Joshua C. Black Ph.D.

Anschutz Medical Center, University of Colorado School of Medicine
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Education:

Sep 2002 - Sep. 2008 **Ph.D. Molecular Biology**, Molecular Biology Institute and Department of Biological Chemistry. University of California Los Angeles. Supervisor: Dr. Michael Carey.
Thesis Project: Regulation of A Catalytic Switch in p300 Important in Preinitiation Complex Assembly

Aug. 1998 - Apr. 2002 **Double Major: B.S. Biology and Biotechnology and B.S. Chemistry and Biochemistry**, Departments of Biology and Biotechnology and Chemistry and Biochemistry, Worcester Polytechnic Institute. Graduated with High Distinction.
Research Supervisors: Dr. Elizabeth Ryder and Dr. Craig Fairchild

Professional Experience:

Dec. 2015 – Present **Assistant Professor**
University of Colorado School of Medicine
Anschutz Medical Center, Department of Pharmacology Denver, CO

Oct. 2014 – Nov 2015 **Assistant in Genetics, Assistant in Medicine,**
Laboratory of Dr. Johnathan Whetstine
Massachusetts General Hospital Cancer Center
Harvard Medical School, Department of Medicine Boston, MA
Project: Understanding mechanisms of site-specific copy gain in cancer.

Oct. 2008 – Oct. 2014 **Postdoctoral Fellow,** Laboratory of Dr. Johnathan Whetstine
Massachusetts General Hospital Cancer Center
Harvard Medical School, Department of Medicine Boston, MA
Project: Understanding the role of histone tri-demethylases in DNA replication, cell cycle progression, copy number control and cancer.

Teaching Experience:

Jan. 2014 - Mar. 2014	Mentored Graduate Rotation Student Kelly Biette (Whetstine Laboratory)
Jan. 2014 - Mar. 2014	Mentored Graduate Rotation Student Colin Waters (Whetstine Laboratory)
Jan. 2013 - Nov. 2015	Instructed Confocal Microscopy use to MGH Cancer Center researchers
Oct. 2009 - Nov. 2015	Instructed microarray platform use to MGH Cancer Center researchers.
Feb. 2011 - Dec. 2011	Mentored Undergraduate Student: Chris Guenard (Whetstine Laboratory)
June 2010 - Apr. 2012	Mentored High School Student: Rachel Lee (Whetstine Laboratory)
June 2010 - Aug. 2011	Mentored High School Student: Ned Taylor (Whetstine Laboratory)
Summer 2010	Mentored Undergraduate Student: Khushbu Patel (Whetstine Laboratory)
Summer 2009	Mentored Undergraduate Student: Bonnie McCullagh (Whetstine Laboratory)
Summer 2009	Mentored Undergraduate Student: Mihika Pradhan (Whetstine Laboratory)
Oct. 2008 – Feb. 2009	Mentored Graduate Rotation Student: Ryan Walsh (Whetstine Laboratory)
Fall 2006	Mentored Graduate Rotation Student: Tasuku Kitada (Carey Laboratory)
Summer 2006	Mentored Graduate Rotation Student: Matt McBrian (Carey Laboratory)
Jan. 2004- June 2005	Mentored Undergraduate Student: Sarah Lombardo (Carey Laboratory)

Fall 2004	Teaching Assistant for LS3: Introduction to Molecular Biology, UCLA
Spring 2004	Teaching Assistant for LS3: Introduction to Molecular Biology, UCLA

Awards and Honors:

