



JOHN R. FINNERTY

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WEB [BU Webpage](#); [Google Scholar](#); [Research Gate](#); [Academia.edu](#); [YouTube](#);

PROFESSIONAL PREPARATION

<i>Undergraduate</i>	University of Pennsylvania Bachelor of Arts in Biology, 1989 <i>Magna cum laude</i>
<i>Graduate</i>	University of Chicago Doctor of Philosophy in Organismal Biology, 1994 <i>Department Award for Outstanding Dissertation</i>
<i>Postdoctoral</i>	University of Chicago Evolutionary Developmental Biology October 1994 – December 1998

ACADEMIC APPOINTMENTS & AFFILIATIONS

<i>2009-present</i>	Director Boston University Marine Program
<i>1999-present</i>	Assistant / Associate Professor Boston University <ul style="list-style-type: none">• Department of Biology;• Graduate Program in Bioinformatics;• Graduate Program in Molecular Biology, Cell Biology and Biochemistry;

TEACHING EXPERIENCE

<i>2004-06, 08-11</i>	Biodiversity (CC106) Boston University—Core Curriculum; <u>Responsibilities</u> : Course (04-06; 08-09) and lab coordinator ('05), curriculum design, lab design, lab manual author, web design, lecturer, discussion leader.
<i>2000, 01, 03, 05</i>	Invertebrate Zoology (BI 301) Boston University—Ecology, Behavior, and Evolutionary Biology Program <u>Responsibilities</u> : Curriculum design, lab design, lab manual author, web design and administration, sole lecturer.

2002, 06-10	Marine Invertebrates (BI 547) Boston University—Marine Semester <u>Responsibilities:</u> Curriculum design, lab design, web design and administration, sole lecturer.
2010-15	Marine Genomics (BI 550) Boston University—Marine Semester <u>Responsibilities:</u> Curriculum design, research mentoring, web design and administration, sole lecturer.
2011-15*	Tropical Marine Invertebrates (BI 569) Boston University—Marine Semester <u>Responsibilities:</u> Curriculum design, sole lecturer, logistics and leadership of 10-11 day field trip to Belize. *Assistant field instructor in 2013-15.
2000-04	Evolution & Development (BI 505) Boston University—Ecology, Behavior, and Evolutionary Biology Program <u>Responsibilities:</u> Curriculum design, web design, sole lecturer.

PHD ADVISEES

Name	Yrs	Prog	Publications	Grants & Awards	Current Position
Patrick Burton	'00-05	EBE	20, 23, 29 32, 36,51	Deans Fellow; Belamarich Award**	Associate Professor Wabash College
John Darling	n/a	SPR	25, 29, 30,46		Research Scientist EPA
Joseph Ryan	'01-07	BF	18, 29, 32 33, 38, 40		Assistant Professor U. Florida
Maureen Mazza	'99-07	CM	29, 32,38,39, 52,57		Legal Administrator Bergman & Song, LLP
Adam Reitzel	'02-08	EBE	25, 29, 30, 31, 35, 36, 43-49, 53-55, 57, 59, 71-73,75	Deans Fellowship, EPA STAR Fellowship,	Assistant Professor UNC Charlotte
James Sullivan	'03-08	EBE	28, 29, 31, 33-35, 37, 40, 41, 43-49, 53-55, 60	Deans Fellowship; NSF DDIG	Associate Director Vertex Pharmaceuticals
Nikki Traylor-Knowles	'05-11	PER	48, 54, 56, 61,62,75	2009 Warren-McLeod Fellowship NSF EASPI	Assistant Professor University of Miami
Derek Stefanik	'07-14	CM	59, 61, 64, 68, 69,73,75,77	2010 Warren-McLeod Fellowship; 2011 NIH F31 GRF	Postdoctoral Fellow U. Pennsylvania
Lauren Friedman	'09-14	CM	68,69,77-79	2014 Warren-McLeod Summer Fellowship	Program Coordinator Harvard University
Tristan Lubinski	'09-14	EBE	61,62,73,77,79		Assoc. Sci., Informatics Astra Zeneca
Brian Granger	'09-15	BF	62,73,77,79		n/a
Elizabeth Burmester	'10-16*	MB	76	2013 Warren-McLeod Fellowship;	n/a
Kathryn Lesneksi	'13-18*	MB	76		n/a
Linda Nguyen	'13-18*	CM			n/a
Karina Scavo	'14-19*	MB	76		n/a

¹co-advised with A. Baxevanis, (NHGRI);
with R. Rotjan (NE Aquarium) *Anticipated graduation date. Programs: BF=Bioinformatics; CM=Cell/Molecular Biol.;
EBE=Ecol., Behavior & Evolution; MB=Marine Biol.; PER=Physiol., Endocrinology & Reprod.; SPR = Sci., Philos., & Reli-
gion; **Publication** numbers refer to co-authorship on Finnerty lab publications listed below; **Outstanding Dissertation, BU
Biology Department;

UNDERGRADUATE RESEARCH ADVISEES (45 out of >50 total)

