Marco Mangone, PhD

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Education

2000–2006 PhD Molecular Biology, Watson School of Biological Sciences. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, USA

Advisor: Professor Dr. Winship Herr. Thesis: "Analysis of the HCF–1 basic region and its role in sustaining cell proliferation"

1990–2000 Dottorato Italian Laurea, La Sapienza University, Rome, Italy

Advisor: Dr. Ernesto Di Mauro. Thesis: "Computational analysis of Single–Nucleotide Polymorphisms in humans"

Honors and Distinctions

2000–2006 Dana Foundation PhD Fellowship

Professional Experience

2011–Present Assistant Professor with joint appointment in the School of Life Sciences and the Biodesign Institute at Arizona State University, Tempe, AZ, USA

2006–2011 Postdoctoral Fellow, Center for Genomics and Systems Biology, New York University, New York, USA. Advisor: Dr. Fabio Piano

1999–2000 Scientific Programmer, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, USA.

Advisor: Dr. Lincoln Stein. Project: Original development of WormBase database

1997–1999 Research Assistant, Regina Elena Cancer Institute, La Sapienza University, Rome, Italy.

Advisor: Dr. Raffaele Tecce. Project: "The role of the Microphthalmia–associated transcription factor in melanoma"

Research Grants – Awarded

1. R21 – NIH/NCI – Detection and validation of miRNA targets in breast cancer. **Mangone M. PI**
2. Biodesign Institute Competitive Bridge Funding - Dissecting drug resistance to Gleevec in CML patients. **Mangone M. PI**
3. ASU/Dublin City College Catalyst Fund - Expanding the human 3'UTRome library. **PI**
4. Arizona State University – School of Life Sciences Start–up Grant (SUG). **PI**

Professional Societies

- Member of Genetics Society of America (GSA)
- Member of the RNA Society

Peer–Reviewed Publications (Generated from work completely conducted at ASU)

[Key: *= ASU/SoLS PhD graduate student, ** = Barrett honors student, *=ASU/SoLS undergraduate student]**

2015

Submitted

1. Kotagama K.*, Babb C., Wolter J.M. *, Murphy R., and **Mangone M**. The human 3′UTRome v1: a clone repository for studies in post-transcriptional gene regulation. 2015 *(submitted)* **[F]**
2. Wallace R.G., Twomey L.C., Custaud M.A., Moyna N., Cummins P.M., **Mangone M.** and Murphy R.P. Potential Diagnostic and Prognostic Biomarkers of Epigenetic Drift within the Cardiovascular Compartment 2015 *(submitted)* **[F]**

Published

3. Kotagama K.*, Chang Y., and **Mangone M**. miRNAs as Biomarkers in Chronic Myelogenous Leukemia. *Drug Dev Res.* 2015 Aug 18. doi: 10.1002/ddr.21266. [impact factor 0.73] **[F]**
4. Blazie S.*, Babb C., Wilky H.**, Rawls A., Park J.G. and **Mangone M**. Comparative RNA Seq Analysis Reveals Pervasive Tissue-specific Alternative Polyadenylation in *Caenorhabditis elegans* Intestine and Muscles. *BMC Biology* 2015 Jan. 13:4 (cited 2 times) [impact factor 7.98] **[F]**
5. Wolter J.M.*, Kotagama K.*, Babb C. and **Mangone M**. Detection of miRNA Targets in High-Throughput Using the 3'LIFE Assay. *J Vis Exp.* 2015 May 25;(99): e52647 [impact factor 1.33] **[F]**

2014

6. Wolter JM*, Kotagama K*, Pierre–Bez AC, Firago M***, Tennant M*** and **Mangone M.** 3'LIFE: A Functional Assay to Detect *C. elegans* miRNA Targets in High–Throughput.

   Nucleic Acids Research July 29, 2014 (10.1093/nar/gku626). PMID: 25074381 (cited 5 times) [impact factor 9.11] **[F]**

Peer–Reviewed Publications (Generated from work at least partially conducted prior to ASU)

[Key: GS = graduate student, PD = postdoctoral fellow, F = ASU faculty]

7. The modENCODE CONSORTIUM. Integrative Analysis of Functional Element in the *Caenorhabditis elegans* Genome by the modENCODE Project.