Aug. 2013 - Aug. 2014	ECOR Tosteson Postdoctoral Fellowship, MGH
July 2009 - July 2012	Jane Coffin Childs Memorial Fund Fellow, MGH
May 2009	ECOR Tosteson Fellowship Award (Declined), MGH
July 2007	Amgen Molecular Biology Institute Dissertation Year Award, UCLA
July 2007 - July 2008	UCLA Dissertation Year Fellowship, UCLA
July 2003 - July 2006	Cell and Molecular Biology Training Grant (Institutional RLK-NRSA), UCLA
April 2002	B.S. in Biology and Biotechnology awarded with High Distinction, Worcester Polytechnic Institute
April 2002	B.S. in Biochemistry awarded with High Distinction, Worcester Polytechnic Institute
April 2002	Provost's Major Qualifying Project Award in Biochemistry, Worcester Polytechnic Institute
April 2002	Provost's Major Qualifying Project Award in Biology and Biotechnology, Worcester Polytechnic Institute
May 2001	Pfizer Summer Undergraduate Research Fellowship, Worcester Polytechnic Institute

Professional Societies:

July 2001 Tau Beta Pi (Member)

Publications (H-Index=12):

1. Wagschal A, Najafi-Shoushtari SH, Wang L, Goedeke L, Sinha S, deLemos AS, **Black JC**, Ramirez CM, Li Y, Tewhey R, Hatoum I, Shah N, Lu Y, Kristo F, Psychoqios N, Vrbanac V, Lu YC, Hla T, de Cabo R, Tsang JS, Schadt E, Sabeti PC, Kathiresan S, Cohen DE, Whetstine JR, Chung RT, Fernandez-Hernando C, Kaplan LM, Bernards A, Gerszten RE, Naar AM. (2015) Genome-wide identification of microRNAs regulating cholesterol and triglyceride homeostasis. *Nature Medicine*. 21(11)1290-1297. PMID:26501192
2. Tajima K, Yae T, Javaid S, Tam O, Comaills V, Morris R, Wittner BS, Liu M, Engstrom A, Takahashi, **Black JC**, Ramaswamy S, Shioda T, Hammell M, Haber DA, Whetstine JR, Maheswaran S. (2015) SETD1A Modulates Cell Cycle Progression Through a miRNA Network that Regulates p53 Target Genes. *Nature Communications*. 6:8257. PMID: 26394836.
3. **Black JC**, Whetstine JR. (2015) Too little O_2, Too much gain. *Cell Cycle*. 14(18):2869-2870. PMID:26221746
4. **Black JC***, Atabakhsh E*, Kim J*, Biette KM, Van Rechem C, Ladd B, Burrowes PD, Donado C, Mattoo H, Kleinstiver BP, Song B, Andriani G, Joung JK, Iliopoulos O, Montagna C, Pillai S, Getz G, Whetstine JR. (2015) Hypoxia drives transient site-specific copy gain drug-resistant gene expression. *Genes and Development*. 29(10):1018-1031. PMID: 25995187
    - Received Cover for this issue of *Genes and Development.*
5. Van Rechem C, **Black JC**, Greninger P, Zhao Y, Donado C, Burrowes PD, Ladd B, Christiani D, Benes CH, Whetstine JR. (2015) A Coding Single Nucleotide Polymorphism in Lysine Demethylase KDM4A Associates with Increased Sensitivity to mTOR Inhibitors. *Cancer Discovery.* 5(3):245-254. PMID: 25564517
6. Van Rechem C, **Black JC**, Gräslund S, Benes CH, Whetstine JR. (2015) Lysine Demethylase KDM4A Associates with Translation Machinery and Regulates Protein Synthesis. *Cancer Discovery.* 5(3): 255-263. PMID: 25564516
7. Javaid S, Zhang J, Anderssen E, **Black JC**, Wittner BS, Tajima K, Ting DT, Smolen GA, Zubrowski M, Desai R, Maheswaran S, Ramaswamy S, Whetstine JR, Haber DA. Dynamic chromatin modification sustains epithelial-mesenchymal transition following inducible expression of Snail-1 (2013) *Cell Reports*. 5(6):1679-89. PMID:24360956.