Name	Yr	Maj	Cred	Hon	Award	Pub	Graduate Program / Post-BA position
Grace Kwong	01	BI	0		LV	32	MA (2006) Florida Atlantic University
Michelle Eggen	03	BI	8		UROP		MA (2005) Boston University Med. School
Cassandra Krone	04	BI	12	●	UROP	36	PhD (2013) UMC Utrecht, Netherlands
Crystal Morales	05	BI	0				Research Associate, Beth Israel Hospital
Timothy Chu	06	BI	12	●		72	MD program, Boston Univ. Medical School
Michael D'Emic	06	BI	8	●			Instructor: Stonybrook Univ. Medical School
Christian Kaufman	07	BI	4			43	unknown
Alissa Assad	08	MR	4				Senior Applications Specialist, Meditech
Laura Chmielewski	08	BI	8				Medical Resident, University of Louisville
Emily Cira	08	BI	0			43	PhD Program, Marine Biology, Texas A & M
Katherine Dubois	08	BI	4		UROP		Dentist; Alaska Island Community Health Ctr.
Maja Edenius	08	BI	8				PhD program, Biol. Oceanography, WHOI
Sara Edquist	08	BI	12	●	LV	43,72	PhD program, Zoology, Univ. New Hampshire
Rebecca Taubert	08	MR	0				unknown
Izak Mizrahi	09	BI	4				graduate program, BU Medical School
Linsey Field	09	MR	8				unknown
Caitlyn Genovese	09	BI	4			72	
Brittany Wittenberns	09	BI	8				Dr. Veterinary Med., University of Florida
Emma Chu	10	BI	8			64	Doctor of Optometry, NE Coll. Optometry
Jessica Duong	10	BI	8				Doctor of Pharmacy, MA Coll. Pharmacy
Brendan Gillis	10	BI	12				PhD program, Marine Biology, Northeastern
Elizabeth Herdter	10	BI	4				PhD Prog., Marine Science, U. South Florida
Pamela Braff	11	BI	4		UROP		PhD Prog., Coastal Resource Mgmt, VIMS
Richard Rodriguez	11	BI	12				Research Associate, Columbia University
Christina Marmet	11	BI	8				MA Program, Marine Policy, Univ. Miami
Spencer Goodman	12	BI	8		CAS		PhD Prog., Biomedical Sciences, UCSD
Molly McCargar	12	MR	4				MA Program; Conservation; Columbia Univ.
Sarah McAnulty	12	MR	0			77	PhD Program in Cell. Dev. Biol. Univ. Conn.
Christina Stephens	12	MR	4				unknown
Noelle Olsen	13	MR	8				unknown
Joanna Grunin	13	MR	4				unknown
Cara Bornstein	13	MR	4				MS Program; Forensic Science; Pace Univ.
Jillian Hayward	13	MR	4				unknown
Zachary Lepore	13	BI	4				unknown
Selma Mahmutovic	13	BI	0				unknown
Erin McLean	13	MR	8	●			PhD program, Marine Biol., U. Rhode Island
Rachel Schweiker	13	MR	0		UROP	77	Content developer, VocaliD
Cassandra Smith	13	MR	0		UROP		unknown
Kyle Woehrl	13	MR	4				unknown
Rachel Filter	14	BI	4		UROP		unknown
Fareesa Hasan	14	BI	4		UROP		unknown
Jessie Mathews	14	MR	0	●			Deckhand, World Ocean School
Lukas DeFilippo	14	MR	0			73	PhD Prog., Aquat. Fish. Sci., U. Washington
Zachary Bengtson	15	BI				76	BU Microarray & Sequencing Resource
Kirsten Kuhn	15	BI				76	Coordinator, BU CAS Academic Advising

Yr. = graduation year; Maj. = Major (BI=Biology; MR=Marine Science); Cred. = academic credits earned for research; Hon. = performed Honors thesis research under my mentorship; Awards: CAS=College of Arts and Sciences Summer Scholar; LV=Larva Vincent Award for Original Research in the Marine Semester; UROP=Undergraduate Research Opportunities Program; Pub. Numbers refer to co-authorship on publications listed in this CV;

RESEARCH SUPPORT (PI = principal investigator)

'14-18	"NF-kappaB in cnidarian development" [co-PI with Tom Gilmore (PI) and Trevor Siggers (co-PI)] NSF IOS- 1354935 ; \$600 K
'11-14	"A functional systems biology approach to investigating the role of Wnt/Beta Catenin in regeneration." [PI] NIH/NIGMS 1 F31 GM095289-01; (Graduate Fellowship for D. Stefanik) \$92 K
'09-14	"Rel homology domain signal transduction pathways in the sea anemone <i>Nematostella vectensis</i> ." [co-PI with Tom Gilmore] NSF MCB- 0924749 ; \$573 K
'09-10	"Possible functional diversification of the CP2 and p53 protein families from a common ancestor early in animal evolution—Evidence from the basal animal model <i>Nematostella vectensis</i> ." [PI, with fellow-PIs U. Hansen and Z-H Xiao] Genome Science Institute, Boston University; \$10 K
'08-11	"Developmental evolution of facultative parasitism: Mechanisms underlying body plan remodeling in the sea anemone <i>Edwardsiella</i> ." [PI] NSF IOS- 0818831 ; \$200 K
'07-09	"Microevolution of stress-response. Genetic, developmental, and molecular analyses of a unique NF-kB SNP." [PI] NSF DEB- 0710098 ; (Dissertation Improvement Grant for J. Sullivan.) \$10 K
'06-07	"Characterization of the NF-kB stress response pathway in basal animals—Implications for the evolution of immunity, the conservation of coastal ecosystems, and the identification of novel antimicrobial agents." [PI] Boston University; Special Prog for Res. Init.; \$25 K
'05-08	"Historical introductions and population dynamics of the widely introduced salt marsh anemone <i>Nematostella</i> ." [PI] Environmental Protection Agency / STAR Fellowship Program F5E11155 (Graduate fellowship for A. Reitzel); \$87 K
'02-05	"Axial patterning during embryogenesis, asexual reproduction, and regeneration." [PI; NSF, Evolution of Developmental Mechanisms: IBN-0212773; \$262 K
2002	"An automated DNA sequencer for the Department of Biology at Boston University." [co-PI] NSF 0301711; \$98 K
'98-02	"The structure, evolution, and deployment of the hox cluster in a basal cnidarian." [co-PI] NSF, Systematics program; 9727244; \$299 K
'94-96	Developmental Biology Training Grant, NIH; University of Chicago.
1992	Hinds Fund Research Award, University of Chicago; \$2.5 K.
'91-94	Molecular Biology Training Grant. NIH; University of Chicago.
1990	Sigma Xi Research Award.
1989	Searle Fellowship, University of Chicago.

