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EDUCATION

- 1990-1993 **State University of New York Binghamton.** Ph.D. in Biology. Vertebrate Physiology.
- 1989-1990 **State University of New York Cortland.** Master in Arts of Teaching. NY teaching certification. High school biology and chemistry.
- 1986-1989 **Cornell University.** Studies in Animal Science. Physiology, metabolism and prenatal growth of domestic animals.
- 1984-1986 **University of Vermont.** Master of Science in Animal Science. Physiology and nutrition of domestic animals.
- 1983-1984 **University of Vermont.** Bachelor of Science in Animal Science.
- 1981-1983 **Vermont Technical College.** Associate Degree in Dairy and Farm Management and Associate Degree in Agribusiness Management.

TEACHING EXPERIENCE

- Spring 2005- **Promoted to Professor of Biology.** Widener University.
- Spring 1999 **Promoted to Associate Professor of Biology.** Widener University.
- Summer 1993-1999 **Assistant Professor of Biology.** Widener University.
- Fall 1992-1993 **NSF Graduate Fellow.** State University of New York Binghamton. Teaching instructor. Developed methods for teaching beginning undergraduate courses.
- 1990- 1992 **Graduate Teaching Assistant.** SUNY Binghamton. Assisted in all aspects of teaching and administration of undergraduate courses.
- Spring 1990 **Adjunct Lecturer.** Elmira College. Taught a four credit non - major general biology course.
- Spring 1990 **Student Teacher.** Homer Middle School. Eighth grade. Physical Science.

OTHER EXPERIENCES

Dec 2000-May 2001 **Project Kaleidoscope**, Scientist in Residence.

1976-1980 **Kibbutz Misgav Am**, Israel. Production agriculture and internal management.

1975-1976 **Youth movement leader**, Ashdod Israel. Coordinated and conducted all activities of 600 member chapter.

1972-1975 **Israeli Defense Force**. Head of paramedic team of six medics.

HONORS AND AWARDS

Science Division. 2013. Research Award

Arts and Sciences. 2013. Research Award

Widener University. 2000. Inducted to Phi Beta Delta the Honor Society for International Scholars

Project Kaleidoscope. 1997. Faculty for the 21st century (F21)

Widener University. 1994. Inducted to Beta Beta Beta the Biology Honor Society for

State University of New York Binghamton. 1992. Graduate Student Award for Excellence in Teaching

Cornell University. 1987 & 1988. Max and Ida Lechhook Fund Award.

PUBLICATIONS

Peer-reviewed

Effects of glyphosate and polyoxyethylene amine on metabolic rate, hemolymphatic carbohydrates levels and energy muscle reserves of *Procambarus clarkii* juveniles. Frontera, J.L, Vatnick, I. , Nicole Gilette , Breanna Hull , Jacquie Korang , Carolina Amorim , Rodríguez, E.M. 2014. *The Open Environmental Sciences*, 8 (49-53)

Estimating survival times for Northern Diamondback Terrapins, *Malaclemys terrapin terrapin*, in submerged crab pots. Patrick J. Baker, Amy Thomson, Itzick Vatnick, and Roger C. Wood. 2013. *Herpetological Conservation and Biology* 8(3):667–680.

Effects of both ecdysone and the acclimation to low temperature, on growth and metabolic rate of juvenile freshwater crayfish *Cherax quadricarinatus* (Decapoda, Parastacidae). 2013. Chaulet Anouk, Itzick Vatnick, and Enrique M. Rodríguez. *Iheringia. Série Zoologia* 103.2: 138-144.

The influence of dietary lipid saturation on environmental temperature preference and metabolic rate in the Djungarian hamster (*phodopus sungorus*) Ryan Pannorfi, Barry M. Zee, Itzick Vatnick, Nancy Berner and Sara M. Hiebert. 2012. *Physiological and Biochemical Zoology* 85: 405-414.

Effects of glyphosate and polyoxyethylenamine on growth and energetic reserves, in the freshwater crayfish *Cherax quadricarinatus* (Decapoda, Parastacidae). Frontera Jimena L., Vatnick Itzick, Chaulet Anouk, Rodríguez Enrique M. 2011 *Archives of Environmental Contamination and Toxicology* 61: 590-598.

Atrazine is an Immune Disruptor in Adult Northern leopard frogs (*Rana pipiens*) MA Brodtkin, H Madhoun, M Rameswaran, I Vatnick. 2007. *Environmental Toxicology and Chemistry*, 26:80-85

The influence of ambient temperature energy and protein content of the food on nitrogenous excretion in the Egyptian fruit bat (*Rousettus aegyptiacus*). Carmi Korine, Itzick Vatnick, Ian G. van Tets and Berry Pinshow. 2006. *Physiological and Biochemical* 79 (5):957-64

Acid Exposure is an Immune Disruptor in Adult *Rana pipiens*. I. Vatnick, J. Andrews, M. Colombo, H. Madhoun, M. Rameswaran, and M. Brodtkin. 2006. *Environmental Toxicology and Chemistry*, Vol. 25, No. 1, pp. 37-40

Oxalate, calcium and ash intake and excretion balances in fat sand rats (*Psammomys obesus*) feeding on two different diets. Niv Palgi, Itzick Vatnick, Berry Pinshow. 2005. *Comparative Biochemistry and Physiology. Part A* 141:48-51

Genetic Monogamy of Captive Pigeons (*Columba livia*) as Assessed by DNA Fingerprinting. Patel, K.K., Siegel, C., Weaver, F.E., and Vatnick, I. 2005. *BIOS*, the quarterly journal of the Beta Beta Beta Biological Honor Society:2 pp. 97-101.

Effects of Acid Stress in Adult *Rana pipiens* M Brodtkin, I Vatnick, M Simon, H Hopey, K Butler-Holston, and M Leonard. 2003. *Journal of Experimental Zoology* 298A (1): 16-22.

