

**DAVID KEITH WALMER, MD, PhD  
DUKE UNIVERSITY MEDICAL CENTER  
CURRICULUM VITAE**

**Positions at Duke**

Associate Clinical Professor	
Global Health Initiative – Delivery Subcommittee	03/2005-present
Division Chief, Reproductive Endocrinology and Infertility	09/2003-present
Fellowship Director, Reproductive Endocrinology and Infertility	07/2000-present
Vice Chairman, IRB #5	05/2000-12/2001
Medical Director, In Vitro Fertilization and Anonymous Oocyte Donation	07/2000-09/2003
Director, ART Laboratory	05/1996-02/2005
Program Director, In Vitro Fertilization and Anonymous Oocyte Donation	05/1990-07/2000
Guest Researcher, Laboratory of Reproductive and Developmental Toxicology	
National Institute of Environmental Health Sciences	07/1989-present

**International Health Organizations, Board of Directors:**

Chairman	Family Health Ministries, Inc.	Chapel Hill, NC	07/2000-present
Board Member	Haiti Fund, Inc.	Rocky Mount, NC	01/2001-01/2003
Board Member	Haiti Outreach Ministries, Inc.	Richmond, VA	08/1998-10/2004
Board Member	Partners in Progress, Inc.	Pittsburgh, PA	07/2001-10/2004
Advisory Board	The Haiti Connection, Inc.	Raleigh, NC	01/2001-present

**Address:**

Division of Reproductive Endocrinology and Infertility  
Department of Obstetrics and Gynecology  
Box 3143, Duke University Medical Center, Durham, NC 27710  
Phone: 919-684-4673 Fax: 919-681-7904 E-Mail: david.walmer@duke.edu

Medical License: 12/83 Flex, North Carolina license no. 31401

Born 9/17/52 in Harrisburg, Pa.

**Education:**

Undergraduate	UNC Chapel Hill	1970-74	BA Chemistry
Graduate	UNC Chapel Hill	1974-79	PhD Biochemistry
Professional	UNC Chapel Hill	1979-83	MD
Residency	UT San Antonio	1983-87	Ob/Gyn, board certified 1990
	Adm. Chief	1986	
Fellowship	Duke University	1987-89	RE&I, board certified 1992

**Refereed Publications**

1. Studies in Extrarenal Erythropoiesis: Biochemical Characteristics of a Sialoerythropoietic Factor Discovered in Adult Male Mice, Walmer DK. PhD Dissertation, 8/79
2. Enterococci in Post-Cesarean Endometritis, Walmer DK, Walmer KAR, Gibbs RS. *Obstetrics and Gynecology* 71:159, 1988.
3. Ovarian Hyperstimulation in Polycystic Ovary Syndrome During Therapy with Leuprolide Acetate, Walmer DK, Haney AF, Dodson WC. *Fertility and Sterility* 52: 858-863, 1989.
4. Utility of Fluoroimmunoassay in Detecting Luteinizing Hormone Surges in Spontaneous and Human Menopausal Gonadotropin-Stimulated Menstrual Cycles. Hughes CL, Dodson WC, Walmer DK, Dixon S. *Journal of Reproductive Medicine* 35: 211, 1990.
5. Epidermal growth factor replaces estrogen in the stimulation of the female genital-tract growth and differentiation. Nelson KG, Takahashi T, Bossert NL, Walmer DK, McLachlan JA. *Proceedings of the National Academy of Science USA* 88:21-25,1991.
6. Adjunctive Leuprolide Therapy Does Not Improve Cycle Fecundity in Controlled Ovarian Hyperstimulation and Intrauterine Insemination of Subfertile Women. Dodson WC, Walmer DK, Hughes, Jr. CL, Yancy SE, Haney AF. *Obstetrics and Gynecology* 78:187-90, 1991.
7. Human Granulosa-Luteal and Cumulus Cells express Transforming Growth Factors-Beta Type 1 and Type 2 mRNA. Mulheron GW, Bossert NL, Lapp JA, Walmer DK, Schomberg DW. *Journal of Clinical Endocrinology and Metabolism* 74(2):458-460,1992.
8. Lactoferrin Expression in the Mouse Reproductive Tract during the Natural Estrous Cycle: Correlation with Circulating Estradiol and Progesterone. Walmer DK, Wrona MA, Hughes CL, Nelson KG. *Endocrinology* 131(3):1458-1466,1992.
9. Differential Molecular Mechanism of the Estrogen Action That Regulates lactoferrin gene in human and mouse. Teng CT, Liu Y, Yang N, Walmer DK, Panella T. *Molecular Endocrinology* 6(11):1969-1981,1992.
10. Transforming growth factor beta<sub>1,2,3</sub> mRNA and protein expression in mouse uterus and vagina during estrogen-induced growth: A comparison to other estrogen-related genes. Takahashi T, Eitzman B, Bossert N, Walmer D, Sparrow S, Flanders K, McLachlan J, Nelson K. *Cell Growth and Differentiation* 5(9):919-935,1994.
11. The effect of neonatal exposure to diethylstilbesterol, coumestrol, and beta-sitosterol on pituitary responsiveness and sexually dimorphic nucleus volume in the castrated adult rat. Register R, Bethel MA, Thompson N, Blohm P, Ayyash L, Walmer D and Hughes C. *Proceedings of the Society for Experimental Biology and Medicine* 208(1):72-77,1995.
12. Malignant Transformation of the Human Endometrium Is Associated with Overexpression of Lactoferrin Messenger RNA and Protein. Walmer DK, Padin CJ, Wrona MA, Healy BE, Bentley RC, Tsao M-S, Kohler MF, McLachlan JA, Gray KD. *Cancer Research* 55(5):1168-1175, 1995.
13. Analysis of Messenger Ribonucleic Acid and Protein for the Ligands and Receptors of the Platelet-Derived Growth Factor Signaling Pathway in the Placenta, Extraembryonic Membranes, and Uterus

