FACULTY VITAE

William E. Plummer, Professor
Animal Science Department
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Education

North Carolina State University	Animal Science	BS, 1970
North Carolina State University	Animal Science-Reproduction	MS, 1976
Utah State University	Animal Science-Reproduction	PhD, 1979

Teaching

1979 to Date- Full time teaching at Cal Poly State University
- Have taught 24 different classes at Cal Poly- Currently teaching 3- primarily ASci 351- Reproductive Physiology of Farm Animals and ASci 463- Undergraduate Seminar, plus ASci 220 Lab
- have overseen 125 Senior Projects since Fall 2003
- currently advise 63 undergraduates
- have overseen two graduate students

Professional Experience

1980 to Date- Reproductive evaluations of bulls for Cal Poly Bull Test
1980 to Date- Reproductive evaluations of bulls and rams for Cal Poly Animal Science
1997 to Date- Member of the Center For Equine Health (UC-Davis Vet School) research proposal review committee
1999, 2003- Member of the UC-Davis Vet School Admissions Advisory Committee
2003, 2004, 2006, 2007- Attended Society for the Study of Reproduction national meetings

Certification

1995- Date -Charter Diplomate- American College of Animal Physiology-Professional Animal Scientist

Presentations

2003- Presented "Does Platelet Activating Factor exist in Swine" to the California Pork Producers Association, Merced, CA

Grants

CSU- Agriculture Research Initiative
2000- $29,400 -Analysis of Platelet Activating Factor in the gravid reproductive tracts of swine
2001- $79,000- Efficacy of adding platelet activating factor (PAF) to extended semen for AI to enhance conception rates
2002- $328,000- Mammalian embryo sexing via micro-manipulation and the FISH chromosome staining technique. In collaboration with Ms. Debbie Beckett
2004- $58,285 -Does the appearance of specific proteins in the male reproductive system have a relationship in assessing sperm quality? Sponsored two graduate students-

Samantha Hollingshead and Melodee Heidmiller
2007- $80,000- Quantification of the relationship between stallion fertility, ubiquitin and the Spermadhesin HSP-7-Not funded
2008- $132,000- How sexed-semen characteristics affect fertilization rate. In collaboration with Ms. Debbie Beckett

US Department of Education
2008- $143,449- How Sexed-Semen Characteristics Affect Fertilization Rate

Center for Equine Health- UC Davis
2005- $13,467- Differential expression of the sperm proteins PAFr and ubiquitin indicates fertility levels in stallions
2007- $6,400 - Quantification of the spermadhesin HSP-7 as found on stallion spermatozoa in relation to conception -Not funded

The Illinois Equine Industry Research and Promotion Board
2007- $5,250- The concentration of sperm surface proteins and their effects on oocyte binding as it relates to fertility estimation
US Department of Agriculture
2006- $72,300 grant- Qualities of sperm surface proteins can be utilized as markers for stallion fertility levels- Not funded

Publications
Refereed
W Yang, JR Diehl, M Yerle, JJ Ford, RK Christenson, WE Roudebush, **WE Plummer**. Chromosomal location, structure and temporal expression of the platelet-activating factor receptor (PAFr) gene in porcine endometrium and embryos relative to estrogen receptor α gene expression. Mole Repro Dev 2002 64(1):4-12

P Sutovsky, **W Plummer**, K Baska, K Peterman, J Diehl, M Sutovsky. Relative Levels of Semen Platelet Activating Factor-Receptor (PAFr) and Ubiquitin in Yearling Bulls with High Content of Semen White Blood Cells: Implications for Breeding Soundness Evaluation. J of Androl 2007 28:92-108

Abstracts
Plummer WE. Livestock reproductive anatomy on a compact disk. Society for the Study of Reproduction (annual meetings, Spokane, WA July 1999)
W Yang, JR Diehl, M Yerle, JJ Ford, RK Christenson, WE Roudebush, **WE Plummer**. Organization and chromosomal location of porcine platelet-activating factor receptor (PAFR), gene and temporal expression of PAFR, and estrogen receptor (ER) genes in pig reproductive tissues. Society for the Study of Reproduction (annual meetings, Baltimore, MD, July 2002)
Plummer WE, JR Diehl, K Peterman, J Mook. Results of adding platelet activating factor (PAF) to boar semen prior to AI on litter productivity of sows and gilts. Society for the Study of Reproduction (annual meetings, Vancouver, BC August 2004)

J Mook, W Bridges, J Morris, **W Plummer**, J Diehl. Two possible indicators of fertility, platelet activating factor receptor (PAFr) and ubiquitin, and their relationship to standard motility parameters determined visually and with two computer-assisted semen analyzer (CASA) systems. Society for the Study of Reproduction (annual meetings, Omaha, NE August 2006)

S. N. Hollingshead, **B. Plummer**, J. Skaife, S. Meyers, P. Sutovsky. How the differential expression of sperm related protein ubiquitin relates to sperm abnormalities and fertility in stallions. Society for the Study of Reproduction (annual meetings, Omaha, NE August 2006)

J Mook, W Bridges, **W Plummer**, J Diehl. Results of adding platelet activating factor (PAF) to low and high fertility boar semen prior to AI on litter productivity of gilts synchronized with MATRIX. Society for the Study of Reproduction (annual meetings, Omaha, NE August 2006)

Melodee Heidmiller, **Bill Plummer**, Miriam Sutovsky, Peter Sutovsky. Relationship of sperm ubiquitin levels with semen quality in stallions and conception rates in mares. Society for the Study of Reproduction meetings, (annual meetings, San Antonio, TX ,July 2007

Manuscript

J Mook, W Bridges, **W Plummer**, J Diehl. Bull semen motility parameters determined visually and on two different computer-assisted semen analyzers. March 2008

Memberships

1978 to Date- Member American Society of Animal Science (ASAS)
1987 to Date- Member Society for the Study of Reproduction (SSR)
1990 to Date- Member American Registry of Professional Animal Scientists (ARPAS)
2007 to Date- Member International Embryo Transfer Society (IETS)
1986 to Date- Member Council for Agriculture Science and Technology
1979 to 2006- Member California Agriculture Teachers Association
1992 to 2006- Member National Association of Colleges and Teachers of Agriculture
1987 to 1994- Member American Fertility Society
1990 to 1995- Member Society of Theriogenology

Appointments

1999, 2003- Member of the UC-Davis Vet School Admissions Advisory Committee
1997 to Date- Member of the Center for Equine Health (UC-Davis Vet School) Scientific Review committee
1988- 2004- Animal Science representative to the California State University Program for Education and Research in Biotechnology (CSUPERB)

Committees

University

2006 to Date- Chairman of the Research and Professional Development Committee for the Academic Senate
2007 to Date- Member of the Cal Poly Strategic Plan Working Group on Graduate Education
2006 to Date- Intellectual Property Review
2008 to Date- Conflict of Interest in Research

Other Activities

Director of the Lab Animal Vivarium for the Dean of Research which leads to active interaction with other departments.
Advisor to Vet Science club
Advisor to Alpha Zeta- a Professional Agricultural Fraternity