

Biographical Sketch

Provide the following information for the key personnel in the order listed for Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

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|--|--------|---|---------------------|
| NAME Gerald R. Bratton | | POSITION TITLE Professor and Head, Veterinary Integrative Biosciences, Veterinary Pathobiology, College of Veterinary Medicine and Biomedical Sciences, Texas A&M University | |
| EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.) | | | |
| INTITUTION AND LOCATION | DEGREE | YEAR(s) | FIELD OF STUDY |
| Texas A&M University, College Station, TX | BS | 1965 | Veterinary Science |
| Texas A&M University, College Station, TX | DVM | 1966 | Veterinary Medicine |
| Texas A&M University, College Station, TX | MS | 1970 | Veterinary Anatomy |
| Texas A&M University, College Station, TX | PhD | 1977 | Veterinary Anatomy |

NOTE: The Biographical Sketch may not exceed four pages. Items A and B may not exceed two of the four-page limit.

A. Positions and Honors. List in chronological order previous positions, concluding with your present position. List any honors. Include present membership on any Federal Government public advisory committee.

ACADEMIC APPOINTMENTS:

1966-1970 Instructor, Department of Veterinary Anatomy, Texas A&M University, College Station, Texas
 1971-1975 Assistant Professor, Department of Veterinary Anatomy, Texas A&M University, College Station, Texas
 1975-1981 Associate Professor, Department of Animal Science, College of Veterinary Medicine, University of Tennessee, Knoxville, Tennessee
 1981-1982 Professor, Department of Animal Science, College of Veterinary Medicine, University of Tennessee, Knoxville, Tennessee
 1982-1983 Professor, Department of Veterinary Anatomy, Texas A&M University, College Station, Texas
 1983-1998 Professor and Head, Department of Veterinary Anatomy and Public Health, Texas A&M University, College Station, Texas
 1987-Present Member of Toxicology Faculty, Texas A&M University, College Station, Texas
 1985-Present Clinical Professor of Neurology, Texas Veterinary Medical Center, Veterinary Teaching Hospital, College Station, Texas
 1988-Present Member of Neuroscience Faculty, Texas A&M University, College Station, Texas
 1998-Present Professor, Department of Veterinary Integrative Biosciences, Texas A&M University, College Station, Texas
 2000-Present Co-Director, TAMU, Trace Element Research Laboratory
 2005 Interim Department Head, Department of Veterinary Pathobiology
 2006-Present Department Head, Department of Veterinary Pathobiology

HONORS AND AWARDS:

1977 Norden Distinguished Teaching Award, University of Tennessee
 1978 Student Chapter AVMA Teaching Award, University of Tennessee
 1986 Texas Veterinary Medical Association Research Award
 1992 Former Students Association Distinguished Achievement Award for Administration
 2000 John H. Milliff Award for Teaching
 2000 Former Students Association Distinguished Achievement Award for Teaching College Level
 2001 Wiley Professorship
 2002 Texas Veterinary Medical Association Award in Teaching
 2003 Norden Distinguished Teaching Award, Texas A&M University
 2003 Former Students Association Distinguished Achievement Award for Teaching University Level
 2005 AAVA National Outstanding Anatomist of the year

B. Selected (>100) peer-reviewed publications (in reverse chronological order). Do not include publications submitted or in preparation.