New observations on urine contents in water deprived Negev desert rodents. C Korine, I Vatnick, I. Van Tets, and B Pinshow. 2003. *Canadian Journal of Zoology* 81 (5): 941-945.

Effects of acid exposure on natural resistance and mortality of adult *Rana pipiens*. M.P. Simon, I. Vatnick, H.A. Hopey, K. Butler, C. Korver, C. Hilton, R.S. Weimann, and M.A. Brodtkin. 2002. *Journal of Herpetology*: 36 (4): 697-699.

Microrclimatic characteristics of a primary tropical amazonian rain forest, ACEER, Iquitos, Peru. Stephen Madigosky and Itzick Vatnick. 2000. *Selbyana* 21(1):107-114.

The effects of exposure to mild acidic conditions on adult frogs (*Rana pipiens* and *Rana clamitans*): Mortality rates and pH preferences. I. Vatnick, MA Brodtkin, MP Simon, BW Grant, CR Conte, M. Gleave, R. Myers, and MM Sadoff. 1999. *Journal of Herpetology* 33 (3):370-374

A multi-week inquiry for an undergraduate introductory biology laboratory. B. Grant and I. Vatnick. 1998. *Journal of College Science Teaching* l XXVIII (2):109-112

Incubation temperature of the pigeon embryo (*Columba livia*). I Vatnick and S Foertsch. 1998. *Journal of Thermal Biology* 23 (1):53-57

Ontogeny of fetal hepatic and placental growth and metabolism in sheep. I. Vatnick and AW Bell. 1992. *American Journal of Physiology* 263:R619-623

Chronic heat stress and prenatal development in sheep: II. Placental cellularity and metabolism. RJ. Early, BW McBride, I Vatnick, AW Bell. 1991. *Journal of Animal Science* 69:3610-3616

Growth and metabolism of the placenta after unilateral fetectomy in twin-pregnant ewes. I. Vatnick, P.A. Schoknecht, R. Darrigrand and A.W. Bell. 1991. *Journal of Developmental Physiology* 15:351-356 1

Effect of heat-stress on ovine placental growth in early pregnancy. I. Vatnick, G. Ignatz, B.W. McBride and A.W. Bell. 1991. *Journal of Developmental Physiology* 16:163-166

Regression of brown adipose tissue mitochondrial function and structure in neonatal goats. I. Vatnick, R.S. Tyzbit, J.G. Welch and A.P. Hooper. 1987. *American Journal of Physiology* 252 (Endocrinol. Metab. 15): E391-397

Published Abstracts, Proceedings, and Others

Jirds living in a hypercapnic environment incur energetic costs, but don't appear to care. Downs C.J., Brickner-Braun, I, Vatnick I, and Pinshow B. 2013. *Integrative and Comparative Biology* 53 E56-E56

Vatnick, Itzick, Elizabeth Blatteau, and Victoria Batter. 2012. The Effects of Dietary Fatty Acid Composition on Energy and Dry Matter Digestibility in Siberian hamsters (P. Sungorus)." *FASEB Journal*. Vol. 26.

Brickner-Braun, Inbal, Itzick Vatnick, and Berry Pinshow. 2011. The oxy-hemoglobin dissociation curve of a semi-fossorial rodent in the context of its burrow's hypercapnic environment. *FASEB JOURNAL*. Vol. 25.

Thomson, A., Vatnick, I., & Baker, P. 2009. Estimate of Survival Time of Diamondback Terrapins Caught in Crab Traps Based on Voluntary Dive Times and Metabolic Rates. *Integrative and Comparative Biology* Vol. 49: E315-E315.

Youssef, S. K., Fischer-Drowos, S., Morris, R. W., Vatnick, I., & Nagengast, A. A. 2009. The Effect of Perfluorooctane Sulfonate Exposure on Gene Expression and WBC in Mouse. *Integrative and Comparative Biology* Vol. 49: E330-E330.

Drebitko, H., Morris, R., Vatnick, I., & Brodtkin, M. 2009, Februar. A Microarray Investigation of Genes Involved in Pollutant-mediated Immunosuppression in *Rana pipiens*. *Integrative and Comparative Biology* vol. 49: e223-e223.

Madigosky, S.R., Platt, N., Vatnick, I., and Caranci, A. 2006. Characteristics of the giant jumping stick *Stiphra* sp. (Orthoptera: Proscopiidae) from Peru. Proceedings of the 14th Annual Invertebrates in Captivity Conference, Rio Rico, AZ

Caranci, A. Madigosky, S. R., Vatnick, I., Platt, N., and Morgan, R. 2006. Metabolic characteristics of the giant jumping stick *Stiphra* sp. (Orthoptera: Proscopiidae) from Peru. Proceedings of the 14th Annual Invertebrates in Captivity Conference, Rio Rico, AZ

Vatnick, I.V., Madigosky, S.R., Caranci, A., Ojo, B., and Morgan, R. 2005. A Comparative Analysis of Growth and Metabolic Change Exhibited by *Dynastes hercules* (L.) (Coleoptera: Scarabaeidae) during Ontogenesis. Proceedings, 13th Annual Invertebrates in Captivity Conference, Sonoran Arthropod Studies Institute, Rio Rico, AZ

Vatnick, I., H. Madhoun, M. Rameswaran, and M. Brodtkin. 2004. Atrazine is an immune disruptor in Northern leopard frogs (*Rana pipiens*). *Integrative and Comparative Biology*, vol. 44 (6): 757-757.

Atrazine is an immune disruptor. SETAC Globe vol 5 #3: 48-49. Vatnick I, Brodtkin MA. 2004

Review of workshop 305 Energy Balance- what we can teach our students that the textbooks do not. I. Vatnick. HAPS Educator. Winter 2004: 27.