SERVICE / Biology Department

Curriculum development

- Developed curricular materials used in Introductory Biology (BI107)

Undergraduate Distinction Committee Service (Bachelors with Honors candidates)

- Amy Stryker [primary advisor]
- Chad Dow [primary advisor]
- Michelle Eggen [primary advisor]
- Tim Chu [primary advisor]
- Sarah Edquist [primary advisor]
- Emily Munday

Dissertation Committee Service (Masters candidates)

- Alison Leschen [BU Marine Program]

Dissertation Committee Service (Ph.D candidates)

- Patrick Burton [Ecology, Behavior and Evolution program (EBE);1]
- Eric Crandall [BU Marine Program]
- Sara Greytalk Rothberg [Physiol., Endocrinology, and Reproduction program (PER)].
- Charles Kieswetter [EBE]
- Maureen Mazza [Cell & Molecular Biology program; 1]
- Suyama Meegaskumbura [EBE]
- Marcio Pie [EBE]
- Adam Reitzel [EBE; 1]
- James C. Sullivan [EBE; 1]
- Heather Shull [EBE]
- Justin Touchon [EBE]
- Nikki Traylor-Knowles [PER; 1st Reader]
- Derek J. Stefanik [EBE; 1st Reader]
- Lauren Friedman [CM; 1st Reader]
- Tristan Lubinski [EBE; 1st Reader]

Graduate Committee:

- **2000-02, 2008-09** Committee Member—Reviewed graduate student applications, participated in making admission and fellowship decisions and planning and execution of graduate student recruitment events.

Seminar Series Coordination

- **2000-01; 2004-05**—Coordinated the Ecology, Behavior, and Evolution weekly series

Training Grant Proposals

- **2001-2003**—Served on committee to draft an IGERT Proposal to the National Science Foundation in the area of Biodiversity.

Guest lecturer

- Lectured in courses: BI107 (4x), BI260 (6x), BI410 (2x), BI442, BI671.

Faculty Merit Review Committees

- **2012; 2013**—Reviewed faculty CVs and annual reports and evaluated the performance of Biology faculty in the previous calendar years.

Faculty search committees

- **2000-01**—Served on faculty search committee / Ecology, Behavior and Evolution
- **2000-01**—Served on faculty search committee / Cell & Molecular Biology
- **2001-02**—Served on faculty search committee / Ecology, Behavior and Evolution
- **2008-09**—Served on faculty search committee / Marine Ecology
- **2009-10**—Served on faculty search committee / Evolutionary Genomics
- **2011-12**—Served on faculty search committee / Systems Biology
- **2015-16**—Chair of faculty search committee / Marine Biology

SERVICE / College of Arts & Sciences

Core Curriculum

- **2002-03**—Served on committee to overhaul CC106, a life sciences course for freshman non-science majors.
- **2004-06; 2008-11**—Course Coordinator & web designer for CC106
- **2005-06**—Lab Coordinator for CC106
- **2004-11**—Authored and performed annual revision on the lab manual for CC106.

Boston University Marine Program / Administration and Curriculum Development

- **2009-16**—Director
- **2005-07**—Curriculum design; Served on 3-member committee that designed new interdisciplinary curriculum

Boston University Marine Program / Undergraduate Honors Committee Service

- Samantha Gifford ['11]; Sarah McAnulty ['11]; Cara Papyrikos ['13]; Erin McLean ['13]

Earth Systems Forum

- **2010-11**—Organizing Committee Member / Forum Speaker. Served on 10-member committee tasked with organizing a forum to showcase BU's existing strengths in Earth systems science and to catalyze new research initiatives.

Institute for Philosophy and Religion

- **2004**—Invited commentator on a lecture by Steven Rockefeller entitled "Ecological and Social Responsibility: The Making of the Earth Charter."
- **2006**—Invited commentator on a lecture by Holmes Rolston III entitled "Can Nature Be Evil: Naturalizing and Systematizing Evil."

CAS Student Recruiting

- **2009-2014**—Gave "Classroom Experience" lectures for prospective freshmen and their parents.

SERVICE / Boston University

BU Matriculation Ceremony: [Faculty Salutation](#)

- **2013**—Gave faculty address to Class of 2017 at annual Matriculation Ceremony

Bioinformatics Program

- **1999-2001**—Member; graduate admissions committee
- **2003-04**—Member, faculty search committee
- **2006**—1st Reader, dissertation committee of Joseph F. Ryan
- **2008-2009**—Member, graduate admissions committee
- **2009**—Member, dissertation committee of Jake Cui

BU School of Medicine

- Dissertation committee member, Michelle Musson

Project STAMP

- **2004-2005**—Faculty advisor, "Science, Technology, and Mathematics Partnerships"

RCR (Responsible Conduct of Research)

- **2011-2012**—Served as faculty facilitator for RCR Workshops.

RET (Research Experience for Teachers)

- **2004**—Hosted a 5th grade science teacher in my lab for 7 weeks, as he participated in directed field research and population genetics research.

