombleholme TM, **Galan HL**. Immediate perioperative predictors of survival in TTTS. Society of Reproductive Investigation. <u>Oral Presentation</u>. San Diego, CA. March 8, 2018. Pfizer President's Presenter Award.
- 145.Steller JG, Gumina D, Gillan A, Reeves S, Hobbins J, **Galan HL**. Comparison of umbilical vein flow with umbilical artery pulsatility index in fetal growth restriction. Poster Presentation. Las Vegas, NV. January 14-16, 2019.
- 146.Steller JG, Gumina D, Gillan A, Son S, Reeves S, Hobbins J, **Galan HL**. Comparison of 3D fetal thigh fractional limb volume between two fetal growth restriction cohorts. Poster Presentation. Las Vegas, NV. January 14-16, 2019.
- 147. Steller JG, Gumina D, Gillan A, Son S, Reeves S, Hobbins J, **Galan HL**. Comparison of fetal thigh fractional limb volume with neonatal ponderal index in fetal growth restriction. Poster Presentation. Las Vegas, NV. January 14-16, 2019.
- 148. Steller JG, Gumina D, Gillan A, **Galan HL**, Hobbins JC, Reeves S. Patterns of brain sparing in fetal growth restriction. SRI Poster presentation. 2019. Paris, France.
- 149. Steller JG, Gumina D, Gillan A, Baily B, **Galan HL**, Hobbins JC, Reeves S. Correlation of fetal Doppler assessment with neonatal ponderal index in fetal growth restriction. SRI Poster presentation. 2019. Paris, France.
- 150.Leopold DK, Phillips R, Wood C, Behrendt N, Zaretsky MV, **Galan HL**. Moulton SL. Insight into hemodynamic compensation during SFLP using the CRI. Accepted for presentation at International Anesthesia Research Society. Montreal, Canada. May 17-20, 2019.
- 151. Steller JG, Driver C, Gumina D, Harper T, Hobbins J, **Galan HL**. Doppler of one or both umbilical arteries in fetal growth restriction and clinical decision making. Poster presentation at SMFM 2020. Grapevine, TX.
- 152. Steller JG, Gumina D, Driver C, Galan HL, Hobbins J, Reeves S. Patterns of brain sparing in a fetal growth

restriction cohort. Poster presentation at SMFM 2020. Grapevine, TX.

- 153. Willner EC, Driver C, Fought AJ, **Galan HL**, Behrendt NJ, Hobbins J. Fetal outcomes among growth restricted fetuses by Hadlock versus GROW customized growth chart. Poster presentation at SMFM 2020. Grapevine, TX
- 154.Lagueux MM, Silveira LJ, Cuneo BF, Liechty KW, Marwan AI, Behrendt NJ, **Galan HL**, Zaretsky MV. Delivery outcomes of monochorionic twins without standard twin twin transfusion staging criteria undergoing laser photocoagulation. Poster presentation at SMFM 2020. Grapevine, TX
- 155. Steller JG, Driver C, Gumina D, Hobbins J, **Galan HL**. Calculation of cerebroplacental ratio (CPR) using both umbilical arteries versus individual umbilical arteries. Poster presentation at SMFM 2020. Grapevine, TX.
- 156.Hesse H, Levek C, Wilcox A, Steller J, C, **Galan, H**, Hobbins, J, Brown L. Pathological fetal growth restriction results in reduction in lean mass growth that persists into the neonatal period. Submitted to the 2020 PAS Annual Clinical Meeting.
- 157. Hamidi OP, Driver C, Fought AJ, Steller JG, Gumina D, Reeves S, **Galan HL**, Hobbins J. Is corpus callosum size affected in the setting of fetal growth restriction (FGR)?. Poster presentation at SMFM 2020. Grapevine, TX
- 158.Hamidi OP, Driver C, Fought AJ, Steller JG, Gumina D, Reeves S, **Galan HL**, Hobbins J. Is cerebellar vermis size affected in the setting of fetal growth restriction (FGR)? Poster presentation at SMFM 2020. Grapevine, TX
- 159.Lagueux MM, Silveira LJ, Cuneo BF, Liechty KW, Marwan AI, Behrendt NJ, **Galan HL**, Zaretsky MV. Factors associated with mortality in monochorionic twins affected by selective intrauterine growth restriction undergoing fetoscopic laser photocoagulation. Poster Presentation at SRI. 2020. Vancouver, Canada.

INTERESTS/ HOBBIES/COMMUNITY SOCIETIES:

- Knights of Columbus St. Luke's Council 7197
- Tee ball coach, 1993, 2007, 2008
- Skiing, biking, swimming, jogging, weight lifting, hunting
- Class A Intramural Racquetball Champion:
 - University of Texas at Austin, 1984
 - Texas A&M University, 1986
- Corporate Challenge Champion in Swimming & Racquetball: 1989, 1990, 1991
- Stroke & Turn Official and Starter; Chaparral Shark Swim Team; Mountain-Hi Swim League: 2007-2015