

CV – Dylan Taatjes

Professor
University of Colorado
Department of Biochemistry
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EDUCATION and TRAINING:

B.S. Chemistry	Calvin College—Grand Rapids, MI	1990 – 1994
Ph D. Chemistry	University of Colorado—Boulder, CO	1994 – 1998
	<i>Advisor: Dr. Tad Koch</i>	
Postdoc	University of California—Berkeley, CA	1999 – 2004
	<i>Advisor: Dr. Robert Tjian</i>	

AWARDS (partial list)

Colorado Doctoral Fellowship, 1994-1995
John S. Meek Teaching Award, University of Colorado, 1995
University of Colorado Fellowship, 1997-1998
University of Colorado Research and Creative Work Award, 1997
ACS Medicinal Chemistry Predoctoral Fellowship, 1997-1998
American Cancer Society Postdoctoral Fellowship, 2000-2002
Ellison Medical Foundation New Scholar Award, 2006-2010
American Cancer Society Research Scholar Award, 2009-2013

PROFESSIONAL SOCIETIES

University of Colorado Cancer Center
ASBMB

PUBLICATIONS: *From work prior to becoming Assistant Professor*

Research Articles (peer reviewed):

1. Taatjes, DJ; Gaudiano, G; Resing, K; Koch, TH. Alkylation of DNA by the anthracycline, antitumor drugs adriamycin and daunomycin. *J Med Chem.* 1996, 39, 4135-4138.
2. Taatjes, DJ; Gaudiano, G; Resing, K; Koch, TH. A redox pathway leading to the alkylation of DNA by the anthracycline, antitumor drugs, Adriamycin and Daunomycin. *J Med Chem.* 1997, 40, 1276-1286.
3. Fenick, DJ; Taatjes, DJ; Koch, TH. Doxoform and Daunoform: anthracycline-formaldehyde conjugates toxic to resistant tumor cells. *J Med Chem.* 1997, 40, 2452-2461.
4. Taatjes, DJ; Gaudiano, G; Koch, TH. Production of formaldehyde and DNA-adriamycin or – daunomycin adducts, initiated through redox chemistry of DTT/iron, xanthine oxidase/NADH/iron, or glutathione/iron. *Chem Res Toxicol.* 1997, 10, 953-961.

5. Taatjes, DJ; Fenick, DJ; Gaudiano, G; Koch, TH. A redox pathway leading to the alkylation of nucleic acids by doxorubicin and related anthracyclines: application to the design of antitumor drugs for resistant cancer. *Curr Pharm Des.* 1998, 4, 217-232.
6. Taatjes, DJ; Fenick, DJ; Koch, TH. Epidoxoform: a hydrolytically more stable anthracycline-formaldehyde conjugate, toxic to resistant tumor cells. *J Med Chem.* 1998, 41, 1306-1314.
7. Taatjes, DJ; Koch, TH. Growth inhibition, nuclear uptake, and retention of anthracycline-formaldehyde conjugates in prostate cancer cells relative to clinical anthracyclines. *Anticancer Res.* 1999, 19, 1201-1208.
8. Podell, E; Harrington, D; Taatjes, DJ; Koch, TH. Crystal structure of Epidoxorubicin-formaldehyde virtual crosslink to DNA and evidence of its formation in human breast cancer cells. *Acta Cryst.* 1999, D55, 1516-1523.
9. Taatjes, DJ; Fenick, DJ; Koch, TH. Nuclear targeting and nuclear retention of anthracycline-formaldehyde conjugates implicates DNA covalent bonding in the cytotoxic mechanism of anthracyclines. *Chem Res Toxicol.* 1999, 12, 588-596. [Cover]
10. Kato, S; Burke, PJ; Fenick, DJ; Taatjes, DJ; Bierbaum, VM; Koch, TH. Mass spectrometric measurement of formaldehyde generated in breast cancer cells upon treatment with anthracycline antitumor drugs. *Chem Res Toxicol.* 2000, 13, 509-516.
11. Dernell, WS; Powers, BE; Taatjes, DJ; Cogan, P; Gaudiano, G; Koch, TH. Evaluation of the epidoxorubicin-formaldehyde conjugate, Epidoxoform, in a mouse mammary carcinoma model. *Cancer Invest.* 2002, 20, 712-723.
12. Taatjes, DJ; Näär, AM; Andel, F; Nogales, E; Tjian, R. Structure, function, and activator-induced conformations of the CRSP coactivator. *Science* 2002, 295, 1058-1062.
13. Näär, AM; Taatjes, DJ; Zhai, W; Tjian, R. Human CRSP interacts with RNA polymerase II CTD and adopts a specific CTD-bound conformation. *Genes Dev.* 2002, 16, 1339-1344.
14. Taatjes, DJ; Schneider-Poetsch, T; Tjian, R. Distinct conformational states of nuclear receptor-bound CRSP-Med complexes. *Nat Struct Mol Biol.* 2004, 11, 664-671.
15. Taatjes, DJ; Tjian, R. Structure and function of CRSP/Med2: a promoter-selective transcriptional coactivator complex. *Mol Cell.* 2004, 14, 675-683.