Undergraduate Academic Programs and Policies Committee

- **2014-2016**—Served on Provost's committee to approve new academic programs

SERVICE / National and International Scientific Community

Conference Organizer

- **2005** — Society for Developmental Biology, Northeast Regional Meeting, Woods Hole, MA (co-organizer with Dr. Karen Symes, Boston University)
- **2012** — StellaFest II. The Second Annual *Nematostella vectensis* Research Conference / Boston University (co-organizer with Dr. Thomas Gilmore, Boston University and Dr. Ann Tarrant, Woods Hole Oceanographic Institute)

Dissertation Committee Service (for outside US institutions)

- **2000-2003** — Member / PhD Dissertation Committee of Yale Passamaneck, MIT and Woods Hole Oceanographic Institute.
- **2009-2011** — Member / PhD Dissertation Committee of Jia Yi Har, MIT
- **2011-2013** — Member / PhD Dissertation Committee of Silvia Libro, Northeastern U.

Dissertation Committee Service (International institutions)

- **2001**—Outside reader, PhD Dissertation Committee of John Reece Hoyes, James Cook University, Australia.
- **2009**—Outside reader, PhD Dissertation Committee of Elizabeth Williams, University of Queensland, Australia
- **2011**—Outside reader, PhD Dissertation Committee of Bryony Fahey, University of Queensland, Australia

Faculty of 1000

- **2002-2008**—Member of the Faculty of Developmental Biology, providing commentary on important new scientific publications.

Editorial Board Service

- **2009-2013**—Editorial board member / *EvoDevo*;
- **2009-2013**—Editorial board associate member / *BMC Evolutionary Biology*;

Peer Review / Scientific Journals

- ad hoc reviewer for numerous scientific journals: *BMC Genomics*; *Development*; *Developmental Biology*; *Development*, *Genes, and Evolution*; *Evolution and Development*; *Geobiology*; *Integrative and Comparative Biology*; *Nature*; *Nature Reviews Genetics*; *PLoS ONE*; *Proceedings of the National Academy of Sciences, USA*; *Proceedings of the Royal Society of London, B*; *Systematic Biology*.

Peer Review / US Funding Agencies / ad hoc grant reviewer

- National Science Foundation (n=8)

Peer Review / International Funding Agencies / ad hoc grant reviewer

- Austrian National Science Foundation (n=1)
- Czech Science Foundation (n=1)
- Israel Science Foundation (n=1)

Society for Integrative and Comparative Biology

- **2000-01**—Nominating Committee, Division of Evolutionary Developmental Biology;

Scientific Database Development and Maintenance

- CnidBase—The Cnidarian Evolutionary Genomics Database. (2003-present; <http://cnidbase.bu.edu>) [with student JF Ryan]
- PocilloporaBase—The *Pocillopora* Transcriptomic Database. (2011-present; <http://pocilloporabase.org>) [with students N Traylor-Knowles, B Granger, T Lubinski]
- StellaBase—The *Nematostella vectensis* Genomics Database. (2006-present; <http://stellabase.org>) [w/ students JF Ryan, JC Sullivan, B Granger, T Lubinski, S McAnulty]
- The *Nematostella* Web Resource (2002-present; <http://nematostella.org>)

SERVICE / Educational & Community Outreach

GK-12 outreach activities

- 2002—LERNet biodiversity lab demonstrations
- 2001—Media and Technology Charter High School in Brookline
- 2005—Odyssey School at South Boston High School
- 2011, 12—Presenter on “Marine Science” at Career Day, Cambridgeport School
- 2012—Lectured to Dr. Brown’s Marine Biology class at Brookline High School
- 2012—Lectured on “Biodiversity & Parasitism” to ZooTeens, Franklin Park Zoo

Guest panelist, Environmental Student Organization

- 2008—Panelist for discussion of the Boston University Level 4 BioLab

AWARDS & NOMINATIONS

2013	Chosen to give Faculty Salutation , Boston University Matriculation Ceremony
2013	Metcalf Award for Excellence in Teaching , Boston University.
2006	Gitner Award for Distinguished Teaching , College of Arts and Sciences, BU.
2004	Nominated for the Metcalf Award for Excellence in Teaching, Boston University.
1995	Departmental Award for Outstanding PhD Dissertation in Organismal Biology
1988	Phi Beta Kappa National Honor Society.
1986-1989	Dean’s List , University of Pennsylvania.
1985	National Merit Scholarship .

PUBLISHED ABSTRACTS (Lab members shown in bold)

1996

Finnerty JR, Martindale MQ (1996) Identification of nine distinct homeobox gene classes in sea anemones with a phylogenetic re-analysis of homeobox genes in the phylum Cnidaria. *Dev. Biol.* **175**(2): C3.

1999

Finnerty JR, Martindale MQ (1999) Early evolution of Hox and ParaHox genes: Evidence from the Cnidaria. *Dev. Biol.* **210**(1): 41.

Finnerty JR, Martindale MQ (1999) Early HOX evolution as revealed by cnidarians. *Am. Zool.* **39**(5): 521.

Schneider S, **Finnerty JR**, Martindale MQ (1999) Evolution of beta-catenin: Does its function in adhesion predate its signaling function? *Dev. Biol.* **210**(1): 67.

2001

Martindale MQ, **Finnerty JR** (2001) Developmental patterning in "pre-bilaterians": can we get there from here?" *Am. Zool.* **41**(6): 1515.

2003

Burton P, **Ryan J**, Pang K, **Eggen M**, Schaus S, Martindale MQ, **Finnerty JR** (2003). Changes in activities of developmental genes and genetic networks underlying reproductive flexibility in the cnidarian *Nematostella*. *Dev. Biol.* **259**(2): 459.

Finnerty JR, Pang K, **Burton P**, Martindale MQ (2003). The evolution of key bilaterian traits: Insights into axial patterning and mesoderm formation from the sea anemone *Nematostella*, a non-bilaterian animal. *Dev. Biol.* **259**(2): 602.

