### 2015 Department Dairy Science Publications and Scholarship

#### Dairy Science Faculty Summary

<table>
<thead>
<tr>
<th>Faculty Member</th>
<th>Rank</th>
<th>Hire Date</th>
</tr>
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<tbody>
<tr>
<td>Cockrum, R.</td>
<td>Assistant Professor (AY)</td>
<td>Jan, 2013</td>
</tr>
<tr>
<td>Corl, B. A.</td>
<td>Associate Professor (AY)</td>
<td>Aug, 2005</td>
</tr>
<tr>
<td>Daniels, K.</td>
<td>Assistant Professor (AY)</td>
<td>Aug, 2014</td>
</tr>
<tr>
<td>Ferreira, G.</td>
<td>Assistant Professor (AY)</td>
<td>Aug, 2013</td>
</tr>
<tr>
<td>Hanigan, M. D.</td>
<td>Lincicome Professor of Dairy Science (AY)</td>
<td>Aug, 2005</td>
</tr>
<tr>
<td>James, R. E.</td>
<td>Professor (CY)</td>
<td>Aug, 1980</td>
</tr>
<tr>
<td>Kanevsky, I</td>
<td>Associate Professor (AY)</td>
<td>Aug, 2006</td>
</tr>
<tr>
<td>Petersson-Wolfe, C. S.</td>
<td>Associate Professor (CY)</td>
<td>Aug, 2006</td>
</tr>
<tr>
<td>Winston, D. R.</td>
<td>Lecturer (CY)</td>
<td>July, 1998</td>
</tr>
</tbody>
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#### Faculty, Student and Staff Awards and Honors – 2015

- **Hardin, Kaitlyn** – 1st Place Award, Oral Presentation, MS division Southern ADSA Annual Meeting, Orlando, FL.
  - Major Professor - B. A. Corl

- **Beaudry, Kirsten** – 1st Place Award, Poster Presentation, MS division, National ADSA Annual meeting, Orlando, FLA
  - Major Professor - R. M. Akers

- **Cayford, E. L.** – Undergraduate 1st Place Original Research Paper Contest, Southern ADSA Annual Meeting
  - Research Advisor – G. Ferreira
• **Cayford, E. L.** – Undergraduate 1st Place Original Research Paper Contest, National ADSA, Orlando, FLA.
  o Research Advisor – G. Ferreira

• **Teets, C. L.** – VT Staff Award for Outstanding Laboratory Performance
  o Supervisor – G. Ferreira

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**Advanced Degree Graduates – 2015**

(4 MS and 2 Ph.D.)

• **Beaudry, Kirsten** – MS, June 2015 (R. M. Akers, Major Professor)
  o **Thesis Title:** Innate Immune Cells may be involved in Prepubertal Bovine Mammary Development.

• **Dietrich, Alyssa** – MS, June 2015 (R. E James, Major Professor)
  o **Thesis Title:** Management, Sanitation, and Accuracy of Automated Calf Feeders.

• **Hardin, D. Kaitlyn** – MS, July 2015 (B. A. Corl, Major Professor)
  o **Thesis Title:** Local Regulation Increased Milk yield due to Early Lactation Increased Milking Frequency.

• **Littier, Heather** – MS, July 2015 (K. Knowlton, Major Professor)
  o **Antibiotic Resistance Gene Abundance in Feces of Calves Fed Pirlimycin-dosed Whole Milk.**

• **Feng, Xin** – Ph.D., May 2015 (K. Knowlton, Major Professor)
  o **Dissertation Title:** In vivo and modeling approaches to improve prediction of P availability in ruminants.

• **Ghimire, Sandip** – Ph.D., September 2015 (M. Hanigan, Major Professor)
  o **Dissertation Title:** Volatile fatty acid production in ruminants.
2015 - Refereed Journal Articles (n = 22)

Boldface indicated DASC faculty member, 1Indicates DASC graduate student, 2Indicates undergraduate student, 3Post Doc or Visiting Scientist, 4Staff.