   Science. Dec 24, 2010; 330(6012): 1775–87 (cited 199 times) PMID: 21177976 [impact factor 32.452] **[PD]**
8. **Mangone M.**, Prasad Manoharan A., Thierry–Mieg D., Thierry–Mieg J., Han T., Mackowiak S., Mis E., Zegar C., Gutwein M.R., Khivansara V., Attie O., Chen K., Salehi–Ashtiani K., Vidal M., Harkins T., Bouffard P., Suzuki Y., Sugano S., Kohara Y., Rajewsky N., Piano F., Gunsalus K.C., Kim J.K. The Landscape of *C. elegans* 3'UTRs.

   Science, 2010 Jul 23; 329(5990): 432–5 PMID: 20522740 (cited 75 times) [impact factor 32.452] **[PD]**

9. **Mangone M.**, Myers M.P., Herr W. Role of the HCF–1 Basic Region in Sustaining Cell Proliferation.
   PLoS ONE. 2010; Feb 2; 5(2): e9020 PMID: 20126307 (cited 2 times) [impact factor 4.537] **[GS]**
10. The modENCODE CONSORTIUM. Unlocking the secrets of the genomes,
    Nature. 2009; Jun 18; 459(7249): 927–30 PMID: 19536255 (cited 234 times) [impact factor 36.235] **[PD]**
11. **Mangone M.**, Macmenamin P., Zegar C., Piano F., Gunsalus KC. UTRome.org: a platform for 3'UTR biology in *C. elegans*.
    Nucleic Acids Res. 2008 Jan; 36: D57–62. Epub 2007 Nov 5 PMID: 17986455 (cited 7 times) [impact factor 7.147] **[PD]**
12. Stein LD., **Mangone M.**, Day A., Harris T., Arva A., Shu SQ., Lewis S. and Mungall C. The Generic Genome Browser: A Building Block for a Model Organism System Database.
    Genome Res., Oct 2002; 12: 1599–1610 PMID: 12368253 (cited 635 times) [impact factor 12.486] **[GS]**
13. Piano F., Schetter A.J., **Mangone M.**, Stein LD., Kemphues KJ. RNAi analysis of genes expressed in the ovary of Caenorhabditis elegans. PMID: 11137018 **[GS]**
    Current Biology 10: 1619–1622 2001 (cited 144 times) [impact factor 10.881]
14. Stein L, **Mangone M.**, Schwarz E., Durbin R., Thierry–Mieg J., Spieth J., Sternberg P. WormBase: network access to the genome and biology of *Caenorhabditis elegans*. **[GS]**
    Nucleic Acids Res. 2001 Jan 1; 29(1): 82–6 PMID: 11125056 (cited 171 times) [impact factor 7.147]

Number of citations as of Sept 2014, ISIS Web of Knowledge

[Impact factor as of 2014]

Total Number of citations: **1,404**

Average number of citations per article: **156**

H index: **6**

Conference Publications (Generated from work completely conducted at ASU)

[Key: *= ASU/SoLS PhD graduate student, ** = Barrett Honors student, *=ASU undergraduate student]**

2015

1. Blazie S.M.*, Babb C., Wilky H.**, Rawls A. Park J.C. and **Mangone M.**, An integrative analysis of alternative polyadenylation and miRNA regulation in *C. elegans*.
   20th International Worm Meeting 2015, University of California, Los Angeles. **[F]**
2. Kotagama K.*, Blazie S.M.*, Babb C., Ramirez K., Otto C., Pierre-Bez A., and **Mangone M.**, A mechanistic study of alternative polyadenylation in *C. elegans*.
   20th International Worm Meeting 2015, University of California, Los Angeles. **[F]**
3. Blazie S.M.*, Kotagama K.*, and **Mangone M.**, APAome.org: a platform to study alternative polyadenylation in *C. elegans*.
   20th International Worm Meeting 2015, University of California, Los Angeles. **[F]**