Martindale MQ, Pang K, Matus DQ, **Finnerty JR** (2003) Expression of mesodermal genes in the anthozoan *Nematostella vectensis*. *Integ. Comp. Biol.* **43**(6): 942.

PUBLISHED ABSTRACTS (Lab members shown in bold)

2004

Reitzel AM, Finnerty JR (2004) Local population dynamics of a widely introduced salt marsh anemone, *Nematostella vectensis*. Integ. Comp. Biol. **44**(6): 629.

Reitzel AM, Sullivan JC, Finnerty JR (2004) Life history and population dynamics of a parasitic sea anemone, *Edwardsiella lineata*. Integ. Comp. Biol. **44**(6): 739-739.

Burton PM, Pang K, Krone C, Martindale MQ, Finnerty JR (2004). *Nematostella*: A model outgroup for Bilaterian evolution. Dev. Biol. **271**(2): 554.

2005

Burton PM, Pang K, Krone C, Martindale MQ, Finnerty JR (2005). An endodermal origin of mesoderm. Integ. Comp. Biol. **45**(6): 972.

Reitzel AM, Sullivan JC, Finnerty JR (2005) Metamorphosis in the life history of the parasitic sea anemone, *Edwardsiella lineata*. Integ. Comp. Biol. **45**(6): 1060.

Mazza ME, Ryan JF, Mullikin JC, Rokhsar DS, Finnerty JR (2005) Evolutionarily conserved and derived homeobox clusters in the starlet sea anemone, *Nematostella vectensis*. Integ. Comp. Biol. **45**(6): 1164.

2009

Traylor-Knowles NG, Hansen U, Kaufman L, Finnerty JR (2009) The evolutionary diversification of LSF and Grainyhead transcription factors preceded the cnidarian-bilaterian split. Integ. Comp. Biol. 49: E317.

Reitzel AM, Finnerty JR, Tarrant AM (2009) Taking the heat: organismal and molecular responses of the estuarine sea anemone *Nematostella vectensis* to thermal stress. Integ. Comp. Biol. 49: E296.

2010

Traylor-Knowles NG, Reitzel AM, Finnerty JR (2010) Identification and expression of genes for sex determination in the starlet sea anemone, *Nematostella vectensis*. Integ. Comp. Biol. 50: E176.

PUBLICATIONS (Lab members shown in bold; *corresponding author; citations from [Google Scholar](#) 1/12/16)



1992

1. **Finnerty JR, Block BA*** (1992) Direct sequencing of mitochondrial DNA detects highly divergent haplotypes in blue marlin (*Makaira nigricans*). Mol. Mar. Biol. Biotech. **1**(3): [206-214](#). [cover photo] [74](#)



1993

2. Block BA*, **Finnerty JR, Stewart AF, Kidd J** (1993) Evolution of endothermy in fish: mapping physiological traits on a molecular phylogeny. Science **260**(5105): [210-214](#). [cover photo] [208](#)

1994

3. Block BA*, **Finnerty JR** (1994) Endothermy in fishes - a phylogenetic analysis of constraints, predispositions, and selection pressures. Environ. Biol. Fish **40**(3): [283-302](#). [94](#)

4. **Finnerty JR, Block BA*** (1994) Accounting for endothermy in fishes - response. Science **265**(5176): 1250-1251. [3](#)

PUBLICATIONS (Lab members shown in bold; *corresponding author; citations from [Google Scholar](#) 1/12/16)

5. Finnerty JR (1994) Molecular Phylogeny of the Scombroidei (Teleostei): Implications for the Evolution of Endothermy. [Dissertation, University of Chicago, Department of Organismal Biology & Anatomy] [0](#)

1995

6. Finnerty JR, Block BA* (1995) Evolution of cytochrome-B in the Scombroidei (Teleostei) - Molecular insights into billfish (Istiophoridae and Xiphiidae) relationships. *Fish. Bull.* **93**(1): [78-96](#). [67](#)

1996

7. Finnerty JR, Master VA, Irvine S, Kourakis MJ, Warriner S, Martindale MQ* (1996) Homeobox genes in the Ctenophora: identification of paired-type and Hox homologues in the atentaculate ctenophore, *Beroe ovata*. *Mol. Mar. Biol. Biotech.* **5**(4): [249-258](#). [27](#)

1997

8. Finnerty JR, Martindale MQ* (1997) Homeoboxes in sea anemones (Cnidaria: Anthozoa): a PCR-based survey of *Nematostella vectensis* and *Metridium senile*. *Biol. Bull.* **193**(1): [62-76](#). [67](#)

1998

9. Finnerty JR* (1998) Homeoboxes in sea anemones and other nonbilaterian animals: implications for the evolution of the Hox cluster and the zootype. *Curr. Top. Dev. Biol.* **40**: [211-254](#). [38](#)

10. Finnerty JR, Martindale MQ* (1998) The evolution of the Hox cluster: insights from outgroups. *Curr. Opin. Genet. Dev.* **8**(6): [681-7](#). [87](#)

1999

11. Finnerty JR, Martindale MQ* (1999) Ancient origins of axial patterning genes: Hox genes and ParaHox genes in the Cnidaria. *Evol. Dev.* **1**(1): [16-23](#). [114](#)

12. Roberts CW, Finnerty JR, Johnson JJ, Roberts F, Kyle DE, Krell T, Coggins JR, Coombs GH, Milhous WK, Tzipori S, Ferguson DJP, Chakrabarti D, McLeod R* (1999) Shikimate pathway in apicomplexan parasites - Reply. *Nature* **397**(6716): [220](#). [12](#)

