

Curriculum Vitae - Pierre Deviche

Personal Information

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Education

B.S. (Biology) 1975 University of Liege, Belgium

Ph.D. (Behavioral Neuroendocrinology) 1980 University of Liege, Belgium

Employment

2003- pres. Professor, Environmental Physiology, Arizona State University
1999-2003. Associate Professor of Environmental Physiology, Arizona State University
1998-1999 Professor of Zoophysiology, University of Alaska Fairbanks
1988-1998 Associate Professor of Zoophysiology, University of Alaska Fairbanks
1987-1988 Research Assistant Professor, Oregon State University
1985-1987 Research Associate, Oregon State University
1984-1985 Research Associate, University of Liege, Belgium
1982-1984 Post-doctoral Fellow, Ruhr-University Bochum, Germany
1980-1982 Senior Research Assistant, University of Liege, Belgium
1978-1980 Research Assistant, University of Liege, Belgium

Research Interests

Neurophysiological, behavioral, and endocrine adaptations of vertebrates to extreme environments;

Neuroendocrine regulation of reproduction;

Hormonal control of immunity;

Physiological control and effects of avian blood parasites;

Influence of gonadal steroids and neuropeptides on vocal behavior and neural plasticity.

Instructional Activities

Courses Taught

UAF:

Spring 1989: BIOL 210: Animal Physiology

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Spring 1991: BIOL 210: Animal Physiology

Spring 1992: BIOL 210: Animal Physiology

Spring 1993: BIOL 493: Vertebrate Endocrinology

Spring 1994: BIOL 693: Neurobiology
Spring 1995: BIOL 494: Vertebrate Endocrinology
Spring 1996: BIOL 493: Neurobiology
Spring 1997: BIOL 494: Vertebrate Endocrinology
Spring 1998: BIOL 494: Vertebrate Endocrinology
Spring 1999: BIOL 493: Neurobiology

ASU:

Spring 2000: BIO 202: Human Anatomy and Physiology
Spring 2000: BIO 498: Organismal and Cellular Responses to Stress
Fall 2000: BIO181: General Biology

Spring 2001: BIO 202: Human Anatomy and Physiology
Fall 2001: BIO 591: Graduate Education: Rules for survival and success

Spring 2002: BIO 202: Human Anatomy and Physiology
Fall 2002: BIO 494/591: Vertebrate Endocrinology
Fall 2002: BIO 494/591: Environmental Disruptors

Spring 2003: BIO 202: Human Anatomy and Physiology
Spring 2003: BIO 494/591: Endocrine Journal Club
Fall 2003: BIO 494/591: Endocrine Journal Club

Spring 2004: BIO 202: Human Anatomy and Physiology
Spring 2004: BIO 494/591: Endocrine Journal Club
Fall 2004: BIO 494/591: Endocrine Journal Club

Spring 2005: BIO 202: Human Anatomy and Physiology
Spring 2005: BIO 494/591: Endocrine Journal Club
Fall 2005: BIO 494/591: Endocrine Journal Club

Spring 2006: BIO 494/591: Endocrine Journal Club
Spring 2006: BIO 202: Human Anatomy and Physiology
Fall 2006: BIO 494/591: Endocrine Journal Club
Fall 2006: BIO 202: Human Anatomy and Physiology

Spring 2007: BIO 202: Human Anatomy and Physiology
Spring 2007: BIO 494/591: Neuroscience Journal Club

Spring 2008: BIO 462: Endocrine Physiology

Spring 2009: BIO 462: Endocrine Physiology

Graduate Student/Postdoctoral Committee Chair**UAF:**

Karen Rock: M.Sc. Graduation: 1990.

Lars Ebbesson: M.Sc. Graduation: 1994. Current position: Postdoctoral Fellow, Bergen University, Norway.

Paul Cotter: M.Sc. Graduation: 1997. Current position: Wildlife Biologist, Fish and Wildlife Service, Anchorage, Alaska.

Renee Crain: M.Sc. Graduation: 1998. Current position: Assistant Program Officer, National Science Foundation.

Stephanie Dloniak: M.Sc. Graduation: 1999. Current position: Post-doctoral Fellow.

Cynthia Gullede: Ph.D. Graduation: 1997. Current position: Assistant Professor, Department of Biology, University of Louisville, Kentucky).

Susan Sharbaugh: Ph.D. Graduation: 1998. Current position: Staff member, Institute of Arctic Biology, The University of Alaska Fairbanks.

ASU:

Thomas Small: Ph.D. student, SoLS (Fall 1999 – Aug. 2006)

Current: NSF-supported postdoctoral fellow, Virginia Tech. University

Christine Strand: Ph.D. student, SoLS (Spring 2001 - pres.)

Current: Assistant Professor, Biological Sciences Department, California State Polytechnic University, San Luis Obispo

Madhusudan Katti: Postdoctoral fellow, ASU Biology (2000 - 2002)

Current: Assistant Professor, Department of Biology, Fresno State University, California

Brett Szymik (Ph.D., SoLS – 2008

Current: Assistant Professor, Department of Biology, Eastern Connecticut State University

Bobby Fokidis: Ph.D. student, SoLS (Fall 2005 – pres.)

Laura Hurley (Ph.D., SoLS; Fall 2007 – pres.)

Scott Davies (Ph.D., SoLS; Fall 2008 – pres.)

Joseph Georges (Ph.D., SoLS and Neuroscience Program; Fall 2008 – pres.)