- O'Hara, T., Hanns, C., Bratton, G. R., Taylor, R., Woshner, V. Essential and Non-essential Elements in Eight Tissue Types from Subsistence Hunted Bowhead Whales: Nutritional and Toxicological Assessment Int. J. Circumpolar Health, 65(3), 228-242, 2006.
- Pine, M.D., Hiney, J.K., Dearth, R.K., Bratton, G.R., and Dees, W.L. IGF-1 Administration to Prepubertal Female Rats Can Overcome Delayed Puberty Caused by Maternal Pb Exposure. Reproductive Toxicology. 21(1):104-109, 2006.
- Dehn, L.A., Follmann, E.H., Rosa, G., Duffy, L.K., Thomas, D.L., Bratton, G.R., Taylor, R.J., and O'Hara, T.M. Stable Isotope and Trace Element Status of Subsistence Hunted Bowhead (Balana mysticetus) and Beluga Whales (Delphinapterus leucas) in Alaska and Gray Whales (Eschrichtius robustus) in Chukotka. Marine Pollution Bulletin. 52:301-319, 2006.
- Valles, R., Rocha, A., Cardon, A.L., Bratton, G.R., and Nation, J.R. The Effects of the GABA_A Antagonist Bicuculline on Cocaine Self-Administration in Rats Exposed to Lead During Gestation/Lactation. Pharmacology, Biochemistry, and Behavior. 80:611-619, 2005.
- Dehn, L.A., Sheffield, G.G., Follmann, E.H., Duffy, L.K., Thomas, D.L., Bratton, G.R., Taylor, R.J., and O'Hara, T.M. Trace Elements in Tissues of Phocid Seals Harvested in the Alaskan and Canadian Arctic-Influence of Age and Feeding Ecology. Canadian Journal of Zoology. 83:726-746, 2005.
- Cardon, A.L., Rocha, A., Valles, R., Bratton, G.R., and Nation, J.R. Exposure to Cadmium During Gestation and Lactation Decreases Cocaine Self-Administration in Rats. Neurotoxicology. 25:869-875 2004.
- Rocha, A., Valles, R., Cardon, A., Bratton, G.R., and Nation, J.R. Self-Administration of Heroin in Rats: Effects of Low-Level Lead Exposure During Gestation and Lactation. Psychopharmacology. 174:203-210, 2004.
- Srivastava, V., Dearth, R.K., Hiney, J.K., Ramirez, L.M., Bratton, G.R., and Dees, W.L. The Effects of Low Level Lead (Pb) on Steroidogenic Acute Regulatory Protein (STAR) in the Prepubertal Rat Ovary. Toxicological Sciences. 77:35-40, 2004.
- Dearth, R.K., Hiney, J.K., Srivastava, V., Dees, W.L., and Bratton, G.R. Low Level (Pb) Exposure During Gestation and Lactation: Assessment of Effects on Pubertal Development in Fisher 344 and Sprague-Dawley Female Rats. Life Sciences. 74:1139-1148, 2004.
- Nation, J.R., Smith, K.R., and Bratton, G.R. Early Developmental Lead Exposure Increases Sensitivity to Cocaine in a Self-Administration Paradigm. Pharm., Biochem. & Behavior. 77(1):127-135, 2004.
- Valles, R., Cardon, A.L., Heard, H.M., Bratton, G.R., and Nation, J.R. Morphine Conditioned Place Preference is Attenuated by Perinatal Lead Exposure. Pharm., Biochem. & Behavior. 75:295-300, 2003.
- Zhang, Q., Bratton, G.R., Agarwal, R.K., Calise, D., Kugel, G., Wan, Y., and Kumar, A.M. Lead-Induced Cell Signaling Cascades in GTI-7 Cells. Brain Res. Bull. 61:207-217, 2003.
- Nation, J.R., Cardon, A.L., Heard, H.M., Valles, R., and Bratton, G.R. Perinatal Lead Exposure and Relapse to Drug-Seeking Behaviour in the Rat: A Cocaine Reinstatement Study. Psychopharmacology. 168:236-243, 2003.
- Dearth, R.K., Hiney, J.K., Srivastava, V., Burdick, S., Bratton, G.R., and Dees, W.L. Effects of Lead (Pb) Exposure During Gestation and Lactation on Female Pubertal Development in the Rat. Reproductive Toxicology. 16(4):343-352, 2002.
- Smith, K.R., Nation, J.R., and Bratton, G.R. The Effects of Developmental Cadmium Exposure on Morphine Sensitization and Challenge with Selective D-1 and D-2 Antagonists. Pharmacology, Biochemistry, and Behaviour. 72:581-590, 2002.
- Woshner, V.M., O'Hara, T.M., Eurell, J.A., Wallig, M.A., Bratton, G.R., Suydam, R.S., and Beasley, V.R. Distribution of Inorganic Mercury in Liver and Kidney of Beluga and Bowhead Whales, through Autometallographic Development of Light Microscopic Tissue Sections. Toxicologic Pathology. 30(2):209-215, 2002.
- Miller, D.K., Nation, J.R., and Bratton, G.R. The Effects of Perinatal Exposure to Lead on the Discriminative Stimulus Properties of Cocaine and Related Drugs in Rats. Psychopharmacology. 158:165-174, 2001.

C. Research Support. List selected ongoing or completed (during the last three years) research projects (federal and non-federal support). Begin with the projects that are most relevant to the research proposed in this application. Briefly indicate the overall goals of the projects and responsibilities of principal investigator identified above.

ACTIVE:

US Fish and Wildlife (FWS) Contract 99-453511-00001 (PI – Taylor and Bratton)
10/01/2002 – 09/30/2006 (\$880,880)

Residues of Inorganic Contaminates in Environmental Samples

NOAA 99-48051-0000(Co-PI – Taylor and Bratton)
10/01/2004 – 09/30/2009 (\$316,146)

Analysis of Metals in Bivalves as a contamination monitor following major Hurricanes

COMPLETED:

I R01 ES09627-04 (PI - Dees and Bratton) NIH/NIEHS
03/01/1999-02/28/2003
(No cost extension - 02/28/2004)

Effects of Lead (Pb) on Neuroendocrine Development

The overall objective of this project is to determine the effects of *in utero* lead (Pb) exposure on the developing neuroendocrine system in female rats.

R01-DA-13188-01A1 (PI - J.R. Nation, Co-PI - G.R. Bratton)
04/01/2000-03/30/2004 (\$294,392)

Heavy Metals and Poly Drug Self-Administration. NIDA.

There are two major aims for this study: (1) to evaluate the effects of early developmental, low level lead, or cadmium exposure on intravenous self exposure of cocaine or heroin in young adult rats; and (2) to determine if cadmium accrual takes place in discrete brain regions relevant to drug addiction following low level exposure during gestation and/or lactation.

NSB3612-PF900580 (Co-PIs - Todd O'Hara and Gerald Bratton)
06/01/1998-05/31/2004 (\$176,410)

Cooperative Institute for Arctic Research (CIFAR)

National Oceanographic and Atmospheric Association (NOAA)

The Bowhead Whale as a Potential Indicator Species for Monitoring the Health of the Western Arctic/Bering Sea Ecosystem Using Blubber, Histology, Metal and Mineral Indices

Since the bowhead whale feeds at the bottom of the food chain, the purpose of this monitoring program is to twice annually assess the heavy metal and organic contamination levels in the Western Arctic/Bering Sea.