2000

13. Finnerty JR* (2000) Evolutionary developmental biology - Head start. *Nature* **408**: [778-781](#). [8](#)

14. Pasquinelli AE, Reinhart BJ, Slack F, Martindale MQ, Kuroda MI, Maller B, Hayward DC, Ball EE, Degnan B, Muller P, Spring J, Srinivasan A, Fishman M, Finnerty J, Corbo J, Levine M, Leahy P, Davidson E, Ruvkun G* (2000) Conservation of the sequence and temporal expression of *let-7* heterochronic regulatory RNA. *Nature* **408**(6808): [86-89](#). [1851](#)

2001

15. Finnerty JR* (2001) Cnidarians reveal intermediate stages in the evolution of Hox clusters and axial complexity. *Am. Zool.* **41**(3): [608-620](#). [23](#)

2002


16. Martindale MQ, Finnerty JR, Henry JQ* (2002). The Radiata and the evolutionary origins of the bilaterian body plan. *Mol. Phylogenet. Evol.* **24**(3): [358-365](#). [74](#)

17. Roberts CW, Roberts F, Lyons RE, Kirisits MJ, Mui EJ, Finnerty J, Johnson JJ, Ferguson DJP, Coggins JR, Krell T, Coombs GH, Milhous WK, Kyle DE, Tzipori S, Barnwell J, Dame JB, Carlton J, McLeod R* (2002). The shikimate pathway and its branches in apicomplexan parasites. *J. Infect. Dis.* **185**(Suppl.): [S25-S36](#). [134](#)

PUBLICATIONS (Lab members shown in bold; *corresponding author; citations from [Google Scholar](#) 1/12/16)

2003


18. Ryan JF, Finnerty JR* (2003) CnidBase: The Cnidarian Evolutionary Genomics Database. *Nucl. Acids Res.* **31**(1): [159-63](#). [21](#)

 **19. Schneider SQ, Finnerty JR, Martindale MQ*** (2003) Protein evolution: structure-function relationships of the oncogene *beta-catenin* in the evolution of multicellular animals. *J. Exp. Zool.* **295B**(1): [25-44](#). [*Faculty of 1000*: "Recommended"] [50](#)


20. Finnerty JR*, Paulson D, **Burton P**, Pang K, Martindale MQ (2003) Early evolution of a homeobox gene: The ParaHox gene *Gsx* in the Cnidaria and the Bilateria. *Evol. Dev.* **5**: [331-345](#). [73](#)

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- 38. Ryan JF, Mazza ME, Pang K, Matus DQ, Baxevaris A, Martindale MQ, Finnerty JR*** (2007) Pre-bilaterian origins of the Hox cluster and the Hox code: Evidence from the sea anemone, *Nematostella vectensis*. *PLoS ONE* **2(1)**: [e153](#). [150](#)
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- 41. Sullivan JC, Finnerty JR*** (2007) A surprising abundance of human disease genes in a simple “basal” animal, the starlet sea anemone *Nematostella vectensis*. *Genome.* **50**: [689-692](#). [21](#)
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Highly accessed **52. Finnerty JR, Mazza ME, Jezewski PA*** (2009) Domain duplication, divergence, and loss events in vertebrate *Msx* paralogs reveal phylogenomically informed disease markers. *BMC Evol. Biol.* **9**: [18](#). <Press coverage: [Science Daily](#)> 20

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Highly accessed **56. Traylor-Knowles N, Hansen U, Dubuc TQ, Martindale MQ, Kaufman L, Finnerty JR*** (2010) The evolutionary diversification of LSF and Grainyhead transcription factors preceded the radiation of basal animal lineages. *BMC Evol. Biol.* **10**: [101](#). 16

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66. Wolenski FS, Bradham CA, **Finnerty JR**, TD Gilmore* (2013) NF- κ B is required for cnidocyte development in the sea anemone *Nematostella vectensis*. *Dev. Biol.* 373: [10](#)

67. Hudon DH, **Finnerty JR*** (2013) To build an ecosystem. An introductory lab for environmental science and biology students. *Amer. Biol. Teacher*. 75: [186-192](#). [0](#)



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71 Gilmore TD*, Tarrant AM, **JR Finnerty** (2013) A report from the second *Nematostella vectensis* research conference. *Dev. Genes Evol.* 223: [207-211](#). [3](#)

PUBLICATIONS (Lab members shown in bold; *corresponding author; citations from [Google Scholar](#) 1/12/16)

72. Reitzel AM, Chu T, Edquist S, Genovese C, Church C, Tarrant AM, Finnerty JR* 4
(2013) Physiological and developmental responses to temperature by the estuarine sea anemone *Nematostella vectensis*: evidence for local adaptation to high temperatures. *Mar. Ecol. Prog. Ser.* **484**:115-130.

2014

73. Stefanik DJ, Lubinski TJ, Granger BR, Byrd AL, Reitzel AM, DeFilippo L, Lorenc A, Finnerty JR* 10
(2014) Production of a reference transcriptome and transcriptomic database (EdwardsiellaBase) for the lined sea anemone, *Edwardsiella lineata*, a parasitic cnidarian. *BMC Genomics.* **15**:71

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74. Finnerty JR*, Gilmore TD (2015) Methods for analyzing the evolutionary relationship of NF- κ B proteins using free, web-driven bioinformatics and phylogenetic tools. *Meth. Mol. Biol.* **1280**:631-646. 0

75. Traylor-Knowles NG, Kane EG, Sombatsaphay V, Finnerty JR, Reitzel AM* 0
(2015) Sex-specific and developmental expression of Dmrt genes in the starlet sea anemone, *Nematostella vectensis*. *EvoDevo.* **6**:13

