

# Professional Resume of Accomplishments

*Howard David Tyler*

College of Agriculture and Life Sciences  
Iowa State University

## DEGREES EARNED

<b>Degree</b>	<b>Institution</b>	<b>Date</b>
Ph.D.	North Carolina State University <b>Majors:</b> Nutrition and Physiology <b>Minor:</b> Animal Science <b>Major Professors:</b> Harold Ramsey and Ian Longmuir <b>Dissertation Title:</b> Regulation of Small Intestinal Development in the Perinatal Period in Calves and Piglets	11/88 to 7/91
M.S.	North Carolina State University <b>Major:</b> Nutrition <b>Minor:</b> Biochemistry <b>Major Professor:</b> Harold Ramsey <b>Dissertation Title:</b> Effect of Hypoxia on Cessation of Small Intestinal Transport of Immunoglobulins in Newborn Calves	8/86 to 10/88
B.S.	Illinois State University <b>Majors:</b> Agricultural Science and Nutritional Science	8/78 to 12/82

## SUMMARY OF PROFESSIONAL EXPERIENCES

<b>Position</b>	<b>Employer</b>	<b>Dates</b>
Assistant Dean for Undergraduate and Graduate Student Success and Graduate Programs	Iowa State University	6/16 to present
Full Professor of Animal Science	Iowa State University	7/13 to present
Associate Professor of Animal Science	Iowa State University	7/97 to 6/13
Assistant Professor of Animal Science	Iowa State University	8/91 to 6/97
Graduate Research Assistant	North Carolina State University	8/86 to 7/91
Farm Manager	Lloyd's Dairy Farm; Efland, North Carolina	6/84 to 7/86

Dairy Facility Superintendent	Middle Tennessee State University; Murfreesboro	12/82 to 6/84
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## **AWARDS AND HONORS**

Cardinal Key Senior Honorary Faculty Membership, 2022  
 Corly Brooke ISU Learning Community Advocate Award, 2019  
 ISU Dairy Science Club Honorary Member, 2018  
 ISU Learning Community Champion Award, 2016  
 ISU Academic Advising Impact Award, 2016  
 ISU Women in Science and Engineering Program Champion, 2016  
 ISU MapWorks Champion of Student Success, 2014 (x2)  
 College of Agriculture and Life Sciences Learning Communities Coordinator Award, 2014  
 ADSA Land O'Lakes, Purina Feed LLC Teaching Award in Dairy Production, 2012  
 ISU Multicultural Student Affairs Director's Award, 2012  
 Wilbur L. Layton Faculty Recognition Award, ISU Division of Student Affairs, 2011  
 College of Agriculture and Life Sciences Louis Thompson Advising Academy, 2011  
 College of Agriculture Outstanding Service in Student Club Advising, 2007  
 College of Agriculture Outstanding Service in Student Recruitment and Retention Award, 2007  
 ISU Award for Excellence in Academic Advising, 2006  
 Excellence in Honors Mentoring and Advising, 2005  
 Exceptional Support Recognition - 2002 Student Scholars and Leaders Recognition Ceremony  
 VEISHEA Faculty of the Year Nominee, 2002  
 Block and Bridle Honorary Member, 2001  
 Exceptional Support Recognition - 2001 Student Scholars and Leaders Recognition Ceremony  
 Advisor Hall of Fame (Student Activities Center), 1999  
 College of Agriculture Outstanding Advisor Award, 1999  
 VEISHEA Faculty of the Year Nominee, 1998  
 Midwest ASAS Outstanding Young Teacher Award, 1997  
 Exceptional Support Recognition - 1997 Student Scholars and Leaders Recognition Ceremony  
 National Science Foundation Foreign Travel Award (Curacao), 1991  
 NCSU Outstanding Graduate Teaching Assistant 1991  
 NCSU Outstanding Graduate Teaching Assistant 1990  
 North Carolina Institute of Nutrition Fellow 1989-1990  
 American Institute of Nutrition Pre-Doctoral Fellowship 1988  
 National Science Foundation Fellowship Honorable Mention 1988  
 NCSU Outstanding Graduate Teaching Assistant 1988

## **ADMINISTRATION**

### **Summary**

In his role as Assistant Dean for Undergraduate and Graduate Student Success and Graduate Programs, Dr. Tyler oversees 6 full-time and 2 part-time faculty and staff, 6 graduate students, and 5 undergraduate students with a total budget (salaries, operating budget and foundation accounts) exceeding \$1,500,000 for 2022. This office serves to support CALS departments, faculty and staff to better recruit, retain and graduate our diverse student population of over 3,700 undergraduate and 450 graduate students. In addition, this office is responsible for developing and maintaining a portfolio of college-level student support initiatives designed to enhance student success from onboarding through graduation.

During his 6 years in this role, Dr. Tyler has developed several initiatives to improve efficiency of operations, enhance student success, and increase total net tuition revenue for the college. These initiatives have been successful based on all of those indicators of success. **Four-year graduation rates have risen to 70% during that period, while the average 4-year graduation rate for all other colleges at ISU remains below 50%.**

**Dr. Tyler has worked to enhance the success of high-risk students. Achievement gaps across all student demographics were identified by looking at within-university, within-college, and within-major retention and graduation rates for all students entering our college.** These data were shared at several college-wide Retention Symposia, which raised faculty and staff awareness. In addition, it led to the development of several department-level programs designed to address their specific issues.

Dr. Tyler developed and coordinated a series of Dean's Forums starting in 2017. These listening sessions allow students in marginalized populations based on our identified and perceived achievement gaps (multicultural students, LGBTQIA+ students, students experiencing barriers due to extenuating circumstances, etc.) a venue to share their concerns with the Dean's Leadership Team. **President Wintersteen's response to the initial meetings is here: <https://www.diversity.cals.iastate.edu/message-diversity-and-inclusion-cals-dean-wintersteen>.** These sessions have not only increased awareness of student issues within the Dean's team, they have led to development of educational outreach efforts to departmental leadership and establishment of Diversity and Inclusion committees at the department level to address the concerns raised. For example, substantive changes were implemented to improve inclusion of our minoritized students in laboratory classes across the college. Intentional outreach efforts now occur every semester to promote inclusive practices and remind faculty of their obligations regarding student accommodations.

In addition, a Multicultural Peer Mentor program (FOCUS – Fostering Opportunity through Collaboration, Unity, and Scholarship) was initially developed and led by Dr. Tyler, and this program is still functional. This program paired incoming multicultural students with upperclass multicultural mentors. Matches were made based on background, race/ethnicity, major and career goals; this allowed the mentors to better assist our new students in their transition to a predominantly white institution. **The program has quadrupled in size since its inception.**

In 2018, Dr. Tyler was provided a 3-year internal grant of 500,000 to hire the first college-level Retention Coordinator at the university. This position was responsible for the development of the SMART Steps program. Initially, this program was designed to provide structure, accountability, and academic support to students that were slated for dismissal. **Students enrolled in this program performed at nearly a full grade point higher than their counterparts that were not enrolled, and the program has been**

**expanded to include other high-risk students.** Four additional graduate students were hired to allow program expansion, and ultimately a full-time SMART Steps coordinator was hired and the program was expanded to include incoming students that have been identified as academically at-risk (PRO Steps).

In 2019, two Student Support Advocate positions were created and graduate students were hired to fill these positions. These positions were responsible for developing a coordinated care network for students experiencing financial, medical, or mental health crises. They maintain a database of campus and community resources available to support these students as well as maintaining relationships with the campus and community providers. They are available to assist students in connecting to these resources to ensure a seamless transition to a supported status. This program is now led by a full-time staff person. The CALS Student Support Advocate has primary responsibility for streamlining the processes involved in students seeking assistance for financial, medical or mental health issues on campus and within our community and providing emergency funding that supports over 100 students per year.

Emergency/completion grant funding has increased from \$7,000 in the 2016-2017 AY to over \$250,000. The current median level of support is slightly over \$2,500 per student. **Over 2/3 of supported students have either graduated or have been retained as currently enrolled students working towards their degree.**

Dr. Tyler also developed the CALS Completion Program, targeting students that left Iowa State in the last 7 years within one semester of graduation, and near or above a 2.0 GPA. A high percentage of the identified students have either completed their degree programs or are making progress towards that goal. Over 25 students have graduated as a direct result of this program.

Communication strategies have been developed to ensure that faculty, staff, and students within the college are fully informed regarding the programs and the data described above. The goal is to enhance the identification of students needing assistance as well as improve the assistance provided at the faculty/staff level. **Approximately 1000 currently enrolled students visited our office in 2019-2020 to receive special support/assistance, well over twice the number of students served in 2016.** These numbers dropped dramatically during the shift to remote learning caused by the pandemic, and have not yet returned back to pre-pandemic levels in 2021-22.

Dr. Tyler also obtained \$75,000 in internal funding to develop adviser training modules and workshops. Interactive modules that include videos of CALS students are in the development process in collaboration with the Brenton Center. Faculty and staff workshops have been presented on recognizing and referring students in crisis as well as inclusive advising and handling bias incidents. All workshops incorporated CALS students discussing their experiences and participating in role playing exercises with advisers. Feedback from workshop participants has been overwhelmingly positive.

The unique initiatives that were developed over the last six years and are described above has benefitted well over 100 students over the last 12 months, most of whom would have otherwise left the university. **This has translated into increased tuition revenue of between \$300,000 and \$500,000 in the last year alone.** Equally important, for the students that are assisted, these are life-changing programs that allow them to continue their education, complete their degrees, and have the opportunity to attain their career and life goals.

# UNDERGRADUATE/GRADUATE EDUCATION

## Summary

Dr. Tyler's teaching program has integrated novel approaches to enhance student learning and utilized both face-to-face and asynchronous distance learning techniques. **These programs have been recognized for innovative excellence locally, regionally and nationally with invited presentations, publications and awards.**

Dr. Tyler's classroom teaching responsibilities have included both undergraduate and graduate courses. **He has acted as primary instructor or course coordinator over a dozen different courses, actively developing the course materials for ten of these courses. He has developed three additional distance education courses.**

In the undergraduate courses that he has taught, he has consistently received very **high evaluations for teaching effectiveness from his students, averaging over 9.2 out of 10** (10 is the highest rating) over his career. **Senior exit interviews consistently rank him among the top classroom instructors in the department, with an average score of over 3.7 on a 4.0 scale**, while the departmental average has been less than 3.1 over the same time period.

**Dr. Tyler is also the co-author of a college-level textbook. The fourth edition of "Dairy Cattle Science" was published by Prentice-Hall in 2006.** Dr. Tyler had sole responsibility for revisions between the 3<sup>rd</sup> and 4<sup>th</sup> editions. The new edition of the book incorporates several novel concepts designed to improve usefulness in the classroom. **As a testament to the effectiveness of this approach, this textbook has been widely adopted nationwide by both community colleges and land-grant institutions; it is used in both sophomore-level and senior-level management classes. By 2008, yearly book sales were nearly 5-fold higher than the previous edition, with approximately 1/3 of all books sold internationally.**

**Dr. Tyler has been recognized by his peers with both regional and national awards for excellence in teaching.** He has been an invited speaker at several teaching-related conferences. In addition, Dr. Tyler, along with other "biotechnology-related" faculty, was interviewed for a National Public Radio program in 1998 ("The DNA Files: Plants, animals, and transgenics: A tomato by any other name") to discuss innovative inclusions of biotechnology topics in teaching materials.

Student evaluations from the Iowa State University Academic Advising Committee's university-wide assessment of advising ranked Dr. Tyler's effectiveness well above the average for all university advisors for literally every question asked. **Eighty-seven percent of his advisees rated his overall effectiveness as excellent; for all advisors across the university, an average of 45% of advisees rated them as excellent.** Dr. Tyler has been received numerous awards for advising and mentoring undergraduate students; these include awards recognizing excellence in academic advising, club advising, and mentoring of students in the Honors Program.

**Dr. Tyler developed numerous innovative approaches to enhancing both student recruitment and retention.** He was awarded grant support from several sources to develop an advisor selection program that allows students to be matched with an advisor based on their background, interests, and career goals. Dr. Tyler also manages the Learning Communities program for the department. **In addition, Dr. Tyler developed virtual learning communities for students prior to their first year at Iowa State.** These groups are currently the focus of a doctoral project by a Ph.D. student in the Department of Educational Leadership and Policy Studies on the innovative use of social media for virtual learning communities.

**During the eight-year period that Dr. Tyler led recruitment and retention activities, student enrollment in the in the Animal Science Department increased from 576 students in 2004 to well over 1000 students for 2012. Within-university retention rate increased from 68% to 88% for first-year students during this same time frame.** For his efforts and excellence in this area, Dr. Tyler received the inaugural College of Agriculture and Life Sciences Recruitment and Retention Award.

**He has been successful in securing funding for his teaching, advising, and retention activities, with eleven successful proposals providing over \$150,000 in grant support.**

Dr. Tyler has acted as major professor or co-major professor for 20 Masters and 5 Ph.D. students. **His graduate students have been highly recruited for positions in both industry and academia.** He has served on 39 other graduate student committees.

