# CURRICULUM VITAE

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

Chair and Professor, Department of Genetics

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

**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 |
| 2011-2012 | Associate Professor. Yale University School of Medicine. New Haven, Connecticut. USA |
| 2013-2015 | Associate Professor with Tenure. Yale University School of Medicine. New Haven, CT. |
| 2012-2016 | Director of Graduate Studies in Genetics. Yale University School of Medicine. New Haven, CT. |
| 2015-Present | Professor with Tenure. Yale University School of Medicine. New Haven, CT. |
| 2017-Present | Chair of the Department of Genetics Yale University School of Medicine. New Haven, CT. |

### Administrative positions

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|---|---|
| 2012-2016 | Director of Graduate Studies Genetics Department. Yale University School of Medicine. New Haven, Connecticut. USA |
| 2017-Present | Chair of the Department of Genetics Yale University School of Medicine. New Haven, CT. |

## PROFESSIONAL HONORS & RECOGNITION

### International/National/Regional

| | |
|---|---|
| 2017 | Blavatnik National Award for Young Scientists (Finalist) |
| 2016 | Whitman Center Research Fellow MBL (2016, 2017) |
| 2016-2021 | HHMI Faculty Scholar |
| 2016 | Blavatnik National Award for Young Scientists (Finalist) |

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|---|---|
| 2016 | Whitman Center Research Fellow MBL |
| 2015 | Damon Runyon Fellowship Award Committee |
| 2014 | Vilcek Prize for Creative Promise in Biomedical Sciences |
| 2008-2012 | Pew Scholar |
| 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. |

**University**

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| 2007-2010 | Lois E. and Franklin H. Top, Jr., Yale Scholar Award |

## GRANT HISTORY

### Current Grants

Agency: NIH
I.D.# **R35 GM122580-01**
Title: Molecular mechanisms of the maternal to zygotic transition
P.I.: Antonio Giraldez
Percent effort: 51%
Direct costs per year: $ 425,068
Total costs for project period: $3,525,210
Project period 05/01/2017-04/30/2022

Agency: HHMI-Gates Foundation
I.D.# **HHMI Faculty Scholars 55108524**
Title: Molecular analysis of the maternal to zygotic transition
P.I.: Antonio Giraldez
Percent effort: 10%
Direct costs per year: $ 100,000
Total costs for project period: $600,000
Project period 10/01/2016-09/30/2021

Agency: NIH
I.D.# **R01 GM081602-06A1**
Title: “The Role of MicroRNAs in Vertebrate Development”
P.I.: Antonio Giraldez
Percent effort: 20%
Direct costs per year: $ 190,000
Total costs for project period: $1,265,400
Project period 9/1/2013-8/31/2017

Agency: NIH
I.D.# **R01GM103789 (NCE)**
Title: “Analysis of the gene networks regulating the maternal to zygotic transition”
P.I.: Antonio Giraldez
Percent effort: 19%

Direct costs per year: $255,726
Total costs for project period: $1,748,355
Project period: 09/01/2012-08/31/2016

Agency: NIH
I.D.# **R01HD074078 (NCE)**
Title: "Functional analysis of the zebrafish genome through RNA-seq and ribosome profile"
P.I.: Antonio Giraldez
Percent effort: 10%
Direct costs per year: $305,617
Total costs for project period: $2,377,640
Project period: 08/15/2012-04/30/2017 (Pre award 7/1/12)

**Past Grants**

Agency: NIH
I.D.# **R01 GM101108-03**
Title: "Molecular Characterization of the microRNA Processing Pathways"
P.I.: Antonio Giraldez
Percent effort: 20%
Direct costs per year: $ 300,696
Total costs for project period: $1,982,821
Project period 5/1/2012-2/29/2016 (Pre-award 2/1/12)

Agency: NIH
I.D.# **R01GM102251-01**
Title: " Molecular mechanisms of miRNA mediated regulation"
P.I.: Antonio Giraldez
Percent effort: 19%
Direct costs per year: $183,350
Total costs for project period: $1,253,302
Project period: 08/10/2012-05/31/2016

Agency: NIH
I.D.# **R21HD073768-01**
Title: "Development of RNA interference in zebrafish"
P.I.: Antonio Giraldez
Percent effort: 5 %
Direct costs per year: $ 142,350
Total costs for project period: $ 444,513
Project period: 7/1/2012-6/31/2014