76. Bengtsson ZA, Kuhn KM, Battaglino AT, Li AS, Talbot MN, Wafapoor M, Atta CJ, Kowalski MB, Margolis SP, Rar EA, Burmester EM, Lesneski KC, Scavo K, Kaufman L, Stewart NL, Finnerty JR* (2015) Corals of the genus *Porites* are a locally abundant component of the epibiont community on mangrove prop roots at Calabash Caye, Turneffe Atoll, Belize. *Peer J PrePrints* **3**:e1811. 0

in preparation

77. Lubinski TJ, Granger BR, Stefanik DJ, Friedman LE, McAnulty S, Schweiker R, Finnerty JR* (in prep) A revised StellaBase enables comparative transcriptomic studies on multiple populations, life stages, and environmental conditions in the model n/a

78. Friedman LE, Gilmore TD, Finnerty JR* (in prep) Intraspecific variation in peroxide sensitivity in the starlet sea anemone, *Nematostella vectensis*, an estuarine cnidarian. n/a

79. Lubinski TJ, Granger BR, Stefanik DJ, Friedman LE, Schweiker RM, Byrd AL, Gilmore TD, Finnerty JR* (in prep) New transcriptome assemblies for *Nematostella vectensis* incorporate data from multiple populations, life stages, and environmental conditions. **to be submitted to [PLoS ONE](#).** n/a

INTERNET RESOURCE DEVELOPMENT



CnidBase
Cnidarian Evolutionary Genomics Database

[cnidbase.org](#); Query gene expression in cnidarians based on species, gene orthology, body region, body layer, developmental stage, or physiological condition. (with JF Ryan).



NEMATOSTELLA.ORG
THE STARLET ANEMONE WEB RESOURCE

[nematostella.org](#); Annotated bibliography, organismal data, and environmental/ecological data for *Nematostella vectensis*. (site founder, site design, & content)



StellaBase
Nematostella Vectensis Genomics Database

[stellabase.org](#); Query the *Nematostella* transcriptomes, genome, ESTs, and predicted genes using both keyword and homology based search functions. (with JC Sullivan, JF Ryan, TJ Lubinski, BR Grangers, DJ Stefanik, LE Friedman, S Mcanulty & S Schweiker).

INTERNET RESOURCE DEVELOPMENT



pocilloporabase.org; Query a reference transcriptome from the cauliflower coral, *Pocillopora damicornis* using GO terms, BLAST searches, etc. (with N Traylor-Knowles, B Granger, T Lubinski)



edwardsiellabase.org; Query a reference transcriptome from the parasitic "lined sea anemone" *Edwardsiella lineata* using GO terms, BLAST searches, etc. (with DJ Stefanik, BR Granger, TJ Lubinski)

INVITED TALKS / US Universities

Michigan State University—Department of Biology (1994)

Harvard University—Department of Organismic and Evolutionary Biology (2001)

University of Illinois—Department of Cell and Structural Biology (2001)

Duke University—Department of Biology (2006)

Tufts University—Department of Biology (2006)

Massachusetts Institute of Technology— (2007) "Conserved Stress Response Pathways in Marine Animals—A Tool For Detecting and Mediating Environmental Stress"

Harvard University—Radcliffe Workshop on Emerging Model Species (2007) "A Rising Starlet—The Starlet Sea Anemone, *Nematostella vectensis*."

INVITED TALKS / Regional Conferences

Boston Area Evolutionary Developmental Biology; semi-annual meeting (2000)

Boston Area Evolutionary Developmental Biology; semi-annual meeting (2001)

Society for Developmental Biology, Northeast Regional Meeting, Woods Hole, MA (2001)

Society for Developmental Biology, Northeast Regional Meeting, Woods Hole, MA (2005)
"Inreach — A Pragmatic Plan for Bringing High School Students into Academic Laboratories."

INVITED TALKS / US Conferences

American Society of Ichthyologists and Herpetologists. Symposium "Studies in the Evolution of Fishes Inferred from DNA Sequences," Los Angeles, CA. (1994)

American Physiological Society. Symposium: "Phylogenetic Approaches in Comparative Physiology," San Diego, CA. (1994)

The Developmental Basis of Evolutionary Change. Chicago, IL. (1999)

Society for Integrative and Comparative Biology. Symposium: "Hox Gene Evolution", Atlanta, GA. (2000)

Society for Developmental Biology. Symposium: "Evolution of Development" symposium. Boston, MA. (2003)

Society for Integrative and Comparative Biology. Annual meeting, Toronto, Ontario, (2003).
"Expression of mesodermal genes in the anthozoan *Nematostella vectensis*." Martindale MQ, Pang K, Matus DQ, Finnerty JR.

INVITED TALKS / International Conferences

International Conference of Cnidarian Biology, Symposium:"Axial Patterning," Lawrence, Kansas. (2003) "Axial patterning in multiple contexts : Embryogenesis, regeneration and asexual reproduction of *Nematostella*" **JR Finnerty**

European Society for Evolutionary Developmental Biology, Prague, Czech Republic. Symposium: Homeobox genes in Evolution and Development. (2006)

4th International Symposium on Networks in Bioinformatics, Amsterdam, Netherlands (2007) "The Starlet Sea Anemone, *Nematostella vectensis*."