### **Primary Instructor**

**Life After Birth: Comparative Neonatal Survival and Development (HON 321K) – (1-0) Cr. 1.** Honors seminar exploring comparative aspects of neonatal development. **Fall, 2019, 17 students enrolled.**

**Fetal Development (HON 321K) – (1-0) Cr. 1.** Honors seminar exploring comparative aspects of fetal and placental development. **Fall, 2018, 15 students enrolled.**

**Orientation in Agriculture (AgEds 110C) – (2-0) Cr. 1.** This course is an orientation to the university and to the majors in the College of Agriculture and Life Sciences. Professional goal setting, portfolio development, and development of interpersonal skills in the context of pursuing a career in agriculture or the associated life sciences. **Taught Fall, 2016-18, primary instructor. Approximately 15 students enrolled.**

**Dairy Cattle Systems Management (AnS 434) – (3-0) Cr. 3.** This course covers decisions facing the administrator of a dairy enterprise. Financial and production goal identification, problem clarification, and resource allocation to manage the dairy enterprise. **Taught Fall and Spring, 1991-2003, Fall 2004-2016 – Primary instructor. Approximately 55 students per term.**

**Orientation in Animal Science and ISU (AnS 110) – (2-0) Cr. 1.** This course is an orientation to the university and Department of Animal Science. Challenges and opportunities available to the professional animal agriculturalist. Professional goal setting, portfolio development, and development of interpersonal skills in the context of pursuing a career in animal science. **Fall, 1992-1999 – primary instructor for one of three sections. Approximately 15 students per term. Fall 2011 -**

**co-instructor with Doug Kenealy. Approximately 300 students enrolled. Fall 2012-2016 – Primary instructor. Approximately 350 students in fall, 25 in spring.**

**Perinatology (AnS 537) – (2-0) Cr. 2.** This course focuses on the physiological adaptations of the neonate during the birth process. Circulatory and pulmonary transitions, metabolic and endocrine shifts, and changes associated with all other major physiological systems. Challenges and opportunities associated with fetal and neonatal programming. **Fall, 1992, 1994, Spring, 1999, 2002, and 2007-2016, 2018 – primary instructor. Approximately 10 students per term.**

**Animal Nutrition (AnS 319) – (2-2) Cr. 3.** This course covers fundamentals of nutrition, essential nutritive requirements of domestic animals, sources of nutrients, composition and identification of feeds, diet formulation and feeding recommendations. **Spring, 2005-2008, Fall and Spring, 2008-2012 – primary instructor. Approximately 115 students enrolled.**

**Nutrition of Exotic Animals (AnS 493J) - (2-0) Cr. 1.** This workshop utilized a case study format for advanced nutrition students to address clinical nutrition issues facing the nutritionist at Henry Doorly Zoo in Omaha, Nebraska. **Fall, 2008 - co-instructor with Kristin Hard - 10 students enrolled.**

**Livestock Feeding Program Design (AnS 320) – (0-4) Cr. 2.** This course covers advanced diet formulation and feeding recommendations. Evaluation of alternate feeding programs and diets in the context of case studies. **Fall, 2005-2006 – primary instructor. 21 students enrolled.**

**Animal Nutrition Seminar (AnS 603) - (1-0) Cr. 1.** This course involves a discussion of current literature; preparation and submission of abstracts. **Fall, 1991, 1994, 2002 – co-instructor with other faculty members. Approximately 30 students per term.**

**Dairy Cattle Science (AnS 235) – (1-3) 2 Cr.** This course covers the origin and development of breeds. Improvement and expansion programs. Comparison of types and performance. Influences affecting commercial use and adaptability of types and breeds. Marketing of dairy cattle and milk. **Fall, 1998 and 1999 – primary instructor. Approximately 25 students enrolled.**

**Lactation Biology (AnS 437) (changed course designation to AnS 337 in 1996) – (2-0) Cr. 2.** This course covers the structure, development and evolution of the mammary gland. Mammary metabolism, milk synthesis; neural and endocrine regulation of mammary function. Immune function and health of the mammary gland. **Spring, 1993-1999. Primary instructor and course coordinator. Approximately 15 students per term.**

**Preservation Plans for Endangered Species in Zoo Populations (HON 322U) – (1-0) 1 Cr.** This course was developed as an Honors Program seminar. It covered issues relative to captive populations of endangered species in zoos. **Spring, 1998 – primary instructor. 15 students enrolled.**

**Zoo Animal Nutrition (AnS 490B) – (2-2) 3 Cr.** This course covered nutritional requirements and feeding programs for wild animals in captivity. **Fall, 1996, primary instructor. 9 students enrolled.**

**Modern Views in Nutrition (AnS 680)** – (2-0) R Cr. This seminar series is developed by the members of the Nutritional Sciences Council. Current concepts in a specific area of nutrition fields are covered throughout the spring semester by a variety of guest speakers. **Spring 1995, speaker series coordinator. 35 students enrolled.**

**Nutrition Summer Lectureship (AnS 590/HDFS 590)** – (1-0) 1 Cr. This seminar series is developed by the members of the Nutritional Sciences Council with support from Wise Burroughs Lectureship funding. Each summer, a pre-eminent authority on an emerging area of nutritional importance is brought in for a one- or two-week lecture series. **Summer, 1994, lectureship coordinator. 40 students enrolled.**

**Dairy Cattle Palpation and Insemination (AnS 490B)** – (0-2) Cr. 1. This course was developed as a special course to develop specific reproductive skills for a group of interested students. Topics covered included semen handling, artificial insemination, rectal palpation of ovarian structures, and pregnancy diagnosis. **Summer, 1992 – co-instructor with Dr. Leo Timms. Nine students enrolled.**

#### **Guest Lecturer**

**Orientation in Animal Science and ISU (AnS 110)** – (1-0) Cr. R. This course is an orientation to the university and Department of Animal Science. Challenges and opportunities available to the professional animal agriculturalist. Professional goal setting, portfolio development, and development of interpersonal skills in the context of pursuing a career in animal science. **Fall, 2010 – Guest lecturer for transfer students (4 class sessions)**

**Digestive Physiology and Metabolism of Ruminants (AnS 519, 520)** - (2,2) Cr. 3. This course is a graduate-level course covering advanced concepts in ruminant nutrition, physiology, and metabolism. **Spring, 2008 –2016, 2018, 2022 - guest instructor for two lectures on neonatal digestive function and rumen development.**

**Survey of Animal Disciplines (AnS 501)** – (1-0) Cr. 1. This class is an orientation to departmental and graduate school policies and procedures. Discussion of programs of research and outreach in Animal Science. Issues impacting the animal industry. **Fall, 2003-2014. Guest lecturer, taught thesis-writing skills and interview tips. (Dr. Joe Sebranek, primary instructor). Approximately 20 students enrolled per term.**

**Lactation Biology (AnS 337)** – (2-0) Cr. 2. This course covers the structure, development and evolution of the mammary gland. Mammary metabolism, milk synthesis; neural and endocrine regulation of mammary function. Immune function and health of the mammary gland. **Spring 2000-2020, Dr. Tyler presented guest lectures on colostrogenesis and changes in milk constituents throughout lactation, as well as on the role of milk constituents in regulating neonatal metabolism, with Dr. Leo Timms as primary instructor. Approximately 70 students per term.**



- Dairy Cattle Science (AnS 235)** – (1-3) 2 Cr. This course covers the origin and development of breeds. Improvement and expansion programs. Comparison of types and performance. Influences affecting commercial use and adaptability of types and breeds. Marketing of dairy cattle and milk. **Fall 2000-present, Dr. Tyler presented guest lectures on calf and heifer development, with Dr. Lee Kilmer and Ms. Christen Jackson as primary instructors. Approximately 75 students per term.**
- Domestic Animal Physiology (AnS 214)** – (3-0) Cr. 3. This course serves as an introduction to anatomy and physiology of the neural, circulatory, respiratory, immune, endocrine, reproductive, and digestive systems of domestic animals. **Fall, 1998, 2001, 2002, 2004, 2007 guest lecturer in the areas of endocrinology, reproductive anatomy and physiology, and central nervous system anatomy and physiology. Approximately 80 students per term.**
- Issues Facing Animal Science (AnS 211)** – (0-2) Cr. 1. This class provides an overview of the factors that define contemporary ethical and scientifically based issues facing animal agriculture. Life skill development (including interactive skills, communication ability, organization, information gathering, and leadership skills) emphasized in the context of issues study. **Fall, 2004 - guest instructor for 3 weeks for Dr. Jim Reecy (primary instructor). Approximately 40 students enrolled.**
- Nutrition Research Techniques (AnS 490B)** – (0-2) 1 Cr. This course covered a variety of techniques associated with research in nutrition. Jugular blood sampling, fecal scoring and sampling, and tissue sampling techniques. Covered various laboratory assays, data collection and manipulation, and statistical analysis of research data. **Spring 1999 and 2000, 2002. Guest presenter, taught blood sampling techniques, some assays, and data handling. (Dr. Jim Quigley, primary instructor). Approximately 8 students per term.**
- Working with Animals (AnS 114L)** – (0-2) 1 Cr. This course serves as a hands-on introductory course in skills for proper care and management of domestic animals. Husbandry skills including health observation, animal movement, identification, management procedures, and environmental assessment are covered. **Fall, 1998-2001 - guest lecturer on the dairy industry. (Dr. Brad Skaar, primary instructor). Approximately 100 students enrolled each term (4 sections of 25 students each).**
- Dairy Nutrition Workshop (AnS 593L)** – (1-0) 1 Cr. This course was a 1-week winter term workshop that covered special topics in dairy nutrition. **Spring, 1997 and 2000, guest lecturer in the area of calf nutrition. (Dr. Leo Timms, primary instructor). Approximately 40 students per term.**
- Seminars in Biomedical Engineering (BME 501)** – (1-0) Cr. 1. This course served as an introduction to the field of Biomedical Engineering for new graduate students. Speakers introduce topics representing the wide array of research areas encompassed within this program. **Fall, 1992 and 1993. Guest lecturer on the development of novel laboratory equipment to assess oxygen consumption of resting and stimulated neutrophils. (Dr. Mary Helen Greer, primary instructor). Approximately 16 students per term.**
- Animal Nutrition (AnS 318)** – (3-0) Cr. 3. This course covers the principles of animal nutrition. Essential nutritive requirements of domestic animals and sources of nutrients. **Summer, 1991 – guest lecturer**

on the functions of and requirements for water-soluble vitamins. (Dr. M.D. Kenealy, primary instructor).

*At the College of Veterinary Medicine:*

**Introduction to Dairy Production Medicine (VDPAM 484)** - (15-20) Cr. 2. Two week introductory topics in dairy production medicine with emphasis on monitoring disease, disease prevention, and production economics. Fifteen hours recitation/discussion and 20 hours clinical experience per week. **Summer 2004-2016 - guest instructor for 2-3 hours each year on calf physiology and nutrition as it relates to health issues.**

**Introduction to Production Medicine (VDPAM 310)** - Cr. 2. The role of the veterinarian in the management of animal health and production in dairy and beef cattle herds, beef feedlots and swine herds. Provides veterinary students with a starting point to understand the principles and techniques that are the basis of food animal health management programs. **Fall, 2006 - guest instructor for dairy calf health and production issues.**

*At Northeast Iowa Community College:*

**D-Pike Program** - Internship program for veterinary students interested in becoming veterinary practitioners. This internship combines practical on-farm experience with classroom learning. **Summer 2007-2009 - guest lecture on parturition and management of assisted deliveries.**

**Advanced Dairy Business (AGS 337)** - Cr. 3. Designed for dairy managers to further develop their level of expertise. Covers 12 areas of importance to the dairy industry. **Spring 2007 - guest instructor on advanced calf and heifer management practices.**

*Cumulative Teaching Evaluations*

<b>Course Number</b>	<b>Course Title</b>	<b>Mean Instructor Effectiveness</b>
AnS 434	Dairy Systems Management	4.68/5
AnS 490B	Artificial Insemination	4.57/5
AnS 536	Perinatology	4.63/5
AnS 337	Lactation Biology	4.23/5
AnS 235	Dairy Cattle Performance	4.48/5
AnS 319	Animal Nutrition	4.30/5
AnS 320	Animal Feeding Programs	4.60/5
AnS 110	Orientation in Animal Science	4.09/5

*SOTL Books or Chapters in Books*

**H.D. Tyler** and M.E. Ensminger. 2006. Dairy Cattle Science. Fourth Edition. Prentice Hall, Upper Saddle River, NJ.

### *SOTL Abstracts*

- Robinson, A.L. and **H.D. Tyler**. 2016. A novel approach to adviser training for relational skills. *J. Anim. Sci* Vol. 94 (E-Suppl. 5)/*J. Dairy Sci.* Vol. 99 (E-Suppl. 1):839
- J.A. Sterle, **H.D. Tyler**, J.A. Daniel. 2016. Beyond veterinary school: Helping animal science students explore other career opportunities. *J. Anim. Sci.* 94 (E-Suppl. 5):858.
- J.A. Sterle and **H.D. Tyler**. 2016. Retaining urban students in animal science: The role of equine programs. *J. Anim. Sci.* 94 (E-Suppl. 5):396.
- J.A. Sterle and **H.D. Tyler**. 2016. The next generation of animal science students: Changing demographics dictate curriculum changes. *J. Anim. Sci.* 94(E-Suppl. 2):185.
- Robinson, A.L., H.A. Jennings, J.A. Sterle, C.L. Morris, K.J. Stalder, D.G. Acker and **H.D. Tyler**. 2015. Factors affecting first year academic success in a large animal science program. *J. Anim. Sci.* 93 (Suppl. 3):558
- Robinson, A.L., H.A. Jennings, J.A. Sterle, C.L. Morris, and **H.D. Tyler**. 2015. Changes in emotional intelligence scores following a peer mentor experience. *J. Anim. Sci.* 93 (Suppl. 3):558-559
- H.D. Tyler** and J.A. Sterle. 2013. Developing critical academic and social connections for incoming students prior to the first day of classes using a combination of innovative programs. *J. Anim. Sci.* Vol. 91, E-Suppl. 2/J:224.
- Tyler, H.D.**, and L.L. Timms. 1995. Industry involvement in a senior communications-intensive project. *J. Animal. Sci.* 73 (Suppl. 1):107
- Tyler, H.D.**, and L.L. Timms, L. Kilmer, and M. Faust. 1995. Promotion of problem-solving and critical thinking skills in a senior production course through dairy farm visits with extension specialists. *J. Animal Sci.* 73 (Suppl. 1):107

### *Invited Teaching/Advising Presentations*

- “Faculty Strategies for Supporting Student Mental Health” Three departmental faculty discussions (BBMB, EEOB, and SOC), November/December 2021
- “Pandemic Impacts on CALS Student Mental Health” Four college-wide faculty/staff forums, October 27-28, 2021
- “Overcoming Failure” to CALS SMART Steps coaches, April 7, 2021
- “Preparing for Success: Urban Multicultural Student Opportunities in Agriculture Programs at a PWI”, Miami-Dade Robert Morgan FFA Chapter, October 27, 2020
- “Changing the Culture in CALS”, LEAD-IT training discussion, February 25, 2019
- “Mentoring Multicultural Students: Program Expectations”, Multicultural Peer Mentors, February 19, 2019
- “Mentoring Multicultural Students: Enhancing Inclusion”, Multicultural Peer Mentors, March 5, 2019
- “Advising Students Through Adversity” Agriculture Education and Studies faculty workshop, March 12, 2019
- “College- and Program-Specific Achievement Gaps”, CALS Retention Symposium: From Data to Action”, March 25, 2019
- “Mentoring Multicultural Students: Implicit Bias and Surviving and Thriving in a PWI”, Multicultural Peer Mentors, March 26, 2019
- “Mentoring Multicultural Students: Student Issues”, Multicultural Peer Mentors, April 16, 2019
- “Mental Health Issues and CALS Advising” Louis Thompson CALS Academic Advising Academy, May 1, 2019