Book Chapters (4)


2015 - Scientific Abstracts – Posters and Oral Sessions (n = 48)


• Beaudry¹, K. L., C. L. M. Parsons⁴, A. J. Geiger¹, S. E. Ellis³ and R. M. Akers. 2015. Innate immune cells may be involved in bovine mammary development. J. Dairy Sci. 98: (Suppl. 2, Abstract M131, Page 53).

• Beaudry¹, K. L, C. L. M. Parsons, A.J. Geiger, S.E. Ellis and R. M. Akers. 2015 Eosinophils and Mast cells in the developing bovine mammary gland. 31st Annual Graduate Research Symposium, Graduate Life Center, Virginia Tech, Blacksburg, VA.


• Chen¹, L., A. Lengi⁴, and B. Corl. 2015. Trans-10, cis-12 CLA regulates SREBP1 activation in bovine mammary epithelial cells through proteasomal degradation of INSIG 1. J. Dairy Sci. 98: (Suppl 2, abstract 820).


• Geiger, A.J., C.L.M. Parsons, and R. M. Akers. Enhanced pre-weaning nutrition increases mammary gland development in Holstein heifer calves. 31st Annual Graduate Research Symposium, Graduate Life Center, Virginia Tech, Blacksburg, VA.


• Meese, E., T. Yohe¹, H. Tucker¹, and K. Daniels. 2015. Rumen epithelial gene expression in response to oral NaHCO₃ in Holstein bull calves, The Ohio State College of Food, Agriculture and Environmental Sciences Undergraduate Research Forum, Columbus, OH.


• Ray³, P., K. Knowlton, C. Shang and K. Xia. 2015. Fecal and urinary elimination kinetics of cephalosporin and lincosamide antibiotics in dairy cows following intramammary infusion: Application of SPE clean-up and UPLCMS/MS quantitation approach. 249th American Chemical Society National Meeting, Denver CO, March 22-26th.


2015 Extension Publications (n = 1)


2015 - Conference Proceedings/Presentations (n = 10)


Major Invited International Talks (n = 13)


- **Hanigan, M.** 2015. Modeling Animal Metabolism. Sandong Agricultural University, Tia’an City, China. June 7-12.


- **Hanigan, M.** and J. Castro Marquez³. 2015. Mammary acid metabolism in the lactating cow. Beijing Agricultural University, Beijing, China, June 19th.


- **James, R.** 2015. Training of students: Real-world experience on farm, in extension and industry. Annual meeting ADSA, Orlando Fla, invited symposium speaker.


- **James, R.** 2015. Calves, Heifers and Dry Cow Management: Combining Research and the Farm. Annual Zenrakuren Educational Seminars. Multiple presentations Kumamoto, Okayama, Nagoya, Sendai, Obihiro, and Tokyo, Japan. February. In country for 17 days, multiple farm visits, presentations published in a 150 page program.


2015 - Popular Press Articles (n = 17)

• **Ferreira, G.**, 2015. Should winter crops be considered cover crops in dairy farming systems? DASC-47NP, Dairy Pipeline 36: (2), VCE, DASC-47NP.

• **Geiger, A.** 2015. Making a smooth transition. DASC-52 NP, Dairy Pipeline 36: (5).

• **James, R.** 2015. Your clients want to feed waste milk to their calves? Bovine Veterinarian July/August, Pages 22-23.


• **James, R.** 2015. Is unsaleable milk good enough for your calves? Hoard’s May 10th, Page 335.

• **James, R.** 2015. Don’t be cheap with your calves! DASC-50 NP, Dairy Pipeline. 36: (4).

• **James, R.** 2015. What does you calf housing smell like? DASC-52NP, Dairy Pipeline 36: (5).

• **James, R.** 2015. Simple strategies to reduce the negative impacts of hot weather. DASC-54NP, Dairy Pipeline 36: (6).

• **James, R.** 2015. Making it pay! DASC-58NP, Dairy Pipeline 36: (7).


• **Petersson-Wolfe, C. S.** 2015. Every second counts. SQMI Quarterly Newsletter Dairy Pipeline (October).


• **Petersson-Wolfe, C. S.** 2015. Prevention is a key when dealing with mastitis. DASC-54NP, Dairy Pipeline 36: (6).

- **Winston, D.** 2015. Culling practices can tell a story. DASC-45NP, Dairy Pipeline, 36: (1).