Graduate Student Thesis Committee Member**UAF:**

Department of Biology and Wildlife: 8 students

Interdisciplinary Program: 3 students

Department of Psychology: 1 student

Department of Chemistry: 1 student

Institute of Marine Sciences: 1 student

ASU:

Anne Weiss (M.S. student, Biology; graduated)

Michael Black (Ph.D. student, Biology)

David Kabelik (Ph.D. student, Biology; graduated)

Emily Taylor (Ph.D. student, Biology; graduation Spring 05)

Bradley Buckley (Ph.D. student, Biology; graduated)

Matt Wright (M.Sc. student, Biology; graduated)
Susannah French (Ph.D. student, Biology; graduated)
Carol Christel (Ph.D. SoLS; graduated)
Claire Oshatz (M.Sc., SoLS)
Eri Saijo (M.Sc., SoLS; graduated)
Sharon Kessler (M.Sc., Anthropology)
Mike Butler (Ph.D., SoLS)
Melissa Radler (Ph.D., SoLS)
Matthew Toomey (Ph.D., SoLS)
Robert Miranda (Ph.D., SoLS)
Robert Bina (Ph.D., Northern Arizona State Univ., Flagstaff)

Undergraduate Student Mentoring

UAF:

Elizabeth Wilkey (Spring 1991): Tourette syndrome: A literature survey and case study
Lars Ebbesson (Spring 1992): Opioid receptors in the fish brain
Martine Labelle (Spring 1994): Avian Reproduction
Cynthia Simons (Fall 1995): Leptin feeding control
Sheryl Gurtner (Summer 1996): Breeding biology of juncos
Kerry Norton (Spring 1997): Avian Neuroanatomy
Rebecca Hoffman (Fall 1997): Central opioid receptors

ASU:

Joshua Manygoats (summer 2000): Laboratory techniques
Julie Story (Fall 2000): Brain GnRH expression
Christopher Putnam (Spring 2001: BIO310: Special Problems)
Russell Martin: Neuroendocrine Regulation of Reproduction in the House Finch (Honors Thesis, graduated 2004).
Luis Cortez: Hormonal control of immune responses (Honors Thesis; graduated 2003)
Amber Nagazawa (2001 – 2003): Neurochemical regulation of singing in the House Finch (Honors Thesis; graduated 2004)
Yakov Khaydatov (Spring 2001 – pres.): Quantitative analysis of Dark-eyed Junco song
Matthew Ross (Fall 2001 – pres.): Effect of dietary arsenic in House Sparrows (Honors Thesis, graduated 2004).
Rajeeyah Muhammad (Fall 2002 – pres.): Control of avian brain neurogenesis
Marie Baron (Spring 2004 – pres.): Independent Study.
Joseph Georges (Summer 2004 – pres.): Independent Study
Vanessa Njorge (Fall 2004 – pres.): Independent Study
Sohail Abdi-Moradi (Spring 2005): Honors Thesis, defended in fall 2005.
Vivian Miller (Fall 2005): SoLS Apprentice.
Kristen Lee (Fall 2006 – Spring 2007). Honors College Student.
Dan Lyman (Spring 2008)
James Hare (Spring 2008)

Invited Lectures and Presentations, ASU

ASU West, Department of Biology (2000)

Workshop on Environmental Stress, ASU (Winter 2001)
University of Texas at Austin, Department of Psychology (Fall, 2002)
Northern Arizona State Univ., Department of Biology (Spring 2002)
Phoenix Desert Botanical Garden (Summer, 2002)
ASU Sigma Xi Chapter (annual luncheon, Fall, 2003)
Payson Bird Club (Fall, 2003)
Lehigh University, PA, Department of Biology (Fall, 2003)
Graduate Course in Vertebrate Endocrinology and Conservation, University of Gothenburg, Sweden (2004)
Annual Meeting, Arizona Field Ornithologists (2008): Separating the Wheat from the Chaff: A Canada vs. Cackling Goose Identification Primer
Annual Meeting, Arizona Field Ornithologists (2008): Arizona Field Ornithologists - Sound Library
Annual Meeting, Arizona Field Ornithologists (2008): Getting articles for "Arizona Birds Online"
Fifth Symposium: Research Insights in Semiarid Ecosystems, Tucson, AZ (2008): Environmental control of Rufous-winged Sparrow Biology and Behavior
University of Arizona: Department of Physiology departmental seminar (2008): Neuroendocrinology of environmental adaptations: Insights from studies on Sonoran desert songbirds

Invited Guest Lectures/Class Presentations, ASU

Vertebrate Reproduction (BIOL 626)
Ornithology (BIOL 426)
Animal Care and Use (BIOL 693)
Professional Values in Sciences (BIO 416/HPS 410, Spring 2004)
Minority Health Issues and Science Research (PSYCH 194; Summer 2004).
Ecology Explorers Bird Diversity and Urban Habitat Internship (Summer 2004).
Human Disease and Society Learning Community (Fall 2004)
Life Sciences Career Paths (BIO 189; 2008)
Ornithology Class (ASU Polytechnic, 2008)

Miscellaneous

Mentor, NIH-funded Minority Alaska Student and Teacher Experiences in Research students (MASTER; 1995: 1 student; 1996: 1 student; 1997: 1 student + 1 teacher)
Mentor, NSF-funded Research Experience for Undergraduate (REU) students (1994: 1 student; 1995: 1 student)
Organizer (with Dr. B. Barnes), weekly Journal Club in Physiology/Neuroscience
Mentor, independent projects by students enrolled in BIOL 426 (Ornithology)

Publications

Full-length Peer-reviewed Research Articles (reverse chronological order)

Fokidis H.B., Orchinik M., & **Deviche P.** (2009). Corticosterone and corticosteroid binding globulin in birds: Relation to urbanization in a desert city. **General and Comparative Endocrinology** 160: 259-270.