- during the Latter Half of Murine Gestation. Bidwell MC, Eitzman BA, Walmer DK, McLachlan JA, Gray KD. *Endocrinology* 136(11):5189-5201, 1995.
14. Potentiation of diethylstilbestrol-induced alterations in the female mouse reproductive tract by transforming growth factor-alpha transgene expression.. Gray K. Bullock B. Dickson R. Raszmann K. Walmer D. McLachlan J. Merlino G., *Molecular Carcinogenesis*. 17(3):163-73, 1996.
  15. Advanced maternal age and perinatal outcome: oocyte recipiency versus natural conception. Wolff KM, McMahon MJ, Kuller JA, Walmer DK, Meyer WR, *Obstetrics and Gynecology* 89:519-523,1997.
  16. p53lyn and p56lyn: A New Signaling Pathway in Human Endometrium and Endometrial Adenocarcinomas, Couchman GM, Bentley R, Tsao M-S, Raszmann K, McLachlan JA, Walmer DK. *Journal of the Society for Gynecologic Investigation* 4(2):103-109,1997.
  17. Evaluation of the Postcoital Test in Cycles Involving Exogenous Gonadotropins. Bush MR, Walmer DK, Couchman GM, Haney AF. *Obstetrics and Gynecology* 89(5):780-784,1997.
  18. Human Endometrial Transforming Growth Factor- $\alpha$ : A Transmembrane, Surface Epithelial Protein That Transiently Disappears During the Midsecretory Phase of the Menstrual Cycle. Hansard LJ, Healy-Gardner BE, Drapkin AT, Bentley RC, McLachlan JA, Walmer DK. *Journal of the Society for Gynecologic Investigation* 4(3):160-166,1997.
  19. Toxicity of Methoxy Acetic Acid in Cultured Human Luteal Cells. Almekindaer JL, Lennard DE, Walmer DK, Davis BJ, *Toxicology and Applied Pharmacology* 38:191-194,1997.
  20. Effects of Dietary Soybean Estrogens of the Reproductive Tract in Female Rats. Tansey G, Hughes CL Jr., Cline M, Krummer A, Walmer DK, Schmetzer S. *Proc. Soc. Exp. Biol. Med.* 217:340-4,1998.
  21. Effect of progestin on the ovarian epithelium of macaques: cancer prevention through apoptosis. Rodriguez GC, Walmer DK, Cline M, Krigman H, Lessey BA, Whitaker RS, Dodge R, Hughes CL. *Journal of the Society For Gynecologic Investigation*. 5(5):271-6, 1998
  22. Evidence of juxtacrine signaling for transforming growth factor alpha in human endometrium. Bush RM, Mele JM, Couchman GM, Walmer DK. *Biology of Reproduction* 59:1522-9,1998.
  23. Subcutaneously administered Repronex in female patients undergoing in vitro fertilization is as effective and well tolerated as intramuscular menotropin treatment. Gocial B, Keye WR, Fein SH, Nardi RV, IVF Study Group. *Fertility and Sterility* 74(1):73-79,2000.
  24. Advances in uterine leiomyoma research: conference overview, summary, and future research recommendations. Newbold RR. DiAugustine RP. Risinger JI. Everitt JI. Walmer DK. Parrott EC. Dixon D. *Environmental Health Perspectives*. 108 Suppl 5:769-73, 2000 Oct.
  25. E2-induced degradation of uterine insulin receptor substrate-2: requirement for an IGF-I-stimulated, proteasome-dependent pathway. Richards RG. Klotz DM. Bush MR. Walmer DK. DiAugustine RP. *Endocrinology*. 142(9):3842-9, 2001 Sep.
  26. Lactoferrin gene expression is estrogen responsive in human and rhesus monkey endometrium. CT Teng, W Gladwell, C Beard, D Walmer, CS Teng, B Brenner. *Molecular Human Reproduction* 8(1):58-67, 2002.