EPA Docket 2004 comment on Revised Atrazine Interim Reregistration Eligibility Decision (IRED) OPP-2003-0367-0142

Korine, C., I. Vatnick, I.G. van Tets, and B. Pinshow. 2003. Negev Desert rodents do not produce allantoin when deprived of water but the sand fat rat produce sodium oxalate. *Israel Journal of Zoology* 49:81.

Acid Stress suppresses the thioglycollate-stimulated inflammatory response of adult *Rana pipiens*. J. Colombo, I. Vatnick, M Brodtkin, J. Andrews, E Piddington, M Rameswaran, and E Fiorini. 2002. *Integrative and Comparative Biology* 42 (6): 1211.

Vatnick, Itzick, and Robert Morris. Biology for Non-Majors—Who Knew I Like Biology? *Integrative and Comparative Biology*, vol. 42 (6):1327-1327.

Can Egyptian fruit bats (*Rousettus aegyptiacus*) alter their urine composition in response to environmental change? C Korine, I Vatnick, I Van Tets and B Pinshow. 2001. *American Zoologist* 41 (6): 1496.

An Acidic Environment Results In Bacterial Colonization Of The Spleen Of Adult Northern Leopard Frogs (*Rana pipiens*). M Brodtkin, M Leonard and I Vatnick. 2000. *FASEB J* 14 (4): A439.

Principles of design for a research-centered biology curriculum. I Vatnick and B Grant. *American Zoologist* 40 (6): 1244-1245.

The Effect Of Cold Exposure On Bacterial Content Of The Gut And Spleen Of Adult Northern Leopard Frogs (*Rana pipiens*). 2000. *American Zoologist* 39 (5): 448

The effect of an acidic environment on mortality, natural defense mechanisms and standard metabolism of adult Northern Leopard frogs (*Rana pipiens*). I. Vatnick, M. Brodtkin, and M. Simon. 1999, *The FASEB Journal* 13 (4): A408.

Metabolic responses of *Rana pipiens* to an acidic environment. I. Vatnick, R. Myers and M. Brodtkin. 1998. *American Zoologist* volume 37 no. 5 (abs)

Behavioral pH preference of frogs (*Rana pipiens* and *clamitans*) under laboratory conditions. I. Vatnick, B.W. Grant, C.R. Conte and R. Myers. 1996. *American Zoologist* 36 (5):

Vatnick, I., J. M. Kelly, A. W. Bell, and B. W. McBride. 1988. Gestational changes in hepatic oxygen consumption in vitro of the ovine fetus. Symposium on Energy Metabolism of Farm Animals, Lunteren (Netherlands), 18-24 Sep 1988. Pudoc, 1989.

The development of metabolic and respiratory functions in pigeons (*Columba livia*). I Vatnick. 1998. FASEB Journal 10 (3):21.

Influences of nutrition and litter size on placental and fetal weights in late-pregnant sheep. A.W. Bell, R. Slepetic and I. Vatnick. 1988. FASEB Journal 2 (5):A1105

Nutritional and placental influences on prenatal growth in sheep. A.W. Bell, R. Slepetic, P.A. Schoknecht and I. Vatnick. 1988. In: Proceedings of Cornell Nutrition Conference 1988. Cornell University, Ithaca NY 14853

Energy expenditure associated with placental Na^+ , K^+ -ATPase activity in chronically heat-stressed ewes. B.W. McBride, A.W. Bell, I. Vatnick and R.J. Early. 1988. Proceedings of Nutritional Society 47: 40A

Placental protein synthesis and DNA content in heat-stressed ewes. R.J. Early, A.W. Bell, B.W. McBride and I. Vatnick. 1988. FASEB Journal 2 (4):A538

Total and Na^+ , K^+ -ATPase-dependent respiration in normal and growth-retarded sheep placenta. A.W. Bell, B.W. McBride, I. Vatnick and R.J. Early. 1987. Journal of Animal Science 65 (1): 241

PRESENTATIONS

Presentations in 2013

Physiological performance and conservation practices in Diamondback terrapins. Invited seminar Wetlands Institute, Stone Harbor NJ June 6 2013

Birds living in a hypercapnic environment incur energetic costs, but don't appear to care. Downs, C.J.; Brickner-Braun, I.; Vatnick, I.; Pinshow, B. Talk presented Annual Meeting of the Society for Integrative and Comparative Biology, January 3-7 2013

Presentations by my students in 2013

Using Geographic Information System Technology to Spatially Analyze the Environmental Conditions affecting Nesting Site Selection of the *Malaclemys terrapin*. Jamie Conley, Itzick Vatnick, Patrick Baker, and Chad Freed. Second Prize for oral presentations at the regional Mid Atlantic ESA meeting Dover, DE April 12-13 2013

Presentations in 2012

Efectos del glifosato sobre la tasa metabólica y la utilización de reservas energéticas en la langosta de agua dulce *Procambarus clarkia*. Frontera, J.L.¹, Vatnick, I.² y Rodríguez, E.M.¹ Poster presented at the IV Congreso Argentino de la Sociedad de Toxicología y Química Ambiental SETAC Argentina, 16 al 19 de octubre de 2012. Ciudad Autónoma

de Buenos Aires, Argentina (¹Depto. de Biodiversidad y Biología Experimental, Facultad de Cs. Exactas y Naturales, Universidad de Buenos Aires, Argentina. Department of Biology, Widener University, Philadelphia, EE.U)

Presentations in 2011

A Fresh Look At Semi-Fossorial Rodents In Burrow Environments. Inbal Brickner-Braun, Itzick Vatnick and Berry Pinshow. Poster presented at Experimental Biology 2011, Washington DC, April 9-13, 2011