8. Rottiers V, Obad S, Petri A, McGarrah R, Lindholm MW, **Black, JC**, Sinha S, Goody RJ, Lawrence MS, Delemos AS, Hansen HF, Whittaker S, Henry S, Brookes R, Najafi-Shoushtari SH, Chung RT, Whetstine JW, Gerszten RE, Kauppinen S, and Näär AM. (2013) Pharmacological inhibition of a microRNA family in non-human primates by a seed-targeting 8-mer antimiR. *Sci Transl Med.* 5(212) 212ra162. PMID: 24259050.
9. **Black JC***, Manning A*, Van Rechem C*, Kim J*, Ladd B, Cho J, Pineda CM, Murphy N, Daniels DL, Montagna C, Lewis PW, Glass K, Allis CD, Dyson NJ, Getz G, Whetstine JR. (2013) H3K9/36me3 Lysine Demethylase KDM4A Induces Site-Specific Copy Gain and Re-replication of Regions Amplified in Tumors. *Cell.* 154(3):541-555. PMID 23871696 * These authors contributed equally to this work.
    - *Cell* Previewed-
      Rickels, R., and Shilatifard, A. (2013) A Histone Modifier's Ill-Gotten Copy Gains. *Cell.* 154(3): 477-479.
    - Editor's Choice in *Science*-
      Kiberstis, P.A. (2013) Gains in Cancer Epigenetics. *Science*. 341, 696.
    - *Cancer Discovery* News-
      KDM4A Promotes Site-Specific Copy Number Gain (2013) DOI: 10.1158/2159-8290.CD-RW2013-162
    - *Nature Structural & Molecular Biology* Research Highlight-
      Heinrichs, A. (2013) Chromatin Impacts Copy Gain. *NSMB.* 20, 1025
    - *Nature Medicine* Research Highlight-
      VA. (2013) Unraveling chromatin checkpoints. *Nature Medicine* 19(9):1102.

10. **Black JC**, Van Rechem C, Whetstine JR. (2012) Histone Lysine Methylation Dynamics: Establisment, Regulation, and Biological Impact. *Mol. Cell.* 48(4):491-507. PMID 23200123
11. **Black JC**, Whetstine JR. (2012) Tipping the Lysine Methylation Balance in Disease. *Biopolymers.* 99(2): 127-135. Epub Aug. 8, 2012. PMID 23175387
12. **Black JC,** Whetstine JR. (2012) LOX Out Histones: A New Enzyme is Nipping at Your Tails. *Mol. Cell.* 46(3):243-244. PMID 22578539
13. **Black JC,** Whetstine JR. (2011) Chromatin landscape: methylation beyond transcription. *Epigenetics*. 6(1):9-15. PMID: 20855937.
14. Van Rechem C, **Black JC**, Abbas TA, Allen A, Reinhart CA, Yuan GC, Dutta A, Whetstine JR. The SKP1 - Cul1 - F-box and Leucine-rich repeat protein 4 (SCF-FbxL4) ubiquitin ligase regulates lysine demethylase 4A (KDM4A)/Jumonji domain-containing 2A (JMJD2A). (2011) *J Biol Chem.* In press. Epub July 8, 2011 PMID: 21757720.
15. **Black JC**, Allen A, Van Rechem C, Forbes E, Longworth M, Tschöp K, Rinehart C, Quiton J, Walsh R, Smallwood A, Dyson NJ, Whetstine JR. (2010) *Molecular Cell*. 40(5):736-48. PMID 21145482.
    - *Molecular Cell* Previewed-
      Gerace, EL., and Moazed, D. (2010) Histone demethylation and timely DNA replication. *Molecular Cell.* 40(5): 683-684.
16. Walker AK, Yang F, Jiang K, Ji JY, Watts JL, Purushotham A, Boss O, Hirsch ML, Ribich S, Smith JJ, Israelian K, Westphal CH, Rodgers JT, Shioda T, Elson SL, Mulligan P, Najafi-Shoushtari H, **Black JC**, Thakur JK, Kadyk LC, Whetstine JR, Mostoslavsky R, Puigserver P, Li X, Dyson NJ, Hart AC, Näär AM (2010). Conserved Role of SIRT1 Orthologs in Fasting-dependent Inhibition of the Lipid/cholesterol Regulator SREBP. *Genes and Development*. 24(13):1403-17. PMID: 20595232
17. Ramirez-Carrozi VR, Brass D, Bhatt DM, Cheng C, Hong C, Doty KR, **Black JC**, Hoffmann A, Carey MF, Smale ST. (2009) A Unifying Model for the Selective Roles of CpG Islands and Nucleosome Remodeling in Inducible Transcription. *Cell.* 138(1):114-28. PMID: 19596239
18. Smallwood AL*, **Black JC***, Tanese N, Pradhan S, Carey M. HP1-mediated Trasncriptional Silencing Directly Targets the Major PolII Co-Activator Complexes. (2008) *Nature Structural and Molecular Biology* 15: 318-320. PMID: 18264112 * These authors contributed equally to this work.
19. **Black JC**, Mosley A, Kitada T, Washburn M, Carey M. (2008) SIRT2 is a p300 Deacetylase. *Molecular Cell.* 32(3):449-55. PMID: 18995842
20. **Black JC**, Choi JE, Lombardo SR, Carey M. (2006) A Mechanism for Coordinating Chromatin Modification and Preinitiation Complex Assembly. *Molecular Cell*. 23: 809-818. PMID: 16973433
    - *Molecular Cell* Previewed-
      Pugh, BF. (2006) HATs off to PIC assembly. *Molecular Cell.* 23(6): 776-777.