Review Articles (peer reviewed):

16. Taatjes, DJ; Koch, TH. Nuclear targeting and retention of anthracycline antitumor drugs in sensitive and resistant tumor cells. *Curr Med Chem.* 2001, 8, 15-29.
17. Taatjes, DJ; Marr, MT; Tjian, R. Regulatory diversity among metazoan co-activator complexes. *Nat Rev Mol Cell Biol.* 2004, 5, 403-410.

Patents:

18. "New anthracycline anti-tumor drugs with enhanced cytotoxicity: compounds, compositions, and methods," Dylan J. Taatjes, David J. Fenick, Tad H. Koch Inventors, US Patent No. 6,677,309.

PUBLICATIONS: Asterisk (*) denotes publications in which I am corresponding author.

Research Articles (peer reviewed):

- 19* Meyer, KD; Donner, AJ; Knuesel, MT; York, AG; Espinosa, JM; Taatjes, DJ. Cooperative activity of CDK8 and GCN5L within Mediator directs tandem phosphoacetylation of histone H3. *EMBO J.* 2008, 27, 1447-1457.

- 20*Knuesel, MT; Meyer, KD; Donner, AJ; Espinosa JM; Taatjes, DJ. The human CDK8 subcomplex is a histone kinase that requires Med12 for activity and can function independently of Mediator. *Mol Cell Biol.* 2009, 29, 650-661.
- 21*Knuesel, MT; Meyer, KD; Bernecky, C; Taatjes, DJ. The human CDK8 subcomplex is a molecular switch that controls Mediator co-activator function. *Genes Dev.* 2009, 23, 439-451.
- 22 Donner, AJ; Ebmeier, CC; Taatjes, DJ; Espinosa JM. CDK8 is a positive regulator of transcriptional elongation within the serum response network. *Nat Struct Mol Biol.* 2010, 17, 194-201. [Cover]
- 23*Ebmeier, CC; Taatjes, DJ. Activator-Mediator binding regulates Mediator-cofactor interactions. *Proc Natl Acad Sci. USA.* 2010, 107, 11283-11288.
- 24*Meyer, KD; Lin, S; Bernecky, C; Gao, Y; Taatjes, DJ. p53 activates transcription by directing structural shifts in Mediator. *Nat Struct Mol Biol.* 2010, 17, 753-760.
- 25 De Carlo, S; Lin, S; Taatjes, DJ; Hoenger, A. Molecular basis of transcription initiation in Archaea. *Transcription* 2010, 1, 103-111. [Cover]
- 26*Kagey, M; Newman, J; Bilodeau, S; Zhan, Y; van Berkum, NL; Orlando, DA; Ebmeier, CC; Goossens, J; Rahl, P; Levine, S; Taatjes, DJ*; Dekker, J*; Young, RA*. Mediator and Cohesin connect gene expression and chromatin architecture. *Nature* 2010, 467: 430-435.

Review Articles (peer reviewed) and invited Commentaries:

- 27*Panning, B; Taatjes, DJ. Transcriptional Regulation: It takes a Village. *Mol Cell* 2008, 31: 622-629.
- 28*Taatjes, DJ. The human Mediator complex: a versatile, genome-wide regulator of transcription. *Trends Biochem Sci.* 2010, 35: 315-322.
- 29*Knuesel, MT; Taatjes, DJ. Mediator and post-recruitment regulation of RNA polymerase II. *Transcription* 2011, 2: 28-31.

