

Laura Szymanski

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EDUCATION

Lehigh University, Bethlehem, PA
Ph.D., Integrative Biology, Expected Summer 2008
Advisor: Dr. Jill E. Schneider
Texas Christian University, Fort Worth, TX
B.S. Neuroscience, December 1999

AWARDS

2000 Biological Sciences Department Fellowship, Lehigh University
2001 Thorne Fellowship, Lehigh University
2002 NIH Predoctoral training fellowship, Monell Chemical Senses Center
2003 NIH Predoctoral training fellowship, Monell Chemical Senses Center
2005 Thorne Fellowship, Lehigh University
2008 Thorne Fellowship, Lehigh University (Spring)

RESEARCH INTERESTS

My Ph.D. dissertation research focuses on the metabolic control of reproduction. Specifically, I am investigating how the hypothalamic-pituitary-gonadal (HPG) axis recovers from energy deficits caused by alterations in diet.

My future aim is to expand my research focus to include the mechanisms of hormone action in the brain as well as the neuroanatomical pathways involved in control of reproduction and fertility.

INVITED TALKS

February 2005 **Food, fat, and fertility.** Nobel Master Class on Research and Creativity. Lehigh University.

TECHNICAL SKILLS

Surgery

ovariectomy
castration
stereotaxic surgery (icv cannulation, injections)
perfusion
micropump implantation

Animal handling

intraperitoneal and subcutaneous injections
blood sampling (cardiac puncture)
serial blood sampling (via indwelling catheter)
breeding
lordosis testing

Other laboratory skills

microtome and cryostat brain sectioning
RIAs
microplate metabolic fuel assays
ELISAs

ACADEMIC EXPERIENCE

Research Assistant

Ph.D. research, including relocating to Australia for extended periods of time in order to conduct dissertation research in the laboratory of Dr. Iain Clarke at Monash University, Clayton, Australia

Teaching Assistant

BIOS 382 – Endocrinology of Behavior (advanced neuroscience course for biology and behavioral neuroscience students). Duties include recording and facilitating classroom participation, occasional lectures, fielding student inquiries, and grading

BIOS 117 – Behavioral Neuroscience I (introductory neuroscience course)
Duties include recording classroom participation, grading.

PUBLICATIONS

Szymanski, L.A., Schneider, J.E., Friedman, M.I., Ji, H., Kurose, Y., Blache, D., Rao, A., Dunshea, F.R., and I.J. Clarke. Changes in insulin,

glucose and ketone bodies, but not leptin or body fat content precede restoration of luteinising hormones secretion in ewes. *J Neuroendocrinology* 2007 Jun; 19(6): 449-60

Schneider, J.E., Buckley, C.A., Blum, R.M., Zhou, D., **Szymanski, L.**, Day, D.E., and T.J. Bartness. Metabolic signals, hormones and neuropeptides involved in control of energy balance and reproductive success in hamsters. *Eur J Neurosci.* 2002 Aug; 16(3):377-9.

ABSTRACTS SUBMITTED TO ANNUAL MEETINGS

Szymanski, L.A., Tabaac, B., and J.E. Schneider (2008) Differentiating between rate of gastric fill, bulk intake, and calories as signals for control of reproduction. Submitted to Society for Behavioral Neuroendocrinology July 2008 annual meeting.

Szymanski, L.A., Edwards, A.E., Grodin, E.D., and J.E. Schneider (2005) Calories but not macronutrients are critical for restoration of estrous cycles in food deprived Syrian hamsters. Submitted to 2005 Society for Behavioral Neuroendocrinology annual meeting.

Szymanski, L.A., Schneider, J.E., Kurose, Y., Friedman, M.I., Ji, H., and I.J. Clarke (2004). Rapid restoration of luteinizing hormone pulses by re-feeding undernourished ewes is preceded by alterations in plasma ketone bodies and insulin but not leptin or ghrelin. Submitted to 2004 Society for Behavioral Neuroendocrinology annual meeting.

Szymanski, L.A., Schneider, J.E., Rao, A., and I.J. Clarke. (2003) Luteinizing hormone pulses resume rapidly after refeeding whereas whole body fat content and plasma leptin concentrations do not increase above those of chronically food-restricted hypogonadal ewes. Submitted to 2003 Society for Neuroscience annual meeting.

Blum, R.M., **Szymanski, L.A.**, Edwards, A.A., Bond, A.R., Friedman, M.I., Swanson, J.A. and J.E. Schneider. (2003) Glucose, fructose and chow diluted with cellulose are not as effective as chow in restoration of estrous cycles after food deprivation in Syrian hamsters. Submitted to 2003 Society for Neuroscience annual meeting.

Szymanski, L.A. and J.M. Swann. (2002) Galanin immunoreactive neuron distribution in male Syrian hamsters. Submitted to Society for Neuroscience November 2002 annual meeting.

Szymanski, L.A. and J.M. Swann. (2002) Distribution of galanin immunoreactive neurons in the bed nucleus of the stria terminalis in Syrian hamsters. Submitted to Society for Behavioral Neuroendocrinology June 2002 annual meeting

Szymanski, L.A., Zhou, D, and J.E. Schneider (2001). Effects of fourth ventricle glucose utilization on estrous cyclicity in Syrian hamsters. Abstract in Society for Behavioral Neuroendocrinology annual meeting abstracts. *Hormones and Behavior*. 39: 351-352.

MEETINGS ATTENDED

June 2001	Society for Behavioral Neuroendocrinology annual meeting.
June 2002	Society for Behavioral Neuroendocrinology annual meeting.
November 2002	Society for Neuroscience annual meeting.
June 2003	Society for Behavioral Neuroendocrinology annual meeting.
November 2003	Society for Neuroscience annual meeting.
July 2004	Society for Behavioral Neuroendocrinology annual meeting.
October 2004	Society for Neuroscience annual meeting.
October 2005	Society for Neuroscience annual meeting
July 2005	Society for Behavioral Neuroscience annual meeting
June 2006	Appetite and Metabolic Function: Advances in Domestic Animals

MEMBERSHIPS

2001-present	Society for Behavioral Neuroendocrinology
2001-2002	National Association for Graduate and Professional Students
2002-present	Society for Neuroscience
2003-present	American Physiological Society