# CURRICULUM VITAE

**Name:** Antonio J. Giraldez, Ph.D.

**Term:** July 1, 2011-June 30, 2016

**School:** Yale University School of Medicine and the Graduate School

**Reason for Promotion:**

**Education:** B.S. Chemistry. University Autonoma of Madrid (Spain) 1998
Ph.D. Developmental Biology, European Molecular Biology Laboratory, (Germany) 2002

## CAREER/ACADEMIC APPOINTMENTS

| | |
|---|---|
| 1998-2002 | Ph.D with Dr. Stephen M. Cohen. Developmental Genetics. European Molecular Biology Laboratory. Heidelberg. Germany. |
| 2003-2005 | Postdoctoral Research, with Dr. Alexander F. Schier. Skirball Institute. New York University School of Medicine. NY. |
| 2006 | Postdoctoral Research, with Dr. Alexander F. Schier. Harvard University. Cambridge. MA. |
| 2006-2011 | Assistant Professor. Yale University School of Medicine. New Haven, Connecticut. USA |
| 2011-present | Associate Professor. Yale University School of Medicine. New Haven, Connecticut. USA |

## PROFESSIONAL HONORS & RECOGNITION

### International/National/Regional

| | |
|---|---|
| 2008-2012 | Pew Scholar |
| 2007-2010 | Lois E. and Franklin H. Top, Jr., Yale Scholar Award |
| 2007 | John Kendrew Young investigator Award EMBL, Heidelberg |
| 2007 | NYAS Blavatnik Young Investigator Award (Finalist) |
| 2004-2007 | HFSP Postdoctoral Fellowship |
| 2003-2004 | EMBO Postdoctoral Fellowship |
| 2001-2002 | EMBL Postdoctoral bridging fellowship. |
| 1998-2001 | EMBL PhD fellowship |
| 1997-1998 | Undergraduate Research Fellowship. CBMSO. UAM. |

## GRANT HISTORY

**Current Grants**

Agency: NIH
I.D.# **R01 GM081602-01**
Title: "The Role of microRNAs in Vertebrate Development"
P.I.: Antonio Giraldez
Percent effort: 58%
Direct costs per year: $ 188,000
Total costs for project period: $ 1,554,838
Project period: 08/01/2007-05/31/2012

Agency: Pew Charitable Trusts
I.D.# **Pew Scholars in the Biomedical Sciences**
Title: "The role of microRNAs in vertebrate development "
P.I.: Antonio Giraldez
Percent effort: 7%
Direct costs per year: $ 55,555
Total costs for project period: $ 240,000
Project period: 07/01/2008-06/30/2012

Agency: MDA
I.D.# **115608**
Title: "The role of microRNAs in muscle development and muscular dystrophy "
P.I.: Antonio Giraldez
Percent effort: 13 %
Direct costs per year: $113,913
Total costs for project period: $387,937
Project period: 01/01/2009-12/31/2011

Agency: NIH
I.D.# **GM081602 ARRA Suplement**
Title: "The role of microRNAs in vertebrate development "
P.I.: Antonio Giraldez
Percent effort: 0%
Direct costs per year: $63,819
Total costs for project period: $105,620
Project period: 02/12/2010-12/31/2010

Agency: NIH
I.D.# **RC2 MH089956-01**
Title: " Genomic profiling and Functional Mutation Analysis in Autism Spectrum Disorders "
P.I.: Mathew State (Giraldez Co-Pi)
Percent effort: 20%
Direct costs per year: $220,000
Total costs for project period: $2,245,836
Project period: 09/30/2009-08/31/2011

**Past Grants**

Agency: Yale Center for Genomics and Proteomics
I.D.# **Yale Genomics Grant**
Title: "Identification of the microRNA regulatory networks in vertebrates"
P.I.: Antonio Giraldez
Percent effort: 0%
Direct costs per year: $25,000
Total costs for project period: $25,000
Project period: 04/01/2008-03/31/2009