PUBLICATIONS: From work as Associate Professor (2011 - 2017) and full professor (2018 – present). Asterisk (*) denotes publications in which I am corresponding author.

Research Articles (peer reviewed):

- 30*Bernecky, C; Grob, P; Nogales, E; Taatjes, DJ. Molecular architecture of the human Mediator–RNA polymerase II–TFIIF assembly. *PLoS Biol.* 2011, 9: e1000603.
- 31 Taylor, DJ; Podell, EA; Taatjes, DJ; Cech, TR. Multiple POT1-TPP1 proteins coat and compact long telomeric ssDNA. *J Mol Biol.* 2011, 410: 10-17.
- 32*Bernecky, C; Taatjes, DJ. Activator–Mediator binding stabilizes RNA polymerase II orientation within the human Mediator–RNA polymerase II–TFIIF assembly. *J Mol Biol.* 2012, 417: 387 – 394.
- 33 Schwartz, J; Ebmeier, CC; Podell, EA; Heimiller, J; Taatjes, DJ; Cech, TR. FUS binds the CTD of RNA polymerase II and regulates its phosphorylation at Ser2. *Genes Dev.* 2012, 26: 2690 – 2695.
- 34 Bancerek, J; Poss, ZC; Steinparzer, I; Sedlyarov, V; Pfaffenwimmer, T; Mikulic, I; Dolken, L; Strobl, B; Muller, M; Taatjes, DJ; Kovarik, P. CDK8 Kinase Phosphorylates Transcription Factor STAT1 to Selectively Regulate the Interferon Response. *Immunity* 2013, 38: 250 – 262.