4. Wolter J.M.*, Godlove V.***, Nguyen T.**, Kotagama K.*, Blazie S.*, Babb C., Lynch C.A.*, Rawls A and **Mangone M.** The Static Dynamics of Gene Regulation & Evolution ny the miR-10 microRNA Family

   30th RNA Society Meeting 2015, University of Madison, Wisconsin. **[F]**

5. Kotagama K.*, Babb C., Nguyen C.**, Phomsavanh A.***, Garcia D.***, and **Mangone M.**, The Human 3'UTRome V1: A Modular Resource for Studies in mRNA Regulation

   30th RNA Society Meeting 2015, University of Madison, Wisconsin. **[F]**

2013

6. Blazie S.M.*, Pierre–Bez A., Otto C.**, Lynch C.* and **Mangone M**. Advancing and Refining the *C. elegans* 3'UTRome.

   19th International Worm Meeting 2013, University of California, Los Angeles. **[F]**

7. Wolter J.M.*, Kotagama K.**, Pierre–Bez A.C., Firago M.***, Tennant M.*** and **Mangone M.** 3'LIFE: A Functional Assay to Detect *C. elegans* miRNA Targets in High–Throughput.

   18th International Worm Meeting 2013, University of California, Los Angeles. **[F]**

Conference Publications (Generated from work at least partially conducted prior to ASU)

[Key: GS = ASU PhD graduate student, PD = postdoctoral fellow, F = ASU faculty]

8. **Mangone M.**, Lucas J.M., Gutwein M.R., Mecenas D., Gunsalus K.C., Piano F. A 3'UTR clone library of the nematode *C. elegans*: a resource for 3'UTR biology.18th International Worm Meeting 2011, University of California, Los Angeles. **[PD]**
9. **Mangone M.**, Prasad Manoharan A., Thierry–Mieg D., Thierry–Mieg J., Han T., Mackowiak S., Mis E., Zegar C., Gutwein M.R., Khivansara V., Attie O., Chen K., Salehi–Ashtiani K., Vidal M., Harkins T., Bouffard P., Suzuki Y., Sugano S., Kohara Y., Rajewsky N., Piano F., Gunsalus K.C., Kim J.K. The Landscape of C. elegans 3'UTRs. *C. elegans*. Development and Gene Expression Meeting 2010 EMBL Heidelberg, Germany. **[PD]**
10. **Mangone M.**, Prasad Manoharan A., Mis E., Zegar C., Attie O., Ting H., Khivansara V., Chen K., Salehi–Ashtiani K., Thierry–Mieg J., Thierry–Mieg D., Kohara Y., Rajewsky N., Piano F., Gunsalus K. and John Kim. The landscape of 3'UTRs in *C. elegans*. 17th International Worm Meeting 2009, University of California, Los Angeles. **[PD]**
11. **Mangone M.**, Vidal M., Macmenamin P., Hill D., Salehi–Ashtiani K., Piano F., Gunsalus K, Rajewsky N.2007. The 3'utrome Project: A Detailed Genomic Annotation Of 3'UTRs of *C. elegans*.16th International Worm Meeting 2007, University of California, Los Angeles. **[PD]**
12. **Mangone M.**, Macmenamin P., Hill D.E., Salehi–Ashtiani K., Gunsalus K and Piano F. The 3'UTRome Project. 6th Annual ORFeome Meeting 2006, Harvard University. **[PD]**
13. **Mangone M.**, Macmenamin P., Salehi–Ashtiani K., Gunsalus K and Piano F. The 3'UTRome Project. 5th Annual ORFeome Meeting 2005, Harvard University. **[PD]**
14. **Mangone M.**, Myers, M and Herr W. Analysis of the HCF–1 Basic Region and its role in sustaining cell proliferation. Mechanisms of Eukaryotic Transcription, 2005. Cold Spring Harbor Laboratory. **[PD]**
15. Sternberg P., Lawson D., Schwarz E.M., Martinelli S.D., Chen W.J., **Mangone M.**, Blasiar D., Worthington R., Lee R.Y., Day A., Mueller H.M., Harris T.W., Thierry–Mieg D., Thierry–Mieg J.,

