JENNIFER L. BARNES, B.S.

Division of Nutritional Sciences University of Illinois at Urbana-Champaign 420 Bevier Hall, 905 S. Goodwin Ave. Urbana, IL 61801 barnes2@illinois.edu, 815-685-1554

EDUCATION

| 2008- present | Doctoral Student in Nutritional Sciences Expected Graduation May 2013 University of Illinois at Urbana-Champaign GPA: 4.0/4.0 Advisor: Kelly Tappenden, PhD., R.D. Thesis Research: Efficacy of Butyrate Producing Therapies for use in Pediatric Intestinal Failure Patients |
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| 2004-2008 | Bachelor of Science with High Honors Food Science and Human Nutrition Dietetics Option, Minor: Chemistry University of Illinois at Urbana-Champaign GPA: 3.75/4.0 |

PROFESSIONAL EXPERIENCE

Graduate Research Assistant 2008- present

University of Illinois at Urbana- Champaign, Division of Nutritional Sciences

- Utilize molecular techniques to analyze and quantify RNA, DNA, and protein of *in vivo* samples, as well as histomorphology, Ussing chambers, disaccharidase activity, immunohistochemistry, RT-PCR
- Analyze and interpret data using SAS 9.2
- Prepare animal study protocols for Illinois Institutional Animal Care and Use Committee approval
- Surgical techniques including preparing instruments, drapes, the sterile field, monitoring anesthesia, suturing and placement of jugular catheters in piglets
- Prepare and administer parenteral nutrition
- Manage animal husbandry of short bowel syndrome piglets on parenteral nutrition
- Teach and supervise undergraduate assistants in laboratory techniques
- Assist in rat and cell culture trials
- Mentor Research Apprentice Program student through 7 week research project

Abbott Nutrition Research and Development, Pediatric Innovation and Discovery Technology 2010-present

Abbott at Research Park, Champaign, IL

- Perform detailed literature review on area of interest
- Generate white paper outlining current knowledge and avenues for future work
- Advise on clinical trial design based on literature

Assistant to the Didactic Program in Dietetics Director 2011-present

University of Illinois at Urbana- Champaign, Food Science and Human Nutrition

- Help to maintain undergraduate program according to Commission on Accreditation for Dietetic Education
- Facilitate alumni communications
- Gather and analyze data from current students, alumni, and dietetic internship directors
- Manage website including updating curriculum, policies, procedures, experience opportunities and useful resources for dietetic students

TEACHING EXPERIENCE

Teaching Assistant 2009-2011

University of Illinois at Urbana-Champaign, Food Science and Human Nutrition (FSHN)

- Contemporary Nutrition FSHN 120 Spring 2009, Fall 2009, Spring 2010
 - Manage semester long nutrition analysis project
 - Co-lead student advisory committee and help implement student feedback
 - Teach digestion lectures to class of 700 students, lead review sessions prior to exams
 - o Assist students during weekly office hours
- Principles of Nutrition FSHN 220 (Discussion leader), Spring 2010, Spring 2011
 - Lead weekly discussion on contemporary nutrition topics
 - Devise, administer and provide feedback on opinion based response to weekly contemporary nutrition question
- Nutritional Aspects of Disease FSHN 420 (Discussion leader), Fall 2009
 - o Conduct weekly discussion on Evidence Based Practice
 - o Mentor students through literature search and presentation preparation
 - o Evaluate student presentations and provide feedback

INVITED LECTURES

Nutrition Assessment & Therapy, Food Science and Human Nutrition 429

University of Illinois at Urbana-Champaign

Chronic Obstructive Pulmonary Disease, Fall 2011

Lead discussion on chronic obstructive pulmonary case study including nutrition assessment, diagnoses, intervention, monitoring, and evaluation

Nutrition and the Life Cycle, Food Science and Human Nutrition 322

University of Illinois at Urbana-Champaign Behavior Theories, Fall 2011 Discuss prominent behavior theories and application in nutrition counseling

Nutritional Aspects of Disease, Food Science and Human Nutrition 420

University of Illinois at Urbana-Champaign

Gastrointestinal Physiology, Fall 2010, Fall 2011 Lecture and lead discussion on advanced gastrointestinal physiology to over 60 junior, senior, and graduate level students in nutrition

Contemporary Nutrition, Food Science and Human Nutrition 120

University of Illinois at Urbana-Champaign

Digestion, Fall 2009 and Spring 2010, *Bone Health Nutrients*, Fall 2009 Lecture on basic principles to over 700 undergraduate students

MANUSCRIPTS

1. **Barnes JL,** Hartmann B, Holst JJ, Tappenden KA. Intestinal Adaptation is Stimulated by Partial Enteral Nutrition Supplemented with the Prebiotic Short Chain Fructooligosaccharide in a Neonatal Intestinal Failure Piglet Model. Journal of Parenteral and Enteral Nutrition, *in press*.