- Deviche P.**, Sabo J. and Sharp P.J. (2008). Glutamatergic stimulation of luteinising hormone secretion in relatively refractory male songbirds. **Journal of Neuroendocrinology** 20, 1191–1202.
- Deviche P.** and Moore M. (2008). First documented observation of Common Teal (*Anas crecca crecca*) in Arizona. **Arizona Field Ornithologists**.
- Deviche P. (2008). Giant Canada Goose, *Branta canadensis maxima*, in Arizona. **Arizona Field Ornithologists**.
- Fokidis, H.B., Greiner, E.C., & **Deviche P.** (2008). Interspecific variation in avian blood parasites and hematology associated with urbanization in a desert habitat. **Journal of Avian Biology** 39: 300-310.
- Deviche P.**, McGraw K.J., & Underwood J. (2008). Season-, sex-, and age-specific accumulation of plasma carotenoid pigments in free-ranging White-winged Crossbills (*Loxia leucoptera*). **Journal of Avian Biology** 39: 283-292.
- Strand C.R, Ross, M.S., Weiss, S.L. & **Deviche P.** (2008). Testosterone and social context affect singing behavior but not song control region volumes in adult male songbirds in the fall. **Behavioral Processes** 78: 29-37.
- Small T.W., Sharp P.J., Bentley G.E., & **Deviche P.** (2008) Relative photorefractoriness, prolactin, and reproductive regression in a flexibly breeding Sonoran Desert passerine, the Rufous-winged Sparrow, *Aimophila carpalis*. **Journal of Biological Rhythms** 23: 69-80.
- Small, T.W., Sharp, P.J., Bentley, G. E., Millar, R. P., Tsutsui, K., Strand, C., & **Deviche, P.** (2008) Auditory stimulation of reproductive function in male Rufous-winged Sparrows, *Aimophila carpalis*. **Hormones and Behavior** 53: 28-39.
- Small T.W., Sharp P.J., Bentley G.E., Millar R.P., Tsutsui K., Mura E., & **Deviche P.** (2008) Photoperiod-independent hypothalamic regulation of luteinizing hormone secretion in a free-living Sonoran Desert bird, the Rufous-winged Sparrow (*Aimophila carpalis*). **Brain, Behavior and Evolution** 71:127-142
- Strand C.R., Small T.W., & **Deviche P.** (2007). Plasticity of the Rufous-winged Sparrow, *Aimophila carpalis*, song control regions during the monsoon-associated summer breeding period. **Hormones and Behavior** 52: 401-408.
- Strand C.R. & **Deviche P.** (2007). Hormonal and environmental control of song region growth and new neuron addition in adult male House Finches, *Carpodacus mexicanus*. **Developmental Neurobiology** 67: 827-837.
- Small T.W., Sharp P.J., & **Deviche P.** (2007). Environmental regulation of the reproductive system in a flexibly breeding Sonoran Desert bird, the Rufous-winged Sparrow, *Aimophila carpalis*. **Hormones and Behavior** 51: 483-495.
- Ottinger M.A., Corbitt C., Hoffman R., Thompson N., Russek-Cohen E., & **Deviche P.** (2006). Reproductive aging in Japanese Quail, *Coturnix japonica* is associated with changes in central opioid receptors. **Brain Research** 1126: 167-175.

- Singletary K., **Deviche P.**, Strand C., & Delville Y. (2006). Distribution of orexin/hypocretin immunoreactivity in the brain of a passerine, the House Finch, *Carpodacus mexicanus*. **Journal of Chemical Neuroanatomy** 32: 81-89.
- Deviche P.**, Martin R.K., Small T., & Sharp P.J. (2006). Testosterone induces testicular development but reduces GnRH-I fiber density in the brain of the House Finch, *Carpodacus mexicanus*. **General and Comparative Endocrinology** 147: 167-174.
- Deviche P.** and Parris J. (2006). Testosterone treatment to free-ranging male Dark-eyed Juncos, *Junco hyemalis*, exacerbates hemoparasitic infection. **The Auk** 123: 548-562.
- Meddle S.L., Wingfield J.C., Millar R.P., & **Deviche P.** (2006). Hypothalamic GnRH-I and its precursor during photorefractoriness onset in free-living male Dark-eyed Juncos (*Junco hyemalis*) of different year classes. **General and Comparative Endocrinology** 145: 148-156.
- Deviche P.**, Small T., Sharp P., & Tsutsui K. (2006). Control of luteinizing hormone and testosterone secretion in a flexibly breeding male passerine, the Rufous-winged Sparrow, *Aimophila carpalis.*, **General and Comparative Endocrinology** 149: 226-235.
- Deviche P.**, McGraw K., & Greiner E. (2005). Interspecific differences in hematozoan infection in Sonoran desert *Aimophila* sparrows. **Journal of Wildlife Diseases** 41: 532-541.
- Deviche P.** & Cortez L. (2005). Androgen control of immunocompetence in the male house finch, *Carpodacus mexicanus* Müller. **Journal of Experimental Biology** 208: 1287-1295.
- Corbitt C. & **Deviche P.** (2005). Age-related difference in size of brain regions for song learning in adult male Dark-eyed Juncos (*Junco hyemalis*). **Brain, Behavior and Evolution** 65: 268-277.
- Plumari L., Plateroti S., **Deviche P.**, & Panzica G.C. (2004). Region-specific testosterone modulation of the vasotocin-immunoreactive system in male dark-eyed junco, *Junco hyemalis*. **Brain Research** 999: 1-8.
- MacDougall-Shackleton S.A., **Deviche P.**, Crain R.D., Ball G.F., & Hahn T.P. (2001). Seasonal changes in brain GnRH immunoreactivity and song-control nuclei volumes in an opportunistically breeding songbird. **Brain, Behavior and Evolution** 58: 38-48.
- Deviche P.** & Sharp P.J. (2001) Reproductive endocrinology of a free-living, opportunistically breeding passerine (White-winged Crossbill, *Loxia leucoptera*). **General and Comparative Endocrinology** 123: 268-279. [**Cover Page Article**]
- Dloniak S.M. & **Deviche P.** (2001) Effects of testosterone and photoperiodic condition on song production and vocal control region volumes in adult male Dark-eyed Juncos (*Junco hyemalis*). **Hormones and Behavior** 39: 95-105. [**Cover Page Article**]
- Deviche P.**, Greiner E.C., & Manteca, X. (2001) Seasonal and age-related changes in blood parasite prevalence in Dark-eyed Juncos (*Junco hyemalis*, Aves, Passeriformes). **Journal of Experimental Zoology** 289: 456-466.