## LECTURES, COURSES, EDUCATION

### Courses

2008 Basic Concepts of Genetic Analysis (Fall)
2008 – present Genetics Graduate student seminar (Fall)
2009 Genomics and Bioinformatics MBB/MCDB/CS/CBB 752 (Spring)

### Lectures/Presentations

2011 Small RNAs in neural development and disease, Baeza, Spain.
2011 Microsymposium on small RNAs. IMP. Vienna. Austria.
2011 Non-coding RNAs and Cancer Symposium. UCL Cancer Institute. London, England.
2011 Department of Medicine. New York University School of Medicine. New York.
2011 Keystone Symposium on Mechanism and Biology of Silencing, Monterey, California.
2010 Genetics department. Skirball Institute. NYU. New York.
2010 EMBO/EMBL Non Coding Genome Symposium. Heidelberg. Germany
2010 Regulatory roles of small RNAs. Weizmann Institute of Science. Rehovot, Israel.
2010 Santa Cruz Developmental Biology Meeting. Santa Cruz. California.
2009 4th Barossa Meeting. Cell signaling in Cancer and Development. Adelaide, Australia.
2009 Twenty-first Annual Kavli Frontiers of Science symposium. Irvine California.
2009 International PhD program, Gulbenkian Institute, Oeiras. Portugal
2009 Institute of Molecular Medicine, Lisbon, Portugal
2009 European Zebrafish meeting. Rome. Italy
2009 The Biology of RNA silencing. Keystone meeting. Victoria, British Columbia. Canada.
2009 Pew Meeting on Biomedical Sciences. Puerto Rico.
2009 Center for Research on Reproduction. University of Pennsylvania. Philadelphia.
2009 Strategic Conference of Zebrafish Investigators. Asilomar, CA. USA.
2008 48th Annual Meeting of the American Society for Cell Biology. San Francisco, CA.
2008 University of Connecticut Health Center. Farmington, CT. USA.
2008 European Molecular Biology Laboratory. Heidelberg. Germany

2008 MicroRNA Symposium. Vienna, Austria.
2008 Regulatory RNA Symposium. Symposium. Toronto, Canada.
2008 National Center for Biological Sciences. Bangalore, India.
2008 Temasek Life Science Laboratory, Singapore.
2008 Institute of Molecular and Cell Biology. Singapore.
2008 Vanderbilt University, Nashville, Tennessee, USA
2007 Keystone Symposia. MicroRNAs and cancer. Keystone, Colorado. USA
2007 Molecular Biology Society of Japan Spring Symposium, Awajishima Island, Japan.
2007 New York Academy of Sciences. RNAi discussion group. New York. USA
2007 Keystone Symposia 'miRNAs and siRNAs' at Keystone, Colorado. USA
2007 Strategic Conference of Zebrafish Investigators. Asilomar, CA. USA.
2006 Keystone Symposia. RNAi and Related Pathways. Vancouver, BC, Canada.
2006 Department of Physiology. Columbia University. New York
2006 Cold Spring Harbor Laboratory. Cold Spring Harbor. New York.
2006 Genetics Department. Yale University School of Medicine. New Haven Connecticut.
2006 Department of Biology. New York University. New York.
2006 Department of Gene expression. UMASS Medical School. Worcester, Massachusets
2006 Center for RNA. Case Western Reserve University. Cincinnati, Ohio.
2006 Department of Biochemistry. UMASS Medical School. Worcester, Massachusets.
2005 CSHL RNAi meeting. Cold Spring Harbor Laboratory, New York.
2005 New York Academy of Sciences. RNAi discussion group. New York.
2005 Keystone Symposia Meeting. Beaver Run Resort Breckenridge, Colorado. USA
2002 ELSO 2002. Nice, France.

