

## Kim C. Pinkerton, M.S.

### EDUCATION

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- Kent State University, Kent, Ohio** *May 2003*  
M.S. Environmental Physiology
- Taylor University, Upland, Indiana** *May 1998*  
B.S. Environmental Biology

### EXPERIENCE

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- ChemaTox Laboratory, Inc.** *January 2012 - March 2019*
- Manage a team of 10+ people, coordinating all laboratory procedures and the testing of 2000+ samples a week
  - Analyze GCMS results from four machines running 24/7
  - Developed and maintain weekly and monthly QA/QC records for CLIA monitoring
  - Perform daily laboratory testing, including drug extractions, ELISA, and GCMS
  - Completed the validation of new drug testing procedures and wrote corresponding SOPs
  - Proficient with laboratory equipment including robotics and GCMS Chemstation programs
  - Daily handling of human specimens including urine, blood, and other coroner samples

- Oceanic Institute** *January 2007 - February 2011*  
Research Associate
- Managed the Live Feeds department, including algae, copepods, and rotifer cultures
  - Grew algae cultures from purified starter cultures to large-scale batch and continuous production levels
  - Studied the microbial profile of algae cultures
  - Developed and performed trouble shooting methods for increasing algal densities
  - Worked with multiple groups to provide algae for their trial and research needs
  - Studied the effects of lighting spectra on algal growth
  - Experience with both indoor and outdoor photobioreactors
  - Proficient in plumbing and systems design
  - Led in the redesign, remodel and set-up of a new algae laboratory
  - Designed a multi-departmental use laboratory building; worked with architects, engineers and electricians for the design and layout of the building spaces
  - Designed and completed set-up of a functional microbiology and molecular laboratory
  - Laboratory manager - responsible for the upkeep and organization of a general use laboratory used by the entire department
  - Maintained relationships with State officials, veterinarians, university contacts, industry contacts, and departmental divisions
  - Water quality, using both hand-held field units and specialized sensitive bench top units

- All microbial processes, from making agar plates to CFU counts and analyzation
- Microbial identification, using gram-stains, acid-fast stains, morphology, microscopic identification, biochemical tests and API strips
- Necropsies
- Animal care-medicating, quarantine, water quality, pit tagging, weighing, measuring, sex determination, fin clips, feeding, and routine movement between tanks and maintenance
- Biosecurity Leader for the department - attended company-wide meetings, research, installed of biosecurity measures including quarantine facilities, footbaths and hand washing stations, specialized footwear, and disinfection techniques
- Developed Standard Operating Procedures (SOPs) for the department
- Chemical safety - ordering, organization, disposal, record keeping, MSDS files
- Rearranged the filtration systems for improved microbial levels and hatchery survival
- Assisted in the construction of water systems, quarantine system, and various structures
- Worked with graduate students and undergraduate interns
- Designed publications, Literature research & Grant writing
- Redesigned the existing general use laboratory for enhanced functionality for the department

### **Ohio Department Of Agriculture**

*March 2005 - July 2006*

#### Microbiologist I

- PCR surveillance programs for Avian Influenza/Exotic Newcastle Disease
- PCR diagnostic tests for Johne's Disease
- PCR testing for various viral and bacterial diseases, including E.coli, M.bovis and general
- Mycoplasma, Clostridium perfringens, BLV, IBR, IBV, BVD, PRRS, EHD, EHV, etc.
- ELISA tests for TSE, Pseudorabies virus (PRV), Bovine diarrheal virus (BVD), IBR, Porcine respiratory virus (PRRS), Neospora
- Daily use of conventional and Real Time PCR
- RNA and DNA extractions
- Gel Electrophoresis
- Experience using Biorobotics
- Handling and testing of animal samples including tissue, blood, serum, semen, milk, and tracheal swabs
- Rewriting and editing of departmental SOP's
- Chemical Representative for department
- Daily use of large and small autoclave
- Handling and disposal of Biohazard materials National Veterinary Service Laboratory
- Certified for:
  - Avian Influenza (molecular)
  - Exotic Newcastle Disease (molecular)
  - Classical Swine Fever (molecular)
  - Foot and Mouth Disease (molecular)
  - TSE (micro)
  - AGID for Avian Influenza
  - General ELISA essays

**Woods Hole Oceanographic Institute & Ocean Alliance***April - October 2004*

Guest Researcher

- Involved in on-going research on CYP1A and CYP1B genes in specific cetacean species
- Conducted various molecular biology procedures, including RT-PCR, PCR, Real Time PCR, Gene Clean, TAE gels, Ligation, Transformation, microbial plating, Sequencing, Primer design, sequence alignment with Sequencer and BLAST programs. Immunohistochemistry projects on cetacean blubber, skin and tooth samples
- Responsible for the training of new interns and summer help
- Responsible for the organization and ordering of supplies
- Organization of mammalian and miscellaneous samples in both storage and in computer files

**Battelle Memorial Institute***July - November 2002*

Research Assistant

- Created toxicology standards based on previous studies for the EPA
- Worked on toxic compound studies for the EPA and Department of Health
- Assisted in the preparation of EPA materials and reports
- Participated in the formation of the EPA body burden database
- Collaborated with other scientists for writing scientific assessment paper