Spieth J., Durbin R., Stein L.D. WormBase, a web–accessible database for *C. elegans* biology. 2001. 13th International *C. elegans* Meeting, UCLA **[PD]**

16. **Mangone M.**, Sternberg P., Jawson D., Schwarz EM, Martinelli SD, Chen W., Blasiar D., Worthington R., Lee RV., Day A., Mueller HM, Harris T., Thierry–Mieg D., Thierry–Mieg J., Spieth J., Durbin R., Stein LD. WormBase: a web–accessible database for *C. elegans* biology. 15th International *C. elegans* Meeting 2001, California Institute of Technology (Caltech), USA. **[ST]**
17. **Mangone M.**, Sternberg P, Thierry–Mieg J., Spieth J., Durbin R., Stein LD. WormBase: a web–accessible database for *C. elegans* biology. Genome Meeting 2000, Cold Spring Harbor Laboratory. **[GS]**
18. Stein L., Kemphues K., Piano F., Morton D., Schetter AJ., Reinke V., Kim S., **Mangone M.** Assigning function to ovary expressed genes using RNAi. East Coast Worm Meeting 2000. **[GS]**

Invited Talks

Dec 2, 2014 Barrow Neurological Institute, Phoenix AZ – Seminar Title: *"The Role of Alternative Polyadenylation in miRNA Regulation".*

June 2, 2015 Society for *In Vitro* Biology meeting, Tucson AZ – Seminar Title: "*Dissecting the miRNA Interactome in Breast Cancer*"

Awards from Graduate Students in Dr. Mangone's Laboratory

2015

1. Blazie S.M.* - Winner of the ***2015 Honorable Mention Poster Award*** at the 20th International Worm Meeting 2015, University of California, Los Angeles. **[F]**
2. Wolter J.M.* - Winner of the ***2015 Outstanding Research in Genetics and Development Poster Award*** at the 30th RNA Society Meeting 2015, University of Madison, Wisconsin. **[F].**
3. Wolter J.M.* - Winner of the Maher scholarship 2012-present. **[F]**

Book Chapters

1. **Mangone M.** and Stein LD. Applied Perl (Williams) Perl and ACEDB Chapter 13 p. 357–383 Paperback – 405 pages (May 2001) Hungry Minds, Inc; ISBN: 0764547836

Teaching Experience

[Key: GS = graduate student, PD = postdoctoral fellow, F = ASU faculty]

2015

1. Teacher for the undergraduate/graduate course BIO494/598 The RNA World: A genomic Approach. Arizona State University – fall 2014 – 26 students **[F]**
2. Co-teacher for the MCB 701 Molecular and Cellular Biology Colloquium – fall 2014 – 37 students **[F]**
3. Lecturer MCB/NEU 555 Adv. Molecular & Cellular Biology. Arizona State University – fall semester 2015 **[F]**

2014

4. Teacher for the undergraduate/graduate course BIO494/598 The RNA World: A genomic Approach. Arizona State University – fall 2014 – 33 students **[F]**

5. Co-teacher for the MCB 701 Molecular and Cellular Biology Colloquium – fall 2014 – 36 students **[F]**
6. Lecturer MCB/NEU 555 Adv. Molecular & Cellular Biology. Arizona State University – fall semester 2014 **[F]**

2013

7. Teacher for the undergraduate/graduate course BIO494/598 The RNA World: A genomic Approach. Arizona State University – fall 2013 – 60 students **[F]**
8. Co–teacher for the undergraduate course BIO340 General Genetics. Arizona State University – spring semester 2013 – 325 students **[F]**
9. Lecturer MCB/NEU 555 Adv. Molecular & Cellular Biology. Arizona State University – fall semester 2013 **[F]**

2012

10. Co–teacher for the undergraduate course BIO340 General Genetics. Arizona State University – spring semester 2012 – 300 students **[F]**
11. Lecturer MCB556 Adv. Molecular & Cellular Biology. Arizona State University – fall semester 2012 **[F]**
12. Lecturer MBB440 Functional Genomics. Arizona State University – fall semester 2012 **[F]**