**Mentoring**

2007-present Carlos Stahlhut, graduate student
2007-present Alison Staton, graduate student
2007-2009 Yuichiro Mishima, postdoctoral fellow (Currently Research Scientist, Kobe University Japan) (JSFP fellowship)
2008-present Daniel Cifuentes, postdoctoral fellow (Ramon Areces Fellowship)
2008-present Carter Takacs, postdoctoral fellow (NIH fellowship)
2009-present Huiling Xue, postdoctoral fellow (HFSP fellowship)
2010-present Ariel Bazzini, postdoctoral fellow (Pew fellowship)
2010-present Minsun Jeong, graduate student
(numerous rotation students)

**Student Exam Committees**

2007 – Khalid Fakhro (Qualifying Exam)
2008 – Jade Li (Thesis Committee Member)
Manav Pathania (Thesis Committee Member)
2009 – Eric Guo (Qualifying Exam and ongoing Thesis Committee Member)

David Taylor Jr. (Qualifying Exam and ongoing Thesis Committee Member)
Michael J. Stulberg (Qualifying Exam and ongoing Thesis Committee Member)
Jamie Schwendinger-Schreck (Qualifying Exam and ongoing Thesis Committee Member)
2010 – Dong Chen (Qualifying Exam)

**Undergraduate student mentoring**
STARS minority program:
Roohi Rustum (2009)

Non-Yale interns:
Alexis Hubaud (Ecole Normale Supérieure de Parisellesley) 2009-2010,

## PROFESSIONAL SERVICE

**Peer Review Groups/Grant Study Sections**
2007-2008 NIH Molecular Neurogenetics study section. Ad hoc committee member

**Journal Service**
Reviewer for Cell, Nature, Nature Genetics, Science, Current Biology, Cell Metabolism, Developmental Cell, EMBO Journal, Genome Biology, Nature Molecular Structural Biology, PLoSONE, Proceedings of the National Academy of Sciences, BMC Genomics, RNA,

**Professional Organizations**
2004-present New York Academy of Science

**Meeting Planning**

**Yale University Service**

**University Committees**
2009-present Vertebrate Developmental Biology/Pediatrics Faculty Search Committee

**Departmental Committees**
2010-present Co-Organizer Genetics Seminar Series
2009-present Co-Organizer of the Interdepartmental Junior Faculty Meetings
2007-present Co-Organizer, Genetics Department Retreat

## BIBLIOGRAPHY

**Peer Reviewed Manuscripts**

(1) Staton AA, Knaut H and **Giraldez AJ‡.** miRNA regulation of SDF1 chemokine signaling provides genetic robustness to germ cell migration. **Nature Genetics.** 2011. Jan 23. [Epub ahead of print]

(2) Sander JD, Dahlborg EJ, Goodwin MJ, Cade L, Zhang F, Cifuentes D, Curtin SJ, Blackburn JS, Thibodeau-Beganny S, Qi Y, Pierick CJ, Hoffman E, Maeder ML, Khayter C, Reyon D, Dobbs D, Langenau DM, Stupar RM, **Giraldez AJ**, Voytas DF, Peterson RT, Yeh JR, Joung JK. Selection-free zinc-finger-nuclease engineering by context-dependent assembly (CoDA). Nat Methods. 2011 Jan;8(1):67-9. Epub 2010 Dec 12.

(3) Cifuentes D, Xue H, Taylor DW, Patnode H, Mishima Y, Cheloufi S, Ma E, Mane S, Hannon GJ, Lawson N, Wolfe S, **Giraldez AJ‡**. A novel miRNA processing pathway independent of Dicer requires Argonaute2. **Science. 2010**, Jun 25;328(5986):1694-8. Epub 2010 May 6

(4) Mishima Y, Abreu-Goodger C, Staton AA, Stahlhut C, Shou C, Cheng C, Gerstein M, Enright AJ and **Giraldez AJ**. Zebrafish miR-1 and miR-133 shape muscle gene expression and regulate sarcomeric actin organization. **Genes & Development**. **2009** Mar 1;23(5):619-32. Epub 2009 Feb 24. PMID: 19240126

(5) Choi PS, Zakhary L, Choi WY, Caron S, Alvarez-Saavedra E, Miska EA, McManus M, Harfe B, **Giraldez AJ**, Horvitz RH, Schier AF, and Dulac C. Members of the miRNA-200 Family Regulate Olfactory Neurogenesis. **Neuron. 2008.** Jan 10, 57, 1–15.