- Deviche P.**, Greiner E.C., & Manteca X. (2001) Interspecific variability of prevalence in blood parasites of adult passerine birds during the breeding season in Alaska. **Journal of Wildlife Diseases** 37: 28-35.
- Deviche P.**, Breuner C., & Orchinik M. (2001). Testosterone, corticosterone, and photoperiod interact to regulate plasma levels of binding globulin and of free steroid hormone in Dark-eyed Juncos, *Junco hyemalis*. **General and Comparative Endocrinology** 122: 67-77.
- Deviche P.**, Wingfield J.C., & Sharp P.J. (2000) Year-class differences in the reproductive system, plasma prolactin and corticosterone concentrations, and onset of prebasic molt in male Dark-eyed Juncos (*Junco hyemalis*) during the breeding period. **General and Comparative Endocrinology** 118: 425-435.
- Deviche P.** (2000) Timing, pattern, and extent of first prebasic molt of White-winged Crossbills in Alaska. **Journal of Field Ornithology** 71: 217-226.
- Deviche P.**, Saldanha C.J., & Silver R. (2000) Changes in brain gonadotropin releasing hormone- and vasoactive intestinal polypeptide-like immunoreactivity accompanying re-establishment of photosensitivity in male Dark-eyed Juncos (*Junco hyemalis*). **General and Comparative Endocrinology** 117: 8-19. [Cover Page Article]
- Deviche P.** & Gulledge C.C. (2000) Vocal control region sizes of an adult female passerine songbird change seasonally in the absence of detectable circulating testosterone. **Journal of Neurobiology** 42: 202-211.
- Gulledge C.C. & **Deviche P.** (1999) Age and sex-related differences in opioid receptor densities in the songbird vocal control system. **Journal of Comparative Neurology** 404: 505-514.
- Panzica G.C., Plumari L., Garcia-Ojeda E., & **Deviche P.** (1999) Central vasotocin-immunoreactive system in a male passerine bird (*Junco hyemalis*). **Journal of Comparative Neurology** 409: 105-117.
- Gulledge C.C. & **Deviche P.** (1998) Photoperiod and testosterone independently affect vocal control region volumes in adolescent male songbirds. **Journal of Neurobiology** 36: 550-558.
- Gulledge C.C. & **Deviche P.** (1997) Androgen control of vocal control region volumes in a wild, migratory songbird (*Junco hyemalis*) is region- and possible age-dependent. **Journal of Neurobiology** 32: 391-402.
- Deviche P.** (1997) Seasonal reproductive pattern of White-winged Crossbills in interior Alaska. **Journal of Field Ornithology** 68: 613-621.
- Deviche P.** (1997) Affinity of naloxone and its quaternary analogue for avian central δ and μ opioid receptors. **Brain Research** 757: 276-279.
- Gulledge C.C. & **Deviche P.** (1997) Androgen control of vocal control region volumes in a wild, migratory songbird (*Junco hyemalis*) is region- and possible age-dependent. **Journal of Neurobiology** 32: 391-402.