Walmer DK

27. Rodriguez GC, Nagarsheth NP, Lee KL, Bentley RC, Walmer DK, Cline M, Whitaker RS, Isner P, Berchuck A, Dodge RK, Hughes CL. Progesterin-induced apoptosis in the Macaque ovarian epithelium: differential regulation of transforming growth factor-beta. *Journal of the National Cancer Institute*. 94(1):50-60, 2002.
28. Walmer DK, Merisier D, Littman E, Rodriguez G, Venero N, Henderson M, Katz D, Edwards R. Portable colposcopy in low-resource settings. *Journal of Acquired Immune Deficiency Syndromes* 37(3):S167-170, 2004.
29. Lee KL, Couchman FM, Walmer DK. Successful pregnancies in patients with estrogenic ovulatory dysfunction after low-dose human chorionic gonadotropin therapy alone following hMG for controlled ovarian hyperstimulation. *Journal of Assisted Reproduction and Genetics* 22(1):37-40,2005
30. Klotz DM, Proctor JA, Walmer DK, Richards RG, DiAugustine RP. Hormonal Activation of the Gab-1 Docking Protein in Uterine Cells. *Hormonal Carcinogenesis IV, Proceedings of the Fourth International symposium*. (Editors JJ Li, SA Li, A Lombart-Bosch) Springer, New York. pp. 443-449.
31. Payne JF, Raburn DJ, Couchman GM, Price TM, Jamison MG, Walmer DK. Redefining the relationship between sperm DNA fragmentation as measured by the Sperm Chromatin Structure Assay (SCSA®) and outcomes of assisted reproductive techniques (ART). *Fertility and Sterility* (in press)

**Publications (in preparation)**

32. The number of motile sperm after swim-up predicts fertilization in IVF cycles. Couchman GM, Bush MR, Bachus KE, Haney AF, Oddone EZ, Bossert NL, Walmer DK, submitted to *Fertility and Sterility*
33. Methylation of the human lactoferrin gene in endometrial cancer. Lee CT, McLachlan J, Walmer DK

### Invited Publications

1. Subfertility Associated with Endometriosis: Potential Influences of the Peritoneal Environment, Walmer DK, Haney AF. *Seminars in Reproductive Endocrinology* 6(3):263, 1988.
2. Role of Peritoneal Environment in Endometriosis-Associated Subfertility. Walmer DK, Haney AF, Hammond CB. *Postgraduate Obstetrics and Gynecology* 10(10):1, 1990.
3. Superovulation and washed intrauterine insemination. Walmer DK, Dodson WC. *Infertility and Reproductive Medicine Clinics of North America* 1(1):135, 1990.
4. Superovulation and washed intrauterine insemination: An alternative to oocyte retrieval in infertile patients with patent fallopian tubes. Bachus KE, Walmer DK. *Contemporary Obstetrics and Gynecology* 37:77, 1992.
5. Superovulation in the management of unexplained infertility. Bachus KE, Walmer DK. *Reproductive Medicine Review* 2:33-49,1993.
6. Hormonal therapy in the perimenopausal woman. Walmer DK. *Postgraduate Obstetrics and Gynecology* 14(20):1 - 6, 1994.
7. Descriptive histology: The gold standard for clinically evaluating the endometrium. Is it about to be replaced? Hansard LJ, Walmer DK. *Infertility and Reproductive Medicine Clinics of North America* 6:281-291,1995.
8. Katz DF, Henderson MH, Owen DH, Plenys AM, Walmer DK: What is needed to advance vaginal formulation technology In: *Vaginal Microbicide Formulations Workshop*, William F. Rencher (Ed.). Philadelphia, Lippincott-Raven Publishers. 1988, pp. 90-99. ISBN 0-781-71932-1. Proceedings of the 5<sup>th</sup> Contraceptive Research and Development Program Workshop, Bethesda, MD 11/7/97.
9. Newbold RR, DiAugustine RP, Risinger JI, Everitt JI, Walmer DK, Parrott EC, Dixon D: Advances in Uterine Leiomyoma Research: Conference Overview, Summary, and Future Research Recommendations. *Environmental Health Perspectives* 108:769-773,2000.