“Inspiring Practice: Destigmatizing Mental Health Issues”, ISU Learning Community Institute. May 13, 2019

“Deeper Dive: Destigmatizing Mental Health Issues”, ISU Learning Community Institute. May 13, 2019

“Closing the Achievement Gap: Strategies for Supporting Low-Income Students” ISU Financial Aid Mini-Conference. September 12, 2019

“Maximizing the Impact of Your First Advising Meeting: Strategies for Success” UAAC Fall Advising Summit. September 19, 2019

“Closing the Achievement Gap: Strategies for Supporting Low-Income Students” ISU Financial Aid Mini-Conference. September 12, 2019

“Inspiring Practice: Destigmatizing Mental Health Issues”, ISU Learning Community Institute. May 13, 2019

“Deeper Dive: Destigmatizing Mental Health Issues”, ISU Learning Community Institute. May 13, 2019

“Mental Health Issues and CALS Advising” Louis Thompson CALS Academic Advising Academy, May 1, 2019

“Mentoring Multicultural Students: Student Issues”, Multicultural Peer Mentors, April 16, 2019

“Mentoring Multicultural Students: Implicit Bias and Surviving and Thriving in a PWI”, Multicultural Peer Mentors, March 26, 2019

“College- and Program-Specific Achievement Gaps”, CALS Retention Symposium: From Data to Action”, March 25, 2019

“Changing the Culture in CALS”, LEAD-IT training discussion, February 25, 2019

“Advising Students Through Adversity” Agriculture Education and Studies faculty workshop, March 12, 2019

“Mental Health Issues and CALS Advising” Louis Thompson CALS Academic Advising Academy, May 1, 2019

“Inspiring Practice: Destigmatizing Mental Health Issues”, ISU Learning Community Institute. May 13, 2019

“Deeper Dive: Destigmatizing Mental Health Issues”, ISU Learning Community Institute. May 13, 2019

“Closing the Achievement Gap at Iowa State University: What Do We Know, What Have We Done, What Have We Learned”, University Innovation Alliance Inaugural Data Symposium, February 5, 2018

“New CALS Faculty/Instructor Adviser Training”, CALS New Faculty Orientation, November 17, 2017

“Student Issues: Recognition and Referrals”, CALS Adviser Training Workshop, August 27, 2017

“Peer Advising: Essential Information for Peer Mentors”, AnS Peer Mentors, February 10, 2016

“Assessment and Assistance Programs for At-Risk Students”, Tuskegee Faculty Informational Visit, February 24, 2016

“Workshop on Development of First-Year Programs for New Student Success”, Colorado State University Animal Science Department, Colorado Springs, March 8-9, 2016

“Leadership-Based Strengths and Emotional Intelligence Training”, AnS Peer Mentors, March 9, 2016

“Diversity and Inclusiveness Training”, AnS Peer Mentors, March 30, 2016

“New Student Issues: Recognition and Referral Options”, AnS Peer Mentors, April 13, 2016

“Strengths Training for Honors Program Leaders”, October 14, 2016

“Enhancing Learning Community Responsiveness to Student Issues: Using Your LC to Prevent Student Crises”, ISU 16<sup>th</sup> Annual Learning Communities Institute, May 15, 2015

“Development of an Advising Management System”, Spring Advising Summit: Matters of Advising: Spotlights on Success, April 27, 2015

“Development of a Workshop for Assisting Students in Crisis”, Spring Advising Summit: Matters of Advising: Spotlights on Success, April 27, 2015

“Student Issues: Recognition and Referrals”, ISU Adviser Training Workshop, April 20, 2015

- “Incorporating Emotional Intelligence into Learning Community Programming”, February 3, 2015
- “Emotional Intelligence as a Student Success Tool”, January 27, 2015
- “Student Issues: Recognition and Referrals”, ISU Adviser Training Workshop, October 3, 2014
- “Student Issues: Recognition and Referrals”, Invited Pre-Conference Workshop for Regional Meeting of the National Academic Advising Association, Altoona, IA, May, 2014
- “Student Issues: Recognition and Referrals”, University Academic Advising Committee Adviser Training Workshop, May 1, 2014
- “Student Issues: Recognition and Referrals”, University Academic Advising Committee Adviser Training Workshop, March 7, 2014
- “Student Issues: Recognition and Referrals”, College of Agriculture and Life Sciences Adviser Training Workshop, February 18, 2014
- “Student Issues: Recognition and Referrals”, College of Agriculture and Life Sciences Adviser Training Workshop, October 23, 2013
- “Beyond Social Media: A Retention Opportunity Hidden Behind a Facebook Mask”, ISU College of Agriculture and Life Sciences Brenton Center (Lunch and Learn Series), October 18, 2012.
- “A Web-Based Program for Matching Advisors and Advisees”, College of Agriculture and Life Sciences, Louis B. Thompson Advising Academy, April 25, 2012.
- “Building Strong Advisor-Advisee Relationships for Minority Student Success”, co-presented with Dr. Curt Youngs, 13<sup>th</sup> Annual Iowa State Conference on Race and Ethnicity, March 2, 2012.
- “Early College Credit Influence on Learning Communities”, 13th Annual Iowa State University Learning Communities Institute, May 10, 2011
- “Building Community Before Day One”, 13th Annual Iowa State University Learning Communities Institute, May 10, 2011
- “Establishing Programs to Create Early Social and Academic Connections to ISU”, Student Success Summit, Ames, Iowa, March 24, 2011
- Invited Panel Member for Undergraduate Education Symposium, “Enhancement of Student Learning Using Activities Outside the Classroom”. Midwest ADSA Section Annual Meeting. March 14, 2011
- “Creating Early Social and Academic Connections to Enhance Student Retention”, College of Agriculture and Life Sciences Academic Affairs, December 14, 2010
- “Plagiarism and Scientific Writing”, Meat Science Seminar Panel Discussion, January 29, 2008.
- “Teaching Production vs. Discipline Classes via Distance Education”, Asynchronous Learning Academy Meeting, Ames, Iowa, April 17, 2007.
- Invited Panel Member for Undergraduate/Graduate Education Symposium, “Scholarship of Teaching as Related to Promotion and Tenure”. ADSA, ASAS, CSAS Joint Annual Meeting. July 26, 2005
- “Cloning a Presentation: Audience-Specific Talks”, ISU Animal Nutrition Seminars, January 22, 2001
- “Teaching Tips from Outstanding Teaching Assistants: A Panel Discussion” Presented at the Teaching Effectiveness Workshop, Raleigh, North Carolina, August 25, 1988

## **Supervision of Graduate Students**

*As Major Professor or Co-Major Professor*

<b>Student</b>	<b>Degree (year)</b>	<b>Current Position</b>

Sushila Jane (Kapil) Nordone	M.S. (1994)	Director of Research Development, Nicholas School of the Environment, Duke University, Durham, North Carolina
Muhammad Abdullah (co-major with Dr. Jerry Young)	Ph.D. (1994)	Dean, University of Veterinary and Animal Sciences, Lahore, Pakistan
Dori Renee Bigner (co-major with Dr. Jesse Goff)	M.S. (1995)	Gastroenterologist, Avera McKennan Hospital and University Center, Sioux Falls, South Dakota
Gary Neil Douglas (co-major with Dr. Jerry Young)	M.S. (1995)	Associate Professor, Berea College, Kentucky
Katherine (Kamm) Strawn	M.S. (1996)	Veterinary Technical Assistant, Phoenix, Arizona
Randi Jill (Reinhart) Franzen	M.S. (1996)	Director of Food Safety and Quality, Alpine Roads, Ossian, Iowa
Rita (Brown) Gritzmacher	M.S. (1997)	Staff Veterinarian, Veterinary Emergency Clinic, Cheektowaga, New York
Carolyn Jean (Hayes) Hammer	M.S. (1998)	Professor, North Dakota State University, Fargo, North Dakota
Carolyn Jean (Hayes) Hammer (co-major with Dr. James Roth)	Ph.D. (2003)	Professor and Director of Equine Science Program, North Dakota State University, Fargo, North Dakota
Josie Ann (Booth) Coverdale	Ph.D. (2003)	Associate Professor, Texas A&M University, College Station, Texas - deceased
Sylvia (Wawrzyniak) Kehoe	M.S. (2003)	Professor, University of Wisconsin River Falls, River Falls, Wisconsin
Allison (Riddle) Bagley	M.S. (2003)	National Accounts Director, Streetmarc Advertising and Marketing, LLC, Swoope, Virginia
Jenice Jim	M.S. (2005)	Staff Veterinarian, VCA Antech, Farington, New Mexico
Mark Hagedorn	M.Ag. (2007)	University of Wisconsin County Extension Agent, Stevens Point, Wisconsin
Kristin (Hard) Robertson	M.S. (2008)	Clinical Development Associate, R3 Health, West Palm Beach, Florida
Maggie (DenBeste) Sprecher	M.S. (2009)	Global Resource Systems Academic Adviser, Iowa State University, Ames, Iowa
Patricia (Slater) Anderson (co-major with Dr. Brian Kerr)	M.S. (2009)	Bovine IVF Embryologist, TransOva Genetics, Sioux Center, Iowa
Tricia (Blum) Wolfswinkel	M.S. (2009)	Northwest Regional Sales Manager, Papillon Agricultural Company, Meridian, Idaho
Jennifer Bentley	M.Ag. (2010)	Iowa State University Area Extension Specialist, Calmar, Iowa
Kim Morrill	Ph.D. (2011)	Technical Services Manager, Animal Health & Nutrition, Chr Hansen, Potsdam, New York
Tricia (Blum) Wolfswinkel	Ph.D. (2016)	Northwest Regional Sales Manager, Papillon Agricultural Company, Meridian, Idaho
Amanda Lynn (Fordyce) Sjoquist	Ph.D. (2019)	Young Animal Specialist, Land O'Lakes, Milwaukee, Wisconsin

Layla Eve King	M.S. (2020)	Ph.D. candidate, North Dakota State University, Fargo, North Dakota
Greer Marie Potadle-Brodsack	M.S. (in progress)	CALS SMART Steps Coordinator, Ames, IA

*As a Member of the Graduate Supervisory Committee*

<b>Student</b>	<b>Degree (year)</b>	<b>Major</b>	<b>Major Professor</b>
Trish Kolterman	M.S. (1993)	Nutritional Physiology	Dr. Peggy Miller
David McCollum	M.S. (1993)	Nutritional Physiology	Dr. Peggy Miller
Lluis Vilaseco	M.S. (1993)	Poultry Nutrition	Dr. Jerry Sell
Teresa Martinez	M.S. (1994)	Nutritional Physiology	Dr. Peggy Miller
Cathy Kuehl-Kovarick	Ph.D. (1995)	Veterinary Anatomy and Neuroscience	Dr. Carol Jacobson
Keith Turner	Ph.D. (1995)	Poultry Nutrition	Dr. Jerry Sell
Burim Armetaj	Ph.D. (1999)	Nutritional Physiology	Dr. Don Beitz
Shihou Jin	Ph.D. (1999)	Poultry Nutrition	Dr. Jerry Sell
Christy Meyer	M.S. (1999)	Animal Breeding	Dr. Jeff Berger
Troy Lohrmann	Ph.D. (2000)	Swine Nutrition	Dr. Tim Stahly
Meryl Miller	M.S. (2000)	Animal Science	Dr. Marjorie Faust
Josie Booth	M.S. (2000)	Animal Nutrition	Dr. Peggy Miller
Laura Greiner	Ph.D. (2001)	Swine Nutrition	Dr. Tim Stahly
Lorie Luscombe	M.A.(2001)	Family and Consumer Sciences	Dr. Sally Williams
Mark Zahradnik	M.Ag. (2001)	Professional Agriculture	Dr. Brad Skaar
Sarah Lowry	M.S. (2003)	Animal Nutrition	Dr. Wendy Powers
Michelle Weiderhold	M.S. (2003)	Animal Science	Dr. Marjorie Faust
Jerry McVicker	Ph.D. (2004)	Veterinary Microbiology and Preventive Medicine	Dr. Louisa Cabatabai
Olivia Kilian	M.S. (2004)	Animal Science	Dr. Brad Skaar
Megan Hall	M.S. (2005)	Animal Physiology	Dr. Peggy Miller
Ciara Goldsmith	M.S. (2007)	Animal Physiology	Dr. Anna Johnson
Faithe Doscher	M.S. (2012)	Animal Science	Dr. Peter Hoffman
Katrina Pille	M.Ag. (2012)	Professional Agriculture	Dr. James Russell
Jessica Juarez	M.S. (2012)	Animal Physiology	Dr. Leo Timms
Shawna Weimer	M.S. (2012)	Animal Physiology	Dr. Anna Johnson
Monique Pairis	Ph.D. (2013)	Animal Physiology	Dr. Anna Johnson
Caroline Mohling	M.S. (2013)	Animal Physiology	Dr. Anna Johnson
Rebecca Davis	M.S. (2013)	Animal Physiology	Dr. Anna Johnson
Sara (Stoakes) Kividera	Ph.D. (2015)	Nutritional Sciences	Dr. Lance Baumgard
Taylor Geppert	M.S. (2015)	Animal Physiology	Dr. Patrick Gunn
Lucas Krueger	M.S. (2015)	Nutritional Sciences	Dr. Don Beitz
Cayla Iske	M.S. (2015)	Nutritional Sciences	Dr. Cheryl Morris

Amber Greiman	M.S. (2015)	Agricultural Education	Dr. Wade Miller
Rebecca Weirs	M.S. (2017)	Agricultural Education	Dr. Robert Martin
German Corujo	M.S. (2017)	Animal Science	Dr. Leo Timms
Nicole Johnson	Ph.D. (2018)	Nutritional Sciences	Dr. John Patience
Mohammad Al-Qaisi	M.S. (2019)	Animal Science	Dr. Lance Baumgard and Dr. Leo Timms
Braymond Adams	Ph.D. (in progress)	Entomology	Dr. Gregory Courtney Dr. Wendy Wintersteen
Handagala Wickramasinghe	Ph.D. (in progress)	Animal Science	Ranga Appuhamy

### Supervision of Post-doctoral Students

STUDENT	DATES EMPLOYED	CURRENT PLACEMENT
Kimberley Morrill	2011-2012	Technical Services Manager, Chr Hansen, Potsdam, NY

## RESEARCH/DISCOVERY

### Summary

Dr. Tyler's major research focus has been to elucidate the factors that affect survivability and performance of neonatal animals. **Dr. Tyler developed an applied research program that was both multidisciplinary and collaborative to address the most crucial issues affecting calf raisers in the industry.** Stressful events during the first day of life represent a tremendous economic loss to the dairy industry, both nationally and around the world. Dairy calf mortality is estimated to cost the United States dairy industry alone over \$35 million dollars per year, while associated losses from increased morbidity and reduced productivity of stressed calves that survive cost many times that amount. He has developed and utilized a variety of models in these studies, including utilizing interspecies pregnancies to model the physiological changes occurring in the developing fetoplacental unit that result in dystocic deliveries. **He has been invited to speak on his research regarding stress during parturition at both regional and national American Dairy Science Association conferences.** He has been nominated for national (2006 ADSA Merit Dairy Management Research Award) and international (1991 ISOTT Melvin Knisely Outstanding Young Investigator Award) awards for his research on the effects of forage inclusion on rumen function in young calves and the development of research models for neonatal hypoxia, respectively. In addition, the recommendations resulting from his research have been adopted nationally and internationally and the data has appeared in a variety of formats around the country and across the world.