- Ebbesson L.O.E., **Deviche P.**, & Ebbesson S.O.E. (1996) Distribution and changes in μ - and κ -opiate receptors during the midlife neurodevelopmental period of Coho salmon, *Onchorhynchus kisutch*. **Journal of Comparative Neurobiology** 366: 448-464.
- Deviche P.** (1995) Androgen regulation of avian premigratory hyperphagia and fattening: From eco-physiology to neuroendocrinology. **American Zoologist** 35: 234-245.
- Hahn T.P., Wingfield J.C., Mullen R. & **Deviche P.** (1995) Endocrine bases of spatial and temporal opportunism in arctic-breeding birds. **American Zoologist** 35: 259-273.
- Saldanha C.J., **Deviche P.J.**, & Silver R. (1994) Increased VIP and decreased GnRH expression in photorefractory Dark-eyed Juncos (*Junco hyemalis*). **General and Comparative Endocrinology** 93: 128-136.
- Gulledge C.C. & **Deviche P.** (1994): Autoradiographic localization of opioid receptors in vocal control regions of a male passerine bird (*Junco hyemalis*). **Journal of Comparative Neurobiology** 356: 408-417.
- Wingfield J.C., **Deviche P.**, Sharbaugh S., Astheimer L.B., Holberton R., Suydam R. & Hunt K. (1994) Seasonal changes of the adrenocortical responses to stress in Redpolls, *Acanthis flammea*, in Alaska. **Journal of Experimental Zoology** 270: 372-380.
- Deviche P.**, Cotter P. & Gulledge C.C. (1993) Identification, partial characterization, and hypothalamic distribution of κ , μ , and δ opioid receptors in a passerine songbird (*Junco hyemalis*). **Brain Research** 614: 220-226.
- Dores R.M., McDonald L.K., Goldsmith A., **Deviche P.** & Rubin D.A. (1993) The phylogeny of enkephalins: speculations on the origins of opioid precursors. **Cell and Physiological Biochemistry** 3: 231-244.
- Deviche P.** (1993) Opioid regulation of appetite in birds. **Poultry Sciences Reviews** 5: 49-55.
- Deviche P.** (1992) Testosterone and opioids interact to regulate feeding in a male migratory songbird. **Hormones and Behavior** 26: 394-405.
- Deviche P.** (1992) Regulation of food intake in a migratory songbird (*Junco hyemalis*): Participation of endorphinergic mechanisms. **Ornis Scandinavica** 23: 260-263.
- Deviche P.** & Gunturkun O. (1992) Peptides for calling? An immunohistochemical study of the avian n. intercollicularis. **Brain Research** 569: 93-99.
- Gunturkun O. & **Deviche P.** (1992) ACTH in the pigeon vestibular ganglion. **NeuroReport** 3: 127-130.
- Silverin B. & **Deviche P.** (1991) Biochemical characterization and seasonal changes in the concentration of testosterone-metabolizing enzymes in the European Great Tit (*Parus major*) brain. **General and Comparative Endocrinology** 81: 146-159.
- Deviche P.**, Murray T.F., & Moore F.L. (1990) Effects of sodium and temperature on naloxone binding in brain tissues of a urodele amphibian. **Comparative Biochemistry and Physiology [C]** 96C: 393-398.
- Deviche P.**, Propper C.R., & Moore, F.L. (1990) Neuroendocrine, behavioral, and morphological changes associated with the termination of the reproductive period in a

- natural population of male Rough-skinned Newts (*Taricha granulosa*). **Hormones and Behavior** 24: 284-300.
- Lowry C.A., **Deviche P.**, & Moore, F.L. (1990) Effects of corticotropin-releasing factor (CRF) and opiates on amphibian locomotion. **Brain Research** 513: 94-100.
- Deviche P.**, Lowry C.A. & Moore F.L. (1989) Opiate control of spontaneous locomotor activity in a urodele amphibian. **Pharmacology Biochemistry and Behavior** 34: 753-757.
- Deviche P.** & Moore F.L. (1988) Steroidal control of sexual behavior in the Rough-skinned Newt (*Taricha granulosa*): Effects of testosterone, estradiol, and dihydrotestosterone. **Hormones and Behavior** 22: 26-34.
- Deviche P.** & Balthazart J. (1987) Effect of the injection solvent on steroid activity in the quail. **General and Comparative Endocrinology** 65: 199-202.
- Deviche P.** & Moore F.L. (1987) Opioid κ -receptor agonists suppress sexual behaviors in male Rough-skinned Newts (*Taricha granulosa*). **Hormones and Behavior** 21: 371-383.
- Deviche P.**, Delville Y. & Balthazart J. (1987) Central and peripheral metabolism of 5 α -dihydrotestosterone in the male Japanese Quail: biochemical characterization and relationship with reproductive behavior. **Brain Research** 421: 105-116.
- Deviche P.** (1985) Behavioral response to apomorphine and its interaction with opiates in domestic pigeons. **Pharmacology Biochemistry and Behavior** 22: 209-214.
- Deviche P.** (1984) Administration of small doses of apomorphine attenuates feeding in non-deprived pigeons. **Physiology and Behavior** 33: 581-585.
- Deviche P.** & Schepers G. (1984) Naloxone treatment attenuates food but not water intake in domestic pigeons. **Psychopharmacology** 82: 122-126.
- Deviche P.** & Schepers G. (1984) Ingestive behavior of the pigeon: Stereoselective influence of the opiate agonist levorphanol and its antagonism by naloxone. **Psychopharmacology** 83: 357-362.
- Deviche P.** & Shepers G. (1984) Intracerebroventricular injection of ostrich β -endorphin to satiated pigeons induces hyperphagia but not hyperdipsia. **Peptides** 5: 691-694.
- Deviche P.** & Wohland A. (1984) Behavioral characterization of the anorexic effect of naloxone in domestic pigeons. **IRCS Medical Sciences** 12: 427-428.
- Deviche P.** & Wohland A. (1984) Opiate antagonists stereoselectively attenuate the consumption of food but not of water by pigeons. **Pharmacology Biochemistry and Behavior** 21: 507-512.
- Deviche P.**, Melmer G. & Schepers G. (1984) Evidence that naloxone attenuates the consumption of food by domestic pigeons through a central influence. **Neuropharmacology** 23: 1173-1178.
- Deviche P.** (1983) Interactions between adrenal function and reproduction in male birds. **Avian Endocrinology** pp. 243-254.