## Abstracts, Presentations

1. Melatonin Action During Hypobaric Hypoxia, O'Shea MD, Berkut MK, Walmer DK, Journal of the Elisha Mitchell Society 91: Summer, 1975, North Carolina Academy of Science.
2. Erythropoeisis in Male Castrated Mice Stimulated by Bleeding, Berkut MK, Herion JC, O'Shea MD, Walmer DK, 1975 Federation of the American Society for Experimental Biologists, Atlantic City, NJ, April 1975.
3. Response of Gonadectomized Mice to Erythropoietic Stimulation, Berkut MK, Walmer DK, O'Shea MD, Journal of the Elisha Mitchell Society 91: Summer 1975, North Carolina Academy of Science
4. The Influence of Melatonin on Erythropoiesis, Walmer DK, Berkut MK, O'Shea MD, Journal of the Elisha Mitchell Society 91: summer 1975, North Carolina Academy of Science
5. Renal Beta-glucuronidase Activity During Hypoxia, Walmer DK, Berkut MK, Sessions R, Cleary D, Journal of the Elisha Mitchell Society 92: Summer 1976, North Carolina Academy of Science
6. The Role of Glucuronylated Testosterone Metabolites in Hemopoiesis, Berkut MK, Walmer DK, O'Shea MD, 6th Annual Conference of the International Society for Experimental Hematology, Basel, Switzerland, Experimental Hematology 5:34, 1977
7. The Influence of Sialoadenectomy and Fluroide on Erythropoiesis in Polycythemic Mice, Walmer DK, Berkut MK, Cleary D, Journal of the Elisha Mitchell Society 93: Summer 1977, North Carolina Academy of Science
8. Ultrastructure of Proximal Convolutd Tubules in Normal and Cobalt-treated Mice, Walmer DK, Berkut MK Journal of the Elisha Mitchell Society 93:Summer 1977, North Carolina Academy of Science
9. Erythropoietic Activity of 5-beta Androstane Glucuronides, Berkut MK, Walmer DK, O'Shea MD, 93: Summer 1977, North Carolina Academy of Science
10. Extra-renal Erythropoiesis, Walmer DK, Berkut MK, 7th Annual Conference of the International Society for Experimental Hematology, Chicago, Illinois, Experimental Hematology 6:56, 1978
11. Enterococci in Postpartum Endometritis, Walmer DK, Walmer KAR, Gibbs RS, 6th Annual Meeting of the Society of Perinatal Obstetricians [Abstract 147], San Antonio, Texas, 2/1/86
12. Lactoferrin Localization in the Murine Reproductive Tract During the Estrus Cycle. Walmer DK, McLachlan JA, Nelson KG, Wrona M, Teng CT. Serono Symposium: Growth Factors in the Reproductive Tract, [Abstract 42], Savannah, Ga., April 1-4, 1990
13. The use of leuprolide as adjunctive therapy during controlled ovarian hyperstimulation and intrauterine insemination. Dodson WC, Hughes CL, Walmer DK, and Haney AF. 37th Annual Meeting of the Society for Gynecologic Investigation [Abstract 241], St. Louis, Mo., March 21-24, 1990
14. Altered structure and expression of the DCC gene in human endometrial carcinoma. Boyd J, Risinger JI, Walmer DK, Cho KR, Vogelstein B, Barrett CJ. 82nd Meeting of the American Association for Cancer Research
15. Molecular Genetic Alterations in Human Endometrial Carcinoma. Boyd J, Risinger JI, Walmer DK, Vogelstein B and Barrett JC. 1991 Keystone Symposium: Genomic Instability and Cancer, Tamarron, Co., February 4-10, 1991