PRESENTATIONS / US Conferences (Lab members shown in bold; *presenter)

Society for Developmental Biology, Annual meeting, Nashville, TN (1996)

The Developmental Basis of Evolutionary Change. Chicago, IL. (2001)

Cold Spring Harbor Laboratories Symposium, "Evolution of Developmental Mechanisms" (2002)

Society for Developmental Biology, Annual meeting, Boston, MA (2003) "Changes in activities of developmental genes and genetic networks underlying reproductive flexibility in the cnidarian *Nematostella*." **Burton PM, Ryan JF, Pang K, Eggen M, Schaus S, Martindale MQ, Finnerty, JR.**

Society for Molecular Biology and Evolution. Annual meeting, Newport Beach, CA. (2003) "Microevolution of cis-regulatory elements in the anemone *Nematostella vectensis*." **Mazza ME*, Finnerty JR.**

Gordon Research Conference on Ecological and Evolutionary Functional Genomics. Colby-Sayer, New Hampshire (2003) "Microevolution of cis-regulatory elements in the anemone *Nematostella vectensis*." **Mazza ME*, Finnerty JR.**

Society for Integrative and Comparative Biology. Annual meeting, New Orleans, LA, (2004)

- "Local population dynamics of a widely introduced salt marsh anemone, *Nematostella vectensis*." **Reitzel AM*, Finnerty JR**
- "Life history and population dynamics of a parasitic sea anemone, *Edwardsiella lineata*." **Reitzel AM, Sullivan JC*, Finnerty JR.**

Society for Developmental Biology. Annual meeting, Calgary (2004) "*Nematostella*: A model outgroup for Bilaterian evolution." **Burton PM***, Pang K, **Krone C**, Martindale MQ, **JR Finnerty.**

Society for Integrative and Comparative Biology. Annual meeting, San Diego, CA (2005)

- "History and Population Dynamics of a Parasitic Sea Anemone, *Edwardsiella lineata*." **Reitzel AM, Sullivan JC*, Finnerty JR.**
- "Local Population Dynamics of a Widely Introduced Salt Marsh Anemone, *Nematostella vectensis*." **Reitzel AM*, Finnerty JR.**
- "Evolutionarily conserved and derived homeobox clusters in the starlet sea anemone, *Nematostella vectensis*." **Mazza ME*, Ryan JF, Mullikin JC, Rokhsar D, Finnerty JR.**

24th Summer Symposium in Molecular Biology: Comparative and Functional Genomics Penn State University (2005)

- "Evolutionarily conserved and derived homeobox clusters in the sea anemone *Nematostella vectensis*." **Mazza ME*, Ryan JF, Mullikin JC, Rokhsar D, Finnerty JR.**
- "Genome complexity of the sea anemone *Nematostella vectensis*: investigating gene family representatives in the first sequenced non-bilaterian genome" **Reitzel AM*, Ryan JF, Finnerty JR.**

PRESENTATIONS / US Conferences (Lab members shown in bold; *presenter)

2nd International Congress on Invertebrate Morphology. Harvard University, Cambridge MA. (2011) “Transcriptome-level characterization of a derived parasitic life cycle in a marine sea anemone.” **Stefanik D***, **Lubinski T**, **Granger BR**, Finnerty JR.

Stellafest I. The 1st Annual *Nematostella vectensis* Research Conference. Woods Hole, MA (2011)

- “A systems approach to investigating the role of Wnt/ β -signaling during regeneration in a sea anemone.” **Stefanik D***, **Granger B.**, **Lubinski TJ**, **Finnerty JR**
- “Characterization of the core elements of the *Nematostella vectensis* NF-kappaB signaling pathway”: Wolenski F, Garbati M, **Lubinski T**, **Traylor-Knowles N**, Dresselhaus E., **Stefanik D**, Goucher H, **Finnerty JR**, Gilmore TD.

Astrangia Workshop. Ocean Genome Legacy, Ipswich, Massachusetts (2012) “The creation of PocilloporaBase and other high throughput sequencing databases.” **Granger BR***, **Finnerty JR.**

Stellafest II. The 2nd Annual *Nematostella vectensis* Research Conference. Boston, MA (2012)

- “Production of a reference transcriptome and transcriptomic database (EdwardsiellaBase) for the parasitic cnidarian, the lined sea anemone, *Edwardsiella lineata*.” **Stefanik D**, **Lubinski TJ**, **Granger BR***, Reitzel AM, **Finnerty JR.**
- “Transcriptome profiling of the derived life cycle of the parasitic sea anemone, *Edwardsiella lineata*.” **Stefanik D***, **Granger BR**, **Lubinski TJ**, Finnerty JR.
- “StellaBase v. 2.0: Redesigned for the transcriptomic age with features designed to make use of high throughput sequencing data.” **Lubinski TJ**, **Granger BR**, **McAnulty S**, **Finnerty JR***
- “*Genome ForSite*—A computational pipeline for predicting transcription factor binding site in a sequenced genome and its application to *Nematostella* NFkB. **Lubinski TJ***, **Finnerty JR.**
- “Investigating the genetic basis of local temperature adaptation in *Nematostella vectensis* using transcriptome profiling.” **Schweiker R***, **Finnerty JR.**
- “Microevolution of the oxidative stress response phenotype in the starlet sea anemone, *Nematostella vectensis*.” **Friedman L***, **Finnerty JR.**

Advances in Genome Biology & Technology. Marco Island, Florida (2013) “Under pressure: Reconstructing the evolution of gene regulatory networks in cnidarians using a computational approach.” **Lubinski TJ***, **Finnerty JR.**

PRESENTATIONS / International Conferences (Lab members shown in bold; *presenter)

International Workshop on Bioinformatics and Systems Biology. Berlin, Germany (2011). “Production of a reference transcriptome and a transcriptomic database (PocilloporaBase) for the cauliflower coral, *Pocillopora damicornis*.” **Traylor-Knowles N**, **Granger BR***, **Lubinski T**, Parikh, JR, Garamszegi S, Xia Y, Marto JA, Kaufman L, **Finnerty JR.**

12th International Coral Reef Symposium. Cairns, Australia (2012)

- “Regeneration and wound healing in anthozoan cnidarians: Using lesion recovery as a proxy for health.” **Burmester EM***, **Finnerty JR**, Kaufman L.
- “Development of corallimorphs as an environmental-genomic model system.” **Granger BR***, **Finnerty JR.**