- Deviche P.** (1983) Stereotyped behavior affected by peripheral and intracerebroventricular apomorphine administration in pigeons. **Pharmacology Biochemistry and Behavior** 18: 323-326.
- Deviche P.**, Massa R., Bottoni L. & Hendrick J.C. (1982) Effect of corticosterone on the hypothalamic-pituitary-gonadal system of male Japanese Quail exposed to either short or long photoperiods. **Journal of Endocrinology** 95: 165-173.
- Deviche P.**, Bottoni L. & Balthazart J. (1982) 5 β -dihydrotestosterone is weakly androgenic in the adult Japanese Quail (*Coturnix coturnix japonica*). **General and Comparative Endocrinology** 48: 421-424.
- Deviche P.** & Schumacher M. (1982) Behavioral and morphological dose-responses to testosterone and to 5 α -dihydrotestosterone in the castrated male Japanese Quail. **Behavioral Processes** 7: 107-121.
- Deviche P.**, Balthazart J., Malacarne G. & Hendrick J.C. (1982) Effects of *in vivo* corticosterone treatment on the *in vitro* metabolism of testosterone in the comb and brain of the young male chicken. **General and Comparative Endocrinology** 48: 398-402.
- Deviche P.**, Malacarne G., Puts C. & Balthazart J. (1982) The *in vitro* metabolism of testosterone by the brain and crest of domestic chicks. **Bolletino Zoologia** 49: 25-30.
- Deviche P.**, Massa R., Bottoni L. & Hendrick J.C. (1982) Effects of corticosterone on the hypothalamo-pituitary-gonadal system of male Japanese Quail exposed to either short or long photoperiods. **Journal of Endocrinology** 95: 165-173.
- Deviche P.** & Heyns W. (1981) Physiological adaptation to high levels of corticosterone in the male duck (*Anas platyrhynchos* L.). **Advances in Physiological Sciences** 33: Recent Advances of Avian Endocrinology, 375-382.
- Deviche P.** & Delius J.D. (1981) Short-term modulation of Domestic Pigeon (*Columba livia* L.) behavior induced by intraventricular administration of ACTH. **Zeitschrift fur Tierpsychologie** 55: 335-342.
- Deviche P.** & Hendrick J.C. (1981) Participation of glucocorticoids in the regulation of plasma LH in the male domestic duck (*Anas platyrhynchos* L.) **Reproduction Nutrition and Development** 21: 1137-1142.
- Balthazart J., Malacarne G. & **Deviche P.** (1981) Stimulatory effects of 5 β -dihydrotestosterone on the sexual behavior in the domestic duck. **Hormones and Behavior** 15: 246-258.
- Malacarne G., Balthazart J. & **Deviche P.** (1981) Effects of 5 β -dihydrotestosterone on sexual behavior in the chick. **Monitore Zoologia Italiano** 15: 319-320.
- Deviche P.**, Balthazart J., Heyns W. & Hendrick J.C. (1980) Endocrine effects of castration followed by androgen replacement and ACTH injections in the male domestic duck (*Anas platyrhynchos* L.). **General and Comparative Endocrinology** 41: 53-61.
- Balthazart J., **Deviche P.** & Hendrick J.C. (1980) Long-term effects of testosterone injections on the social behavior of male ducks and their physiological correlates. **Behavioral Processes** 5: 323-338.

- Deviche P.** (1979) Behavioral effects of castration and testosterone replacement combined with ACTH in the male domestic duck (*Anas platyrhynchos* L.). **Journal of Experimental Zoology** 207: 471-480.
- Deviche P.** (1979) Effects of testosterone propionate and pituitary-adrenal hormones on the social behavior of male ducklings (*Anas platyrhynchos* L.) in two test situations. **Zeitschrift fur Tierpsychologie** 49: 77-86.
- Deviche P.**, Heyns W., Balthazart J. & Hendrick J.C. (1979) Inhibition of LH plasma levels by corticosterone administration in the male duckling (*Anas platyrhynchos*). **IRCS Medical Sciences** 7: 622.
- Bortolussi M., **Deviche P.**, Colombo L. & Marini G. (1979) *In vitro* binding of radioiodinated rat follicle-stimulating hormone to the testis of the Mallard Duck, *Anas platyrhynchos* L. **Basic and Applied Histochemistry** 23: 279-284.
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- Deviche P.** and Gulledge C.C. Vocal control region volumes of an adult, sexually dimorphic songbird (*Junco hyemalis*) change seasonally in both sexes. Annual Meeting of the Society for Neuroscience, Los Angeles, CA.
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Deviche P. & Cotter P. (1991) Hypothalamic localization of kappa, delta, and mu opioid receptors in the songbird brain. Annual Meeting of the Society for Neuroscience, New Orleans, LA.

Deviche P. (1991) Endorphinergic regulation of appetite in a migratory songbird. Conference on Hormones, Physiology and Non-Reproductive Behaviour in Birds, Univ. Gothenburg, Sweden.

Deviche P. (1991) Androgen-opioid interaction on feeding in a migratory songbird. Annual Meeting of the Society of American Zoologists, Atlanta, GA.

Rock K. & **Deviche P.** (1991) Diurnal and seasonal body composition and body mass changes in Dark-eyed Juncos (*Junco hyemalis*). Fourth Alaska Bird Conference, Anchorage, AK.

Professional Development

Selected Awards, Fellowships, and Grants

Arizona State University – School of Life Sciences Research Incentive Program:

Carotenoids, vocal performance, and the brain: An early-life nutritional and antioxidative mechanism underlying neural control of animal communication (P.I.s: K. McGraw, P. Deviche, P. Nolan; 2005)

Songbird Neurogenomics (SoNG) Initiative (NIH-sponsored): Photoperiodic Regulation of Hypothalamic Gene Expression (P.I.: P. Deviche; 2004-05).