2000-2010

13. Lecturer in undergraduate and PhD course of Post–transcriptional Gene Regulation. New York University – fall semester 2010 **[PD]**
14. Lecturer in undergraduate and PhD course of Dr. Fabio Piano on Post–transcriptional Gene Regulation. New York University – spring semester 2009 **[PD]**
15. Lecturer in undergraduate and PhD course of Dr. Fabio Piano on Post–transcriptional Gene Regulation. New York University – fall semester 2008 **[PD]**
16. Teacher of course on recombinant DNA for middle and high school students at the DNA Learning Center as part of Watson School of Biological Sciences curriculum. WSBS – fall semester 2000 **[GS]**

Mentoring History (Current)

Graduate Students in Dr. Mangone's laboratory

1. Justin Wolter, Graduate Student, Molecular & Cellular Biology PhD Program – Arizona State University, Project: "A High–Throughput approach to detect cancer–related miRNA targets *in vivo*".

   PhD Research Chair. (2012 – current)
2. Stephen Blazie, Graduate Student, Molecular & Cellular Biology PhD Program – Arizona State University. Project: "Tissue–specific mRNA profiling of *C. elegans* 3'UTRs".

   PhD Research Chair. (2012 – current)
3. Kasuen Kotagama, Graduate Student, Molecular & Cellular Biology PhD Program – Arizona State University. Project: "Expanding the human 3'UTRome".

   PhD Research Chair. (2014 – current)

Research Technician

4. Victoria Godlove, Research Assistant, Arizona State University. Project: "The 3'LIFE screen" (2015 – Present)

Undergraduate Research

ASU Barrett Honors College undergraduate Students

5. Clara Nguyen, Barrett Honors College undergraduate student – Title: TBD (summer 2013 – current).

ASU School of Life Sciences Students

6. Amanda Phomsavanh, Barrett Honors College undergraduate student – Title: "The human 3'UTRome". Thesis Committee Chair (fall 2014 – current)
7. Alexander Linse, ASU/SoLS undergraduate student – Title: "3'LIFE assay". (fall 2015 – current)
8. Christina Nguyen, ASU/SoLS undergraduate student – Title: "Expanding the Human 3'UTRome Clone Collection". (summer 2013 – current)
9. Michelle Di Palma, ASU/SoLS undergraduate student – Title: "The human 3'UTRome". (summer 2015 – current)
10. Shantelle George, ASU/SoLS undergraduate student – Title: "3'UTR localization in eukaryotes". (summer 2015 – current)
11. Hoai Le ,ASU/SoLS undergraduate student – Title: "3'UTR localization in eukaryotes". (summer 2015 – current)
12. Rajan Joshi, ASU/SoLS undergraduate student – Title: "Alternative polyadenylation in *C. elegans*". (summer 2015 – current)

Mentoring History (Past)

Research Technician

13. Alexandra Pierre–Bez – Project: "The *C. elegans* 3'UTRome project". (2011–2013). She is now enrolled in the Dental Medicine Program at Midwestern University. ***This person is currently enrolled in dentistry school at Midwestern University***.
14. Cody Babb – Project "The human 3'UTRome clone library. (2013-2015).
15. Karina Ramirez – Project: "The *C. elegans* 3'UTRome project" (2014 – Summer 2015) ***This person is currently enrolled in the PhD program in genomics at Tsukuba University, Japan.***

Graduate Students in other laboratories

16. Joshua Podlevsky (Dr. Chaput's laboratory) – Molecular & Cellular Biology PhD Program – Arizona State University. PhD Chair of the comprehensive exam. (2013 – current)
17. Matthew Dunn (Dr. Chaput's laboratory) – Molecular & Cellular Biology PhD program – Arizona State University. PhD thesis committee member. (2013 – current)
18. Paul Hanavan (Dr. Lake's Laboratory) – Graduate Student, Molecular & Cellular Biology PhD program – Arizona State University. PhD thesis committee member. (2012 – current)

Undergraduate Research

ASU Barrett Honors College undergraduate Students

19. Carine Otto – Title: "Genome–wide analysis of the role of CstF in alternative polyadenylation in *C. elegans*" Thesis Committee Chair (summer 2012 – Fall 2013)

This student is now a graduate student in Utah State University School of Veterinary Medicine.