Agency: MOD
I.D.# **MARCH OF DIMES #1-FY12-230**
Title: "The role of microRNAs during vertebrate development "
P.I.: Antonio Giraldez
Percent effort: 2%
Direct costs per year: $100,186
Total costs for project period: $ 334,312
Project period: 6/1/2012-5/31/2015

**Past Grants**

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: 09/30/2009-08/31/2012 (no cost ext)

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: 1%
Direct costs per year: $ 23,076
Total costs for project period: $ 240,000
Project period: 07/01/2008-6/30/2013 (no cost ext)

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

Agency: NIH
I.D.# **R01 GM081602-01**
Title: "The Role of microRNAs in Vertebrate Development"
P.I.: Antonio Giraldez
Percent effort: 75%
Direct costs per year: $ 188,000
Total costs for project period: $ 1,545,536
Project period: 08/01/2007-05/31/2012

Agency: MDA
I.D.# **115608**
Title: "The role of microRNAs in muscle development and muscular dystrophy "
P.I.: Antonio Giraldez
Percent effort: 15.25 %
Direct costs per year: $113,913
Total costs for project period: $385,180
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

## 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)
2012 – present Genetics Graduate student seminar (Spring)
2012 Time management for graduate students in the Genetics training grant
2012 – present GENE 760:Genomic Methods for Genetic Analysis

## INVITED SPEAKING ENGAGEMENTS, PRESENTATIONS, SYMPOSIA & WORKSHOPS

### International/National

2017 EMBO Symposium, Awakening the genome. Germany, Dresden
2017 University of Utah, Department of Human Genetics
2017 Center for genomic Regulation. Spain Barcelona
2017 Institute for Research in Biomedicine. IRB. Spain, Barcelona
2017 Gene regulatory systems in Development. Spain, Carmona
2017 Brown University. Department of Biology
2017 Upenn. Developmental Biology Seminar Series
2017 Zebrafish Strategic Conference. Asilomar
2016 Columbia University
2016 Keystone Symposia Stem Cells and Regeneration- Silverthorne, CO
2016 3rd Developmental Biology Workshop NIH
2016 MARC NU-STAR Seminar at Northeastern Illinois University
2016 EMBL epitranscriptome. EMBL Heidelberg.
2016 Vienna microsymposium IMBA-IMP
2016 Computational biology conference Florida
2016 Blavatnik Science Symposium NYC
2016 Complex life of RNA
2016 IMB conference
2016 Heidelberg Steve Cohen symposium
2016 The Hospital for Sick Children Seminar Series
2016 Frontiers of Biology Stanford University, Developmental Biology Department

2015 6th Strategic Conference of Zebrafish Investigators, Pacific Grove, CA
2015 Seminar NYU Department of Biology
2015 University of Wisconsin School of Medicine and Public Health, Seminar
2015 Annual Meeting of Korean Society for Biochemistry and Molecular Biology (KSBMB)
2015 9th European Zebrafish Meeting Oslo Norway
2015 Gordon Conference, Fertilization and Activation of Development, NH
2014 13th Annual McGill Workshop on Bioinformatics in Barbados
2014 Keystone Symposium RNA Silencing Sheraton Seattle Hotel in Seattle, Washington
2014 UCB CDB Seminar
2014 EMBO/EMBL SYMPOSIA
2014 Northwestern University
2014 Santa Cruz Developmental Meeting
2014 RNA meeting in Quebec Ribo Club
2014 Ohio State University
2014 Towards an encyclopedia of DNA elements in zebrafish London, UK
2014 Santa Cruz Developmental Biology Meeting.
2014 Non-coding RNA - From Basic Mechanisms to Cancer, DKFZ, Germany
2014 Biochemistry Department, Northwestern University, Chicago, USA
2014 Department of Biochemistry, University of Washington, Seattle, USA
2014 University of California Berkeley, Division of Cell & Developmental Biology, USA
2014 MicroRNA workshop. McGill University's Bellairs Research Station, Barbados
2014 Keystone Symposium RNA silencing, Seattle, Washington. USA
2013 RNA Program in Academia Sinica (RPAS), Taipei, Taiwan
2013 Molecular Biology Society of Japan, Kobe, Japan
2013 RNA Symposium: Nobel Forum Karolinska Institute, Stockholm, Sweden
2013 EMBO|EMBL Symposium: Non-Coding Genome, Heidelberg, Germany
2013 EMBO, Protein Synthesis and Translational Control, Heidelberg, Germany
2013 Gordon Conference in Developmental Biology, Il Ciocco, Italy
2013 Cellular aspects of mRNA fate,Université Pierre et Marie Curie, Paris, France
2013 Micro Symposium, IMP, Vienna.
2013 National Institute of Child Health and Human Development, NIH, Bethesda, ME
2013 Keystone Meeting, Noncoding RNAs in Development and Cancer, Vancouver, CA
2012 Cincinnati Children's Hospital Medical Center, Cincinnati, OH.
2012 Annual Developmental Biology symposium, McGill University, Montreal, CA.
2012 CRG, Centre de Regulacio Genomica, Barcelona, Spain.
2012 FMI, Friedrich Miescher Institute for Biomedical Research , Basel, Switzerland.
2012 RIKEN, Center for Developmental Biology, Kobe, Japan.
2012 Max Plank Institute for Biochemistry, Munich, Germany.