**Dr. Tyler has been an author or co-author on 32 peer-reviewed publications and over 60 scientific abstracts.** His research collaborations include scientists representing five other academic institutions and the U.S. Department of Agriculture, as well as numerous scientists representing a variety of animal science-



related businesses. **Dr. Tyler has consistently published his research in the top tier of established scientific journals in his field. Well over 2/3 of his publications were either in Journal of Dairy Science (with an impact factor ranked first for the last 11 years of all the journals in the entire Agriculture, Dairy, and Animal Science category (ISI, 2012), or the Journal of Animal Science (ranked in the top 5 in the same category). Both of these journals are widely read and recognized for excellence both nationally and internationally. Another journal he has published in, Theriogenology, is the most-cited journal dedicated to veterinary medicine (ISI, 2004).** In addition, several of his projects were extensively reported in extension newsletters and popular press outlets and are affecting industry practices utilized by producers throughout the dairy industry.

Dr. Tyler also has been consistently successful in generating extramural support to support his research programs. **Dr. Tyler has been principal investigator or co-investigator on over 60 successful research-related proposals with awards totaling well over \$1.5 million. On all but one of these grants, Dr. Tyler was the principal investigator.** Support has been generated from a number of different sources, including major animal science-related industries (American Protein Corporation, Merrick's, Inc. TransOva Genetics, Midland Bioproducts, New Generation Genetics), research foundations (American Jersey Cattle Club Research Foundation), and other sources (Brown Swiss Cattle Association, Henry Doorly Zoo).

#### *Invited Journal Articles*

**Tyler, H.D.** 2001. Nutritional and physiological challenges to successful reproduction in aging ungulates. Proceedings of the First International Symposium on Assisted Reproductive Technology for the Conservation and Genetic Management of Wildlife. Omaha, Nebraska, Jan 17-18, 2001, pp. 75-90.

#### *Refereed Journal Articles*

- Fordyce, A.L. E.A. Hines, E.M. Edwards, S. Plaengkaeo, K.J. Stalder, J.D. Colpoys, J.M. Bundy, A.K. Johnson, and H.D. Tyler. 2021. Measuring birth weight and umbilical cord diameter at birth to predict subsequent performance in swine. *Transl. Animal Science* 5: <https://doi.org/10.1093/tas/txaa214>
- Robinson, A.L., L.L. Timms, K.J. Stalder and **H.D. Tyler**. 2018. Short communication: The effect of novel antiseptic compounds on umbilical cord healing and incidence of infection in dairy calves. *J. Dairy Sci.* 101:5444-5448
- McCracken, M.M., K.M. Morrill, A.L. Fordyce, and **H.D. Tyler**. 2017. Technical note: Evaluation of digital refractometers to estimate serum immunoglobulin G concentration and passive transfer in Jersey calves. *J. Dairy Sci.* 100: 8438-8442
- Robinson, A.L., J.D. Colpoys, G.D. Robinson, E.A. Hines, E.M. Edwards, K.J. Stalder, A.K. Johnson, L.L. Timms, and **H.D. Tyler**. 2016. The effect of antiseptic compounds on umbilical cord healing and infection rates in piglets from a commercial facility. *JSHAP.* 24: 212-215.
- Robinson, A.L., L.L. Timms, K.J. Stalder and **H.D. Tyler**. 2015. Short communication: The effect of 4 antiseptic compounds on umbilical cord healing and infection rates in the first 24 hours in dairy calves from a commercial herd. *J. Dairy Sci.* 98:5726-5728
- Robertson, K.E., K.M. Morrill, M.M. Spring, A.L. Robinson and **H.D. Tyler**. 2015. Validating a refractometer to evaluate immunoglobulin G concentration in Jersey colostrum and the impact of multiple freeze-thaw cycles on evaluating colostrum quality. *J. Dairy Sci.* 98:595-601.

- Mohling C.M., A.K. Johnson, J.H. Coetzee, L.A. Karkker K.J. Stalder, C.E. Abell, **H.D. Tyler** and S.T. Millman. 2014. Evaluation of mechanical and thermal nociception as objective tools to measure painful and non-painful lameness phases in multiparous sows. *J. Animal Sci.* 92:3073-3081.
- Weimer, S.L., A.K. Johnson, T.J. Fangman, L.A. Karkker, **H.D. Tyler**, and K.J. Stalder. 2014. Comparison of nursery pig behavior assessed using human observation and digital-image evaluation methodologies. *Journal of Swine Health and Production.* 22:116-124.
- Krueger, L., M. Osman, D. Beitz, K. Onda, M. O'Neil, S.M. Lei, F. Wattoo, H. Feroza, R. Stuart, **H.D. Tyler**, B. Nonnecke. 2014. Effects of d- $\alpha$ -tocopherol and dietary energy on growth and health of pre-ruminant dairy calves. *J. Dairy Sci.* 97: 3715-3727
- Morrill, K.M., E. Conrad, J. Polo, A. Lago, J. Campbell, J.D. Quigley III, and **H.D. Tyler**. 2013. Estimate of serum immunoglobulin G concentration using refractometry with or without caprylic acid fractionation. *J. Dairy Sci.* 96:4535-4541
- Morrill, K.M., E. Conrad, A. Lago, J. Campbell, J.D. Quigley III, and **H.D. Tyler**. 2012. Nationwide evaluation of quality and composition of colostrum on dairy farms in the United States. *J. Dairy Sci.* 95:3997-4005
- Morrill, K.M., E. Conrad, J. Polo, A. Lago, J. Campbell, J.D. Quigley III, and **H.D. Tyler**. 2012. Estimate of colostrum immunoglobulin G concentration using refractometry without or with caprylic acid fractionation. *J. Dairy Sci.* 95:3987-3996
- Campbell, J.M., L.E. Russell, J.D. Crenshaw, E.M. Weaver, S. Godden, J.D. Quigley III, J.A. Coverdale, and **H.D. Tyler**. 2007. Impact of irradiation and immunoglobulin G concentration on absorption of protein and immunoglobulin G in calves fed colostrum replacer. *J. Dairy Sci.* 90:5726-31.
- Coverdale, J.A., **H.D. Tyler**, J.D. Quigley III, and J.A. Brumm. 2004. Effect of various levels of forage and form of diet on rumen development and growth in calves. *J. Dairy Sci.* 87:2554-62.
- Coverdale, J.A., J. A. Moore, **H. D. Tyler**, and P. A. Miller-Auwerda. 2004. Soybean hulls as an alternative feed for horses. *J. Anim. Sci.* 82:1663-1668
- Hammer, C.J., J.D. Quigley, L. Ribeiro, and **H.D. Tyler**. 2004. Characterization of a colostrum replacer and colostrum supplement containing IgG concentrate and growth factors. *J. Dairy Sci.* 87:106-111
- Arthington, J.D., C.A. Jaynes, **H D. Tyler**, S. Kapil, and J.D. Quigley III. 2002. The use of bovine serum protein as an oral support therapy following coronavirus challenge in calves. *J. Dairy Sci.* 85:1249-254
- Hammer, C.J., **H.D. Tyler**, N.M. Loskutoof, D.L. Armstrong, D.J. Funk, B.R. Lindsey, and L.G. Simmons. 2001. Compromised development of calves (*Bos gaurus*) derived from in vitro-generated embryos and transferred interspecifically into domestic cattle (*Bos taurus*). *Theriogenology* 55:1447-1455
- Hammer, C.J., J.A. Booth, L. Etzel, and **H.D. Tyler**. 2001. Adequacy of a concentrated equine serum product to prevent failure of immune passive transfer in neonatal foals: preliminary study. *Equine Vet J.* 33:734-736
- Abdullah, M., J.W. Young, **H.D. Tyler**, and G. Mohiuddin. 2000. Effect of feeding high forage diets and supplemental fat on feed intake and lactation performance in dairy cows. *Asian-Austr. J. Anim. Sci.* 13:457-463
- Abdullah, M., J.W. Young, **H.D. Tyler**, and G. Mohiuddin. 2000. Effect of feeding high forage diets with supplemental fat on blood metabolites, rumen fermentation and dry matter digestibility in dairy cows. *Asian-Austr. J. Anim. Sci.* 13:451-456
- C.J. Hammer, **H.D. Tyler**, and P.A. Miller. 2000. Effects of oral administration of concentrated equine serum to newborn foals on passive immunity. *J. Equine Vet. Sci.* 20:337-338

- Bigner, D.R., J.P. Goff, M.A. Faust, **H.D. Tyler**, and R.L. Horst. 1997. Comparison of oral sodium compounds for the correction of acidosis. *J. Dairy Sci.* 80:2162-2166
- Bigner, D.R., J.P. Goff, M.A. Faust, J.L. Burton, **H.D. Tyler**, and R.L. Horst. 1996. Acidosis affects insulin response during glucose tolerance tests in Jersey cows. *J. Dairy Sci.* 79:2182-2188
- Tyler, H.D.**, S.R. Vigna and W.J. Croom, Jr. 1993. Developmental appearance of gut peptide receptors in the small intestine of the neonatal piglet. *Can. J. Animal Sci.* 74:243-249
- Tyler, H.D.**, and H.A. Ramsey. 1993. Effect of fructose-induced hypoglycemia on timing of cessation of intestinal transport of immunoglobulins in the neonatal calf. *J. Dairy Sci.* 76:3021-3025
- Tyler, H.D.**, and H.A. Ramsey. 1993. Effect of insulin-induced hypoglycemia on timing of cessation of intestinal transport of immunoglobulins in the neonatal calf. *J. Dairy Sci.* 76:2736-2741
- Tyler, H.D.**, and H.A. Ramsey. 1992. Altered aldosterone levels in newborn calves following hypoxia. *Oxygen Transport to Tissue XIV, Advances in Experimental Medicine and Biology, Vol. 317*, Edited by W. Erdman and D. Bruley, pp. 521-524. Plenum Press, New York.
- Tyler, H.D.**, L.P. Tate, H.A. Ramsey, and I.S. Longmuir. 1992. Development of an *in vivo* perfusion system for bovine fetal small intestine. In: *Oxygen Transport to Tissue XIII, Advances in Experimental Medicine and Biology, Vol. 316*, Edited by T. Goldstick, M. McCabe and D. Maguire, pp. 441-445. Plenum Press, New York.
- Tyler, H.D.**, and H.A. Ramsey. 1990. Metabolic and developmental responses of the calf to a chronic hypoxic episode in the immediate newborn period. In: *Oxygen Transport to Tissue XII, Advances in Experimental Medicine and Biology, Vol. 277*, edited by J. Piiper, T. Goldstick and M. Meyer, pp. 797-804. Plenum Press, New York.
- Morbeck, D.E., **H.D. Tyler**, and J.H. Britt. 1991. Duration of estrous cycles subsequent to two injections of prostaglandin F<sub>2α</sub> given at a 14-d interval in non-lactating Holstein cows. *J. Dairy Sci.* 74:2342
- Tyler, H.D.**, and H.A. Ramsey. 1991. Hypoxia in neonatal calves: Effect on selected metabolic parameters. *J. Dairy Sci.* 74:1957
- Tyler, H.D.**, and H.A. Ramsey. 1991. Hypoxia in neonatal calves: Effect on intestinal transport of colostral immunoglobulins. *J. Dairy Sci.* 74:1953

### *Published Scientific Abstracts*

- Potadle, G.M., G.E. Dahl, B. Dado-Senn, J. Laporta, J. Bundy, and H.D. Tyler. 2019. Effect of placental parameters on dairy calf performance. *J. Animal Science* (in press)
- Robinson, A.L. and **H.D. Tyler**. A novel approach to adviser training for relational skills. 2016. *J. Anim. Sci* Vol. 94, E-Suppl. 5/*J. Dairy Sci.* Vol. 99 (E-Suppl. 1): 839
- Robinson, A.L., J. Colpoys, G.D. Robinson, E.A. Hines, E.M. Edwards, J.M. Bundy, A.K. Johnson, and **H.D. Tyler**. The effect of various parameters measured at farrowing on subsequent pig performance. 2016. *J. Anim. Sci* Vol. 94, E-Suppl. 5/*J. Dairy Sci.* Vol. 99 (E-Suppl. 1): 82
- Robinson, A.L., L.L. Timms, K.J. Stalder, and **H.D. Tyler**. The effect of novel antiseptic compounds on umbilical cord healing and infection rates in the first week of life in dairy calves. 2016. *J. Anim. Sci* Vol. 94, E-Suppl. 5/*J. Dairy Sci.* Vol. 99, (E-Suppl. 1): 48
- Robinson, AL., J.D. Colpoys, G.D. Robinson, E.A. Hines, L.L. Timms, E.M. Edwards, K.J. Stalder, A.K. Johnson and **H.D. Tyler**. 2015. The effect of antiseptic compounds on umbilical cord healing and infection rates in neonatal piglets from a commercial facility. *J. Anim. Sci.* 93 (Suppl. 3):272