- 35 Davis, MA; Larimore, EA; Fissel, BM; Swanger, J; Taatjes, DJ; Clurman, BE. The SCF-FBW7 ubiquitin ligase degrades MED13 and MED13L and regulates CDK8 module association with Mediator. *Genes Dev.* 2013, 27: 151 – 156.
- 36 Lai, F; Orom, UA; Cessaroni, M; Beringer, M; Taatjes, DJ; Blobel, G; Shiekhattar, R. Long non-coding RNAs associate with Mediator to enhance chromatin architecture and transcription. *Nature* 2013, 494: 497 – 501.
- 37 He, Y; Fang, J; Taatjes, DJ; Nogales, E. Structural visualization of key steps in human transcription initiation. *Nature* 2013, 495: 481 – 486.
- 38*Lin, S; Karoly, ED; Taatjes, DJ. The human Δ Np53 isoform triggers metabolic and gene expression changes that activate mTOR and alter mitochondrial function. *Aging Cell* 2013, 12: 863 – 872.
- 39 Bunch, H; Zheng, X; Burkholder, A; Dillon, S; Motola, S; Birrane, G; Ebmeier, CC; Levine, S; Fargo, D; Hu, G; Taatjes, DJ; Calderwood, SK. TRIM28 regulates RNA polymerase II promoter proximal pausing and pause release. *Nat Struct Mol Biol.* 2014, 21: 876 – 883.
- 40 Pelish, HE; Liau, BB; Nitulescu, I; Tangpeerachaikul, A; Poss, ZC; DaSilva, D; Caruso, B; Arefolov, A; Fadeyi, O; Christie, A; Du, K; Banka, D; Schneider, EV; Jestel, A; Zou, G; Si, C; Ebmeier, CC; Bronson, RT; Krivtsov, AV; Myers, AG; Kohl, N; Kung, A; Armstrong, S; Lemieux, M; Taatjes, DJ; Shair, MD. Mediator kinase inhibition further activates super-enhancer-associated genes in AML. *Nature* 2015, 526: 273 – 276.
- 41 Luo, J; Cimermanic, P; Viswanath, S; Ebmeier, CC; Kim, B; Dehecq, M; Raman, V; Sali, A; Taatjes, DJ; Hahn, S; Ranish, J. Architecture of the human and yeast general transcription and DNA repair factor TFIIH. *Mol Cell* 2015, 59: 794 – 806.
- 42*Poss, ZC; Ebmeier, CC; Odell, AT; Tangpeerachaikul, A; Lee, T; Pelish, HE; Shair, MD; Dowell, RD; Old, WM; Taatjes, DJ. Identification of Mediator kinase substrates in human cells using cortistatin A and quantitative phosphoproteomics. *Cell Rep.* 2016, 15: 436 – 450.
- 43*Lerner, E; Chung, S; Allen, BL; Wang, S; Lee, JJ; Lu, SW; Grimaud, LW; Ingargiola, A; Michalet, X; Alhadid, Y; Borukhov, S; Strick, T;* Taatjes, DJ;* Weiss, S.* A backtracked and paused transcription initiation intermediate of *Escherichia Coli* RNA polymerase. *Proc Natl Acad Sci. USA.* 2016, 113: E6562 – 6571.
- 44*Audetat, KA; Galbraith, MD; Odell, AT; Lee, T; Pandey, A; Espinosa, JM; Dowell, RD; Taatjes, DJ. A kinase-independent role for CDK19 in p53 response. *Mol Cell Biol.* 2017, 37: e00626-16.
- 45 Guan, X; Chaffey, PK; Ruan, Y; Hurd, CK; Taatjes, DJ; Tan, Z. Chemical synthesis of the multiply phosphorylated and biotinylated N-terminal transactivation domain of human p53 (p53TAD). *Synlett.* 2017, 28: 1917 - 1922.
- 46*Ebmeier, CC; Erickson, B; Allen, BL; Allen, MA; Kim, H; Fong, N; Jacobsen, JR; Liang, K; Shilatifard, A; Dowell, RD; Old, WM; Bentley, DL*; Taatjes, DJ*. Human TFIIH kinase CDK7 regulates transcription-associated chromatin modifications. *Cell Rep.* 2017, 20: 1173 - 1186.
- 47 Boija, A; Klein, IA; Sabari, BR; Dall'Agnesse, A; Coffey, EL; Zamudio, AV; Li, CH; Shrinivas, K; Manteiga, J; Hannett, NM; Abraham, BJ; Schuijers, J; Afeyan, L; Guo, YE; Rimel, JK; Fant, CB; Lee, TI; Taatjes, DJ;* Young, RA.* Transcription factors activate genes through the phase separation capacity of their activation domains. *Cell* 2018, 175: 1842 – 1855.

Review Articles (invited & peer reviewed) and invited Commentaries:

- 48*Phillips, A; Taatjes, DJ. Small molecule probes to target the human Mediator complex. *Isr J Chem.* 2013, 53: 588 – 595.
- 49*Poss, ZC; Ebmeier, CC; Taatjes, DJ. The Mediator complex and transcription regulation. *Crit Rev Biochem Mol Biol.* 2013, 48: 575 – 608.

- 50*Lin, SC; Taatjes, DJ. Δ Np53 and Aging. *Aging (Albany NY)* 2013, 5: 717 – 718.
- 51*Sennett, NC; Taatjes, DJ. Mediator redefines itself. *Cell Res.* 2014, 24: 775 – 776.
- 52*Allen, BL; Taatjes, DJ. The Mediator complex: a central integrator of transcription. *Nat Rev Mol Cell Biol.* 2015, 16: 155 – 166.
- 53*Fant, CB; Taatjes, DJ. All in the family: A portrait of a nuclear receptor co-activator complex. *Mol Cell* 2015, 57: 952 – 954.
- 54*Rubin, JD; Taatjes, DJ. Molecular Biology: Mediating transcription and RNA export. *Nature* 2015, 526: 199 – 200.
- 55*Passmore, LA; Taatjes DJ. Macromolecular complexes in transcription and co-transcriptional RNA processing. *J Mol Biol.* 2016, 428: 2539 – 2541.
- 56 Alhadid, Y; Chung, S; Lerner, E; Taatjes, DJ; Borukhov, S; Weiss, S. Studying transcription initiation by RNA polymerase with diffusion-based single molecule fluorescence. *Protein Sci.* 2017, 26: 1278 - 1290.
- 57*Taatjes, DJ. Transcription factor–Mediator interfaces: multiple and multi-valent. *J Mol Biol.* 2017, 429: 2996 - 2998.
- 58*Harper, TM; Taatjes, DJ. The complex structure and function of Mediator. *J Biol Chem.* 2018, 293: 13778 - 13785.
- 59*Taatjes, DJ. The complex SAGA of TFIID function on genomic DNA. *Mol Cell* 2017, 68: 1 - 2.
- 60*Rimel, JK; Taatjes, DJ. The essential and multi-functional TFIIH complex. *Protein Sci.* 2018, 27: 1018 - 1037.
- 61*Goodrich, JA; Taatjes, DJ. Gene regulation: a new phase in transcription. *Nature* 2018, 558: 197 - 198.
- 62*Fant, CB; Taatjes, DJ. Regulatory functions of the Mediator kinases CDK8 and CDK19. *Transcription* 2019, 10: In Press.

