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EDUCATION:

<u>Institution and Location</u>	<u>Degree</u>	<u>Year</u>	<u>Field of study</u>
Wilkes College, Wilkes Barre, PA	B. S.	1977	Biology
Virginia Tech, Blacksburg, VA	M. S.	1979	Nutrition
Virginia Tech, Blacksburg, VA	Ph. D.	1983	Genetics

RESEARCH AND PROFESSIONAL EXPERIENCE:

Assistant Geneticist; Holly Farms Primary Breeders, Inc., Wilkesboro, NC (1982-1984)
NIH Post-doctoral Fellow; Institute of Human Nutrition, Columbia University, New York, NY
(with M. Winick/R. Marks-Kaufman)(1984-1985)
NIMH Post-doctoral Research Associate; Institute of Animal Behavior and Department of Chemistry,
Rutgers University, Newark, NJ (with B. R. Komisaruk/F. Jordan)(1985-1987)
Associate Professor of Physiological Genetics, College of Agricultural Sciences, The Pennsylvania State
University, University Park, PA (1987-2008)

- Date of initial appointment to Penn State: September 1, 1987
- Promoted to Associate Professor: July 1, 1993
- Chair of Genetics Program: July 1, 1994 – June 30, 1999

Adjunct Professor of Biology, Ocean County College, Toms River, NJ (2009-current)

SELECTED PUBLICATIONS:

48. Reinoso, V. P., R. Katani, and G. F. Barbato. 2007. Nicarbazin reduces egg production and fertility in White Pekin ducks via reducing ZP3 in the perivitelline membrane. *Poultry Sci.* 86 (Suppl. 1): 536.
46. Ealy A. D., S. K. Wagner, A. E. Sheils, N. C. Whitley, D. O. Kiesling, S. E. Johnson and **G. F. Barbato** (2004) Identification of interferon-tau isoforms expressed by the peri-implantation goat (*Capra hircus*) conceptus. *Domest Anim Endocrinol.* 27:39-49.
45. Decuyper, E., V. Bruggeman, **G. F. Barbato** and J. Buyse (2003) Problems associated with selection for increased broiler meat production: growth and reproduction. In: *Poultry Genetics: Breeding and Biotechnology*. Eds. W. M. Muir and S. E. Aggrey. Pp. 13-28. CABI Publishing, CAB International.
43. **Barbato, G. F.** (2003) Variant oocyte membrane proteins and breeder subfertility. In: Proceedings of the Fifty-second Annual National Breeders Roundtable. Ed. D. Lubritz. pp. 59-68. U. S. Poultry & Egg Association, Atlanta, GA.
37. Hammerstedt, R. H., **G. F. Barbato**, P. Cramer, M. Griswold and J. O'Brian (2001) The role of prosaposin (SPG-I) in sperm-binding and fertility. *J. Andrology.* 22:361-75.
34. **Barbato, G. F.**, P. Cramer and R. H. Hammerstedt. (1998) Evaluation of an *in vitro* sperm-egg binding assay assessing male infertility. *Biology of Reproduction* 58:686-699.
33. Azar, M. R., N. Acar, V. Gene Erwin, **G. F. Barbato**, A. C. Morse, C. L. Heist and B. C. Jones (1998) Distribution and clearance of cocaine in brain is influenced by genetics. *Pharmacol. Biochem. Behav.* 59:637-640.
32. **Barbato, G. F.** (1997) Selection for growth and poultry welfare: A genetic perspective. In: *Proceedings of the Fifth European Symposium on Poultry Welfare 1997*. Ed., P. Koene and H. J. Blokhuis. Pp. 63-70. Ponsen and Looyen, Wageningen, Netherlands.
30. Clum, N. J., D. K. McClearn, and **G. F. Barbato** (1995) Comparative embryonic development in chickens with different patterns of postnatal growth. *Growth, Development and Aging* 59:129-138.
27. Sizemore, F. G., G. R. Leach, and **G. F. Barbato** (1995) Neonatal MSG administration eliminates hypothalamic lateralization of biogenic amines in chickens selected for divergent growth rates.