- Robinson, A.L., H.A. Jennings, J.A. Sterle, C.L. Morris, K.J. Stalder, D.G. Acker and **H.D. Tyler**. 2015. Factors affecting first year academic success in a large animal science program. *J. Anim. Sci.* 93 (Suppl. 3):558
- Robinson, A.L., H.A. Jennings, J.A. Sterle, C.L. Morris, and **H.D. Tyler**. 2015. Changes in emotional intelligence scores following a peer mentor experience. *J. Anim. Sci.* 93 (Suppl. 3):558-559
- Robinson, A.L., L.L. Timms, K.J. Stalder and **H.D. Tyler**. 2014. The effect of four antiseptic compounds on umbilical cord healing and infection rates in the first 24 hours in dairy calves from a commercial herd. *J. Dairy Sci.* 97 (Suppl. 1):430
- Spring, M.M., K.M. Morrill, A.L. Robinson and **H.D. Tyler**. 2014. Estimate of serum immunoglobulin G concentration in Jersey calves using refractometry. *J. Dairy Sci.* 97 (Suppl. 1):567
- Robertson, K.E., K.M. Morrill, M.M. Spring, A.L. Robinson and **H.D. Tyler**. 2014. Validating a refractometer to evaluate immunoglobulin G concentration in Jersey colostrum and the impact of multiple freeze-thaw cycles on evaluating colostrum quality. *J. Dairy Sci.* 97 (Suppl. 1):727
- Morrill, K.M., M.M. Spring, **H.D. Tyler**. 2014. Colostrum management practices on New York and Vermont Jersey farms. *J. Dairy Sci.* 97 (Suppl. 1):419
- Tyler, H.D.**, J. A. Sterle. 2013. Developing critical academic and social connections for incoming students prior to the first day of classes using a combination of innovative programs. *J. Dairy Sci.* 96 (Suppl. 1):224
- Krueger, L.A., K. Onda, M. Osman, M. R. O'Neil, R. L. Stuart, **H. D. Tyler**, B. Nonnecke, D. C. Beitz. 2013. The effects of d- $\alpha$ -tocopherol and dietary energy on growth and health of dairy calves. *J. Dairy Sci.* 96 (Suppl. 1):182
- Morrill K.M., A. Lago, J. Polo, J.D. Quigley, and **H.D. Tyler**. 2012. Estimate of serum IgG concentration using refractometry with or without caprylic acid fractionation. *J. Dairy Sci.* 95 (Suppl. 1):512-513
- Morrill K.M., E. Conrad, A. Lago, J.D. Quigley, and **H.D. Tyler**. 2011. Nation-wide evaluation of quality and composition of colostrum fed to dairy calves in the United States. *J. Dairy Sci.* 94 (Suppl.1):256
- Morrill K.M., E. Conrad, A. Lago, J.D. Quigley, and **H.D. Tyler**. 2011. On-farm validation of two rapid methods to estimate IgG in bovine colostrum. *J. Dairy Sci.* 94 (Suppl.1):180
- Conrad E., K. Morrill, J.D. Quigley, and **H.D. Tyler**. 2011. Management factors affecting microbial contamination of bovine colostrum. *J. Dairy Sci.* 94 (Suppl.1):355
- Morrill K.M., J.D. Quigley, A. Lago, and **H.D. Tyler**. 2011. Development of a rapid method to estimate IgG in bovine colostrum. *J. Dairy Sci.* 94 (Suppl.1):519
- Wolfswinkel T.L., **H.D. Tyler**, J.E. Cunnick, T. Waugh, J. Sewell, and A. Chestnut. 2010. The effects of feeding fermented soybean meal in calf starter on growth and performance of dairy calves. *J. Dairy Sci.* 90 (Suppl.1):424
- DenBeste M.D. and **H.D. Tyler**. 2010. Effects of glucose on suckling aggressiveness in newborn Holstein and Brown Swiss calves. *J. Dairy Sci.* 90 (Suppl. 1):401
- Hard K.E. and **H.D. Tyler**. 2009. Predictive measures of fetal distress in calves during delivery. *J. Dairy Sci.* 89 (Suppl.1):11-12
- Campbell J.M., L.E. Russell, J.D. Crenshaw, E.M. Weaver, **H.D. Tyler**, S. Godden, and J.D. Quigley. 2007. Impact of irradiation and immunoglobulin level on absorption of protein and IgG in calves fed colostrum replacers. *J. Dairy Sci.* 90 (Suppl 1):296
- Kimura K., J.P. Goff, T.A. Reinhardt, S. Sato and **H.D. Tyler**. 2003. Association between retained placenta and impaired neutrophil function in dairy cows. *Acta Veterinaria Scandinavica* 44 (Suppl 1):P27
- Hammer C.J., J.D. Quigley, L. Ribeiro, and **H.D. Tyler**. 2003. Characterization of a colostrum replacer containing IgG concentrate and growth factors. *J. Dairy Sci.* 86 (Suppl 1):21

- Booth J.A., J.A. Moore, **H.D. Tyler**, and P.A. Miller. 2003. Soybean hulls as an alternative feed for horses. Proceedings of the Eighteenth Equine Nutrition and Physiology Society. p. 31
- Booth J.A., **H.D. Tyler**, and J.D. Quigley III. 2003. Effect of various levels of crude fiber and form of diet on rumen development in calves. *J. Animal Sci.* 81 (Suppl 1):136
- Riddle A.L., **H.D. Tyler**, M.L. O'Brien, K.J. Touchette, and J.A. Coalson. 2003. The absorption of immunoglobulins from a plasma-based IgG supplement. *J. Dairy Sci.* 86 (Suppl 1):246
- Riddle A.L. and **H.D. Tyler**. 2003. Factors affecting postpartum placental blood volume. *J. Dairy Sci.* 86 (Suppl 1):243
- Riddle A.L., **H.D. Tyler**, and J.D. Quigley. 2003. Relationship between placental characteristics, delivery parameters and placental retention. *J. Dairy Sci.* 86 (Suppl 1):145
- Hammer, C.J., J.D. Quigley, and **H.D. Tyler**. 2002. Effect of different levels of passive immunity on response to intravenous immunoglobulin in calves. *J. Dairy Sci.* 85 (Suppl 1):66
- Wawrzyniak, S.I., **H.D. Tyler**, and J.D. Quigley III. 2002. Effects of ruminal infusion of electrolyte solutions on calf performance parameters. *J. Dairy Sci.* 85 (Suppl 1):237-238
- Booth, J.A., J.D. Quigley, and T.M. Wolfe. 2002. Effect of plasma protein and form of diet in meal-fed calves. *J. Dairy Sci.* 85 (Suppl 1):79
- Hammer, C.J., J.D. Quigley, J.A. Roth, and **H.D. Tyler**. 2002. Characterization of reactions to intravenous immunoglobulin in neonatal calves. *J. Dairy Sci.* 85 (Suppl 1):66
- Hammer, C.J., J.A. Booth, L. Etzel, and **H.D. Tyler**. 2001. Efficacy of a concentrated equine serum product to prevent failure of passive transfer of immunity in neonatal foals. *J. Anim. Sci.* 79 (Suppl 1):335
- Kimura, K., J. Goff, and **H.D. Tyler**. 2000. Association between retained placenta and neutrophil function in dairy cattle. *J. Dairy Sci.* 83 (Suppl 1):3
- Hammer, C.J., **H.D. Tyler**, and P.A. Miller. 1999. Effects of oral administration of concentrated equine serum to newborn foals on immunoglobulin G levels. *J. Anim. Sci.* 77 (Suppl 1):75
- Tyler, H.D.** and C.J. Hammer. 1999. Associations between placental characteristics, delivery parameters, and calf measurements. *J. Dairy Sci.* 82 (Suppl 1):97-98
- Tyler, H.D.** and C.J. Hammer. 1999. Changes in electrical resistance of vaginal mucous in relation to initiation of parturition in the bovine. *J. Dairy Sci.* 82 (Suppl 1):97
- Hammer, C.J. and **H.D. Tyler**. 1999. Effects of two methods of obstetrical assistance in Holstein calves. *J. Dairy Sci.* 82 (Suppl 1):76
- Hammer, C.J. and **H.D. Tyler**. 1999. Effects of early rupture of the umbilical vessels in Jersey calves. *J. Dairy Sci.* 82 (Suppl 1):49
- J.D. Arthington, C.A. Jaynes, and **H.D. Tyler**. 1998. Bovine serum protein is a beneficial nutritional support therapy following coronavirus challenge. *J. Dairy Sci.* 81 (Suppl 1):263
- Tyler, H.D.** 1997. The stress of parturition: A management perspective. *J. Dairy Sci.* 80 (Suppl 1):233
- Strawn, K.K., **H.D. Tyler**, and M.A. Faust. 1996. Changes in leukocyte populations in normal and stressed neonatal calves. *J. Dairy Sci.* 79 (Suppl 1):172
- Reinhart, R.J., **H.D. Tyler**, M.A. Faust, and B.J. Nonnecke. 1996. Effects of electrolyte administration at birth on performance in dairy heifers. *J. Dairy Sci.* 79 (Suppl 1):186
- Strawn, K.K., **H.D. Tyler**<sup>2</sup>, M.A. Faust, and B.J. Nonnecke. 1996. Effects of birth stress in calves. *J. Dairy Sci.* 79 (Suppl 1):130
- Douglas, G.N., **H.D. Tyler**, and J.W. Young. 1995. Effect of altered glucose availability on feed efficiency and glucose utilization in growing calves. *J. Dairy Sci.* 78 (Suppl 1):233
- Bigner, D.R., J.P. Goff, **H.D. Tyler**, J.L. Burton, and R.L. Horst. 1995. Acidosis affects insulin response during glucose tolerance tests in Jersey cows. *J. Dairy Sci.* 78 (Suppl 1):168

- Kapil, S.J., **H.D. Tyler**, M.E. Kehrli, and J.P. Goff. 1995. Effects of cortisol, calcium and magnesium concentration on bovine neutrophil CD18 expression *in vitro*. *J. Animal Sci.* 73 (Suppl. 1):92
- Bigner, D.R., J.P. Goff, **H.D. Tyler**, R.L. Horst. 1994. The effect of acid-base balance on insulin responsiveness during glucose tolerance tests in Jersey cows. *J. Dairy Sci.* 77 (Suppl. 1):258
- Abdullah, M., J.W. Young, **H.D. Tyler**, J.R. Russell, and A.R. Hippen. 1994. Effect of high forage diets and replacing nonstructural carbohydrate with supplemental fat in dairy cows. *J. Dairy Sci.* 77 (Suppl. 1):1346
- Kapil, S.J., **H.D. Tyler**, M.E. Kerhli, D.R. Bigner, and J.P. Goff. 1993. Effect of maternal and neonatal calcium status at parturition on passive and active immune function in newborn calves. *J. Dairy Sci.* 76 (Suppl. 1):189
- Kapil, S.J., **H.D. Tyler**, M.E. Kerhli, D.R. Bigner, and J.P. Goff. 1993. Periparturient hypocalcemia and CD18 expression on neutrophil surfaces in Jersey cows. *J. Dairy Sci.* 76 (Suppl. 1):185
- Tyler, H.D.**, and H.A. Ramsey. 1992. Effect of insulin-induced hypoglycemia on cessation of macromolecular transport in the neonatal calf. *J. Dairy Sci.* 75 (Suppl. 1):266
- Tyler, H.D.**, S. Vigna, D. McVey, and W.J. Croom, Jr. 1992. Developmental appearance of bombesin (BBS) and vasoactive intestinal peptide (VIP) receptors in the duodenum, jejunum and ileum of piglets from birth through four weeks of age. *J. Anim. Sci.* 70 (Suppl. 1):233
- Tyler, H.D.**, and H.A. Ramsey. 1991. Altered aldosterone levels in newborn calves following an extended hypoxic period. Proceedings of the Nineteenth Annual Meeting of the International Society for Oxygen Transport to Tissue, Willemstad, Curacao.
- Tyler, H.D.**, and H.A. Ramsey. 1990. Effect of fructose-induced hypoglycemia on cessation of intestinal transport of immunoglobulins in newborn calves. *J. Dairy Sci.* 73 (Suppl. 1):219
- Tyler, H.D.**, and B.A. Didion. 1990. Effect of follicle stimulating hormone (FSH) on estrus behavior in Holstein cows. *J. Dairy Sci.* 73 (Suppl. 1):202
- Tyler, H.D.**, L.P. Tate, H.A. Ramsey and I.S. Longmuir. 1990. Development of an *in vivo* perfusion system for bovine fetal small intestine. Proceedings of the Eighteenth Annual Meeting of the International Society for Oxygen Transport to Tissue, Townsville, Australia.
- Morbeck, D.E., **H.D. Tyler**, and J.H. Britt. 1990. Duration of estrous cycles following synchronization of estrus with PG<sub>F2α</sub> in non-lactating Holstein cows. *J. Dairy Sci.* 73 (Suppl. 1):179
- Tyler, H.D.**, and H.A. Ramsey. 1989. Metabolic and developmental responses to a chronic hypoxic episode in the immediate newborn period. Proceedings of the Seventeenth Annual Meeting of the International Society for Oxygen Transport to Tissue. July 21-24, Göttingen, Federal Republic of Germany. Abstract 17C
- Tyler, H.D.**, and H.A. Ramsey. 1989. Effect of hypoxia on cessation of intestinal transport of immunoglobulins in newborn calves. *J. Dairy Sci.* 72 (Suppl. 1):316

#### *Articles in Non-Refereed Publications*

- Tyler, H.D.** 1999. Potential nutritional and(or) endocrine factors related to weak calf syndrome in older ruminants. In: Okapi Species Survival Plan Reproductive Research Report 1999. N.M. Loskutoff, ed.

