

Foteini Mourkioti, PhD

CURRICULUM VITAE

Perelman School of Medicine
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EDUCATION

B.S. 1994-1998 University of Patras, Faculty of Biology, Greece.
Ph.D. 1998-2002 Max-Planck Institute for Biophysical Chemistry, Department of Molecular Developmental Biology, Göttingen, Germany.

RESEARCH EXPERIENCE

2003-2008 Postdoctoral Fellow, EMBL Mouse Biology Unit, Italy. Field: Inflammation and Muscle Regeneration, Mouse Genetics and Heart Disease Models.
2009-2011 Life Science Research Associate/Staff Scientist, Baxter Laboratory for Stem Cell Biology, Stanford University, USA, Field: Muscle Stem Cell Regulation, Dystrophic mouse models.

POSITIONS AND EMPLOYMENT

2011-2013 Instructor, Baxter Laboratory for Stem Cell Biology, Stanford
2014- Assistant Professor, *Primary Appointment*: Department of Orthopaedic Surgery, *Secondary Appointment*: Cell and Developmental Biology, Perelman School of Medicine, University of Pennsylvania, USA.
2016- Co-Director, Musculoskeletal Program, Institute of Regenerative Medicine, Perelman School of Medicine, University of Pennsylvania, USA.

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

2012- Member, American Heart Association.
2013- Member, Penn Center for Musculoskeletal Disorders.
2014- Member, Penn Muscle Institute.
2014- Member, Penn Institute of Regenerative Medicine.
2014- Member, Penn Cardiovascular Institute.
2015- Member, Orthopaedic Research Society
2015- Member, Penn Orphan Disease Center.

AD HOC PEER REVIEWER FOR RESEARCH JOURNALS

2013- Review Editorial Board of the Nature Publishing Group Journals “Frontiers in Striated Muscle Physiology” and “Frontiers Cell and Developmental Biology”.
2015- ad hoc Reviewer for “The FASEB Journal”.
2016- Reviewer for “eLife” Journal

GRANT REVIEWER FOR FUNDING AGENCIES

2011- French Muscular Dystrophy Association (AFM) Grant Review
2015 NASA HERO Musculoskeletal Panel 2015, Washington DC
2015 Muscular Dystrophy Association Scientific Advisory Committee.
2015 Muscular Dystrophy Association Medical Advisory Committee.

TEACHING AND MENTORING

2003-2009	Mentor for a graduate student: Paschalis Kratsios (currently Assistant Professor, The University of Chicago, K99 NIH Awardee).
2006	European Molecular Biology Laboratory (EMBL) Course on “Methods of Mouse Cell Isolation”.
2011	“BIOE282: Performance, Development, and Adaptation of Skeletal Muscle” Stanford University, fall quarter, advanced undergraduate and graduate students.
2015-	“CAMB 511: Principles of Development” spring quarter, graduate students.
2015-	“CAMB 703: The ECM, Adhesion Receptor Signaling, and Translational Biomechanics” spring quarter, graduate students.
2015-	“BE561: Musculoskeletal Biology and Bioengineering” spring quarter, graduate students.
2015-	“CAMB 605: First Year Seminars” Cell and Molecular Biology CAMB 605, autumn quarter, graduate students.
2015-	Lecturer in “Cell Biology and Physiology” CAMB 691, spring quarter, graduate students.
2015-	Committee Member for 3 graduate students: Brian Cosgrove, Tonia Tsiman, Noelle Knight
2016-	Co-Mentor of a graduate student: Alexandra Stanley

SELECTED HONORS

2003	Honorarium from Max-Planck Institute for Biophysical Chemistry, Department Molecular Developmental Biology, Goettingen, Germany.
2003	EMBL Postdoctoral fellowship.
2010	American Heart Association Scientist Development Grant.
2010	Cell paper selected from the Faculty of 1000 Medicine: http://f1000.com/7577958
2012	Poster Judge, Stem Cells in Cancer and Regenerative Medicine Conference, Heidelberg.
2013	Poster Judge, Cardiac Biology-From Development to Regenerative Medicine Conference, Heidelberg, Germany.
2015	Poster Judge, Muscular Dystrophy Association Annual Conference 2015, Washington DC

SELECTED INVITED TALKS (INTERNATIONAL AND REGIONAL)