INVITED TALKS (partial list): *Since becoming Assistant Professor*

2005

Calvin College, Dept. of Chemistry and Biochemistry 10/05
 Hope College, Dept. of Biochemistry 10/05

2006

ACS/Colorado Cancer Center Mechanisms of Aging Conference, Denver, CO 6/27/06

2007

UCHSC Dept. of Biochemistry/Molecular Genetics 1/25/07
 Colorado Cancer Center Conference on Developmental Therapeutics 8/24/07

2008

UCHSC Dept. of Molecular Biophysics 3/26/08
 FASEB Conference: “Transcriptional Regulation during Cell Growth, Differentiation, and Development” Snowmass, CO 6/22/08 – 6/27/08.

2009

Cold Spring Harbor Laboratory “Eukaryotic Gene Expression” summer course, Cold Spring Harbor, NY 7/29/09.
 Conference: “The Regulation and Transcription of Eukaryotic Genes” Glen Cove, NY 7/31/09 – 8/2/09.
 Cold Spring Harbor Laboratory “Mechanisms of Eukaryotic Transcription” Meeting, Cold Spring Harbor, NY 8/25/09 – 8/29/09.

2010

University of Colorado Cancer Center, Scientific Retreat, Westminster, CO 3/19/10.

Brown University, Dept. of Biochemistry, Molecular & Cell Biology 3/24/10
ASBMB 2010 Annual Meeting, session on Chromatin and Transcription. Anaheim, CA 4/24/10 – 4/28/10
Ellison Medical Foundation Award Talk: Colloquium on the Biology of Aging, Woods Hole, MA 8/11/10 – 8/13/10.
ASBMB Special Symposium, “Transcriptional Regulation By Chromatin and RNA Polymerase II” Lake Tahoe, CA 9/30/10 – 10/4/10.

2011

UCLA–Jonsson Cancer Center, Gene Regulation Program 4/12/11.
Texas A&M University, Dept. of Molecular & Cellular Medicine 4/19/11.

INVITED TALKS (partial list): *Since becoming Associate Professor and Full professor*

2012

Keystone Symposia on Molecular and Cellular Biology “Structural Biology of Cellular Processes: from Atoms to Cells” Keystone, CO 1/22/12 – 1/27/12.
Fred Hutchinson Cancer Research Center, Division of Basic Sciences, Seattle, WA, 3/13/12.
Purdue University, Dept. of Biochemistry, West Lafayette, IN, 3/20/12
ASBMB 2012 Annual Meeting, session on Fundamental Mechanisms of Gene Regulation. San Diego, CA 4/21/12 – 4/25/12.
Mount Sinai School of Medicine, Dept. of Structural and Chemical Biology, New York, NY, 5/10/12.
University of Colorado Cancer Center, Molecular Oncology annual retreat: Chromatin, Epigenetics, and Cancer. Colorado State University, Fort Collins, CO, 6/11/12.

2013

Stowers Institute for Medical Research, Kansas City, MO 3/27/13.
University of Colorado-Denver, Dept. of Integrative Biology, Denver, CO, 9/27/13.

2014

University of Texas–Southwestern Medical Center, Gene Regulation and Genomics Seminar series. Dallas, TX, 3/17/14.