#### *Invited Scientific Presentations*

- “Managing the Dairy Cow and Calf at Parturition”, 2004 Midwestern Section ASAS/ADSA Annual Meeting, March 16, 2004

- “Sex and the Elderly: The Relationship Between Nutrition and Reproduction in Geriatric Ungulates”, The 27<sup>th</sup> Annual Conference of the International Embryo Transfer Society - Satellite Program on Assisted Reproductive Technology for the Conservation and Genetic Management of Wildlife, Omaha, Nebraska, January 17-18, 2001.
- “The Stress of Parturition: A Management Perspective”, ADSA Management Symposium on Practical Considerations of Transition Cow and Calf Management, Ninety-second Annual Meeting of the American Dairy Science Association, Guelph, Ontario, June 24, 1997
- “Physiological Transitions in the Neonate: Challenges and Opportunities”, H. Hugh Dukes Club (ISU Physiology Council), Ames, Iowa, March 27, 1995

### *Funded Grant Proposals*

- H.D. Tyler.** Enhancing Student Success Through Student Support Advocates, 9/1/2019 to 5/30/2020. **\$60,000.**
- H.D. Tyler** and G.M. Potadle. Ag Exploration Learning Communities, ISU Learning Community Program, 7/1/19 to 6/30/20. **\$1,500**
- H.D. Tyler.** Improving CALS Revenue Through Improved Student Retention, ISU College of Agriculture and Life Sciences, 7/1/2018 to 6/30/2023. **\$500,000.**
- H.D. Tyler.** Development of Adviser Training Modules for CALS Advisers, ISU College of Agriculture and Life Sciences, 7/1/2018 to 6/30/2023. **\$125,000**
- H.D. Tyler** and G.M. Potadle. Ag Exploration Learning Communities, ISU Learning Community Program, 7/1/18 to 6/30/19. **\$1,500**
- H.D. Tyler** and G.M. Potadle. A Proposal to Improve Umbilical Cord Healing Through Development and Testing of a Novel Instrument. Harmon Grant Program, 10/15/17 to 10/14/18. **\$3,000**
- H.D. Tyler** and G.M. Potadle. Ag Exploration Learning Communities, ISU Learning Community Program, 7/1/17 to 6/30/18. **\$1,400**
- H.D. Tyler** and A.L. Robinson. Animal Science/Dairy Science/General Pre-vet Learning Communities, ISU Learning Community Program, 7/1/15 to 6/30/16. **\$31,000**
- H.D. Tyler**, H.D. Jennings and A.L. Robinson. Animal Science/Dairy Science/General Pre-vet Learning Communities, ISU Learning Community Program, 7/1/14 to 6/30/15. **\$31,000**
- H.D. Tyler** and A.L. Robinson. Restructuring Learning Teams, Peer Mentor Programs, and Advisor Educational Opportunities to Enhance Student Success. ISU College of Agriculture and Life Sciences, 1/1/14 to 6/30/17. **\$150,479**
- H.D. Tyler** and A.L. Robinson. Development of a Workshop for Assisting Students in Crisis. ISU Academic Advising Innovation Grant Program, 12/15/13 to 6/30/14. **\$2,500**
- H.D. Tyler** and A.L. Robinson. Enhancing a Web-based Program for Advising. ISU Academic Advising Innovation Grant Program, 12/15/13 to 6/30/14. **\$12,000**
- H.D. Tyler** and A.L. Robinson. Programming support for development of an online Advising Management System, ISU College of Agriculture and Life Sciences, 9/1/13 to 6/30/14, **\$10,000**
- H.D. Tyler.** Enhancing a web-based program for advising, ISU Department of Animal Science Electronic Teaching Materials, Facilities and Equipment Committee, 5/1/13 to 4/30/14, **\$7,500**
- H.D. Tyler.** Animal Science/Dairy Science/General Pre-vet Learning Communities, ISU Learning Community Program, 7/1/13 to 6/30/14, **\$24,000**

K.M. Morrill, H.M. Gauthier, and **H.D. Tyler**. The use of digital refractometers to evaluate serum IgG concentration in day old Jersey calves and colostrum management practices of Jersey producers in New York. American Jersey Cattle Club Research Foundation, 3/1/13 to 2/28/14, **\$8,000**

**H.D. Tyler**. Development of teaching demonstration materials for Dairy Management Systems, Harmon Endowment Fund, 12/1/12 to 6/30/13, **\$5,000**

**H.D. Tyler**. Programming support for Advising Management System, ISU College of Agriculture and Life Sciences, 10/1/12 to 6/30/13, **\$2,500**

**H.D. Tyler**. Animal Science/Dairy Science/General Pre-vet Learning Communities, ISU Learning Community Program, 7/1/12 to 6/30/13, **\$24,000**

**H.D. Tyler**. Travel support for enhancing retention via advising-related components to the college website, ISU College of Agriculture and Life Sciences, 7/1/12 to 6/30/15, **\$2,500**

**H.D. Tyler**. Developing and programming an online advising management system, ISU College of Agriculture and Life Sciences, 7/1/12 to 6/30/15, **\$5,000**

**H.D. Tyler**. Graduate student support for learning teams and the peer mentor program to enhance first year student success, ISU College of Agriculture and Life Sciences, 7/1/12 to 6/30/15, **\$45,000**

**H.D. Tyler**. Graduate student support for creating inclusive peer mentor programs for incoming students, ISU Learning Community Program, 1/1/12 to 6/30/12, **\$15,000**

**H.D. Tyler** and Morrill, K. A rapid, on-farm method to determine quality of colostrum from Jersey cattle, American Jersey Cattle Club Research Foundation, 7/1/11 to 6/30/12, **\$6,500**

**H.D. Tyler**. Developing a web-based method for selecting and changing advisors, ISU Computer Advisory Committee, 7/1/11 to 6/30/12, **\$17,000**

**H.D. Tyler** and P. Spike. Animal Science/Dairy Science/General Pre-vet Learning Communities, ISU Learning Community Program, 7/1/11 to 6/30/12, **\$15,500**

**H.D. Tyler**, Morrill, K., and E. Conrad. A nation-wide study to evaluate colostrum management practices and colostrum quality. American Protein Corporation and IPRT, 9/1/2010 to 8/31/2011, **\$60,535**.

A.K. Johnson, E. Huff-Lonergan, D. Kenealy, J. Cunnick and **H.D. Tyler**. Peer review of teaching: Creation of a formative assessment tool for the Department of Animal Science. CELT Teach Award. Iowa State University, 1/1/2010 to 12/31/2010, **\$2,000**.

**H.D. Tyler** and Morrill, K. Modifying current laboratory methods for rapid determination of colostral IgG concentration and colostral IgG absorption in the neonate. American Protein Corporation and IPRT, 3/1/2010 to 2/28/2011, **\$27,015**.

**H.D. Tyler**. Establishing programs to create early social and academic connections to ISU. College of Agriculture Retention Grant Program, 11/1/2009 to 10/31/2010, **\$5,000**

**H.D. Tyler**. Factors affecting Brown Swiss calf suckling aggressiveness. New Generation Genetics and Brown Swiss Cattle Association, 10/1/2008 to 9/30/2009. **\$31,219.40**

**H.D. Tyler**. Incorporation of fermented soy products into calf starter diets. Nutra-Flo, Inc. and IPRT, 7/1/2008 to 6/30/2009, **\$51,540**.

**H.D. Tyler**. Apparent efficiency of absorption of colostral supplements fed to neonatal calves. American Protein Corporation, 10/15/2006 to 10/14/2007, **\$21,500**

**H.D. Tyler**. Effect of type and intensity of irradiation on availability of oral immunoglobulins to neonatal calves. American Protein Corporation, 5/15/2006 to 5/14/2007, **\$11,250**

**H.D. Tyler**. Metabolic and hormonal correlates to suckling aggressiveness in Brown Swiss calves. Brown Swiss Cattle Association/New Generation Genetics. 7/1/2005 to 6/31/2006, **\$29,340.16**

**H.D. Tyler**. Conversion of Perinatology (AnS 536) to asynchronous web-based delivery. Grants for Distance Education. 4/15/2005 to 6/31/2006, **\$9,000**



- H.D. Tyler.** Conversion of Dairy Systems Management (AnS 434) to asynchronous web-based delivery. Grants for Distance Education. 4/15/2005 to 6/31/2006, **\$9,000**
- H.D. Tyler.** Development of multilingual distance education teaching modules. Learning and Teaching Innovation Grant. 3/15/2005 to 6/31/2005, **\$4,000**
- H.D. Tyler.** Efficacy of novel electrolyte formulations on recovery from a coronavirus challenge in calves. Merrick's, Inc. 7/1/2001 to 6/31/2002, **\$12,900**
- H.D. Tyler.** Effect of an emulsifying agent on immunoglobulin absorption from a plasma-based colostrum supplement. Merrick's, Inc. 5/15/2001 to 5/14/2002, **\$6,474**
- H.D. Tyler** and S.I. Wawzyniak. Effects of a novel electrolyte solution with added antioxidants on rumen function and small intestine absorption in Jersey calves. American Jersey Cattle Association Research Foundation, 4/1/2001 to 3/31/2002, **\$2,375**
- H.D. Tyler, J.A. Booth, and M.A. Rasmussen.** Effects of crude fiber levels on the physical and metabolic development of the rumen. American Jersey Cattle Association Research Foundation, 4/1/2001 to 3/31/2002, **\$7,450**
- H.D. Tyler.** Mechanisms and duration of altered glucose metabolism in cloned calves. TransOva Genetics, 1/15/2001 to 1/14/2002, **\$1,000**
- H.D. Tyler, C.J. Hammer, and J.A. Booth.** Optimizing passive immunity in neonatal foals by administration of oral immunoglobulins, American Protein Corporation, 1/15/2000 to 1/14/2001, **\$2,440**
- H.D. Tyler.** Assessing milk haptoglobin as an indicator of mammary health, Midland Bioproducts, 3/15/2000 to 7/15/2000, **\$600**
- H.D. Tyler, C.J. Hammer, and R.B. Gritzmacher.** Efficacy and kinetics of intravenous IgG in young calves, American Protein Corporation, 10/1/1999 to 9/30/2003, **\$42,844**
- H.D. Tyler.** Assessing a calf-side IgG test, Midland Bioproducts, 5/15/98 to 8/15/98, **\$900**
- H.D. Tyler** and C.J. Hayes. Interspecific transfer of IVF-derived embryos between *Bos gaurus*, *Bos taurus* and *Bos bison*, Henry Doorly Zoo, 3/1/97 to 2/28/98, **\$5,000**
- H.D. Tyler** and C.J. Hayes. Evaluation of factors affecting survivability of IVF-derived Gaur calves, Henry Doorly Zoo, 9/1/96 to 8/30/98, **\$7,500**
- H.D. Tyler.** Efficacy of purified immunoglobulins for treating coronavirus-challenged calves, American Protein Corporation, 3/15/96 to 3/14/97, **\$16,000**
- H.D. Tyler.** Effect of immunoglobulin dose on attainment of passive immunity in calves, American Protein Corporation, 3/15/96 to 3/14/97, **\$9,000**
- H.D. Tyler.** Utilization of plasma proteins in calf starters to facilitate early weaning in calves, American Protein Corporation, 12/1/95 to 11/30/97, **\$45,000**
- H.D. Tyler.** Development of a problem-solving course in zoo animal nutrition, Henry Doorly Zoo, 3/15/96, **\$1,000**
- H.D. Tyler.** Evaluation of sustained release potassium in an oral rehydration solution for calves challenged with *E. coli* K99, Fort Dodge Laboratories, 9/1/94 to 8/31/95, **\$17,500**
- H.D. Tyler.** In vivo safety evaluation of reformulated Cal Dextro products in normal cattle, Fort Dodge Laboratories, 11/1/94 to 2/1/95, **\$7,500**
- H.D. Tyler** and S.J. Kapil. The effect of plasma calcium concentration on neutrophil adherence and migration in Jersey cows and calves, American Jersey Cattle Club Research Foundation, 4/1/93 to 3/31/94, **\$5,500**
- J.W. Young, **H.D. Tyler,** and M.A. Faust. Feeding high-forage diets and replacing nonstructural carbohydrate with supplemental fat in dairy cows, Milk Specialties Company, 3/15/93 to 3/14/94, **\$7,500**

**H.D. Tyler.** Kinetics of IgG transport in Jersey calves from calcium-deficient and calcium-sufficient dams, American Jersey Cattle Club Research Foundation, 4/1/92 to 3/31/93, **\$3,000**

**H.D. Tyler** and S.P. Ford. An alternative system for oxygenating the prematurely-born fetus: gas permeable extensions in the umbilical vessels, Roy G. Carver Charitable Trust Grant, 1/1/92 to 12/31/92, **\$15,000**

**H.D. Tyler.** Faculty Development Travel Award 1991 to attend the International Society for Oxygen Transport to Tissue 19<sup>th</sup> Meeting in Curacao, Netherlands Antilles, August 25-31, 1991, **\$500**

**Total \$ funded** \_\_\_\_\_ **\$1,586,261.56**

**Total \$ funded as Principal Investigator** \_\_\_\_\_ **\$1,568,761.56**

## **EXTENSION/OUTREACH**

### **Summary**

Although he has no formal outreach/extension appointment, Dr. Tyler has been active and effective in conducting such activities for Iowa State University. **He has presented over 60 invited outreach talks in five different states and in Mexico. He has 30 extension publications in various outlets, including extension bulletins, popular press, and invited chapters in extension booklets.**

Dr. Tyler is also actively engaged with animal science-related industries; he serves on Research Advisory Boards for two companies that develop products that are sold around the world (Nouriche Nutrition, Ltd. And American Protein Corporation), conducts workshops for milk cooperatives and milk replacer companies, and consults with producers and companies all over the world on dairy or newborn-related issues.

**Because of his unique combination of research on interspecies pregnancies with endangered species and pregnancy outcomes following advanced reproductive technologies, Dr. Tyler was utilized as a consultant for the interspecies pregnancies (and the deliveries) produced using cloned endangered species.** Advanced Cell Technologies, a biotechnology-based company out of Worcester, MA, along with San Diego Zoological Park and TransOva Genetics (Sioux Center, IA), combined resources on several attempts at cloning endangered species via interspecies pregnancies, including gaur (Noah and Bessie) and banteng. **Because of his national recognition as an expert in this area, Dr. Tyler was the delivery and neonatal management consultant for each of these projects.**

He was also actively involved in the planning for the calf research facility at the Northeast Iowa Community-Based Dairy Foundation farm facility in Calmar, Iowa as well as the Iowa State Dairy facility. These facilities are models for the industry in terms of innovative design and functional performance. In addition, Dr. Tyler continues to receive numerous extension-related calls and e-mails each month, ranging from dairy calf management issues to exotic animal nutrition issues, to newborn-related issues for many species.