10/2016	Translational Research in Mitochondria, Aging, and Disease (TRiMAD) Symposium, Children’s Hospital of Philadelphia (CHOP), Philadelphia, USA.
08/2016	Gordon Research Conference (GRC), Musculoskeletal Biology and Bioengineering, Andover, NH, USA.
01/2016	Institute of Regenerative Medicine-The Present and Future of Regenerative Biology and Medicine Symposium, UPenn, Philadelphia, USA.
01/2015	Institute of Regenerative Medicine, Annual Symposium, UPenn, Philadelphia, USA.
6/2014	EMBL Symposium-40 years EMBL, Monterotondo, Italy.
9/2013	Molecular Mechanisms of Muscle Growth and Wasting in Health and Disease, Ascona, Switzerland.
7/2013	Cardiovascular Institute, Stanford University, Stanford, USA.
6/2013	Cardiac Biology-From Development to Regenerative Medicine Conference, Heidelberg, Germany.
8/2012	Stem Cells in Cancer and Regenerative Medicine Conference, Heidelberg, Germany.
9/2011	Gordon Research Conference (GRC), Myogenesis, New Horizons for Myogenesis, Waterville Valley, NH, USA.
06/2011	9 th Annual Meeting International Society for Stem Research (ISSCR), Toronto, Ontario Canada.
10/2010	Seminar Series, Microbiology & Immunology Department, Stanford University, Stanford, USA.
09/2006	2 nd Annual MYORES Congress - European muscle development network of excellence, Prague, Czech Republic.
05/2006	EUROPREVENT 2006 Conference, Athens, Greece.

04/2006 Harefield Heart Science Centre, Imperial College, London, UK.
10/2002 Fred Hutchinson Cancer Research Centre, Seattle, Washington, USA.

MEETING ORGANIZATION

2007 Mini-Symposium on Cardiac & Skeletal Muscle Regenerative Mechanisms, Skiathos, Greece (Organizer).

PUBLICATIONS

Frederick DW, Loro E, Liu L, Davila A Jr, Chellappa K, Silverman IM, Quinn WJ 3rd, Gosai SJ, Tichy ED, Davis JG, **Mourkioti F**, Gregory BD, Dellinger RW, Redpath P, Migaud ME, Nakamaru-Ogiso E, Rabinowitz JD, Khurana TS, Baur JA. Loss of NAD Homeostasis Leads to Progressive and Reversible Degeneration of Skeletal Muscle. *Cell Metabolism*. 2016 Aug 9;24(2):269-82. doi: 10.1016/j.cmet.2016.07.005. PubMed PMID: 27508874; PubMed Central PMCID: PMC4985182.

Cosgrove, BD., Gilbert, PM., Porpiglia, E., **Mourkioti, F.**, Lee, SP., Corbel S.Y., Liewellyn, M.E., Delp, SL., Blau H.M. (2014) Rejuvenation of the aged muscle stem cell population restores strength to injured aged muscles. *Nature Medicine* Mar;20(3):255-64. doi: 10.1038/nm.3464. Epub 2014 Feb 16. PMID: 24531378.

- *This paper was highlighted in Nature Medicine* under “News and Views” section: Bentzinger, F.C., and Rudnicki, M.A.(2014) Rejuvenating aged muscle stem cells. *Nature Medicine*, 20:234-235.

Mourkioti, F., Kustan, J., Kraft, P., Way, JW., Zhao, MM., Kost-Alimova, M., Protopopov, A., DePinho, R., Bernstein, D., Meeker, AK., Blau, HM. (2013) Role of Telomere Dysfunction in Cardiac Failure in Duchenne Muscular Dystrophy. *Nature Cell Biology*, 15(8):895-904.

- *This paper was highlighted in Nature* under “Research Highlights: Disease Research” section: (2013) Short Telomeres Damage Heart. *Nature*, 499:129.
- *This paper was highlighted in San Francisco Business Times* under “Biotech” section: Ron Leuty (2013) Stanford catches mice. *July 12*.

Sacco, A*, **Mourkioti, F***, Tran, R., Choi, J., Llewellyn, M., Kraft, P., Shkreli, M., Delp, S., Pomerantz, JH., Artandi, SE., Blau HM. (2010) Short Telomeres and Stem Cell Exhaustion Model Duchenne Muscular Dystrophy in mdx/mTR Mice. *Cell*, 143(7):1059-71. Epub 2010 Dec 9. ***Authors contributed equally**.

- *This paper was highlighted in Cell* under “Previews” section: Chamberlain, J.S. (2010) Duchenne Muscular Dystrophy Models Show Their Age. *Cell*, 143(7):1040-2.

Kratsios, P., Catela, C., Salimova, E., Huth, M., Berno, V., Rosenthal, N., and **Mourkioti, F.** (2010) Distinct roles for cell-autonomous Notch signaling in cardiomyocytes of the embryonic and adult heart. *Circ. Res.*, 106(3):559-72. Epub 2009 Dec 10.

Kratsios, P., Huth, M., Temmerman, L., Salimova, E., Al Banchaabouchi, M., Sgoifo, A., Manghi, M., Suzuki, K., Rosenthal, N., and **Mourkioti, F****. (2010) Antioxidant amelioration of dilated cardiomyopathy caused by conditional deletion of NEMO/IKK γ in cardiomyocytes. *Circ Res.*, 106(1):133-44. Epub 2009 Oct. 22. ** **corresponding author**.

- *This paper was highlighted in Circulation Research* under “Editorials” section: Nemchenko, A., Hill, J.A. (2010) NEMO nuances NF-kappaB. *Circ. Res.* 106(1):10-2.

Ruffel, D*, **Mourkioti, F.***, Gambardella, A*, Kirstetter, P., Lopez, R.G., Rosenthal, N. and Nerlov, C. (2009) A CREB-C/EBP β cascade induces M2 macrophage-specific gene expression and promotes muscle injury repair. *Proc Natl Acad Sci USA* 106(41): 17475-80 ***Authors contributed equally**.