2015

2nd International PhD Symposium of the Molecular Mechanisms of Cell Signaling, “Signaling Hubs: Central Organizers of Biological Systems.” Vienna, Austria, June 11 – 12, 2015. (Keynote speaker)
34th Summer Symposium in Molecular Biology, “Chromatin and Epigenetic Regulation of Transcription.” Penn State University, July 21 – 24, 2015.
Colorado Immunology Conference, Vail, CO, Sept. 2 – 4, 2015.
University of Colorado, Denver, Anschutz Medical School, Dept. of Pharmacology. November 2, 2015.

2016

Brandeis University, Dept. of Biology, March 1, 2016.
University of Indiana School of Medicine, Dept. of Biochemistry & Molecular Biology, May 9, 2016.
California Polytechnic State University (Cal Poly), July 8, 2016.
Van Andel Institute, 7th Annual Origins of Cancer Symposium, “Exploring Tumor Complexity” July 22, 2016; Grand Rapids, MI
ASBMB Special Symposium “Transcriptional Regulation By Chromatin and RNA Polymerase II” Snowbird, UT Oct. 6 – Oct. 10, 2016.

2017

Calvin College, Dept. of Chemistry and Biochemistry, September 21, 2017
Hope College, Dept. of Biochemistry, September 22, 2017

SFB 960 – Symposium “The Biology of RNA-protein Complexes” October 11 – 14, Regensburg, Germany.

2018

ASBMB Special Symposium “Transcriptional Regulation By Chromatin and RNA Polymerase II” Snowbird, UT Oct. 4 – Oct. 8, 2018.

SMICH (Signaling Mechanisms In Cellular Homeostasis) PhD program retreat, sponsored by Austrian Science Fund; Strass im Strassertale, Austria, Sept. 23 – 25, 2018.

Research Institute of Molecular Pathology (IMP), Vienna, Austria; Sept. 25, 2018.

2019

Northwestern University, Feinberg School of Medicine, January 8, 2019

MEETING ABSTRACTS:

Meyer, K; Knuesel, M; Taatjes, DJ. Modulation of Mediator Function by Subunit Exchange. “Mechanisms of Eukaryotic Transcription” 8/29-9/2/07 Cold Spring Harbor, NY. Meeting abstract.

Knuesel, M; Meyer, K; Bernecky, C; Ebmeier, C; Taatjes, DJ. Structural and Functional Studies of the human Mediator Complex. “Transcriptional Regulation during Cell Growth, Differentiation, and Development” 6/22/08 – 6/27/08 Snowmass, CO. Meeting abstract.

Knuesel, M; Meyer, K; Bernecky, C; Taatjes, DJ. Kinase Activity within the CDK8 subcomplex of Mediator is not necessary for the repression of human Transcription. “Transcriptional Regulation during Cell Growth, Differentiation, and Development” 6/22/08 – 6/27/08 Snowmass, CO. Meeting abstract.

Meyer, K; Bernecky, C; Taatjes, DJ. p53 induces Structural changes within the Mediator Complex that dictate Transcriptional Activity. “Transcriptional Regulation during Cell Growth, Differentiation, and Development” 6/22/08 – 6/27/08 Snowmass, CO. Meeting abstract.

Ebmeier, C; Taatjes, DJ. Activator Binding Triggers new Mediator-cofactor interactions revealed by MudPIT Mass Spectrometry. “Transcriptional Regulation during Cell Growth, Differentiation, and Development” 6/22/08 – 6/27/08 Snowmass, CO. Meeting abstract.

York, AG; Taatjes, DJ. Structural and Functional Studies of Sp1/SREBP-Mediator Transcriptional Synergy. “Transcriptional Regulation during Cell Growth, Differentiation, and Development” 6/22/08 – 6/27/08 Snowmass, CO. Meeting abstract.

Meyer, KD; Ebmeier, C; Bernecky, C; Taatjes, DJ. Mediator co-activator function is controlled by Activator-induced Structural Shifts. “Mechanisms of Eukaryotic Transcription” 8/25/09 – 8/29/09 Cold Spring Harbor, NY. Meeting abstract.

Meyer, KD; Lin, S; Bernecky, C; Gao, Y; Taatjes, DJ. Post-recruitment Activation of Transcription by p53-Mediator “Mechanisms of Eukaryotic Transcription” 8/25/09 – 8/29/09 Cold Spring Harbor, NY. Meeting abstract.