20. Kausen Kotagama – Title: "High throughput verification of miRNA targets in the 3`UTRs of *C. elegans*" Thesis Committee Chair (summer 2012–Fall 2013)

This student is now aPhD student in the School of Life Sciences at ASU in my laboratory.

21. Henry Wilky – Title: "Developing a system to study Alternative Polyadenylation in Worms". Thesis Committee Chair (summer 2013 – Spring 2015)

***This student is now a research technician in Dr. Amodeo's lab at Princeton University**.]*

22. Dustin Weigele – Title: "miRNA Biogenesis".

Thesis Committee Chair (summer 2013 – fall 24 2014)

ASU School of Life Sciences Undergraduate Students

23. Cherie Lynch – Project title: "Study 3'UTRs in *C. elegans*". (Graduated in 2012).

*[**This student is now enrolled in the Molecular & Cellular PhD Program at ASU/SoLS**]*

24. Danielle Matter – Project title: "Primers design for 3'RACE analysis in human genes". (Graduated in 2012).

*[**This student is now enrolled in a Master's in Biomedical Sciences at Midwestern University**]*

25. Mari Firago – Project title: "Genome–wide analysis of 3'UTRs in humans". (Graduated in 2012).

*[**This student is now enrolled in the Biomedical Informatics Master's Program at ASU/Mayo Clinic**]*

26. Jeffrey Jones – Project title: "A human 3'UTRome for cancer research". (Graduated in 2012).

*[**This student is now enrolled in the doctorate program in pharmaceutical sciences at Midwestern University**]*

27. Immanuel Purushothaman – MS. Bioinformatics "A Bioinformatics Approach for Discovering Distinctions Between High and Low Risk HPV Sequences as Potential Sites Significant to Oncogenicity." (Graduated in 2012).

*[**This student is now employed as bioinformatician at Mount Sinai in NYC**]*

28. Nicole Labban, – Title: "A method to detect tissue–specific miRNA expression in *C. elegans*" (summer 2013 – summer 2014)

29. Dasia Garcia – Title: "Expanding the Human 3'UTRome Clone Collection". (summer 2014 – spring 2015)

30. Jacqueline Buchak – Title: "Determining of the Relationship Between a Man–made ATP Binding Protein and the Bacterial Stringent Response" Thesis Committee Member (2012 – 2014)

31. Joseph Cusimano – Title: Glioblastoma in the Crosshairs: Development of a Dual Reporter Assay for Discovery of Olig2 Inhibiting Drugs. Thesis Committee Member (fall 2013 – spring 2014)

32. Molly Shaw – Project title: "Post–transcriptional gene regulation by miRNAs". (Graduated in 2012).

Service

2011–Present Member of the Executive Committee of the Molecular & Cellular Biology PhD program in the School of Life Sciences at Arizona State University.

2015-Present Arizona State University Senate member (Representing the ASU School of Life Sciences).

2015-Present Arizona State University Residency Appeal Committee.

Fall 2012 Co–chair of the 2012 Molecular & Cellular Biology PhD program Admission Committee.

Fall 2013 Member of the 2013 Molecular & Cellular Biology PhD program Admission Committee.

Fall 2014 Member of the 2014 Molecular & Cellular Biology PhD program Admission Committee.

Ad–Hoc Manuscript Reviewer

- Nature Protocols: 2015
- BMC Genomics: 2015
- Nucleic Acids Research: 2014
- PLoS One: 2014
- BMC Evolutionary Biology: 2013
- Journal of Proteome Research: 2013
- Journal of Proteomics and Genomics Research: 2012
- Genes & Development: 2011

Review Study Sections

2014 Invited Reviewer for NIH Study Section ZRG1 HDM-Q (58)