16. The Presence of a TGF $\alpha$  Transgene Results in Reproductive Abnormalities in Female CD-1 Mice. Walmer DK, Wrona M, Feola R, Nelson K, Bossert N, Dickson R, Merlina G, McLachlan J. Keystone Symposium of Molecular, Cellular Biology, Keystone, Co. J Cell Biochem 16F:84(W125),1992.
17. Human oocyte fertilization: Influence of reinsemination and media change after the first 18 hours of culture. Walmer DK, Bachus KA, Bossert NL, [Abstract 171], 39th Annual Meeting of the Society for Gynecologic Investigation, San Antonio, Tx, 3/19/92.
18. The Presence of a TGF $\alpha$  Transgene Results in Reproductive Abnormalities in Female CD-1 Mice. Walmer DK, Wrona MA, Feola R, Nelson KG, Bossert NL, and McLachlan J, [Abstract], Triangle Conference on Reproductive Biology, Research Triangle Park, NC, 1/11/92.
19. Identification and Characterization of Novel Human Endometrial Protein Tyrosine Kinases: New Insights into the Regulation Endometrial Activity. Couchman G, Nelson K, Carpenter S, McLachlan J, Walmer DK. Triangle Conference on Reproductive Biology 1/9/93
20. The Expression of Lactoferrin in the Human Endometrium by Inflammatory Granulocytes and Glandular Epithelium: A Possible Role in Growth Regulation. Padin C, Nelson K, McLachlan J, Walmer DK. Triangle Conference on Reproductive Biology 1/9/93
21. TGF $\beta$  Expression in the Cycling Human Female Reproductive Tract: Parallels with wound repair. Walmer DK, Padin C, Flanders K, Kohler M, McLachlan J, Nelson K. Triangle Conference on Reproductive Biology 1/9/93 (#38)
22. TGF $\beta$  Expression in the Cycling Human Female Reproductive Tract: Parallels with wound repair. Walmer DK, Padin C, Flanders K, Kohler M, McLachlan J, Nelson K. Journal of Cellular Biochemistry 17E:123, 1993 (#R2160)
23. Cytokine expression profiles in endometriosis, endometrial carcinoma, and normal endometrium. Boyd J, Walmer DK, American Association of Cancer Research 1993
24. Lactoferrin is overexpressed in proliferative disorders of the endometrium. Reproductive Biology Special Interest Group, American Fertility Society, Montreal, Canada, 10/13/93, (P-286)
25. Identification of a novel human endometrial protein tyrosine kinase: its expression and role in normal and abnormal endometrium. Couchman G, Walmer DK. The American Fertility Society. Montreal, Canada, 10/13/93.
26. Platelet-derived growth factors and receptors are expressed in vivo in normal and pathologic human endometrium. P. Blohm, K. Nelson, B. Healy, J. McLachlan, Walmer DK. Reproductive Triangle Symposium 1993
27. Differential expression of epidermal growth factor-related proteins in human uterus and mouse uterus and vagina. Walmer DK, A. Drapkin, E-S Ro, G. Johnson, J. McLachlan, K. Nelson. Reproductive Triangle Symposium 1993
28. Hepatocyte Growth Factor: Another modulator of reproductive function? K. Raszmann, M-S Tsao, Walmer DK, N. Bossert, T. Nakamura, J. McLachlan, K. Nelson. Reproductive Triangle Symposium 1993
29. Estrogen stimulation of TGF $\beta_{1,2\&3}$  mRNA and protein expression in mouse uterus and vagina: a comparison to other estrogen-regulated genes. T. Takahashi, B. Eitzman, M. Bidwell, N. Bossert, Walmer DK, K.

