

Curriculum Vitae

Peter D. Mariner

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**Research Specialist II, Howard Hughes Medical Institute
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Education

Graduate

Ph.D. (2003) - Molecular, Cellular, and Developmental Biology – University of Colorado, Boulder CO

Continuing Education

Molecular Biology & Chemistry (1997-98) – University of Colorado, Boulder, CO
Summer courses (1995) – Rocky Mountain Biological Laboratories, Gothic, CO

Undergrad.

B.A. (1992) – Biology (Spanish Minor) - University of Virginia, Charlottesville, VA
Year Abroad – Costa Rica - Associated Colleges of the Midwest (w/ Beloit College)

Professional Experience

2008-present

Research Specialist & Lab Manager - Howard Hughes Medical Institute
Department of Chemical and Biological Engineering
Research: Enhancing osteogenesis with miRNA-based approaches
Principal Investigator: Kristi S. Anseth

2006-2008

Post-Doctoral Research Assistant - Howard Hughes Medical Institute
Department of Chemical and Biological Engineering
Research: Osteogenesis of Mesenchymal Stem Cells
Principal Investigator: Kristi S. Anseth

2004-2006

Post-Doctoral Research Assistant – University of Colorado, Boulder, CO.
Research: Analysis of RNA regulators of RNA Polymerase II transcription.
Principle Investigator: James A. Goodrich

1998-2003

Graduate Research Assistant – University of Colorado, Boulder, CO.
Thesis research: Transcriptional regulation of the rat α -MyHC promoter: repression by the transcription factor YY-1.
Principle Investigator: Leslie A. Leinwand

2001-2002

Consulting Scientist - Ingenuity
Responsibilities: Analysis and extraction of pertinent information from scientific papers for an internet-based database.

1997-1998

Laboratory Technician – University of Colorado, Boulder, CO
Responsibilities: Genetic mapping, DNA extraction and purification.
Principle Investigator: Ken Krauter.

1995-1996

Fisheries Biologist – Prince William Sound Aquaculture Corporation, AK
Responsibilities: seasonal work at salmon hatchery

1994-1995 **High School Teacher** - The St. Stephen's School, Austin, TX
Courses taught: Biology I and Spanish I.

1992-1994 **High School Teacher** - The Kinkaid School, Houston, TX
Courses taught: Biology I and Chemistry I.

Research Experience:

2006-present **Research Specialist II** – Howard Hughes Medical Institute
Department of Chemical and Biological Engineering, Univ. of Colo., Boulder, CO;
Principle Investigator: Kristi S. Anseth
Research: The development of miRNA-based techniques for controlling cellular differentiation with the goal of improving *de novo* tissue generation.
Responsibilities: Direct and perform research, manage day-to-day lab functions, aid Dr. Anseth with grant proposals and renewals, mentor graduate and undergraduate students.

2004-2006 **Post-Doctoral Research Assistant** – Department of Chemistry and Biochemistry, University of Colorado, Boulder, CO; Principle Investigator: James A. Goodrich
Research: The inhibition of RNA Pol II by human SINE RNA transcripts
Responsibilities: Functional analysis of Alu RNA on *in vitro* transcription systems.

1998-2003 **Graduate Research Assistant** – Department of MCD Biology, University of Colorado, Boulder, CO; Principle Investigator: Leslie A. Leinwand.
Research: Transcriptional regulation of the rat α -MyHC promoter.
Responsibilities: Analyze repressive role of YY-1 on the rat α -MyHC promoter, preparation of neonatal rat cardiac myocytes, maintenance of breeding rat colony.

1997-1998 **Laboratory Technician** – Department of MCD Biology, University of Colorado, Boulder, CO; Principle Investigator: Ken Krauter
Research: Human Genome Project, Genetic analysis of antisocial behavior.
Responsibilities: Genetic mapping of human chromosome 18, extraction and purification of DNA from human buccal swabs.

1991 **Field Biologist** – Associated Colleges of the Midwest, Costa Rica, Central America
Research: Movement and dietary habits of coatimundis.
Responsibilities: Tracking daily movements of a troop of coatimundis using radio telemetry, dietary observations from scat samples.

Teaching Experience:

2004-2007 **Instructor** – University of Colorado, Boulder, CO
Minority Arts and Science Program
Co-seminar for Intro to Molecular Biology and Intro Genetics

2004 **Mentor** – University of Colorado, Boulder, CO
Summer Minority Research Training Program

1998 **Teaching Assistant** – University of Colorado, Boulder, CO
Course: Introduction to Molecular Genetics, Department of MCD Biology

- 1997** **Teaching Assistant** – University of Colorado, Boulder, CO
Course: Cellular Biology, Department of MCD Biology
- 1994-1995** **High School Teacher** - The St. Stephen's School, Austin, TX
Courses taught: Biology I and Spanish I.
- 1992-1994** **High School Teacher** - The Kinkaid School, Houston, TX
Courses taught: Biology I and Chemistry I.

Publications:

Terella A, **Mariner PD**, Brown N, Anseth KS, Streubel SV. (2009) Repair of a Calvarial Defect with Biofactor and Stem Cell Embedded Poly (ethylene glycol) Scaffold. *Archives of Facial Plastic Surgery* (In Press).

Benton JA, Kern HB, Leinwand LA, **Mariner PD**, Anseth KS. (2009) Statins Block Calcific Nodule Formation of Valvular Interstitial Cells by Inhibiting α -Smooth Muscle Actin Expression. *Arterioscler Thromb Vasc Biol*, 29(11):1950-1957.

Mariner PD, Walters RD, Espinoza CA, Drullinger LF, Wagner SD, Kugel JF, Goodrich JA. (2008) Human Alu RNA Is a Modulator Transacting Repressor of mRNA Transcription during Heat Shock. *Molecular Cell*. 29:499-509.

Cushing MC, **Mariner PD**, Liao JT, Sims EA, Anseth KS. (2008) Fibroblast growth factor represses Smad-mediated myofibroblast activation in aortic valvular interstitial cells. (2008) *FASEB Journal*. Jun;22(6):1769-77

Sucharov CC, **Mariner PD**, Nunley KR, Long CS, Leinwand LA, Bristow MR. (2006) A β 1-adrenergic receptor, CaM Kinase II dependent pathway mediates cardiac myocyte fetal gene induction. *Am J Physiol Heart Circ Physiol*. 291(3):H1299-308.

Mariner PD, Luckey SW, Sucharov CC, Long CS, Leinwand LA. (2004) YY-1 represses the rat α -myosin heavy chain promoter in pathologic cardiac hypertrophy. *Biochem Biophys Res Comm*. 326(1):79-86.

Sucharov CC, **Mariner PD**, Bristow MR, Long CS, Leinwand LA. (2003) Yin Yang 1 is increased in human heart failure and represses the activity of the human α -myosin heavy chain promoter. *J Biol Chem*. 278(33):31233-9.