**Columbus Zoo & Aquarium***July - November 2002*

Aquarist

- Participated in on-going research within the aquarium
- Responsible for monitoring and upkeep of aquarium, penguin, reptile, and flamingo exhibits
- Held daily interactions to educate the public on the animals and related conservation issues
- Monitored and performed water quality tests
- Fed reef, invertebrate, and freshwater exhibits
- Handled the shipment, water changes, and feeding of brine and mycies
- Participated in training procedures for rays, sharks, and green sea turtles

**The American Chemical Society/Chemical Abstracts***January - July 2002*

Editor

- Proofread scientific articles for grammar and stylistic features
- Corrected chemical formulas, equations, and research figures
- Ensured scientific chemical and biological research was clearly and accurately expressed
- Interacted with editors and authors regarding corrections and clarifications
- Completed articles in a timely fashion to meet journal deadlines

**The Living Seas At Walt Disney World***June 1998 - January 1999*

Conservation Intern

- Participated in veterinary procedures for Green sea turtles, manatees and bottlenose dolphins
- Trained and utilized in all areas of animal care (Marine Mammal and Aquarium Teams)
- Led daily tours and presentations for guest education experiences
- Interpreted interactive exhibits and on-going research for guests
- Facilitated educational programs to students (K-12) and adults
- Dove for daily SCUBA diving demonstrations
- Assisted in developing an Historian position for The Living Seas
- Developed a program involving the articulation of an adult manatee skeleton
- Assisted in the revision and rewriting of a youth education program for students (K-12)

- Organized the participation of WDW employees in the National Beach Clean-up
- Participated in the chemical treatment of the aquarium
- Designed and published the monthly newsletter for The Living Seas Animal Care Staff

### NASA/Dynamac

*January 1997*

#### Intern

- Assisted Jane Provancha, head scientist in the Aquatic and Biological Life Sciences Department
- Participated in gathering field data (netting, blood samples, measuring, weighing, PIT tagging) of endangered species of sea turtles (*Chelonia mydas* and *Caretta caretta*)
- Formulated tables and page layouts for the collected data on *C.mydas* and the impacts from NASA operations on the surrounding habitats
- Participated in gathering species for necropsy, including dolphin, sea turtles, deer and birds
- Performed weekly beach surveys of the Kennedy Space Center and Air Force beaches for marine life washed ashore
- Proofread previously collected data on beach mice
- Conducted water quality measurements on collected samples
- Performed measurement and species identification on sea

### PRESENTATIONS

**In utero and lactational exposure of Sprague-Dawley rats to 2,3,7,8-tetrachlorodibenzo-p-dioxin and polychlorinated dibenzo-p-furans: A histological analysis of the liver.**

*July 27<sup>th</sup> 2004 -  
August 1<sup>st</sup> 2004*

International Congress of Vertebrate Morphology

**In utero and lactational exposure of Sprague-Dawley rats to 2,3,7,8-tetrachlorodibenzo-p-dioxin and polychlorinated dibenzo-p-furans: A histological analysis of the kidney.**

*January 17<sup>th</sup> 2000*

Society of Integrative and Comparative Biology

### PUBLICATIONS

**Pacific Ocean-Wide Profile of CYP1B1 Expression, Stable Carbon and Nitrogen Isotope Ratios, and Organic Contaminant Burden in Sperm whale Skin Biopsies.**

*March 2011*

*Environmental Health Perspectives*

**Biomarker and Contaminant Burden Analyses of Sperm Whale Skin Biopsies Indicate Geographical Trends in Pacific Ocean-wide Pollution Profile (09-01809-ART)**

*December 11<sup>th</sup> 2009*

*Environmental Health Perspectives*

**In utero and lactational exposure of Sprague-Dawley rats to 2,3,7,8-tetrachlorodibenzo-p-dioxin and polychlorinated dibenzo-p-furans: A histological analysis of the liver.**

*Journal of Morphology* 260.3: 288-289

**In utero and lactational exposure of Sprague-Dawley rats to 2,3,7,8-tetrachlorodibenzo-p-dioxin and polychlorinated dibenzo-p-furans: A histological analysis of the kidney.**

*American Zoologist* 39.5: 123A

**CYP1A1 and CYP1B1 expression in tissues of male and female white-sided dolphins (*Lagenorhynchus acutus*).** 2004

*Society of Environmental Toxicology and Chemistry*

## **CONTINUING EDUCATION**

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**Hawaii Aquaculture Association** 2007

Kapiolani Community College

**International Congress of Vertebrate Morphology** July 2004

Boca Raton, Florida

**Society of Comparative and Integrative Biology** January 2000

Atlanta, Georgia

**National Marine Educators Association** August 1997

Chicago, Illinois

## **PROJECTS**

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### **Master's Research Project**

- In utero and lactational exposure of Sprague-Dawley rats to 2,3,7,8-tetrachlorodibenzo-p-dioxin and 2,3,4,7,8-polychlorinated-p-dibenzofurans: A histological analysis of the kidney, liver, and small intestine.
  - Animal care & Sacrificing
  - Histological preparation & Slide staining
  - Research and analysis using microscope
  - Fixation and dehydration
  - Dissection/Removal of test organs
  - Photography of sections
  - Sectioning of organs

## **AFFILIATIONS**

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**Hawaii Aquaculture Association** Member

**National Marine Educators Association** Member

## **ADDITIONAL SKILLS**

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- Proficient with Microsoft Word, Excel, PhotoShop, PowerPoint, Framemaker, Sequencer, MacVector, VetLims, and EndNote
- Proficient with both Macintosh and PC systems
- Extensive experience in histological preparation, including dehydration, fixation, staining, and microtome techniques
- SCUBA Certified