Mourkioti, F., Slonimsky, E., Huth, M., Berno, V., and Rosenthal, N. (2008) Analysis of CRE-mediated recombination driven by myosin light chain 1/3 regulatory elements in embryonic and adult skeletal muscle: a tool to study fiber specification. *Genesis* 46(8):424-30.

Mourkioti, F.** and Rosenthal, N. (2008) NF- κ B signaling in skeletal muscle: prospects for intervention in muscle diseases. *Journal of Molecular Medicine* 86(7):747-59. ** **corresponding author and received the review invitation**.

- Lara-Pezzi, E., Paul, A., McCullagh, K., Winn, N., Slonimsky, E., Santini, M.P., **Mourkioti, F.**, Fukushima, S., Suzuki, K., and Rosenthal, N. (2007) A naturally occurring calcineurin variant inhibits FoxO activity and enhances skeletal muscle regeneration. *Journal of Cell Biology* 179(6):1205-18.
- Mourkioti, F.****, Kratsios, P., Luedde, T., Adami, R., Parente, V., Bottinelli, R., Song, Y., Delafontaine, P., Pasparakis, M., and Rosenthal, N. (2006) Targeted ablation of IKK2 increases skeletal muscle strength, counters atrophy and promotes regeneration. *Journal of Clinical Investigation* 116(11): 2945-2954.
****corresponding author.** (Cover).
 • This paper was highlighted in *Journal of Clinical Investigation* under “Commentaries” section: Karin, M. Role for IKK2 in muscle: waste not, want not. *J. Clin. Invest.* 116(11):2866-8.
- Mourkioti, F.** and Rosenthal, N. (2005) IGF-1, inflammation and stem cells: interactions during muscle regeneration. *Trends Immunol.* 26(10): 535-542.
- Peter A, Schottler P, Werner M, Beinert N, Dowe G, Burkert P, **Mourkioti F**, Dentzer L, He Y, Deak P, Benos PV, Gatt MK, Murphy L, Harris D, Barrell B, Ferraz C, Vidal S, Brun C, Demaille J, Cadieu E, Dreano S, Gloux S, Lelaure V, Mottier S, Galibert F, Borkova D, Minana B, Kafatos FC, Bolshakov S, Siden-Kiamos I, Papagiannakis G, Spanos L, Louis C, Madueno E, de Pablos B, Modolell J, Bucheton A, Callister D, Campbell L, Henderson NS, McMillan PJ, Salles C, Tait E, Valenti P, Saunders RD, Billaud A, Pachter L, Klapper R, Janning W, Glover DM, Ashburner M, Bellen HJ, Jackle H, Schafer U. (2002) Mapping and identification of essential gene functions on the X chromosome of *Drosophila*. *EMBO Rep.* 3(1): 34-38.
- Benos, P.V., Gatt, M.K., Murphy, L., Harris, D., Barrell, B., Ferraz, C., Vidal, S., Brun, C., Demaille, J., Cadieu, E., Dreano, S., Gloux, S., Lelaure, V., Mottier, S., Galibert, F., Borkova, D., Minana, B., Kafatos, F.C., Bolshakov, S., Siden-Kiamos, I., Papagiannakis, G., Spanos, L., Louis, C., Madueno, E., de Pablos, B., Modolell, J., Peter, A., Schottler, P., Werner, M., **Mourkioti, F.**, Beinert, N., Dowe, G., Schafer, U., Jackle, H., Bucheton, A., Callister, D., Campbell, L., Henderson, N.S., McMillan, P.J., Salles, C., Tait, E., Valenti, P., Saunders, R.D., Billaud, A., Pachter, L., Glover, D.M., and Ashburner, M. (2001) From first base: the sequence of the tip of the X chromosome of *Drosophila melanogaster*, a comparison of two sequencing strategies. *Genome Res.* 11(5): 710-730.
- Benos, P.V., Gatt, M.K., Ashburner, M., Murphy, L., Harris, D., Barrell, B., Ferraz, C., Vidal, S., Brun, C., Demailles, J., Cadieu, E., Dreano, S., Gloux, S., Lelaure, V., Mottier, S., Galibert, F., Borkova, D., Minana, B., Kafatos, F.C., Louis, C., Siden-Kiamos, I., Bolshakov, S., Papagiannakis, G., Spanos, L., Cox, S., Madueno, E., de Pablos, B., Modolell, J., Peter, A., Schottler, P., Werner, M., **Mourkioti, F.**, Beinert, N., Dowe, G., Schafer, U., Jackle, H., Bucheton, A., Callister, D.M., Campbell, L.A., Darlamitsou, A., Henderson, N.S., McMillan, P.J., Salles, C., Tait, E.A., Valenti, P., Saunder, R.D., and Glover, D.M. (2000) From sequence to chromosome: the tip of the X chromosome of *D. melanogaster*. *Science* 287(5461): 2220-2222.