Presentations in 2010

Nonmonotonic innate immune suppression of adult Red-spotted newts (*Notophthalmus viridescens*) exposed to atrazine. Itzick Vatnick*, Raymond Howanski, Elizabeth Shank, Laura Stashefski, and Marc Brodtkin. APS Intersociety Meeting: Global Change and Global Science: Comparative Physiology in a Changing World. August 4-7 Westminster, Colorado

Estimate of Survival Time of Diamondback Terrapins Caught in Crab Traps Based on Voluntary Dive Times and Metabolic Rates Amy Thomson, Itzick Vatnick, Patrick Baker*. The 5th National Symposium on the Ecology, Status, and Conservation of the Diamondback Terrapin, The Louisiana Universities Marine Consortium (LUMCON), November 12-14th, Chauvin, LA

Presentations by my students in 2010

Escherichia coli ATCC # 25922 induces an inflammatory response in adult *Rana pipiens* Ashley Jones*, Amy Thomson, Michelle Kozakowski, Rachel Kyprianou, Itzick Vatnick, and Marc A. Brodtkin Poster presented at the Annual Meeting of the Society for Integrative and Comparative Biology, January 3-7 Seattle, WA

Presentations by my students in 2009

Estimate of Survival Time of Diamondback Terrapins Caught in Crab Traps Based on Voluntary Dive Times and Metabolic Rates Amy Thomson*, Itzick Vatnick, Patrick Baker Poster presented at the Annual Meeting of the Society for Integrative and Comparative Biology, January 4-8 Boston, MA

A Microarray Investigation of Genes Involved in Pollutant-mediated Immunosuppression in *Rana pipiens* Heather Drebitko*, Robert Morris, Marc Brodtkin and Itzick Vatnick Poster presented at the Annual Meeting of the Society for Integrative and Comparative Biology, January 4-8 Boston, MA

Presentations by my students in 2008

Acid exposure affects bactericidal activity of blood and serum in *Rana pipiens* Jonathon Diulio*, Heather Drebitko*, Marc Brodtkin, and Itzick Vatnick Poster presented at the

National Conference on Undergraduate Research in the Salisbury University, Salisbury MD April 10-12 2008.

Presentations by my students in 2007

The Herbicide Atrazine Is Not An Immune Disruptor in Drinking Water, Heather Drebitko* , John Diulio*, Marc Brodtkin and Itzick Vatnick. Poster presentation at the Undergraduate Research at the Capitol – Pennsylvania, October 2, 2007

Effect of Acid Stress on the Innate Immune Response of Adult *Rana clamitans* (Green frogs) Elizabeth Shank, Bukola Ojo, Raymond Howanski, Laura Stashefski and Itzick Vatnick, and Marc Brodtkin Presented at the Annual Meeting of the Society for Integrative and Comparative Biology, January 4-8 Phoenix AZ.

Presentations in 2006

Environmental pollutants as immune disruptors in amphibians. Invited talk with Marc Brodtkin at the Department of Biological Science Salisbury University May 11 2006

Presentations by my students in 2006

Body mass and metabolic rate changes of Hercules beetles, (*Dynastes hercules*) during ontogenesis. Poster Presentation Vatnick, I; Madigosky, Sr; Caranci, A*; Ojo, B; Morgan, R. Annual Meeting of the Society for Integrative and Comparative Biology, January 4-8 Orlando FL.

The Time Course of Thioglycollate Induced Peritonitis in Adult *Rana pipiens* Elizabeth Shank, Laura Stashefski, Bukola Ojo, Raymond J. Howanski, Marc Brodtkin and Itzick Vatnick Presented at the Tribeta Regional Conference, York College, PA, March 26 2006

Characterization of metabolism in a giant jumping stick from the Peruvian Amazon. Angela Caranci, Stephen Madigosky, and Itzick Vatnick. Presented at the Tribeta Regional Conference, York College, PA, March 26 2006

The Effect Of Acid Stress On Adult *Rana Clamitans* (Green Frogs). Bukola Ojo, Raymond J. Howanski, , Elizabeth Shank, Laura Stashefski Marc Brodtkin and Itzick Vatnick Presented at the 20th National Conference on Undergraduate Research in the University Of North Carolina Asheville, April 4-8 2006.

Presentations in 2005

Atrazine is an Immune Disruptor in Northern leopard frogs *Rana pipiens*. Poster Presentation Itzick Vatnick, Hareth Madhoun, Muthuramanan Rameswaran, and Marc A. Brodtkin Annual Meeting of the Society for Integrative and Comparative Biology, San Diego January 4-8 2005

Comparative analysis of growth and metabolic change exhibited by *dynastes hercules* (l.) (coleoptera: scarabaeidae) during ontogenesis Oral Presentation Itzick Vatnick, Stephen Madigosky, Angela Caranci, Bukola Ojo Randy Morgan Annual Meeting of Insect in Captivity at the Sonoran Arthropod Study Institute Rio Rico, AZ July 27-31 2005

Presentations by my students in 2005

Environmental pollutants as Immune Disruptors Hareth M. Madhoun, Muthuramanan Rameswaran, Itzick Vatnick*, and Marc Brodtkin* Department of Biology Widener University Chester, PA 19013 , April 2005 and at the National Conference on Undergraduate Research, April 2005

Presentations in 2004

Molecular Characterization of the Acid-induced Stress Response of Adult Leopard Frog (*Rana pipiens*) Oral Presentation co-authored with Colombo, Mathew.; Rameswaran, Mutharamanan.; Weaver, Frances.; Brodtkin Marc.; Presented at the Annual Meeting of the Society for Integrative and Comparative Biology, New Orleans January 6-10 2004

Effects of salt intake on oxalate balance and calcium absorption in fat sand rats Poster Coauthored with Niv Palgi,.*; Zvi Ronen,. and Berry Pinshow. Presented at the Annual Meeting of the Society for Integrative and Comparative Biology, New Orleans January 6-10 2004