ABSTRACTS

- 1. Deutsch AS, **Barnes JL**, Chung BM, Tappenden KA. The addition of synbiotics to partial enteral nutrition enhances intestinal adaptation in a short bowel syndrome piglet model. Journal of Parenteral and Enteral Nutrition 2009;33: 184-185.
- 2. **Barnes JL**, Deutsch AS, Chung BM, Tappenden KA. The addition of synbiotics to partial enteral nutrition enhances intestinal adaptation in a piglet model of intestinal failure. Gastroenterology 2010;138(4 Suppl 2):S-132.
- 3. **Barnes JL,** Tappenden KA. Intestinal Adaptation is Stimulated by Partial Enteral Nutrition Supplemented with the Prebiotic Short Chain Fructooligosaccharide in a Neonatal Intestinal Failure Piglet Model. Clinical Nutrition Week, Orlando, Florida, January 2012.
- 4. **Barnes JL,** Tappenden KA Chronic antibiotic administration increases intestinal mass but inhibits functional adaptation in an intestinal failure piglet model. Experimental Biology, San Diego, California, April 2012.

BOOK CHAPTERS

- 1. **Barnes JL**, Tappenden KA. Nutrition in Inflammatory Bowel Disease & Short Bowel Syndrome. In: *Nutrition in the Prevention and Treatment of Disease (Third Edition)*. San Diego, California: Academic Press, *in press*.
- 2. Barnes JL, Tappenden KA. Intestinal Adaptation Following Resection. In: Nutrition and Metabolism in Surgery. Rio de Janeiro, Brazil: Rubio Editora, in press.

PUBLICATION REVIEW CONTRIBUTIONS

Ad-hoc Reviewer

Journal of Parenteral and Enteral Nutrition

SELECTED SCHOLARSHIPS, HONORS AND AWARDS

Harry M. Vars Award, Clinical Nutrition Week, 2012

Awarded annually to the best research manuscript and presentation at Clinical Nutrition Week

Promising Investigator Award, Clinical Nutrition Week, 2012

Travel award presented to the first authors of the top abstracts

James L. Robinson Nutrition Impact Award, 2012

Awarded annually to the graduate student making the greatest extracurricular impact on the Division of Nutritional Sciences

Ruth L. Kirschstein Fellow, 2010-2012

Supports trainees investigating nutritional regulation of inflammation

American Society for Nutrition Predoctoral Fellowship, 2010

Awarded annually based on significance, feasibility, scientific quality and potential for contribution to the field of nutrition

Margin of Excellence Travel Award, 2010, 2012

Supports student travel to present research at professional meetings

Margin of Excellence Research Award, 2010

Awarded based on quality of proposed work to support student nutrition research

2010 Abbott Nutrition Certificate in Business Administration Scholarship

Supports student completion of the Certificate in Business

List of Teachers Ranked as Excellent by Their Students, 2009, 2010, 2011

Includes instructors ranking in the top 10% for Overall Teaching Effectiveness, based on student completion of the Instructor & Course Evaluation System (FSHN 420, FSHN 220)

University Fellowship, 2008

CERTIFICATIONS

Graduate Teacher Certificate, completed Spring 2011

Sponsored by the Center for Teaching Excellence and requires teaching development activities, classroom experience, feedback from observer and students

The Illinois Certificate in Business Administration for Scientists, Spring 2010

Sponsored by the Biotechnology Center, in cooperation with the College of Business, designed for graduate students in non-business areas of study

Teaching College Course, Fall 2009.

Sponsored by the College of Agricultural, Consumer and Environmental Sciences and the ACES Academy of Teaching Excellence, designed to teach professors and teaching assistants how to teach.

Illinois Food Service Sanitation Manager Certification, Fall 2006-present

Illinois Department of Public Health

VISITING STUDENTS MENTORED IN LABORATORY

Francisco Belsis, College of Agricultural Consumer and Environmental Sciences Research Apprentice Program II, Summer 2010

Francisco received awards for Outstanding Paper, Outstanding Poster, and Outstanding Oral Presentation

COMMITTEE WORK

National Organizations American Society for Nutrition Student Interest Group

- Liaison to the Graduate and Professional Education Committee 2011-2013
 - Attend business meetings of student interest group and graduate and professional education committee at Experimental Biology Meeting
 - Report on actions of both committees
 - o Plan Student Interest Group activities

University of Illinois

Nutritional Sciences Graduate Student Association (NSGSA) 2009- present

- Chair 2010-2011
 - Serve as head of steering committee
 - o Organize events and subcommittees
 - Lead Nutrition Symposium planning
- Co-Chair 2009-2010 (with automatic succession to Chair)
 - o Supervised various committee activities within NSGSA
- Planning committees
 - o Nutrition Symposium 2010, 2011
 - o ExplorACES 2010, 2011
 - o Holiday Party 2010
 - Fall Picnic 2010
 - o New Student Reception 2010
 - o Quiz Bowl 2009
 - o Fundraising 2009

SOCIETY MEMBERSHIPS

American Society for Parenteral and Enteral Nutrition 2011-present American Society for Nutrition 2009-present American Dietetic Association 2007-present