- Biogenic Amines 11:19-29.
26. **Barbato, G. F.** (1994) Genetical control of feed intake in the fowl. J. Nutrition 124:1341S-1348S.
 25. Roush, W. B., T. Cravener, and **G. F. Barbato** (1994) A nonlinear dynamical (chaos) approach to understanding aberrations associated with accelerated growth. Poultry Sci. 73:1183-1192.
 24. Alexander, A., J. Graham, R. H. Hammerstedt and **G. F. Barbato** (1993) Cryopreservation, line and dose effects on fertility and numbers of spermatozoa trapped in the vitelline membrane of hens' eggs. Br. Poultry Sci. 34:757-764.
 23. **Barbato, G. F.** (1992) Divergent selection for exponential growth rate at fourteen or forty-two days of age: 1. Early responses. Poultry Sci. 71:1985-1993.
 22. Hammad, S., H. S. Siegel, H. L. Marks and **G. F. Barbato** (1992) A fast HPLC analysis of cholesterol and cholesteryl esters in avian plasma. J. Liq. Chromatog. 15:2005-2014.
 21. **Barbato, G. F.** and R. P. Kruzlock (1992) Heterosis for concentrations of dopamine, norepinephrine, their metabolites, and epinephrine in the chick hyperstriatum ventrale, hypothalamus and optic tectum. Behav. Genet. 22:381-398.
 19. **Barbato, G. F.** (1991) Genetic architecture of growth curve parameters in chickens. Theor. Appl. Genet. 83:24-32.
 18. Sizemore, F. G. and **G. F. Barbato** (1991) Effects of monosodium glutamate on lines of chickens having different juvenile exponential growth rates. Life Sci. 49:1659-1665.
 17. Kruzlock, R. P. and **G. F. Barbato** (1991) Genotype differences in catecholamine concentrations in hypothalamus, intramedial hyperstriatum ventrale and optic tectum of newly hatched chicks. Neurochem. Res. 16:105-112.
 15. **Barbato, G. F.** (1990) A fast HPLC analysis of catecholamines and indoleamines in avian brain tissue. J. Liq. Chromatog. 13:2553-2560.
 14. **Barbato, G. F.** and R. F. Wideman (1990) Chicken hypotensive peptide: Purification and characterization. Biochem. Biophys. Res. Comm. 169:916-920.
 13. Marks-Kaufman, R., M. W. Hamm and **G. F. Barbato** (1989) The effects of dietary sucrose on opiate receptor binding in lean and obese mice. J. Amer. Coll. Nutr. 8:9-14.
 12. Komisaruk, B.R., C. Banas, S. Heller, B. Whipple, **G. F. Barbato** and F. Jordan (1989) Analgesia produced by VIP in rats. Regulatory Peptides 26 (2): 165-165
 11. **Barbato, G. F.**, F. Jordan and B. R. Komisaruk (1988) The *in vitro* proteolytic processing of vasoactive intestinal polypeptide (VIP) by rat spinal cord homogenate. Ann. N.Y. Acad. Sci. 527:582-584.

Intellectual Property:

(US patents only, each has 3 International patents associated (Europe, India, Japan), assuring worldwide protection)

1. Hammerstedt, R. H., **G. F. Barbato** and P. G. Cramer. Process for evaluating fertility of spermatozoa samples. U. S. Patent Number: 5,763,206 (Date: 6/9/1998).
2. Hammerstedt, R. H., P. G. Cramer and **G. F. Barbato**. Molecule involved in binding of sperm to egg surfaces and procedures for use of this molecule to enhance or decrease potential fertility. Patent Number: 5,910,568 (Date: 6/8/1999).
3. Hammerstedt, R. H., P. G. Cramer and **G. F. Barbato**. Molecule involved in binding of sperm to egg surfaces and procedures for use of this molecule to enhance or decrease potential fertility. Patent Number: 6,004,586 (Date: 12/21/1999).
4. Hammerstedt, R. H., P. G. Cramer and **G. F. Barbato**. Molecule involved in binding of sperm to egg surfaces and procedures for use of this molecule to enhance or decrease potential fertility. Patent Number: 6,103,483 (Date: 8/15/2000)
5. Hammerstedt, R. H., P. G. Cramer and **G. F. Barbato**. Molecule involved in binding of sperm to egg surfaces and procedures for use of this molecule to enhance or decrease potential fertility. Patent Number: RE39,034 (Date: 3/21/2006).

Patents Pending

1. Barbato, G. F. and A. MacDonald. Reversible inhibition of sperm receptor synthesis for contraception. U.S. Patent Application Serial Nos. 60/913,034; Full Patent Application Submitted 08/2007: PCT/US2007/017316; REVERSIBLE INHIBITION OF SPERM RECEPTOR SYNTHESIS FOR CONTRACEPTION