

Joana A. Vidigal

Academic Positions	Stadtman Tenure-Track Investigator Starting 05/15/2018 National Institutes of Health, National Cancer Center, Bethesda, USA.
	Postdoctoral Fellow 03/01/2011 - Present Memorial Sloan-Kettering Cancer Center; Cancer Biology and Genetics Program. NYC, USA.
Education	Doctor of Philosophy 02/11/2011 Free University of Berlin, Germany
	Licenciatura in Biology, Specialization in Microbiology and Genetics 06/01/2005 University of Lisbon, Portugal
Research Experience	Postdoctoral Fellow 03/01/2011 - Present Memorial Sloan-Kettering Cancer Center; Cancer Biology and Genetics Program. NYC, USA.
	Graduate Student 02/01/2007 - 02/11/2011 Max-Planck Institute for Molecular Genetics; Department of Developmental Genetics. Berlin, Germany.
	Visiting Student 11/01/2005 - 08/01/2006 Max-Planck Institute for Infection Biology; Laboratory of Molecular Biology. Berlin, Germany.
	Visiting Student 04/01/2005 – 07/30/2005 University of Aarhus; Department of Molecular Biology. Aarhus, Denmark.
Academic Honors	Memorial Sloan-Kettering Postdoctoral Research Award 2016 Memorial Sloan-Kettering Cancer Center. NYC, USA.
	FCT Doctoral Fellowship 01/01/2008 - 02/11/2011 Foundation for Science and Technology, Ministry of Science Technology and Higher education, Portugal.
	Max-Planck Doctoral Fellowship 02/01/2007 - 01/30/2007 Max-Planck Society, Germany.
	Leonardo DaVinci Program Award for professional mobility 11/01/2005 - 08/01/2006 European Commission.
	Erasmus Fellowship 01/01/2005 – 08/07/2005

European Commission.

Academic Merit Award

2004

University of Lisbon, Portugal.

- Research Grants**
- Lung Cancer Research Foundation Grant — PI** **1/10/2015-1/10/2016**
Investigating the role of mutations in epigenetic regulators and noncoding DNA elements in lung cancer. \$75,000.
- NIH/NCI K22 CA226050-01 — PI** **04/01/2018 - 03/31/2021**
Regulation of transcriptional noise by miRNAs during lung tumorigenesis. \$450,000.
- Publications**
- Perez AR, Pritykin Y, **Vidigal JA***, Chhangawala S, Leslie CS, Ventura A. "GuideScan software for improved single and paired CRISPR guide RNA design". **Nature Biotech** doi:10.1038/nbt.3804 **2017** *co-first and co-corresponding author
- Vidigal JA** and Ventura A. "Rapid and efficient one-step generation of paired gRNA CRISPR/Cas9 libraries" **Nat. Commun.** 6:8083 doi: 10.1038/ncomms9083 **2015**
- Han YC, **Vidigal JA***, Mu P, Yao E, Singh I, González AJ, Concepcion CP, Bonetti C, Ogradowski P, Carver B, Selleri L, Betel D, Leslie C, Ventura A. "An allelic series of miR-17~02 mutant mice uncovers functional specialization and cooperation among members of a microRNA polycistron." **Nat Genet.** **2015** Jul;47(7):766-75. *co-first author
- La Rocca G, Olejniczak SH, González AJ, Briskin D, **Vidigal JA**, Spraggon L, DeMatteo RG, Radler MR, Lindsten T, Ventura A, Tuschl T, Leslie CS, Thompson CB. "In vivo, Argonaute-bound microRNAs exist predominantly in a reservoir of low molecular weight complexes not associated with mRNA." **Proc Natl Acad Sci U S A.** **2015** Jan 20;112(3):767-72
- Vidigal JA**, Ventura A. "The biological functions of miRNAs: lessons from in vivo studies." **Trends Cell Biol.** **2014** Dec 4 pii: S0962-8924(14)00197-4. *Review*
- Maddalo D, Manchado E, Concepcion CP, Bonetti C, **Vidigal JA**, Han YC, Ogradowski P, Crippa A, Rekhman N, de Stanchina E, Lowe SW, Ventura A. "In vivo engineering of oncogenic chromosomal rearrangements with CRISPR/Cas9 system." **Nature.** **2014** Dec 18;516(7531):423-7.
- Pennimpede T, Proske J, König A, **Vidigal JA**, Morkel M, Bramsen JB, Herrmann BG, Wittler L. "In vivo knockdown of Brachyury results in skeletal defects and urorectal malformations resembling caudal regression syndrome." **Dev Biol.** **2012** Dec;372(1):55-67.
- Vidigal JA**, Ventura A. "Embryonic stem cell miRNAs and their roles in development and disease." **Semin Cancer Biol.** **2012** Oct;22(5-6):428-36. *Review*
- Concepcion CP, Han YC, Mu P, Bonetti C, Yao E, D'Andrea A, **Vidigal JA**, Maughan WP, Ogradowski P, Ventura A. "Intact p53-dependent responses in miR-34-deficient mice". **PLoS Genet.** 2012;8(7)
- de Pontual L, Yao E, Callier P, Faivre L, Drouin V, Cariou S, Van Haeringen A, Geneviève D,