Dietary lipids, temperature and melatonin: behavioral preference adjustments in hamsters consistent with the membrane homeoviscosity model Poster Coauthored with Hiebert , SM.; Pannorfi, R.; Leininger, E.; Le, L.; Huneryager, R. and Pike, E Presented at the Annual Meeting of the Society for Integrative and Comparative Biology, New Orleans January 6-10 2004

Dietary lipids and environment: anticipatory and compensatory changes in behavioral preferences of *Phodopus sungorus* Poster Coauthored with Hiebert , SM.; Pannorfi, R.; Leininger, E.; Le, L.; Huneryager, R. and Pike, E Presented at the Annual Meeting of the Society for Integrative and Comparative Biology, New Orleans January 6-10 2004

Presentations by my students in 2004

Is Atrazine an Immune Disruptor? H Madhoun, M Rameswaran, T Mehta, I Vatnick, M Brodtkin, and B Grant Presented at Regional Conference at St Joseph University, Philadelphia, PA. April 24 2004.

Presentations in 2003

Korine, C., I. Vatnick, I.G. van Tets, and B. Pinshow. 2003. Negev Desert rodents do not produce allantoin when deprived of water but the sand fat rat produce sodium oxalate. Israel Journal of Zoology 49:81.

Energy Balance- what we can teach our students that the textbooks do not. Oral Presentation and workshop Presented at the 17th Annual conference of the Human Anatomy and Physiology Society Philadelphia, PA May 31- June 5

Philadelphia Regional PKAL Network: K-16 Connections. Oral Presentation authored with Bruce Grant, Elizabeth McCormack, Jeanne Narum and Karen Rose. The National Science Teachers Association yearly national convention, Philadelphia, PA March 28 2003

Biology for Non-Majors –Who Knew? I Like Biology Poster coauthored with Robert Morris Presented at the Annual Meeting of the Society for Integrative and Comparative Biology, Toronto, Ontario Canada January 4-8 2003

Presentations by my students in 2003

The Effects of Environmental Acidification on the Inflammatory Response of *Rana pipiens* Regional Conference, Oral presentation Matthew J. Colombo, Jaime L. Andrews University of Delaware Newark, Delaware. March 23, 2003. Honorable mention.

Environmental Acidification: Causes, Effects, and Solutions”. Matt Colombo. Ecological Library, Großhennersdorf, Saxony, Germany. Umweltbibliothek. Spring Break environmental trip to Germany March 3, 2003

Acid Stress Suppresses The Thioglycollate-Stimulated Inflammatory Response of Adult *Rana pipiens* Poster coauthored with Matthew J. Colombo, Jaime L. Andrews, Emily J. Piddington, Muthuramanan Rameswaran, Elizabeth Fiorini, and Marc A. Brodtkin Presented at the Annual Meeting of the Society for Integrative and Comparative Biology, Toronto, Ontario Canada January 4-8 2003

Presentations in 2002

Urine composition in water stressed gerbillinid rodents: sodium oxalate excretion in fat sand rats Poster coauthored with C. Korine, G. Van Tets, and B. Pinshow and presented by C. Korine at the 2002 Annual meeting of the Israeli Society of Zoology, Tel Aviv University, Israel

Urine composition in water stressed cricetid rodents: sodium oxalate excretion in fat sand rats Poster coauthored with C. Korine, G. Van Tets, and B. Pinshow and presented by C. Korine at the power of Comparative Physiology Meeting Sponsored by the American Physiological Society August 24-28, 2002 San Diego CA

Research Collaborations: "A personal Journey" Featured Speaker at the annual TriBeta Induction Ceremony, Widener University May 2002

Can Egyptian fruit bats (*Rousettus aegyptiacus*) alter their urine composition in response to environmental change?. Oral presentation coauthored with C. Korine, G. Van Tets, and B. Pinshow and presented by C. Korine at the annual meeting of the Society for Integrative and Comparative Biology Jan 2-6, 2002 Anaheim, CA.

Presentations by my students in 2002

An acidic pH functions as an environmental stressor to suppress the natural defense mechanisms of *Rana pipiens* Poster co-authored with Jaime L. Andrews, Emily J. Piddington,, Matthew J. Colombo and Marc Brodtkin and Itzick Vatnick Presented at the Council for Undergraduate Research "Research on the Hill" poster session, Washington D.C., and the 14th National Conference on Undergraduate Research in the University of Wisconsin White Water, White Water, WI on April 2002.

Presentations in 2001

Evolutionary Ecology of the Eastern Fence Lizard (*Sceloporus undulatus*) in Our Changing Climate. Departmental Seminar, Ben-Gurion University of the Negev, Jacob Blaustein Institute for Desert Research, Mitrani Department for Desert Ecology May 15 2001

Effects of Chamber Activity on Estimates of Digestive Performance of Lizards. . Poster co-authored with Bruce W Grant, Catherine C L'Armd and, Robert Neveln. Presented at the annual meeting of the Ecological Society of America (ESA 2001), Madison, WI, 5-10 August 2001.

Egyptian fruit bats (*Rousettus aegyptiacus*) increase urine ammonia concentration in response to changes in diet and temperature. Oral presentation coauthored with C. Korine, G. Van Tets, and B. Pinshow and presented by C. Korine at the annual meeting of the Israeli Zoological Society in Tel Aviv Israel, December 2001.

Presentations in 2000

B. Grant, S. Madigosky, I. Vatnick and F. Weaver. An Acidic Environment Results In Bacterial Colonization Of The Spleen Of Adult Northern Leopard Frogs (*Rana pipiens*). Poster co-authored with Michelle Leonard, Marc Brodtkin, and Martin Simon presented at Experimental Biology 2000, San Diego CA, April 15-18, 2000.

Designing a Research-Centered Biology Curriculum. Poster co-authored with t B. Grant, S. Madigosky, and F. Weaver presented at the Link 2000 workshop at Hood College, Frederick MD, October 27-29 2000.