National Geographic Society: Environmental Control of Reproduction in Desert Passerines (P.I.: P. Deviche; 2002)

Salt River Project: Feasibility of a Novel Fowl Disturbance System (P.I.; coP.I.: G. Karady, 2002)

ASU Center for Studies on Stress and Adaptations: Ecological Stress: Effects and Mechanisms of Action of Environmental Contaminants (Principal Investigator; 2002)

Central Arizona Project Long-term Ecological Research: Bioaccumulation and Biological Effects of Environmental Contaminants (Principal Investigator; 2002).

National Institute on Deafness and Other Communications Disorders (NIDCD; Principal Investigator; 1996-1999): Neurochemical Control of Vocal Behavior Expression.

National Science Foundation (1996; Principal Investigator): Neurophysiological control of avian vocal behavior.

UAF President's Special Fund project (1995; Principal Investigator): Role of the Obesity Hormone in the Regulation of Food Intake.

National Science Foundation (1993; Principal Investigator): Identification of Avian Encephalic Photoreceptors.

National Science Foundation (1993; Principal Investigator): Endocrinology of Arctic Birds and Mammals Symposium.

National Institutes of Health (1993, co-Principal Investigator): Endocrinology of Arctic Birds and Mammals Symposium.

National Science Foundation (1993, co-Principal Investigator): Body Composition Analysis Equipment for Study of the Physiological Ecology of High Latitude Endotherms.

National Science Foundation (1992-1995; Principal Investigator): Neurochemical Mediators of Appetite in a Male Migratory Songbird.

Biomedical Research Support Grant from the National Institutes of Health (1993; Principal Investigator): Glucocorticoids and Lipid Metabolism.

Biomedical Research Support Grant from the National Institutes of Health (1991; Principal Investigator): Radioimmunological Determination of 5 Steroidal Hormones in Avian Plasma.

Faculty Grant Award, University of Alaska Fairbanks (1989; Principal Investigator): Biochemical Characterization and Neuroanatomical Localization of Opioid Binding Sites in the Brain of the Willow Ptarmigan (*Lagopus lagopus*).

Research Grant, Alexander von Humboldt (1989; Principal Investigator): Neuroanatomical Distribution of Opioid Peptides Immunoreactivity in the Brain of the Willow Ptarmigan (*Lagopus lagopus*).

NATO Research Fellowship (1986; Recipient).

NATO Research Fellowship (1988; Recipient).

Belgian National Science Council Research Grant (1984; Principal Investigator).

European Training Program in Brain and Behavior Research Grant (1984; Principal Investigator).

Alexander von Humboldt Foundation Fellowship (1981 and 1982; Recipient).

European Training Program in Brain and Behavior Research Grant (1979; Principal Investigator).

Society Memberships (2006-08)

American Association for the Advancement of Sciences
American Birding Association
American Ornithological Union
Arizona Field Ornithologists
Dragonfly Society of the America
Ornithological Societies of North America
Sigma Xi, The Scientific Research Society
Society for Behavioral Neuroendocrinology
Society for Integrative and Comparative Biology
Society for Neuroscience

Professional Services

University of Alaska Fairbanks:

Member, UAF Transportation and Campus Security Committee
Member, UAF Institutional Review Board (= "Human Subjects Committee")
Member, UAF Faculty Small Grant Program Evaluation Committee
Outside Examiner, UAF M.Sc. and Ph.D. thesis defenses
Member and Chair, IAB Research Advisory Council

Member and Chair, M.Sc. Comprehensive Examination Committee of the Biology and Wildlife Department
Member, IAB Animal Quarters and Veterinarian Services Task Force on Budgeting
Member, IAB Irving-Scholander Lecture Series Committee
Member, IAB Space Committee
Co-organizer, IAB weekly Life Sciences Seminars Series
Member, search committees for faculty position of Curator of Birds and for faculty position in cellular/molecular biology
Member, Biology and Wildlife Department Graduate Curriculum Committee
Responsible for IAB annual reports and applications (Alaska Fish and Game Department; US Fish and Wildlife Service) for scientific/educational bird collecting permits
Member and Secretary, Alaska Chapter of the Society for Neuroscience
Organizer and co-organizer, Society for Neuroscience Grass Foundation Traveling Scientist visits

Arizona State University:

Member, SoLS Combined Neurosciences Faculty Search Committee (2006)
Member, SoLS Bioimaging Faculty Search Committee (2006)
Grant Application Reviewer, University Committee on Research Collaborations (2007)
Member, SoLS Research and Training Initiatives Committee (2006 – pres.)
Member, Personnel Committee of the SoLS Organismal and Integrative Systems Biology (OISB) Faculty (2004 – pres.)
Elected Chair, International Society for Avian Endocrinology (2004-2008)
Member, Search Committee for School of Life Sciences Laboratory Coordinator (2004)
Member, Search Committee for School of Life Sciences faculty position in Integrative Neurosciences (2004)
Member, Search Committee for Office for Research and Sponsored Projects Administration Compliance Officer position (2004)
Member, ASU Animal Users Advisory Committee (2004 – 2007)
Chair, Scientific Program Committee and Local Organizing Committee of the 8th International Symposium on Avian Endocrinology (Sunburst Resort, Scottsdale, June 2004)
Chair, ASU Institutional Animal Care and Use Committee (July 2003 – June 2006)
Associate Chair, Department of Biology, 2002-2003
Member, CLAS Committee of Review (2002 – 2005)
Secretary, ASU Chapter of Sigma Xi, the Scientific Research Society of America (2002 – pres.)
Member, Personnel Committee, Department of Biology (2000)
Chair, Biology Departmental Weekly Seminar Series (Spring 2000)
Member, Search committee for undergraduate courses coordinator (Department of Biology, Spring 2001)
ASU Delegate to the Annual Meeting of the Organization for Tropical Studies, Costa Rica, March 2001.
Member, Institutional Animal Care and Use Committee (Fall 2001)
Member, Search Committee for faculty position in Molecular Neuroscience (Spring 2001 to Spring 2002)

Chair, ASU Animal Users Advisory Committee (2009 -)

Other Professional Services

University of Alaska Fairbanks:

Presented IAB Life Science Seminars (Spring 1990; Fall 1991; Spring 1995)

Chair, oral contributed presentation session, 1988 Annual Meeting of the Society of Zoologists, San Francisco, CA.