Goldenberg A, Oufadem M, Manouvrier S, Munnich A, **Vidigal JA**, Vekemans M, Lyonnet S, Henrion-Caude A, Ventura A, Amiel J. "Germline deletion of the miR-17~92 cluster causes skeletal and growth defects in humans." **Nat. Genet.** **2011** Sep 4; 43(10):1026-30

Vidigal JA, Morkel M, Wittler L, Brouwer-Lehmitz A, Grote P, Makura K, Herrmann BG. "An inducible RNA interference for functional dissection of mouse embryogenesis." **Nucleic Acids Res.** **2010**, 1–7

Patents **P300080.US.01-32896-222799** "Composition For Co-Expression of RNA Molecules And Method Of Use Thereof". Joana A. Vidigal & Andrea Ventura

Teaching and Mentoring

Teaching:

Biology 7005G – Mouse Genetics and CRISPR **Fall 2016**

Graduate Course at Brooklyn College. NYC, USA.

Mouse Models **2009**

Graduate Course at Max-Planck Institute for Molecular Genetics. Berlin, Germany.

Lange Nacht der Wissenschaften (Long Night of Sciences) **2009**

Science outreach program. Max-Planck Institute for Molecular Genetics. Berlin, Germany.

Mentoring:

Alexander Perez. MD/PhD Student **01/01/2015 - Present**

Tri-Institutional MD-PhD Program. *Best Talk Award* at 2015 Tri-I MD-PhD Retreat; *Selected talk* at 2016 RECOMB/ISCB Conference on Regulatory and Systems Genomics. Selected as *Forbes 30 under 30*, class 2018.

Shalin Alfred. Visiting Student **01/01/2016 – 09/01/2016**

External participant in the 2016 Human Oncology and Pathogenesis Program (HOPP) Summer Student Program.

Kristin Hsieh. Summer Undergraduate Researcher **06/01/2015 – 07/30/2015**

Junior majoring in Biological Sciences at Cornell University. Recipient of the 2015 *Rubin and Sarah Shaps Scholars Award* by the SURP program of the Gerstner, Jr. Graduate School of Biomedical Sciences and Memorial Sloan-Kettering Cancer Center.

Relevant Training:

Optimizing the Practice of Mentoring: how to be an effective research Mentor. March 2016

A 2-day format with morning lectures and afternoon small-group discussions. Organized by Weill Cornell Medicine, Clinical and Translational Science Center.

Leadership for Scientists. **March-May 2016**

Nine-week course focused on improving communication, management and leadership skills in science. Organized by the Office for Career and professional Development at Memorial Sloan-Kettering Institute.

**Conferences
and Meetings****Participant:**

Systems Biology of Genome Regulation & Genome editing **2016**

Cold Spring Harbor Meeting Asia. Invited Speaker: “*Mouse Models for the noncoding Genome*”

microRNAs: A Gene silencing Mechanism with Therapeutic Implications **2016**

New York Academy of Sciences. Invited Speaker and Panelist: “*Using mouse models to functionally dissect an oncogenic miRNA cluster.*”

Lung Cancer Translational Science: from the Bench to the Clinic **2016**

AACR-IASLC International Joint Conference. Invited Speaker: “*Modeling lung cancer with CRISPR/Cas9.*”

Epigenomics **2015**

Keystone Symposia.

Regulatory RNAs **2014**

Cell Symposia.

Noncoding RNAs in Development and Cancer **2013**

Keystone Symposia.

11th International Conference on Cancer Induced Bone Metastasis **2011**

CIBD. Invited Speaker: “*OncomiR-1 in Cancer and Development: A Tale of Mice and Men.*”

Day of Science of the Max Planck Institute for Molecular Genetics **2010**

Selected Talk: “*An inducible RNAi system for the functional dissection of genes in the mouse.*”

RNA silencing: Mechanism, Biology and Application **2010**

Keystone Symposia.

International AEK Cancer Congress **2009**

Mechanisms and Models of Cancer **2008**

Cold Spring Harbor Meeting.

17th Meeting of the German Society for Developmental Biology **2007**

Organizer:

Dahlem Colloquium by Professor Robert Weinberg (MIT) **2010**

Max-Planck Institute for Molecular Genetics. Berlin, Germany.

Dahlem Colloquium by Jorge Cham (author of phdcomics.com) **2010**

Max-Planck Institute for Molecular Genetics. Berlin, Germany.