Raszman, K. Flanders, J. McLachlan, K. Nelson. Estrogens in the Environment III. Global Health Implications, 1/9-11/94

30. Zonation of the human endometrium: Analysis of estrogen receptors, progesterone receptors and markers of cellular proliferation. Martha L. Ehrmann, MD, Bridget E. Healy, DVM, Walmer DK, MD, PhD, Presented at 1994 Resident's Day, Department of Obstetrics and Gynecology, Duke University Medical Center
31. The predictive value of sperm swim-up migration in human in vitro fertilization. Bossert NL, CA Cutney, Walmer DK and KE Bachus, Presented and the 1995 annual meeting of the American Society of Andrology. March 31 - April 4, Raleigh, NC
32. Women with mild endometriosis who have failed COH have IVF pregnancy rates equivalent to or superior to that of tubal factor patients. B.D. Barnett, K.E. Bachus, G.M. Couchman, A.F. Haney, D.K. Walmer, Oral Presentation at the 1995 Annual Meeting of the American Society of Reproductive Medicine, Seattle, WA
33. *Lyn*, a *src*-related tyrosine kinase, is dysregulated in leiomyomata of the human uterus. G. Couchman, R. Bentley, Ming-Sound Tsao, K. Raszmann, J. McLachlan, Walmer DK. Oral Presentation at the 1995 Annual Meeting of the American Society of Reproductive Medicine, Seattle, WA
34. Expression of cytoplasmic and extracellular transforming growth factor antigens in human endometrium during the menstrual cycle correlates with physiologic markers. L.Hansard, B. Gardner, M. Ehrmann, R. Bentley, J. McLachlan, A. Drapkin, Walmer DK. Oral Presentation at the 1995 Annual Meeting of the American Society of Reproductive Medicine, Seattle, WA
35. Endometriosis and the Environment: Biomarkers of Toxin Exposure. J. Boyd, G. Clark, Walmer DK, D. Patterson, L. Needham, G. Lucier. Endometriosis Workshop, Bethesda, MD, NICHD, 5/15/95.
36. Identification and regulation of the apoptosis-associated gene, BAX in human granulosa/luteal cells. Gorman EA, Walmer DK, Schomberg DW Presented at Resident's Day, Department of Obstetrics and Gynecology, Duke University Medical Center, June 10, 1995.
37. Intrauterine fetal position influences the development of the reproductive tract in mice. Battin C, Walmer D, Vandenberg J. Presented at Resident's Day, Department of Obstetrics and Gynecology, Duke University Medical Center, June 10, 1995.
38. Platelet Derived Growth Factor expression in uterine myometrium and dysregulation in leiomyomas. Soufi W, Johnson P, Couchman G, Healy B, Walmer D. Presented at Resident's Day, Department of Obstetrics and Gynecology, Duke University Medical Center, June 10, 1995.
39. The postcoital test does not correlate with fecundity in cycles utilizing gonadotropin-induced superovulation. MR Bush, Walmer DK, GM Couchman, AF Haney. Submitted to Armed Forces District Meeting.
40. The expression of yes, a *src*-family tyrosine kinase, is altered in leiomyomas and associated myometrium. Osborn B, Barnett B, Walmer D, Bentley R, Plaehn E, Couchman G. Accepted for Oral Presentation ASRM, #436, Boston, Ma. 11/4/96 (2:00pm)
41. Advanced maternal age and perinatal outcome: oocyte reciprocity versus natural conception. Wolff KM, McMahon MJ, Kuller JA, Walmer DK, Meyer WR, Presentation at American College of Obstetrics and Gynecology meeting, 1997

42. The effect of contraceptive progestins on the ovarian epithelium: Cancer prevention through apoptosis. Rodriguez GC, Walmer D, Lessey B, Whitaker R, Krigman HR, Hughes CL. Presented Plenary Session - SGI, 1997.
43. A Method for Observation and Analysis of Contraceptive Gel Spreading and Retention on the Vaginal Epithelium. Henderson MH, Yezbick AB, Walmer DK and Katz DF, American Society for Reproductive Medicine, 1998
44. *In vivo* sensing of formulation distribution in the human vagina: initial results. MH Henderson, DK Walmer, MA Brown, DF Katz. Journal of the Society for Gynecologic Investigation 6(1):161A, 1999. Abstract 450. 46<sup>th</sup> Annual Meeting of the Society for Gynecologic Investigation, Atlanta, GA.
45. Estradiol-stimulated mitosis and Cdk1 activity are reduced in the insulin receptor substrate-1 knockout mouse uterine epithelium. Society of Endocrinology meeting 2001
46. Molecular Signaling in Uterine Leiomyomas. Oral Presentation, Uterine Fibroid Course with David Olive & Elizabeth Stewart at American Society for Reproductive Medicine
47. Uterine Artery Embolization for Uterine Leiomyomas. Oral Presentation, Uterine Fibroid Course with David Olive & Elizabeth Stewart at American Society for Reproductive Medicine
48. Clinical Issues: Relevance & Importance of Embryo Cryopreservation. DK Walmer. Oral Presentation Symposium: "Frozen in Place: Advancing the Debate about Disposition of Frozen Human Embryos." Sponsored by the Center for Genome Ethics, Law and Policy, January 14, 2004.
49. Challenges for the Christian Practitioner in Reproductive Endocrinology: From IVF to Embryonic Stem Cell Research. DK Walmer. Theology and Medicine Seminar, March 3, 2005 (Seminar Series sponsored by the Theology and Medicine program in the Duke Divinity School)