2012 Institute of Molecular Biology, Mainz, Germany.
2012 EMBL, Developmental Biology Department, Heidelberg, Germany
2012 Keystone Meeting, RNA Silencing, Vancouver, CA
2012 Department of Developmental and Molecular Biology, Albert Einstein, NY.
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**

| | |
|---|---|
| 2007-2009 | Yuichiro Mishima, postdoctoral fellow (Currently Research Scientist, Tokyo University, Japan) (JSFP fellowship) |
| 2007-2011 | Carlos Stahlhut, graduate student (Currently Post-doc, Frank Slack, Yale University) |
| 2007-2012 | Alison Staton, graduate student (Currently Post-doc, Craig Crews, Yale University) |
| 2008-present | Daniel Cifuentes, postdoctoral fellow (Ramon Areces Fellowship)(K99) |
| 2008-present | Carter Takacs, postdoctoral fellow (NIH fellowship) |
| 2009-2011 | Huiling Xue, postdoctoral fellow (HFSP fellowship) |
| 2009-present | Ellen Hofmann MD., graduate student (co-mentored with Mathew State) |
| 2010-present | Ariel Bazzini, postdoctoral fellow (Pew fellowship) |
| 2010-present | Minsun Jeong, graduate student |
| 2011-2012 | Polloneal Ocbina, Postdoctoral fellow (NIH Fellowship) |
| 2011-present | Miler Lee, Postdoctoral fellow (NIH Fellowship) |
| 2011-2012 | Simon Moxon, Postdoctoral fellow (Currently Project Leader, The Genome Analysis Centre) |
| 2011-present | Magdalena Koziol (HFSP Fellowship), (Currently post-doc, John Gurdon, Gurdon Institute) |
| 2012-present | Valeria Yartseva, Graduate Student |
| 2012-present | Ashley Bonneau, Graduate Student |
| 2012-present | Kate DiVito, Postgraduate Student |
| 2012-present | Elizabeth Fleming, Lab manager |
| 2012-present | Stephanie Lau, Postgraduate student |
| 2013-present | Miguel Angel Moreno Mateos, Postdoctoral Fellow, (Andalusian Fellowship) |
| 2013-present | Charles Vejnar, Postdoctoral Fellow, (Swiss Science Foundation Fellowship) |
| 2013-present | Jean-Denis Beaoudin, Postdoctoral Fellow |
| 2013-present | Juan Pablo Fernandez Postdoctoral Fellow |
| 2013-present | Hiba Codore, Lab manager |
| 2013-present | Marlon Stoeckious, Postdoctoral Fellow |
| 2013-present | Tim Johnstone. PhD 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)
2011 – David Taylor Jr. (Thesis Committee Member)
Eric Guo (Thesis Committee Member)
Michael J. Stulberg (Thesis Committee Member)
Jamie Schwendinger-Schreck (Thesis Committee Member)
Helen Rankin (Thesis Committee Member)
Diona Kasper (Thesis Committee Member)
2012 – David Taylor Jr. (Thesis Committee Member)
Eric Guo (Thesis Committee Member)
Michael J. Stulberg (Thesis Committee Member)
Jamie Schwendinger-Schreck (Thesis Committee Member)
Helen Rankin (Thesis Committee Member)
Diona Kasper (Thesis Committee Member)
2013 – David Taylor Jr. (Thesis Committee Member)
Eric Guo (Thesis Committee Member)
Helen Rankin (Thesis Committee Member)
Diona Kasper (Thesis Committee Member)