- **Winston, D.** 2015. Cow mortality data can provide useful management information. DASC-59NP, Dairy Pipeline 36 (8).

**2015 - Talks, Presentations, Workshops, Short Courses and Seminars (n = 41)**

- **Daniels, K.** 2015. Enhancing rumen development and growth in dairy calves through the use of a Megasphaera elsdenii probiotic supplement, VA Ag Council, Staunton, VA, March.

- **Daniels, K.** 2015. Calf research overview at Virginia Tech, Field Day for Virginia State Dairymen’s Board of Directors, August.


- **Ferreira, G.** 2015. Yield and nutritional quality of winter crops for forage. Franklin County, Grain and Forage Field Day, August 11th.


- **Ferreira, G.** 2015. Holistic management and risk assessment workshops for dairy farmers in the southern region Amelia, Franklin, Rockingham and Smith counties, November.

- **Ferreira, G.** 2015. Peer-farmers discussion group – Income over feed costs. August 7th.


- **James, R.** 2015. What dairymen can learn BQA. Area Dairy Conference, Marion VA.


• **James, R.** 2015. Dairy opportunities in Virginia. Fauquier County Farm Bureau, Annual Meeting, September 22nd.

• **James, R.** 2015. Group housing and feeding systems: Opportunities and challenges. Area Dairy Conference multiple VA locations Amelia, Brandy Station, Harrisonburg, Rocky Mount, Marion.

• **James, R.** 2015. New technologies Panel Discussion, Dairy Calf and Heifer Association Annual Conference, Madison, WI, April 1st.

• **James, R.** 2015. Stepping up feeding and growing healthier calves. GPS Dairy Leaders Forum, Mystic Lake, MN, November.

• **James, R.** 2015. Water Quality for calves. GPS Dairy Leaders Forum, Mystic Lake, MN, November.

• **James, R.** 2015. Automatic calf feeders: What have we learned? Pennsylvania Dairy Nutrition Workshop, Grantville, PA.

• **James, R.** 2015. Group feeding with autofeeders. Organized and moderated panel of three speakers. Western Dairy Management Conference, Reno, NV.

• **Petersson-Wolfe, C.** 2015. Understanding the Importance of Milk Culturing and Learning how to Culture on-farm. Industry Presentations, January and May.


• **Petersson-Wolfe, C.** 2015. Area Dairy Conference Presentations, multiple VA locations Amelia, Brandy Station, Harrisonburg, Rocky Mount, Marion.

• **Winston, D.** 2015. State 40H Dairy Quiz Bowl, Broadway, VA, March 7th.


• **Winston, D.** 2015. What can be Learned from Survival Analysis?, Area Dairy Conferences, Multiple VA locations, Dayton, VA., Culpeper, Rock Mount, VA and Marion, VA. March 9, 10, 11, 12th.

• **Winston, D.** 2015. A Day in the Life of a Dairy Cow at the New Virginia Tech Dairy Center, Montgomery County 4-H Livestock Club, Blacksburg, VA, September 15th.

• **Winston, D.** 2015. Dairy Technology, Virginia Agricultural Commodity Tour, City of Richmond 4_Hers, Blacksburg and Dublin, VA, October 7th.


• **Winston, D.** 2015. Dairy Youth Programs, Dairy Science Advisory Board, Blacksburg VA, November 18th.


2015 – Webinars (n = 3)


• **Knowlton, K.** 2015. Online engagement on contentious issues in dairying: the case of therapeutic use of antibiotics.

Publications listed after this point have 2016 publication dates, are in press, accepted, or under review.

**Refereed Journal Articles**


Tucker\(^1\), H. L. M., C. L. M. Parsons\(^4\), S. E. Ellis\(^3\) and **R. M. Akers**. 2016. Tamoxifen impairs prepubertal mammary development and alters expression of estrogen receptor α (ESR1) and progesterone receptors (PGR). *Domestic Anim. Endo.* 54: 1-11.


**Extension Publications**


Tholen\(^1\), A. G. Jones, and **C. S. Petersson-Wolfe**. Milking practices to assure milk quality and prevent mastitis. *VCE* (in press).

**Book Chapters**