### ***Invited Outreach Presentations***

“Nutrition and management strategies to improve pre-weaned calf performance”, Veterinary Nutrition Club, April 15, 2019

“Assisting at calving time”, State 4-H Round-up, Ames, Iowa, July 1, 2015

“Tips for managing calving time”, State 4-H Round-up, Ames, Iowa, June 26, 2014

“Colostrum management issues”, No Calf Left Behind Dairy Extension program, March 13, 2014

“Calf-rearing issues – first day”, State 4-H Round-up, Ames, Iowa, June 28, 2012

“Assistance at delivery time”, State 4-H Round-up, Ames, Iowa, June 30, 2011

“Stress and calf performance”, Dairy Calf Workshop, Cherokee, IA, March 3, 2010

“Managing calfhood health issues”, Central Vet Clinic Workshop, Sioux Center, IA, February 24, 2010

“Raising healthy calves through weaning”, Dairy Calf Workshop, Pocahontas, IA, February 23, 2010

“New issues in pre-weaning calf management”, Dairy Calf Workshop, Sac City, IA, January 12, 2010

“Delivering dystocia calves”, State 4-H Round-up, Ames, Iowa, June 25, 2008

“Bioactive proteins and peptides in colostrum and milk”, Annual Dairy Calf and Heifer Association Conference, Rochester, Minnesota, April 2, 2008

“Pet nutrition and pet food selection”, Pre-Veterinary Club Meeting, Ames, Iowa, October 30, 2007.

“Assisting problem deliveries and managing the newborn calf”, State 4-H Round-up, Ames, Iowa, June 27, 2007

“Calf and heifer housing issues: Birth to 6 months of age”, Dairy Calf Workshop, U of MN SROC, April 7, 2007

“Economics of calf health - decreasing costs by decreasing risks”, Dairy Calf Workshop, U of MN SROC, April 7, 2007

“Cat and dog nutrition and feeding tips”, Pre-Veterinary Club Meeting, Ames, Iowa, October 10, 2006.

“Grass to Glass seminar panel discussion”, Tri-State Ag and Dairy Exposition, Calmar, Iowa, September 7, 2006

“Tips for assisted deliveries”, Tri-State Ag and Dairy Exposition, Calmar, Iowa, September 7, 2006

“How are calves born?”, State 4-H Round-up, Ames, Iowa, June 25, 2006

“Record keeping and educational monitoring tools”, Dairy Calf Workshop, U of MN SROC, April 12, 2006

“Calf and heifer nutrition: Birth to 6 months of age”, Dairy Calf Workshop, U of MN SROC, April 12, 2006

“Practical economics of accelerated calf feeding programs”, Managing and Marketing Quality Holstein Steers, Rochester, Minnesota, November 2, 2005

“Colostrum management”, Calf Care Workshop for Dairy Calf Managers, Rock Rapids, Iowa, September 30, 2005

“Management strategies for the first day of life to keep calves healthy”, Calf Care Workshop for Dairy Calf Managers, Rock Rapids, Iowa, September 30, 2005

“Assisting the difficult deliveries”, Calf Care Workshop for Dairy Calf Managers, Rock Rapids, Iowa, September 30, 2005

“New issues for calf raisers”, State 4-H Round-up, Ames, Iowa, June 21, 2005

“Key issues in calf and heifer development”, Northeast Iowa Dairy Foundation’s School for New and Transitioning Dairy Producers, Calmar, Iowa, March 23, 2005

“Starting them off right: Healthy calves make profitable cows”, Midwest Dairy School for Calf and Replacement Heifers, Calmar, Iowa, November 23, 2004

“Delivering a healthy calf”, State 4-H Round-up, Ames, Iowa, June 24, 2004

“Management of the pre-weaned calf”, State 4-H Round-up, Ames, Iowa, June 22, 2003

- “Practical applications of “accelerated” calf feeding programs”, Four-State Dairy Management Seminar, Dubuque, IA, February 20, 2003
- “New approaches to assistance at calving: Preventing stress for the calf and the cow”, Four-State Dairy Management Seminar, Dubuque, IA, February 20, 2003
- “Practical applications of “accelerated” calf feeding programs”, Four-State Dairy Management Seminar, South Beloit, IL, February 19, 2003 “Controlling feed costs - dairy replacements”, Southeast Iowa Dairy Seminar, Iowa City, Iowa, March 3, 1992
- “New approaches to assistance at calving: Preventing stress for the calf and the cow”, Four-State Dairy Management Seminar, South Beloit, IL, February 19, 2003
- “Practical applications of “accelerated” calf feeding programs”, Four-State Dairy Management Seminar, Kaukauna, WI, February 18, 2003
- “New approaches to assistance at calving: Preventing stress for the calf and the cow”, Four-State Dairy Management Seminar, Kaukauna, WI, February 18, 2003
- “Practical applications of “accelerated” calf feeding programs”, Four-State Dairy Management Seminar, Waconia, MN, February 17, 2003
- “New approaches to assistance at calving: Preventing stress for the calf and the cow”, Four-State Dairy Management Seminar, Waconia, MN, February 17, 2003
- “The calving process: Reducing losses at parturition”, Top Dairy Conference 2002, Watertown, South Dakota, July 31, 2002
- “Managing transition cows and calves”, State 4-H Round-up, Ames, Iowa, June 28, 2002
- “New horizons in calf nutrition”, Iowa Dairy Days, Ryan, Iowa, January 31, 2002
- “New horizons in calf nutrition”, Iowa Dairy Days, Rickardsville, Iowa, January 30, 2002
- “New horizons in calf nutrition”, Iowa Dairy Days, Elkader, Iowa, January 29, 2002
- “New horizons in calf nutrition”, Iowa Dairy Days, Waverly, Iowa, January 21, 2002
- “New findings about assisting cows at calving”, Northwest Iowa Dairy Producer Workshop, Boyden, Iowa, July 31, 2001
- “Neonatal calf management”, State 4-H Round-up, Ames, Iowa, June 24, 2001
- “Current calf management issues”, Area Livestock Specialists In-Service Training, Ames, Iowa, April 16, 2001
- “Feeding neonatal calves”, State 4-H Round-up, Ames, Iowa, June 26, 1999
- “Opportunities and challenges: Managing pre-weaned calves” Second Annual Conference on Management of Holstein Replacements, Torreon, Durango, Mexico, April 30, 1999
- “Biosecurity issues affecting calf management”, State 4-H Round-up, Ames, Iowa, July 1, 1998
- “Neonatal calf development”, Continental Grain/ISU Joint Technical Meeting, April 29, 1998
- “Transfer of gaur embryos into domestic bovine recipients”, Zoo and Exotic Wildlife Club Meeting, September 8, 1997
- “Zoo animal nutrition”, Zoo and Exotic Wildlife Club Meeting, September 8, 1997
- “Iowa dairy industry update”, College Dairy Feed Conference, Fort Mitchell, Kentucky, July 31-August 2, 1995
- “Factors affecting calf survival in the first 24 hours”, Merrick’s First Annual Nutrition, Sales, and Marketing Conference, Madison, Wisconsin, June 5-6, 1995
- “Dairy replacement management strategies”, State 4-H Round-up, Ames, Iowa, June 28, 1994
- “Strategies for raising replacement heifers”, Dairy Nutrition Conference (sponsored by Booth Feeds and Triple F Nutrition), Beatrice, Nebraska, March 11, 1994

- “Transition management for dairy calves”, Dairy Nutrition Conference (sponsored by Booth Feeds and Triple F Nutrition), Beatrice, Nebraska, March 11, 1994
- “Applied dairy nutrition”, State 4-H Round-up, Ames, Iowa, June 30, 1993
- “Feeding the pre-ruminant calf”, Professional Dairy Management Seminar, Dubuque, Iowa, July 8, 1992
- “Applied dairy nutrition”, State 4-H Round-up, Ames, Iowa, July 1, 1992
- “Pre-weaning calf nutrition”, Area Livestock Specialists In-Service Training, Ames, Iowa, April 29, 1992
- “Calf nutrition research”, Iowa Feed and Nutrition Seminar, Ames, Iowa, April 14, 1992
- “Controlling feed costs - producing herd”, Southeast Iowa Dairy Seminar, Iowa City, Iowa, March 3, 1992

### ***Books or Chapters in Books (Extension)***

- H.D. Tyler.** 2003. Calf development and birth. In: Raising Dairy Replacements. North Central Regional Extension Publication (NCR-205)

### ***Extension and Conference Publications***

- Robinson, A.L., L.L. Timms, K.J. Stalder, and **H.D. Tyler.** 2015. Neonatal calf umbilical cord healing and infection rates after treatment with four different antiseptics. AS Leaflet R2970.
- Tyler, H.D.** 2014. Leave no calf behind: ISU research and management updates. ISU Dairy News and Views. Dec., 2014
- Morrill, K., Conrad, E. and **H.D. Tyler.** 2012. Nation-wide evaluation of colostrum quality. AS Leaflet R2711.
- Morrill, K., Conrad, E. and **H.D. Tyler.** 2012. A novel method to determine colostrum IgG concentration. AS Leaflet R2709.
- Morrill, K. and **H.D. Tyler.** 2012. Two methods to determine IgG concentration in calf serum. AS Leaflet R2708.
- Chester-Jones, H. and **H.D. Tyler.** 2006. Record keeping and educational monitoring tools. Dairy Calf Workshop, Apr. 5 and 12, U of MN SROC, MN Extension Dairy Team.
- Chester-Jones, H. and **H.D. Tyler.** 2006. Calf and heifer nutrition: Birth to 6 months of age. Dairy Calf Workshop, Apr. 5 and 12, U of MN SROC, MN Extension Dairy Team.
- H.D. Tyler.** 2005. Practical economics of accelerated calf feeding programs. Proceedings of the 2005 Dairy Beef Conference: Managing and Marketing Quality Holstein Steers.
- H.D. Tyler.** 2005. Practical calf management. Proceedings of the Calf Care Workshop for Dairy Calf Managers.
- H.D. Tyler.** 2005. Maternity barn management on the dairy farm. Proceedings of the Calf Care Workshop for Dairy Calf Managers.
- H.D. Tyler.** 2005. Harvesting and freezing colostrum. Proceedings of the Calf Care Workshop for Dairy Calf Managers.
- H.D. Tyler.** 2005. Assisting the difficult deliveries. Proceedings of the Calf Care Workshop for Dairy Calf Managers.
- H.D. Tyler.** 2005. Management strategies for the first day of life to keep calves healthy. Proceedings of the Calf Care Workshop for Dairy Calf Managers.
- H.D. Tyler.** 2005. Colostrum management. Proceedings of the Calf Care Workshop for Dairy Calf Managers.
- H.D. Tyler.** 2005. Calf care after delivery. Proceedings of the Calf Care Workshop for Dairy Calf Managers.

- H.D. Tyler.** 2004. Managing calves: an overview. Proceedings of the Midwest School for Calf and Replacement Heifers.
- H.D. Tyler.** 2003. Practical applications of “accelerated” calf feeding programs. Four-State Dairy Management Seminar (MWPS-4SD14)
- H.D. Tyler.** 2003. New approaches to assistance at calving: Preventing stress for the calf and the cow. Four-State Dairy Management Seminar (MWPS-4SD14)
- H.D. Tyler.** 2002. The fundamentals of calf management. From Calves to Cash: Iowa Dairy Days 2002
- H.D. Tyler.** Opportunities and challenges: Managing pre-weaned calves. Proceedings of the Second Annual Conference on Management of Holstein Replacements, Torreon, Durango, Mexico, April 30, 1999
- C.J. Hayes, **H.D. Tyler**, D.L. Armstrong, N.M. Loskutoff, and L.G. Simmons. Viability of offspring derived from interspecies transfer of Gaur (*bos gaurus*) embryos into Holstein (*bos taurus*) recipients. 1996 Dairy Research Report DSL-93
- R.J. Reinhart and **H.D. Tyler.** The effects of electrolyte administration at birth on health and performance of heifers. 1995 Dairy Research Report DSL-51
- K.K. Strawn and **H.D. Tyler.** The effects of birth stress in calves. 1995 Dairy Research Report DSL-50
- S.J. Kapil, M.E. Kehrli, **H.D. Tyler**, and J.P. Goff. Characterization of CD18 expression in Jersey calves at parturition and during the first week postpartum. 1995 Dairy Research Report DSL-49.
- S.J. Kapil, **H.D. Tyler**, M.E. Kehrli, and J.P. Goff. The effect of anticoagulant on CD18 expression on bovine neutrophils. 1995 Dairy Research Report DSL-48.
- S.J. Kapil, M.E. Kehrli, **H.D. Tyler**, and J.P. Goff. Effects of cortisol and divalent cations on CD18 expression on bovine neutrophils. 1995 Dairy Research Report DSL-47.
- S.J. Kapil, M.E. Kehrli, **H.D. Tyler**, and J.P. Goff. Expression of CD18 during the periparturient period in Jersey cows. 1995 Dairy Research Report DSL-46.
- J.W. Young, M. Abdullah, **H.D. Tyler**, A.R. Hippen, J.R. Russell, and M.A. Faust. Feeding high-forage diets and replacing non-structural carbohydrate with supplemental fat in dairy cows. 1995 Dairy Research Report DSL-36.