Bernecky, C; Meyer, KD; Taatjes, DJ. Structures of the Human Mediator/RNA polymerase II Complex determined using Cryo-electron Microscopy “Mechanisms of Eukaryotic Transcription” 8/25/09 – 8/29/09 Cold Spring Harbor, NY. Meeting abstract.

Knuesel, M; Old, W; Taatjes, DJ. Roles of the CDK8 subcomplex in human Transcription. “Mechanisms of Eukaryotic Transcription” 8/25/09 – 8/29/09 Cold Spring Harbor, NY. Meeting abstract.

Ebmeier, CC; Goossens, J; Donner, A; Espinosa, JM; Taatjes, DJ. Targeted proteomics reveals novel functions for the transcription co-activator Mediator complex. “US HUPO Annual Conference” 3/7/10 – 3/10/10 Denver, CO. Meeting abstract.

- Espinosa, JM; Donner, AJ; Galbraith, M; Taatjes, DJ; Ebmeier, CC. CDK8 is a positive regulator of transcriptional elongation within the serum response network. “ASBMB Annual Meeting” 4/24/10 – 4/28/10 Anaheim, CA. Meeting abstract.
- Taatjes, DJ; Ebmeier, CC; Bernecky, C. Mediator co-activator function is controlled by activator-induced structural shifts. “ASBMB Annual Meeting” 4/24/10 – 4/28/10 Anaheim, CA. Meeting abstract.
- Bernecky, C; Ebmeier, C; Taatjes, DJ. Structure and Mechanism of the human Mediator complex. “Transcriptional Regulation by Chromatin and RNA Polymerase II” ASBMB Special Symposia Series 9/30/10 – 10/4/10 Tahoe City, CA. Meeting abstract.
- Bunch, H; Bernecky, C; Knuesel, M; Ebmeier, C; Taatjes, DJ. Structure and Mechanism of the human Mediator Complex. “Mechanisms of Eukaryotic Transcription” 8/30/11 – 9/3/11 Cold Spring Harbor, NY. Meeting abstract.
- Bernecky, C; Knuesel, M; Ebmeier, CC; Taatjes, DJ. Structure and Mechanism of the human Transcription Initiation Machinery. “Structural Biology of Cellular Processes: from Atoms to Cells” 1/22/12 – 1/27/12 Keystone, CO. Meeting abstract.
- Bernecky, C; Poss, Z; Knuesel, M; Ebmeier, CC; Taatjes, DJ. Structure and Mechanism of the human Transcription Initiation Machinery. “ASBMB Annual Meeting” 4/21/12 – 4/25/12 San Diego, CA. Meeting abstract.
- Schwartz, JC; Ebmeier, CC; Podell, ER; Taatjes, DJ; Cech, TR. The RNA-binding protein FUS regulates RNA polymerase II CTD phosphorylation. “Regulatory and non-coding RNAs” 8/28/12 – 9/1/12 Cold Spring Harbor, NY. Meeting abstract.
- Lin, S; Karoly, ED; Taatjes, DJ. Metabolic and Gene Expression changes triggered by the Naturally occurring Human Δ Np53 Isoform. Keystone Meeting on Tumor Metabolism 2/24/13 – 3/1/13 Keystone, CO. Meeting abstract.
- Yuan He, Michael A Cianfrocco, Jie Fang, Patricia Grob, George A Kassevitis, Tamar Juven-Gershon, Dylan J Taatjes, James T Kadonaga, Eva Nogales. VISUALIZING CORE PROMOTER RECOGNITION AND TRANSCRIPTION PREINITIATION COMPLEX ASSEMBLY. “Mechanisms of Eukaryotic Transcription” 8/27/13 – 8/31/13 Cold Spring Harbor, NY. Meeting abstract.
- Michael A Davis, Elizabeth A Larimore, Brian M Fissel, Dylan J Taatjes, Bruce E Clurman. THE SCF FBW7 UBIQUITIN LIGASE DEGRADES MED13 AND MED13L AND REGULATES CDK8 ASSOCIATION WITH MEDIATOR. “Mechanisms of Eukaryotic Transcription” 8/27/13 – 8/31/13 Cold Spring Harbor, NY. Meeting abstract.
- Yuan He, Jie Fang, Dylan J Taatjes, Eva Nogales. STRUCTURAL VISUALIZATION OF KEY STEPS IN HUMAN TRANSCRIPTION INITIATION. “Mechanisms of Eukaryotic Transcription” 8/27/13 – 8/31/13 Cold Spring Harbor, NY. Meeting abstract.
- Heeyoun Bunch, Xiaofeng Zheng, Adam Burkholder, Shmulik Motola, Simon T Dillon, Christopher C Ebmeier, Stuart Levine, David Fargo, Guang Hu, Dylan J Taatjes, Stuart K Calderwood. TRIM28 REGULATES RNA POLYMERASE II PROMOTER PROXIMAL PAUSING AND ENTRY INTO PROCESSIVE ELONGATION. “Mechanisms of Eukaryotic Transcription” 8/27/13 – 8/31/13 Cold Spring Harbor, NY. Meeting abstract.
- Jeff Ranish, Peter Cimermancic, Bong Kim, Jie Luo, Steven Hahn, Andrej Sali, Dylan Taatjes. MOLECULAR ARCHITECTURE OF TFIIF. “Mechanisms of Eukaryotic Transcription” 8/27/13 – 8/31/13 Cold Spring Harbor, NY. Meeting abstract.
- Poss, ZC, Ebmeier, CC, Odell, A, Shair, MD, Old, WM, Dowell, RD, Taatjes, DJ. Identification of Mediator kinase substrates using SILAC-based phosphoproteomics. “11th EMBL Conference – Transcription and Chromatin” 8/23/14 – 8/26/14 Heidelberg, Germany. Meeting abstract.
- Taatjes DJ et al. Mediator kinases and Transcription regulation. “2nd International PhD Symposium of the Molecular Mechanisms of Cell Signaling, Signaling Hubs: Central Organizers of