**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**

| | |
|---|---|
| 2017-2021 | NIH Dev1 study section permanent member. |
| 2016-2019 | Pew Scholars Alumni Review Board |
| 2016-2017 | Damon Runyon Cancer Research Foundation Fellowship Award Committee |
| 2016 | NIH/NIAMS ad hoc reviewer Board of Scientific Counselors |
| 2015 | NIH Dev1 study section ad hoc reviewer |
| 2014 | NIH/SREA reviewer for a CSR study section, ad hoc reviewer |
| 2008 | NIH reviewer for a Molecular Neurogenetics study section, ad hoc reviewer |

**Journal Service**
Reviewer
2007-present 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**
2007-2011 Co-Organizer, Genetics Department Retreat

**Yale University Service**

2012-present Director of Graduate Studies, Genetics.

**University Committees**
2012- Member, executive committee of the Developmental Biology Training Grant
2012- Member, executive committee for the Human Genetics Training Grant
2012- Member, executive committee Molecular Cell Biology, Development and Genetics
2011- Member, advisory committee for the Genetics Training Grant
2009-2011 Vertebrate Developmental Biology/Pediatrics Faculty Search Committee

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

**Faculty mentoring**
Participant in the 1st Junior faculty retreat as a faculty in the discussion panel
Co-organizer of the junior faculty meeting in group/organizational psychology (David Berg)

**BIBLIOGRAPHY**

**Peer-Reviewed Original Research**

1.Yartseva V,Takacs CM, Vejnar CE, Lee MT‡, **Giraldez AJ‡**. RESA identifies mRNA regulatory sequences with high resolution. **Nature Methods.** 2017 Feb;14(2):201-207. doi: 10.1038/nmeth.4121. Epub 2016 Dec 26.

2.Bazzini AA‡, Del Viso F, Moreno-Mateos MA, Johnstone TG, Vejnar CE, Qin Y, Yao J, Khokha MK, **Giraldez AJ‡**. Codon identity regulates mRNA stability and translation efficiency during the maternal-to-zygotic transition. **EMBO J**. 2016 Oct 4;35(19):2087-2103.

3.Reischauer S, Stone OA, Villasenor A, Chi N, Jin SW, Martin M, Lee MT, Fukuda N, Marass M, Witty A, Fiddes I, Kuo T, Chung WS, Salek S, Lerrigo R, Alsiö J, Luo S, Tworus D, Augustine SM, Mucenieks S, Nystedt B, **Giraldez AJ**, Schroth GP, Andersson O, Stainier DY‡. Cloche is a bHLH-PAS transcription factor that drives haemato-vascular specification. **Nature**. 2016 Jul 13;535(7611):294-8. doi: 10.1038/nature18614.

4.Johnstone TG, Bazzini AA, **Giraldez AJ‡**. Upstream ORFs are prevalent translational repressors in vertebrates. **EMBO J**. 2016 Apr 1;35(7):706-23. doi: 10.15252/embj.201592759.

5.Hoffman EJ, Turner KJ, Fernandez JM, Cifuentes D, Ghosh M, Ijaz S, Jain RA, Kubo F, Bill BR, Baier H, Granato M, Barresi MJ, Wilson SW, Rihel J‡, State MW‡, **Giraldez AJ‡**. Estrogens Suppress a Behavioral Phenotype in Zebrafish Mutants of the Autism Risk Gene, CNTNAP2. Neuron. 2016 Feb 17;89(4):725-33. doi: 10.1016/j.neuron.2015.12.039.