### **Popular Press**

- H.D. Tyler.** Difficult births, early assistance may cost you. Sept. 25, 2003. Hoards Dairyman.
- C.J. Hammer and **H.D. Tyler.** When too much help is no longer a good thing: New thoughts on assisting cows during calving, Sept., 2000. Swiss Valley Farms Dairyman

### **Youth Activities**

- Moderator for 4-H State Dairy Quiz Bowl (Starmont, Iowa) (2004-2007)
- Assisted with 4-H Dairy Judging Contest (Iowa State Fair. 1991, 2000-2006)
- Assisted with 4-H Dairy Judging Contest Awards Banquet (Iowa State Fair, 1991, 2000)
- Judged Supreme Champion Cow Division of the Dairy Show (1991 Iowa State Fair)
- Judged UDIA-Midland’s “Kiddie Cattle Capers” (1991 Iowa State Fair)

### **Agri-business Outreach Activities**

- American Protein Corporation Research Advisory Board (2009-2013)
- Nouriche Nutrition Ltd. Research Advisory Board (2002-2017)

Advanced Cell Technologies (Worcester, Massachusetts), TransOva Genetics (Sioux Center, Iowa), and San Diego Zoo (San Diego, California), 2003 – consulted on management of interspecies pregnancy of cloned bantengs

Merrick's, Inc., (Union Center, Wisconsin), 2001 – workshop and product development (new “Blue Ribbon” electrolyte formulation with optimized DCAD and electrolyte sources marketed since 2002)

Advanced Cell Technologies (Worcester, Massachusetts), TransOva Genetics (Sioux Center, Iowa), and San Diego Zoo (San Diego, California), 2000 – consulted on management of interspecies pregnancy of cloned gaur

Lala Dairy Cooperative (Durango, Mexico), 1999 – dairy farm consulting and workshop presentation

Apligen (Mexico City, Mexico), 1999 – agribusiness consulting

Midland Bioproducts Corporation (Boone, Iowa), 1998 – product development consulting (calf-side IgG, colostrum IgG, and foal IgG testing kits currently being marketed)

Foalert, Inc. (Marietta, Georgia), 1996 – product development consulting (Calf-Alert currently being marketed)

Birzai Milk Joint-Stock Company (Lithuania), 1994 – farm management troubleshooting

## SERVICE

### Summary

**Dr. Tyler has also been actively involved in professional and institutional service in a variety of leadership roles.** Within his discipline, he often served as an ad-hoc reviewer for several important journals in his field. He chaired sessions at several national scientific meetings, and has twice been selected by his peers to chair a group of international scientists and industry professionals that conduct an annual “brainstorming” meeting on calf management issues (Informal Calf Conference) every year at the annual meetings of the American Dairy Science Association. He has served as regional and national advisor to student groups in dairy science and is active in several committees across several professional organizations.

At the institutional level, Dr. Tyler serves on a variety of committees and task forces that help form institutional policies and determine the future direction of student success-related efforts both within the college and across the university. He served as chair for many of these committees.

### *Membership and Service in Professional and Honor Societies*

#### **American Dairy Science Association**

*ADSA Teaching Award in Dairy Production Evaluation Committee (2012-2015, 2017-2018)*

*Committee Chair (2015, 2017, 2018)*

*Northeast Region Outstanding Senior Evaluation Committee (2011)*

*Undergraduate Education Committee (2008-2010)*

*Graduate Student Paper Competition Committee (2005-2008)*

*Committee Chair (2008)*

*Graduate Student Paper Competition Committee, Southern Section ADSA (2007)*

*Chair, Informal Calf Conference (1996-1998, 2005-2007)*

*Regional Advisor, Midwest Regional Student Affiliate Division (1997-1998; 2002-2004)*

*Presidential Advisor, Midwest Regional Student Affiliate Division (1992-1993; 2001-2002)*  
*Coordinated Dairy Section of Midwest Sectional Academic Quadrathlon Lab Practical (1994, 2000)*  
*Chair, Calf Poster Session (1996)*  
*Chair, Calf Nutrition Session (1994, 1995)*  
*Judge, Yearbooks and Scrapbooks, National Student Affiliate Division (1995)*  
*Presidential Advisor, National Student Affiliate Division (1992-1993)*

**American Society for Animal Science**

*Undergraduate Teaching Committee (2008-2010)*  
*Graduate Student Competition Committee (2008-2009)*  
*Committee Chair (2008)*  
*Academic Quadrathlon Committee – Midwest ASAS (2000-2002)*  
*Undergraduate Paper Competition Committee – Midwest ASAS (1999-2001)*  
*Outstanding Teacher Awards Committee – Midwest ASAS (1998-2000)*  
*Ad hoc Career Brochure Committee (1996-1997)*

**American Zoological Society**

*Assisted Reproductive Technologies Advisory Group for Taxon Advisory Groups and Species Survival Plans (2001-2003)*

**International Society for Oxygen Transport to Tissue**

**National Academic Advising Association**

**NAACP**

**Sigma Xi**

**Gamma Sigma Delta**

*Past-President 2011-2012*  
*President 2010-2011*  
*President-elect 2009-2010*

**ISU Nutritional Sciences Council**

*Education Committee (1999-2006)*  
*Modern Views of Nutrition Committee (1994-1997)*  
*Nutrition Summer Lectureship Committee (1993-4)*

**ISU Physiology Council**

*Advisory Board (1994-1997)*

***University Service Activities***

**ISU DEI Think Tank (2022)**

**ISU Faculty Senate Drop Limit Workgroup (2021-2022)**

**ISU WorkCyte Phase II Steering Committee (2021-present)**

**ISU Workday Student Information Systems Student Core and Academic Foundation Committee (2021-present)**

**ISU Workday Student Information Systems Records and Academic Foundation Committee (2021-present)**

**ISU EAB Leadership Team (2021-present)**

**ISU Graduate Recruitment Coordinating Council (2021-present)**

**ISU American Council on Education Learner Success Lab Steering Committee (2021-2022)**

*Co-chair Leadership and Structure subcommittee (2021-2022)*



**ISU Graduate College Associate Deans Committee (2021-present)**  
**ISU Summer Jumpstart Program Planning Task Force - Chair (2021)**  
**ISU 2020-2021 Academic Continuity Work Team (2020-2022)**  
**ISU Associate Deans for Academic Programs Task Force (2020)**  
**ISU 100 Ideas in 100 Days Retention Team (2020-2022)**  
*Emergency/Completion Grant Sub-committee (2021-2022)*  
**ISU 100 Ideas in 100 Days Recruitment Team (2020-2021)**  
**ISU COVID-19 Emergency Response Team (SME Academic Continuity) (2020)**  
**ISU 2021 Women Impacting ISU Review Committee (2020-present)**  
**ISU Academic Programs Brainstorming Task Force (2019-2020)**  
**ISU Admissions Partnership Program Task Force (2019-2021)**  
**ISU Mental Health Task Force (2019-2022)**  
**ISU Student Success Council (2019-2021)**  
**ISU Multicultural Student Success Collaborative (2019-present)**  
**ISU Advocates for Cyclone Success (ACES) Task Force (2019-2021)**  
*Chair and developed concept for committee*  
**ISU Strategic Enrollment Management Committee – Recruitment (2019-2020)**  
**ISU Financial Aid Leveraging Task Force (2019-2021)**  
**ISU Center for Undergraduate Research, Creativity and Innovation Task Force (2019- 2020)**  
**ISU Academic Programs Brainstorming Task Force (2019-2021)**  
**ISU Closing the Achievement Project Team: Students of Color (2018-2019)**  
**ISU Vertically Integrated Projects Task Force (2018)**  
**ISU Campus Climate Committee: Undergraduate Students (2018-2019)**  
**ISU Workday Student Information Systems Implementation Committee (2018-2019)**  
*Workday Feature Design Group (2018-2019)*  
**ISU LatinX Steering Committee (2017-2018)**  
**ISU Outcomes and Assessment Committee (2016-2019)**  
**ISU New Student Onboarding Leadership Committee (2016-2019)**  
*Co-chair, New Direct From High School subcommittee (2017-2018)*  
**ISU University Orientation Committee (2016-present)**  
**ISU Student Services Directors Committee (2016-present)**  
**ISU Electronic Testing Committee (2016-2020)**  
**ISU Military Credit Committee (2016-2021)**  
**ISU Registration and Classification Committee (2016-present)**  
**ISU Undergraduate Recruitment Coordinating Council (2016-2018)**  
**ISU Technology Education Advisory Committee - Enterprise Student Information Systems Committee (2016-2018)**  
*Student Information Systems Learning Communities Review Subcommittee (2017-2018)*  
**ISU Course Availability Committee (2016-2021)**  
**ISU Women in Science and Engineering Strategic Planning Committee (2016)**  
**ISU Technology Education Advisory Committee – Enterprise Student Information Systems Subcommittee (2016-2018)**  
**ISU Undergraduate Programs Council (2015-present)**  
**ISU Academic Advising Committee (2015-2016, 2018)**  
*Co-chair (2015-2016)*

**UAAC Research and Assessment of Advising Committee (2014-2016)**  
**David J. Henry Scholarship Selection Committee (2014-present)**  
**UAAC Adviser Training Materials Development Committee (2014-2016)**  
**ISU Education Advisory Board Student Success Collaborative Advisory Board (2014-2016)**  
**ISU Learning Communities Advisory Committee (2014-2018)**  
**Faculty Senate Student Affairs Advisory Committee (2014-2021)**  
**Margaret Sloss Women's Center Director Search Committee (2014)**  
**Graduate College GMAP Advisory Committee (2014)**  
*Chair (2014)*  
**ISU Learning Communities Curriculum Committee (2012-2014)**  
*Chair (2013-2014)*  
**ISU Division of Student Affairs RMM Budget Advisory Committee (2011-2021)**  
**Griffith Research Excellence Award Selection Committee (2011)**  
**University Advisor Award Selection Committee (2007-2009, 2016-2019)**  
**Margaret Sloss Women's Center Advisory Board (2003-2009)**  
**VEISHEA Advisory Council (2001-2003)**  
**University Honors Committee (1996-2000)**  
*Subcommittee for Restructuring Freshman Honors Program, Chair (1998)*  
*Student-Professor Dinner Exchange (1999, 2000)*  
**Iowa Agriculturalist Publication Board (1992-2000)**  
**New Student Days Workshop (2000, 2002, 2005)**  
**Science Bound Program presentation (1995)**

### *College Service Activities*

**CALS Dean's Leadership Group (2019-present)**  
**CALS Scholarship of Teaching and Learning Task Force (2019)**  
*Chair (2019)*  
**CALS Student Innovation Center Task Force (2019)**  
**CALS Mental Health Task Force (2019)**  
*Chair (2019)*  
**CALS Farms Confederation Committee (2019)**  
**Advisory Committee for the IFB/Hinkle Trust Student Support Fund**  
*Chair (2019-2022)*  
**CALS Entrepreneur Programs Visioning Task Force (2018-2019)**  
**CALS Outcomes Assessment Committee (2016-2019)**  
*(Chair 2016-2018)*  
**CALS Inclusiveness Committee (2017-2018)**  
**CALS Curriculum Committee (2014-2015, 2016-2020)**  
**CALS New Adviser Training Committee (2012-2015)**  
*Chair (2012-2015)*  
**Advisory Committee for the Harold Crawford Student Support Fund (2012-present)**  
*Chair (2017-present)*  
**Dean's Task Force for Enhancing First-Year Student Success (2011-2012)**  
**Louis Thompson Advising Academy (2011-present)**

**CALS Learning Communities Committee** (2010-present)  
**CALS Academic Affairs Committee** (2010-2011, 2016-present)  
**CALS Faculty Liaison to NIACC** (2007-2016)  
**CALS Recruitment Committee** (1992-1993, 2004-2013, 2016-2018)  
*Co-chair for Science in Agriculture Day, April 7, 1993*  
**CALS Honors Committee** (1995-2000, 2005-2011, 2016-present)  
*Chair* (1996-2000)  
**Faculty Escort for Student Marshall (Meghan Filbert)** (2007)  
**CALS Transfer and Articulation Committee** (2005-2007)  
**Faculty Escort for Student Marshall (Jennifer Taylor)** (2005)  
**CALS Scholarship Committee** (2002-2005)  
**College of Veterinary Medicine Admissions Committee** (1998-2001)

### *Departmental Service Activities*

**Animal Science Faculty Development Task Force** (2021)  
**Preliminary Evaluation Committee (chair) - Dr. Jodi Sterle** (2019)  
**Preliminary Evaluation Committee - Dr. Jodi Sterle** (2017)  
**Ad-Hoc Committee on Post-Tenure Review Superior Ratings Guidelines** (2013)  
**Undergraduate Advisers Committee** (2011-2015)  
**Undergraduate Curriculum Committee** (1991-2005, 2009-2010, 2012-2015)  
*Chair* (2014-2015)  
**Departmental Recruiting and Retention Committee** (2004-2016)  
*Chair* (2004-2016)  
**Departmental Representative at College of Agriculture Commencement** (1996-2015)  
**Assisted in New Student Orientation Advising** (1992- 2016)  
**Experience Iowa State**, 1992-2016, ~10 times per year  
**Dairy Farm User's Group** (2009-2017)  
**Undergraduate Executive Committee** (2005-2009)  
**Dairy Farm Facilities Planning Committee** (1993- 2007)  
**Electronic Teaching Materials, Facilities, and Equipment Committee** (1991-2004)  
**Nutrition Conferences Committee** (1991-2004)  
**Display Case Committee** (1999, 2001-2004)  
**Undergraduate Curriculum Revision Committee** (1994-1996)  
*Recruitment and Retention Subcommittee* (2001-2003)  
**Academic Quadrathlon Committee** (1998-2003)  
*Committee Chair* (1998-2002)  
**Three-year Evaluation Committee - Dr. James Reecy** (2002)  
**Post-tenure Review Committee - Dr. Leo Timms** (2001)  
**Research Coordinator for ISU Dairy Farm** (1991- 2000)  
**Seminar Committee** (1991- 1998)  
*Chair* (1997)  
**Department Strategic Planning Committee** (1995-1996)  
*Research* (1995-1996)  
*Teaching* (1995-1996)

**Kildee Addition Planning Committee (1994-1995)**

*Intensive Animal Facilities Planning Committee (1994-1995)*

*Research Laboratories and Offices Planning Committee (1994-1995)*

**Minority Recruiting - Experience Iowa State (Chicago Agricultural High School) (1994, 1995)**

**Recruitment phone-a-thons (1992)**

**Departmental representative for College of Agriculture Booth, Homecoming Reception, October 17, 1992**

**Dairy Science Information Booth at Iowa State Fair, August 20-22, 1992**

### *Other Service Activities*

**University of New Hampshire Department of Animal Sciences External Reviewer for Faculty Promotion and Tenure package (2011)**

**Northeast Iowa Community College Dairy Science Technology and Pre-Veterinary Medicine Advisory Committee (2007-2015)**

**Midwest Teaching Consortium - *Planning committee member* (2008-2009)**

**South Dakota State University Department of Animal Sciences External Reviewer for Faculty Promotion and Tenure package (2007)**

**North Carolina State University College of Agriculture and Life Sciences Career Development and Placement Center -- *Career Consultant* (1993-2005)**

**Louisiana State University Department of Dairy Science External Reviewer for Faculty Promotion and Tenure package (2003)**

**University of Kentucky Department of Animal Sciences External Reviewer for Faculty Promotion and Tenure package (2003)**