(6) Choi WY, **Giraldez AJ‡**, Schier AF‡. Target Protectors Reveal Dampening and Balancing of Nodal Agonist and Antagonist by miR-430. **Science. 2007.** Oct 12;318(5848):271-4. ‡Corresponding authors.

(7) Mishima Y[#]**, Giraldez AJ[#],** Takeda Y, Fujiwara T, Sakamoto H, Schier AF and Inoue K. Differential regulation of germline mRNAs in soma and germ cells by zebrafish miR-430. **Current Biology**, **2006.** Nov 7;16(21):2135-42.

(8) **Giraldez AJ‡,** Mishima Y, Rihel J, Grocock R, van Dongen S, Inoue, K, Enright A, and Schier AF‡. Zebrafish miR-430 promotes deadenylation and clearance of maternal mRNAs. **Science. 2006** Apr 7;312(5770):75-9.

(9) **Giraldez AJ‡**, Cinalli RM, Glasner ME, Enright A, Thomson JM, Baskerville S, Hammond SM, Bartel D, and Schier AF‡. MicroRNAs regulate brain morphogenesis in zebrafish. **Science**. **2005** May 6;308(5723):833-8.

(10) Le Good JA, Joubin K[#], **Giraldez AJ[#],** Ben-Haim N[#], Beck S, Chen Y, Schier AF and Constam DB. Nodal stability determines signaling range. **Current Biology**. **2005** Jan 11;15(1):31-6.

(11) Kreuger J, Perez L, **Giraldez AJ**, Cohen SM. Opposing activities of Dally-like glypican at high and low levels of Wingless morphogen activity. **Developmental Cell**. **2004** Oct;7(4):503-12.

(12) **Giraldez AJ**, Cohen SM. Wingless and Notch signaling provide cell survival cues and control cell proliferation during wing development**. Development**. **2003** Dec;130(26):6533-43.

(13) **Giraldez AJ**, Perez L, Cohen SM. A naturally occurring alternative product of the mastermind locus that represses notch signaling. **Mechanisms of Development**. **2002** Jul;115(1-2):101-5.

(14) **Giraldez AJ**, Copley RR, Cohen SM. HSPG modification by the secreted enzyme Notum shapes the Wingless morphogen gradient. **Developmental Cell. 2002** May; 2(5):667-76.

**‡** Corresponding authors.
**#** Equal contribution

**Reviews, Chapters, Books**

(1) Bazzini AA, **Giraldez AJ**. MicroRNAs sculpt gene expression in embryonic development: new insights from plants. **Dev Cell. 2011** Jan 18;20(1):3-4.

(2) **Giraldez AJ.** microRNAs, the cell's Nepenthe: clearing the past during the maternal-to-zygotic transition and cellular reprogramming. **Curr Opin Genet Dev. 2010.** Volume 20, Issue 4, August 2010, Pages 369-375 (Review)

(3) Takacs CM, **Giraldez AJ**. MicroRNAs as genetic sculptors: Fishing for clues. **Semin Cell Dev Biol. 2010** Epub 2010 Feb 10. (Review)

(4) Staton, A.A. and **Giraldez AJ**. MicroRNAs in development and disease. **Encyclopedia of Life Sciences**. **2008**. pp. 1–10. (Review)

(5) Mishima Y, Stahlhut C, **Giraldez AJ‡**. miR-1-2 gets to the heart of the matter. **Cell. 2007** Apr 20;129(2):247-9. (Review). **‡** Corresponding author.

(6) Schier AF, **Giraldez AJ**. MicroRNA function and mechanism: insights from zebra fish. **Cold Spring Harb Symp Quant Biol. 2006.** 71:195-203. (Review).