Chair, oral contributed presentation session, 1988 Western Regional Conference on Comparative Endocrinology, Seattle, WA.

Co-organizer, Alaska Bird Conference, Fairbanks, AK, 1989.

Co-organizer with Dr. C. Harding and Dr. M.A. Ottinger, symposium on *Frontiers in Avian Reproductive Behavioral Endocrinology*, Vth International Symposium on Avian Endocrinology, Edinburgh, Scotland, 1992.

Co-organizer (with Dr. B. Silverin), round table discussion on *Field Endocrinology*, XXIst International Ornithological Congress, Vienna, Austria, 1992.

Organizer (with Dr. B. Barnes) of a Symposium on *Endocrinology of Arctic Birds and Mammals*, 1993 Annual Meeting of the American Society of Zoologists, Los Angeles, CA. This Symposium was sponsored by awards from NSF and NIH. Proceedings were published as full-length, peer-reviewed articles in the journal **American Zoologist**.

Chair, oral contributed presentation session, 1992 Western Regional Conference on Comparative Endocrinology, Newport, OR.

Chair, oral contributed presentation session, 1993 Western and Southwestern Regional Conference on Comparative Endocrinology, Boulder, CO.

Arizona State University:

Convener, symposium on “Endocrine bases of reproduction: Mechanisms and diversity”. 24th International Ornithological Congress, Hamburg, Germany (2006).

Invited Lecturer, workshop on “ESF Workshop: Endocrine measurements for ecologists”, Glasgow, Scotland (2006).

Invited Lecturer, graduate course on Vertebrate Endocrinology and Conservation, University of Gothenburg, Sweden (2004).

Invited participant, McGraw Hill Pub. Co. workshop on Anatomy and Physiology, Key West, FL, March 20-23, 2003.

Participant, Workshop on BIO 187-188, May 2002

Chair, Nomination Committee for the Comparative Endocrinology Division of the Society for Integrative and Comparative Biology (SICB; 2000).

Member, General and Comparative Endocrinology Editorial Board of (2000 - pres.)

Chair, oral contributed presentation session, 2001 Western Regional Conference on Comparative Endocrinology, Berkeley, CA

Co-chair of the local organizing committee of the Annual Meeting of the Society for Behavioral Neuroendocrinology (to be held in Scottsdale, Arizona, June 2001).

Elected Chair of the local organizing committee and the scientific program committee of the VIII International Symposium on Avian Endocrinology (~ 300 participants anticipated), ASU (held in 2004).

Consultant for the “Ask a Biologist” ASU web site

Member, EBIRD USA (2007 – pres.)

Grant/Manuscript Reviews

Granting Agencies:

Idaho Board of Education
Murdock Charitable Trust
National Science Foundation
Natural Sciences and Engineering Research Council of Canada
North Pacific Board
University of Alaska Fairbanks Center for Global Change and Arctic System Research
University of Alaska Fairbanks EPSCOR program

Peer-reviewed Professional Journals:

Animal Behavior
Ardea
Auk
Behavioral Neuroscience
Behavioral Processes
Biology Letters
Brain Research
Brain Research Bulletin
Brain, Behavior and Evolution
Comparative Biochemistry and Physiology
Comparative Physiology and Biochemistry
Condor
Ecology
Endocrinology
European Journal of Neurosciences
Evolution
General and Comparative Endocrinology
Hormones and Behavior
Ibis
Integrative and Comparative Biology
Journal of Avian Biology
Journal of Field Ornithology
Journal of Neuroendocrinology
Journal of Parasitology
Neuroscience Letters
Ornitologia Neotropical
Physiological Zoology
Physiology and Behavior
Psychoneuroendocrinology
Trends in Neuroscience
Wilson Bulletin.

Community Services

UAF:

Member, Board of Directors, Alaska Bird Observatory

Judge, local school annual Science Fairs, Fairbanks, Alaska

Invited presentations on Alaska birds, local elementary schools

Guide, local bird-watching trips

Coordinator, UAF area Christmas Bird Count of the National Audubon Society

Interviews for articles in local newspaper (Alaska Science Forum; front page article in Daily News Miner, October 1996).

ASU:

Recorded and edited all Southwest bird song recordings for ASU Ask a Biologist web site (<http://askbiologist.asu.edu/expstuff/experiments/birdsongs/>).

Participant, Arizona Game and Fish Department Phoenix Winter Waterbird Annual Survey (2006, 2007, 2008).

Co-organizer and field guide, "SoLS Takes a Hike" nature hike (2006, 2007, 2008).

Photo contributions, Arizona Field Ornithologists web site (<http://www.azfo.org/>).

Photo contributions, Dragonflies of the Southwest web site (<http://southwestdragonflies.net/swanisoptera.html>).

Field Guide for birdwatching trips (Maricopa Audubon Society; Desert Rivers Audubon Society, Boyce Thompson Arboretum State Park)

Field Guide for dragonfly walks (Boyce Thompson Arboretum State Park).