Recent Presentations (2009-Present):

Black JC. Remodeling the Chromatin Landscape in Cancer. 2014. Abcam Chromatin Snapshot Highlights: Methylation, Enhancers and Cancer. Invited Speaker

Black JC. Remodeling the Chromatin Landscape in Cancer. 2014. Agilent Boston Clinical Research Meeting. Invited Speaker.

Black JC*, Atabakhsh EA*, Kim J, van Biette K, Ladd B, Donado C, Burrowes P, Mattoo H, Song B, Rechem C, Iliopoulos O, Pillai S, Getz G, Whetstine JR. Remodeling the Chromatin Landscape in Cancer. 2014. Cold Spring Harbor Meeting on "Epigenetics and Chromatin" Poster Presentation.

Black JC, Van Rechem C, Whetstine JR. Understanding Biological Function of KDM4A. 2012. ASBMB Transcription Regulation Meeting. Poster Presentation.

Black JC, Van Rechem C, Allen A, Whetstine JR. A Conserved Role for the JMJD2 Family of Histone Lysine Tri-demethylases in Cell Cycle Progression. 2011. Jane Coffin Childs memorial Symposium. Oral Presentation.

Black JC, Van Rechem C, Allen A, Whetstine JR. A Conserved Role for the JMJD2 Family of Histone Lysine Tri-demethylases in Cell Cycle Progression. 2011. Cold Spring Harbor Meeting on "Mechanisms of Eukaryotic Transcription". Poster Presentation

Black JC, Van Rechem C, Allen A, Whetstine JR. A Conserved Role for the JMJD2 Family of Histone Lysine Tri-demethylases in Cell Cycle Progression. 2010. ASBMB meeting on "Transcription Regulation by Chromatin and RNA Polymerase II". Poster Presentation.

Black JC, Van Rechem C, Allen A, Whetstine JR. A Conserved Role for the JMJD2 Family of Histone Lysine Tri-demethylases in Cell Cycle Progression. 2010. Jane Coffin Childs memorial Symposium. Poster Presentation.

Black JC. Conserved antagonism between JMJD2A/KDM4A and HP1γ during cell cycle progression. 2010. Epigenetics and Disease Symposium. Oral Presentation.

Black JC, Van Rechem C, Allen A, Whetstine JR. A Conserved Role for the JMJD2 Family of Histone Lysine Tri-demethylases in Cell Cycle Progression. 2009. Cold Spring Harbor Meeting on "Mechanisms of Eukaryotic Transcription". Poster Presentation.