Campus ecology as a means to teach urban environmental literacy. Workshop presented with Bruce Grant at the 2000 national PKAL F21 assembly Tucson AZ, December 1-2, 2000.

Presentations by my students in 2000

The Effect Of Cold Exposure On Bacterial Content Of The Gut And Spleen Of Adult Northern Leopard Frogs (*Rana pipiens*). .Poster presentation co-authored with Michelle Leonard, M. Brodtkin, and M. Simon. Presented at the Annual Meeting of the Society for Integrative and Comparative Biology, Atlanta GA, January 4-8, 2000.

The effect of cold exposure on bacterial content of the gut and spleen of adult northern leopard frogs *Rana pipiens* Poster co-authored with M. Leonard M. Brodtkin, and M. Simon presented at the 13th National Conference on Undergraduate Research in the University Of Montana, Missoula, MT, April 2000.

Presentations in 1999

Ecology of the Eastern Fence Lizard, *Sceloporus undulatus*, from the New Jersey Pine Barrens. Poster presentation co-authored with Bruce W. Grant (Ph.D.), Stephanie Skelly, and Robert Hopkins presented at the annual meeting of the Society for Integrative and Comparative Biology, Denver, CO, 6-10 January 1999.

A novel method for simultaneous measurement of temperature-dependent activity and metabolic rate: Applications to bioenergetic modeling of Eastern Fence Lizards (*Sceloporus undulatus*). Poster presentation co-authored with Bruce W. Grant (Ph.D.), Robert T. Dendall, and Catherine C. L'Armand presented at the annual meeting of the Society for Integrative and Comparative Biology, Denver, CO, 6-10 January 1999.

The effect of an acidic environment on mortality, natural defense mechanisms and standard metabolism of adult Northern Leopard frogs (*Rana pipiens*). Poster co-authored with Marc Brodtkin, and Martin Simon presented at Experimental Biology 99, Washington D.C, April 22-17, 1999.

How to build a multimedia laboratory facility or what do you do in your reproductive system labs? Workshop presented at the 13th annual conference of the Human Anatomy and Physiology Society (HAPS), Baltimore, MD, May 22-28, 1999.

Research Experiences Within the Curriculum of a One Semester Course for Non-Science Majors. Poster co-authored with Frances Weaver, and Bruce Grant presented at the Project Kaleidoscope National Conference, University of Maryland, College Park, MD, October 1999.

Longitudinal Micrometeorologic Characteristics of a Primary Tropical Rainforest, Iquitos, Peru. Co-authored with Stephen Madigoski and presented at the annual meeting of the Pennsylvania Science Teachers Association, Hershey PA December 1-3 1999.

Presentations by my students in 1999

How to Build a Multimedia Laboratory Facility or What Do You Do in Your Reproductive System Labs? Workshop presented at the 13th annual conference of the Human Anatomy and Physiology Society, Baltimore, MD, May 22-28, 1999.

Annual Variation in life history of the Eastern Fence Lizard *Sceloporus Undulatus* from the New Jersey Pine Barrens: Effects of the El Nino of 1997-98. Poster co-authored with Robert T. Dendall, Stephanie Skelly, Bruce W. Grant presented at the 12th National Conference on Undergraduate Research in the University Of Rochester, Rochester NY, April 1999.

Effects of chamber activity on the digestive performance of the Eastern Fence Lizard (*Sceloporus undulatus*). Poster co-authored with Robert T. Dendall, Stephanie Skelly, Bruce W. Grant (Ph.D.) presented at the 12th National Conference on Undergraduate Research in the University Of Rochester, Rochester NY, April 1999.

Presentations in 1998

Micrometeorologic characteristics of primary tropical Amazon Rainforest - ACEER, Iquitos, Peru. Poster co-authored with Stephen Madigosky (Ph.D.), and Stephanie Skelly presented at: Forest Canopies 1998: Global Perspectives, Sarasota FL, November 1998.

A novel method for simultaneous measurement of temperature-dependent activity and metabolic rate: Applications to bioenergetic modeling of Eastern Fence Lizards (*Sceloporus undulatus*). Poster co-authored with Bruce Grant (Ph.D.), Robert Hopkins, and Stephanie Skelly presented at the Annual Meeting of the Ecological Society of America, Baltimore MD, August 3-6, 1998.

Ecology of the Eastern Fence Lizard, *Sceloporus undulatus*, from the New Jersey Pine Barrens: Results from field studies of life history variation. Poster co-authored with Bruce Grant (Ph.D.), Robert Hopkins, and Stephanie Skelly presented at the Annual Meeting of the Ecological Society of America, Baltimore MD, August 3-6, 1998.

Environmental correlates with leaf stomata density: A multi-week bounded inquiry for an undergraduate introductory biology laboratory. Oral presentation co-authored with Bruce Grant (Ph.D.) presented at the 11th National Conference on Undergraduate Research in Salisbury State, Salisbury MD, April 23-25, 1998.

Metabolic responses of *Rana pipiens* to an acidic environment. Poster co-authored with Ruth Myers and Marc Brodtkin (Ph.D.) presented at the Annual Meeting of the Society for Integrative and Comparative Biology, Boston MA, January 3-6, 1998.

Presentations by my students in 1998

Environmental Correlates with Leaf Stomata Density: A Multi-week Bounded Inquiry for an Undergraduate Introductory Biology Laboratory. Oral presentation co authored with Brice Grant presented at the Undergraduate Research Network at NCUR 98, Salisbury State University, Salisbury MD, April 1998.

The effect of mild acid conditions on mortality of *Rana pipiens*. Poster co-authored with Margaret Sadoff, Melanie Gleave and Marc Brodtkin (Ph.D.) presented at the Council for Undergraduate Research “Research on the Hill” poster session, Washington D.C., April 21, 1998.