## Research Funding

Principle Investigator for joint NIEHS-Duke environmental estrogen laboratory  
1993

\$375,000 federal grant from NIH to set up NIEHS lab  
in Reproductive Endocrine Division at Duke

1993-1997

NIH MOU Can #8323662

Budget: 50,000/yr for 5 years

Principal investigator:

1. Gonal-F in the treatment of infertility caused by female hypogonadism  
Sponsor: Serono Laboratories, Inc., Protocol: 6905, Duke IRB registry: 1562-95-11  
1995-1997 Budget \$17,434.00
2. Safety and efficacy of recombinant hCG versus urinary hCG in women undergoing IVF/ET, Sponsor:  
Serono Laboratories, Inc., Protocol: 7927,  
Duke IRB registry: 1563-95-11,  
1995-1997, Budget \$106,875
3. Repronex SC versus Repronex IM and Pergonal IM in In Vitro Fertilization, Ferring Laboratories, Inc.,  
Protocol 97-02, 1997
4. Anovulatory and oligoovulatory infertile female patients, Ferring Pharmaceuticals, Inc., Protocol 97-  
01, 1998
5. r-hLH versus Profasi® in the inhibition of premature LH surge in women undergoing IVF/ET,  
Sponsor: Serono Laboratories, Inc., Protocol 21750  
Duke IRB registry:  
Budget
6. Prospective Evaluation of the AutoCyte PREP Slide Preparation using the PREPMate 2000 and the  
PREP Manual Method, Sponsor: TriPath Imaging, IRB Protocol #1725-99-10ER, 1999-2001
7. Cervical Dysplasia IRB Protocol #:0945-99-5ER
8. Longitudinal Research Study of the Growth and Potential Causes of Uterine Leiomyomas, Sponsor:  
NIEHS, GCRC Protocol #867, Budget includes \$25,000 nurses salary, \$17,000 MD salary support

**Faculty Preceptor for Medical Students, Residents, and Fellows 1991 - 1997**

Faculty preceptor for 3rd year medical student research: Cell and Regulatory Biology Study Program

1) 1991-1992 Cheryl Padin

Lacoferrin expression in normal, proliferative disorders of human endometrium

2) 1993-1994 Annie Drapkin

TGF-alpha expression in normal, proliferative disorders of human endometrium

Faculty preceptor for resident research projects:

1) 1991-1992 Allison Blomer

Hepatic clearance blunts the bioactivity of estradiol on the endometrium

2) 1992-1993 Martha Ehrmann

Microenvironments in the human endometrium: an analysis of ER, PR and Ki-67

3) 1993-1994 Chris Battin

Microenvironments in human endometrium: Zonal expression of ER, PR and MIB-1

4) 1993-1994 Winni Soufi

PDGF B and receptor beta expression is dysregulated in uterine leiomyomas

5) 1995-1996 Craig Gaccione (co-sponsored with Dave Schomberg)

Bax: A regulator of apoptosis in granulosa cell apoptosis *in vivo*?

6) 1995-1996 Barbara Osborne (co-sponsored with Grace Couchman)

Dysregulation of src-related tyrosine kinases in uterine leiomyomata

7) 1998-1999 John Lancaster

Estrogen and progesterone receptor gene polymorphism in uterine leiomyomas

8) 2001-2002 Chad Grotegut

Cystic Fibrosis gene mutations in women with unexplained infertility

Faculty preceptor for reproductive endocrinology fellows

1991 - 1992 Mark Bidwell

1992 - 1993 Grace Couchman

1993 - 1994 Patrick Blohm

1994 - 1995 Lisa Hansard

1995 - 1996 Brian Barnett

1996 - 1997 Mark Bush

1999 - 2000 Ernie Zeingue

2000 - 2001 Fred Larsen

2001 - 2002 John Payne

PhD Committee Member

2002 Sarah Kieweg, Medical Engineering, project involving physicochemical properties of vaginal gels as a vehicle for anti-infective agents