***6.*** Moreno-Mateos MA, Vejnar CE, Beaudoin JD, Fernandez JP, Mis EK, Khokha MK and **Giraldez AJ‡**. CRISPRscan: designing highly efficient sgRNAs for CRISPR/Cas9 targeting in vivo. **Nature Methods.** 2015. Oct;12(10):982-8.Bazzini AA‡#, Johnstone TG#, Christiano R, Mackowiak SD, Obermayer B, Fleming ES,Vejnar CE , Lee MT , Rajewsky N‡, Walther TC and **Giraldez AJ‡**. Identification of smallORFs in animals using ribosome footprinting and evolutionary conservation . EMBO J. 2014 Apr 4.

*7.* Lee MT#, Bonneau AR#, Takacs CM, Bazzini AA, DiVito KR, Fleming ES, **Giraldez AJ‡**. Nanog, SoxB1 and Pou5f1/Oct4 regulate widespread zygotic gene activation during the maternal-to-zygotic transition**. Nature,** 2013 Sep 22. doi: 10.1038/nature12632.

*8.* Yoda M #, Cifuentes D #, Izumi N, Sakaguchi Y, Suzuki T, **Giraldez AJ‡** and Tomari Y‡. PARN mediates 3′-end trimming of Argonaute2-cleaved precursor microRNAs. **Cell Reports**, 2013, 5, 1–12, November 14,

**9.** Lewellis SW, Nagelberg D, Subedi A, Staton A, LeBlanc M, **Giraldez A**, and Knaut H. Precise SDF1-mediated cell guidance is achieved through ligand clearance and microRNA-mediated decay. **J Cell Biol.** 2013 Feb 4;200(3):337-55.

10. Stahlhut C, Suarez Y, Lu J, Mishima Y‡, and **Giraldez AJ‡**. miR-1/206 regulate angiogenesis by modulating Vegf-A expression. **Development**, 2012.

11. Bazzini AA, Lee MT, **Giraldez AJ‡**. Ribosome Profiling Shows That miR-430 Reduces Translation Before Causing mRNA Decay in Zebrafish. **Science** 13 April 2012: 233-23

12. Staton AA, **Giraldez AJ‡**. Use of target protector morpholinos to analyze the physiological roles of specific miRNA-mRNA pairs in vivo. **Nature Protocols.** 2011 Dec 1;6(12):2035-49. doi: 10.1038/nprot.2011.423.

13. Zhu C, Smith T, McNulty J, Rayla AL, Lakshmanan A, Siekmann AF, Buffardi M, Meng X, Shin J, Padmanabhan A, Cifuentes D, **Giraldez AJ**, Look AT, Epstein JA, Lawson ND, Wolfe SA. Evaluation and application of modularly assembled zinc-finger nucleases in zebrafish. **Development**. 2011 Oct;138(20):4555-64.

14. Staton AA, Knaut H and **Giraldez AJ‡.** miRNA regulation of SDF1 chemokine signaling provides genetic robustness to germ cell migration. **Nature Genetics.** Mar;43(3):204-11. Epub 2011 Jan 23

15. Zhu C, Smith T, McNulty J, Rayla AL, Lakshmanan A, Siekmann AF, Buffardi M, Meng X, Shin J, Padmanabhan A, Cifuentes D, **Giraldez AJ**, Look AT, Epstein JA, Lawson ND, Wolfe SA. Evaluation and application of modularly assembled zinc-finger nucleases in zebrafish. **Development**. 2011 Oct;138(20):4555-64.

16. 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). **Nature Methods**. 2011 Jan;8(1):67-9. Epub 2010 Dec 12.

*17.* 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

18. 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

19. 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.
20. 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.
21. 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.
22. **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.
23. **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.
24. 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.
25. 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.
26. **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.
27. **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.
28. **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. Yartseva V‡, **Giraldez AJ‡**. The Maternal-to-Zygotic Transition During Vertebrate Development: A Model for Reprogramming. **Curr Top Dev Biol.** 2015;113:191-232. doi: 10.1016/bs.ctdb.2015.07.020. Epub 2015 Aug 13.
2. Lee MT‡#, Bonneau AR#, **Giraldez AJ‡.** Activation of the zygotic genome during the maternal to zygotic transition in animals. **Annu Rev Cell Dev Biol.** 2014;30:581-613. Review.
3. Bazzini AA, **Giraldez AJ‡**. MicroRNAs sculpt gene expression in embryonic development new insights from plants. **Dev Cell.** 2011 Jan 18;20(1):3-4.
4. **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)

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