Measurements of metabolism in Fence Lizards (*Sceloporus undulatus*) from the New Jersey Pine Barrens. Poster co-authored with Alex Kobb, Bob Hopkins, Stephanie Skelly and Bruce Grant (Ph.D.) presented at the 11th National Conference on Undergraduate Research (NCUR), Salisbury State University, Salisbury MD, April 23-25, 1998.

Using DNA fingerprinting to determine monogamy in pigeons. Poster co-authored with Courtney Siegel, Kruti Patel and Francis Weaver (Ph.D.) presented at the 11th National Conference on Undergraduate Research, Salisbury State University, Salisbury MD, April 23-25, 1998.

The effect of mild acid conditions on mortality of *Rana pipiens*. Oral presentation co-authored with Margaret Sadoff, Melanie Gleave and Marc Brodtkin (Ph.D.) presented at the 11th National Conference on Undergraduate Research, Salisbury State University, Salisbury MD, April 23-25, 1998.

Effect of a recent fire on arthropod diversity and abundance in the New Jersey Pine Barrens. Poster co-authored with Joseph Gillespie, and Bruce W. Grant. (Ph.D.) presented at the 11th National Conference on Undergraduate Research, Salisbury State University, Salisbury MD, April 23-25, 1998.

Metabolic responses of *Rana pipiens* to an acidic environment. Oral presentation co-authored with Ruth Myers presented at the Beta Beta Beta Biological Honor Society District Convention, Northeast Region II, Georgian Court College, Lakewood NJ, April 25, 1998.

Ecology of the Eastern Fence Lizard, *Sceloporus undulatus*, from the New Jersey Pine Barrens: Results from field studies of life history variation. Poster co-authored with, Stephanie Skelly, and Robert Hopkins and Bruce Grant (Ph.D.) presented at the first annual meeting of the Penn/Princeton Greater Philadelphia Ecology/Evolution Meeting, University of Pennsylvania, Philadelphia PA, April 25, 1998.

Effect of a recent fire on arthropod diversity and abundance in the New Jersey Pine Barrens. Poster co-authored with Joseph Gillespie, and Bruce W. Grant. (Ph.D.) presented at the Annual meeting of the Delaware Valley Chapter of the Society for Conservation Biology, West Chester University, West Chester PA, March 1998.

GRANTS

Widener University

Faculty Development Grant 2014 – Sustainable Agriculture as a Contributor to Preserving Biodiversity: Species Richness of Insectivore Bats and their Importance for Sustainable Agriculture Practices Of Irrigated Lands at the lab of Dr. Carmi Korine Mitrani Department of Desert Ecology, Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Sede Boqer Campus (1875)

Provost Grant 2013 - Ventilation in animal burrows. At the laboratory of Dr. Berry Pinshow Mitrani Department of Desert Ecology, Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Sede Boqer Campus, 84990 Midreshet Ben-Gurion, Israel. Research conducted in Israel (\$1,500)

Provost Grant 2012 - Effects of Roundup® on metabolism and growth of estuarine crab *Chasmagnathus granulata* at the Laboratory of Enrique Rodriguez, Comparative Animal Physiology, Department of Biodiversity and Experimental Biology, University of Buenos Aires, Argentina (\$1,500)

Faculty Development Grant 2012 - Effects of Roundup® on metabolism and growth of estuarine crab *Chasmagnathus granulata* at the Laboratory of Enrique Rodriguez, Comparative Animal Physiology, Department of Biodiversity and Experimental Biology, University of Buenos Aires, Argentina (\$2,000)

Provost Grant 2011 - Effects of Dietary Fat Saturation on Dry Matter and Energy Digestibility in Siberian hamsters (*P. Sungorus*) (\$500)

Faculty Development Grant 2011 - Ecophysiological aspects of the life of a semifossorial desert rodent, Sundevall's jird (*Meriones crassus*). At the laboratory of Dr. Berry Pinshow Mitrani Department of Desert Ecology, Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Sede Boqer Campus, 84990 Midreshet Ben-Gurion, Israel. Research conducted in Israel (\$3,400)

Provost Grant 2010 - Effect of exposure to Roundup and Atrazine on the growth, metabolism and physiology of Redclaw crayfish (*Procambarus clarkii*), at the Laboratory of Enrique Rodriguez, Comparative Animal Physiology, Department of Biodiversity and Experimental Biology, University of Buenos Aires, Argentina (\$2,000)

Faculty Development Grant 2009 - Bioenergetics of a Fresh Water Lobster *Cherax Quadricarinatus* at the Laboratory of Enrique Rodriguez, Comparative Animal Physiology, Department of Biodiversity and Experimental Biology, University of Buenos Aires, Argentina (\$2,000)

Provost Grant 2008 - Do Nitrogenous Compounds Disrupt the Innate Immune System in Adult Northern Leopard Frogs (*Rana pipiens*)? (\$1000)

Provost Grant 2007 - Microclimatic Influences on Plant Growth in a Tropical Forests in Northeast Peru, Amazon Conservatory for Tropical Studies (ACTS) (\$2,000)

Faculty Development Grant 2006 - Metabolism of Migratory Birds During the Non-Migratory Season Collaboration with Dr. Berry Pinshow Mitrani Department of Desert Ecology, Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Sede Boqer Campus, 84990 Midreshet Ben-Gurion, Israel. Research conducted in Israel (\$2,000)

Provost Grant 2005 - Microclimatic Influences on Plant Growth in a Tropical Forests in Northeast Peru, Amazon Conservatory for Tropical Studies (ACTS) (\$1,380)

Provost Grant 2005 - Is Atrazine an innate immune system disruptor in the amphibian Axolotl? (\$2,000)

Provost Grant 2004 - Is Atrazine an innate immune system disruptor in adult Northern Leopard Frogs (*Rana pipiens*)? (\$800)

Faculty Development Grant 2004 - Microclimatic Influences on Plant Growth in a Tropical Forests in Northeast Peru, Amazon Conservatory for Tropical Studies (ACTS) (\$1,500)

Faculty Development Grant 2004 - Is Atrazine an innate immune system disruptor in adult Northern Leopard Frogs (*Rana pipiens*)? Supplementation of above Provost Grant (\$1,500)

Provost Grant 2003 - Characterization of the stress response of *Rana pipiens* exposed to mild acid pH. (\$850)

Faculty Development Grant 2002 - In collaboration with Steve Madigosky Microclimatic Influences on Plant Growth in a Tropical Forest in Northeast Peru, Amazon Conservatory for Tropical Studies (ACTS)

Provost Grant 2002 Characterization of the stress response of *Rana pipiens* exposed to mild acid pH (\$3,600).