**Committees**

American Society of Reproductive Medicine  
Resident Education Committee, 1994 - present

Duke University Medical Center  
Clinical Sciences Faculty Council, 1997 - 1999  
Institutional Review Board, (Ob/Gyn representative) 1992 – present  
Institutional Review Board, (Vice Chairman for IRB#4) 2000

Southeastern Reproductive Medicine Association  
Protocol Review Committee Member, 1995 – 1998  
Protocol Review Committee Chairman, 1998 – 1999

**Organization participation and memberships**

American Society of Reproductive Medicine

Duke Cancer Research Center

North Carolina Obstetrics and Gynecology Society

Society for Assisted Reproductive Technologies

Society of Reproductive Endocrinologists

Visiting Speaker's Bureau: Wyeth Pharmaceuticals, Inc.

**Ad Hoc Reviews for**

American Journal of Pathology

Fertility and Sterility

Endocrinology

Obstetrics and Gynecology

Journal of Clinical Endocrinology and Metabolism

**Awards/Honors**

- October 3, 2002 Duke University Humanitarian Service Award
- May 7, 2003 Arnold P. Gold Foundation Humanism in Medicine Award Nominee

**Miscellaneous****International Medicine:** (work in Haiti)

- June 19-23 1993,  
Started cervical cancer prevention program at Hopital St. Croix  
Hopital St. Croix, Leogane, worked with Jean-Claude Fertilien, MD (Ob/Gyn) & Medical Director, Richard Brown, MD
- April 11-May 20, 1994  
Hosted Dr. Jean-Claude Fertilien for cervical cancer training to Duke University Medical Center, colposcope donated by Leisgang,
- October 1996 IND304C
- November 1-8, 1997 Cite Soleil
- Jan 02-11 1998 IND304C
- March 1998 Cormier district
- Jan 1999 IND304C
- June 1999 Cormier district
- September 1999
  - began construction of dedicated cervical cancer clinic at HSC
    - sponsored by Haiti Fund, Inc & AutoCyte, Inc
  - Dr. Manita Noel began using colposcopy – cryotherapy strategy in Leogane
  - 2 month medical student project on cervical cancer
- January 2000 IND304C, Hopital St. Croix, Fondwa & Cite Soleil
- June 2000 Hopital St. Croix, Fondwa & Cite Soleil
  - 2 month public health project, radio communication in mountains of Fondwa

**Course Director for International Health, Issues of Healing in Poverty**

1<sup>st</sup> class of students went to Haiti in October of 1996

**Medical School IND 304C** Approved by curriculum committee Fall 1997

**Divinity School PASTCARE211** Approved by curriculum committee Fall 2000

Trip with Duke medical students planned to Cite Soleil (clinic in urban slum), Leogane (hospital) and Fondwa (remote mountain community with no access to medical care) course runs each fall and culminates with a medical mission trip

1. 10/25/96-11/01/96
2. 01/02/98-01/10/98
3. 01/05/99-01/12/99
4. 01/00/00-01/00/00
5. 01/02/01-01/10/01

Funded projects:

- Construction of Medical Clinic in Cite Soleil, Port-au-Prince, Haiti
  - Children's nutrition program in Fondwa, Haiti
  - Cervical cancer prevention program in Leogane, Haiti
- **Funding** obtained for Haiti Medical Missions
 

Mary Duke Biddle Foundation, Inc.	Fall	1997	\$03,000.00
Josiah Charles Trent Memorial Foundation, Inc.	Fall	1997	\$01,000.00
Duke Divinity School	Fall	1997	\$01,500.00
Haiti Fund, Inc.	Fall	1999	\$10,000.00
AutoCyte, Inc.	Spring	2000	\$05,000.00

Mary Duke Biddle Foundation, Inc.

Fall 2003

Walmer DK

Fundraising to construct a medical clinic in Cite Soleil (completed 2/2000) \$50,000.00

Medical Advisor for CBS movie (1st mother / daughter surrogate pregnancy) Labor of Love: The Arlette Schweitzer Story, aired Mother's Day 1993 Carolco Studios, Wilmington, NC

**Personal Information**

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Married with five children.