Faculty Development Grant 2001- The thioglycollate-induced inflammatory response of *Rana pipiens*: effects of short- term exposure to mild acid pH. (\$1000)

Provost Grant 2001 - The effect of short- term exposure to mild acid pH on thioglycollate-induced inflammatory response in *Rana pipiens*. (\$750)

Faculty Development Grant 2000 - Support for Sabbatical Leave at Dr. Pinshow's lab at the Jacob Blaustein Institute for Desert Research (on the Sde Boqer Campus of Ben-Gurion University at Midreshet Ben-Gurion) of the University of the Negev, Israel (\$2,230)

Provost's Grant 2000 - The effects of cold and mild acid exposure on mortality rate, and immune function of *Rana utricularia* (\$1,200)

Faculty Development Grant 1999 - Bioenergetics of Fence Lizards (*Sceloporus undulatus*) (\$1,050)

Provost's Grant 1999 - The Effects of Cold and Mild Acid Exposure on Mortality Rate, Metabolic Responses, and Immune Function of *Rana pipiens* (\$1,835)

Faculty Development Grant 1998 - Metabolic Responses of *Rana clamitans* and *Rana castesbiana* to an Acidic Environment" (\$1,000)

Provost's Grant 1998 - The Effects of Mild Acid Exposure on the Gut Permeability and Immune Function of *Rana pipiens*" (\$ 1,000)

Faculty Development Grant 1997 - Metabolic Responses of *Rana pipiens* to an Acidic Environment (\$ 1,000)

Provost's Grant 1997 - Monogamy in Pigeons (\$1,080)

Faculty Development Grant 1996 - Behavioral and Physiological Responses of Frogs to Environmental Acidification (\$ 1,000)

Faculty Development Grant 1995 - Environmental Influences on Growth and Development of Pigeons (\$ 1,360)

Provost's Grant 1995 - Effects of Environmental Factors on Growth and Development of Altricial Birds (\$ 1,700)

Provost's Grant 1994 -The Effect of Incubation Temperatures on Pre- and Post-Hatching Growth and Development of Pigeons (\$ 2,025)

External Grants

Declining Amphibian Population Task Force (**DAPT**) **Seed Grant 2003** - In collaboration with Marc Brodtkin and Frances Weaver. Molecular characterization of the acid-induced stress response of the adult Leopard Frog (*Rana pipiens*). (\$700.0)

National Science Foundation (**NSF**) - **Math and Science Partnership Grant (MSP) 2003**- Co PI/ Senior Personnel Widener's sub award (\$279,822 / 5years

Eppley Foundation 2002 - In collaboration with Marc Brodtkin - The Effect of an Acidic Environment on Natural Defense Mechanisms of *Rana Pipiens* (\$18,760)

American Physiological Society (**APS**) **Research Career Enhancement Awards 2001** (\$4,000)

ILLI-IP -NSF 1995 – with Bruce Grant Experimenting to Teach Physiological Ecology (\$14,241)

External Grants to my students

Sigma Xi Grants in Aid of Research

Michael Colgan - 2012. Effects of Temperature Acclimation on Growth Rates, Diving Times, and Water Temperature Preference in *Malaclemys terrapin*

Amy Thomson - 2010. Effect of atrazine exposure on gene regulation in adult *Rana pipiens*

Jonathon Diulio - 2007. The effect of acid exposure on bactericidal action of blood in *Rana pipiens*.

Betsy Mathew – 2006. The Effects of Atrazine on Cytochrome P450 Activity in *Rana Pipiens*

Bukola Ojo - 2005. Serum Amyloid P Component Mediator in the Atrazine Induced Immunosuppression of *Rana Pipiens*?

Hareth Mousa Madhoun – 2003. Does atrazine act as an innate immune system disruptor in adult Northern Leopard Frogs (*Rana pipiens*) at levels lower than found in EPA drinking water standards?

Muthuramanan Rameswaran - 2003. The Effect of Acidification on the Immune Response of Axolotls

Muthuramanan Rameswaran - 2002. Is Atrazine an innate immune system disruptor in adult Northern Leopard Frogs (*Rana pipiens*)?

Beta Beta Beta Research Grants

Ruth Myers and Carol Conte – 1996 Metabolic responses of frogs (*Rana pipiens*) exposed to an acidic environment

Matthew Colombo 2003. The effects of environmental acidification on the immune response of *Rana pipiens*

PROFESSIONAL SOCIETIES:

American Physiology Society (APS)
Society of Integrative and Comparative Biology (SICB)
Sigma Xi
Tri Beta
Faculty 21 Century (F21) PKAL

LANGUAGES:

Fluent (native speaker level) in English, Spanish, and Hebrew

PERSONAL:

1954-1963 Born in Buenos Aires, and lived in Argentina (Argentinean citizenship)
1963-1980 Lived in Israel (Israeli citizenship)
1980 - Live in USA (US Citizenship acquired in spring 1985)

Married to Sue Meeker Vatnick, two daughters, one son