- Biological Systems” 6/11/15 – 6/12/15 Vienna, Austria. Meeting abstract.
- Taatjes DJ et al. Mediator kinases and Transcription regulation. “34th Summer Symposium in Molecular Biology, Chromatin and Epigenetic Regulation of Transcription” 7/21/15 – 7/24/15 Penn State University. Meeting abstract.
- Luo, J; Cimermancic, P; Viswanath, S; Ebmeier, CC; Kim, B; Dehecq, M; Raman, V; Greenburg, CH; Pellarin, R; Sali, A; Taatjes, DJ; Hahn, S; Ranish, J. Architecture of the human and yeast general transcription and DNA repair factor TFIID. “Mechanisms of Eukaryotic Transcription” 8/25/15 – 8/29/15 Cold Spring Harbor, NY. Meeting abstract.
- Taatjes DJ et al. Mediator kinases and Transcription regulation. “Mechanisms of Eukaryotic Transcription” 8/25/15 – 8/29/15 Cold Spring Harbor, NY. Meeting abstract.
- Steinparzer, I; Bancerek, J; Poss, ZC; Sedlyarov, V; Eismayr, K; Taatjes, DJ; Kovarik, P. The role of CDK8 in JAK-STAT regulated transcription. “Mechanisms of Eukaryotic Transcription” 8/25/15 – 8/29/15 Cold Spring Harbor, NY. Meeting abstract.
- Ebmeier, C; Erickson, B; Allen, B; Old, W; Bentley, D; Taatjes, DJ. Proteomics identifies associated factors of the phosphorylated RNA polymerase II C-terminal domain linking regulation of chromatin dynamics. “US Human Proteome Organization (HUPO) Annual Conference” 3/13/16 – 3/16/16 Boston, MA. Meeting abstract.
- Rubin, JD; Fant, CB; Poss, ZC; Odell, A; Pelish, HE; Shair, MD; Dowell, RD; Old, W; Taatjes, DJ. Mediator kinases and transcription regulation. ASBMB Special Symposium “Transcriptional Regulation By Chromatin and RNA Polymerase II” Snowbird, UT Oct. 6 – Oct. 10, 2016. Meeting abstract.
- Allen, BL¹; Rubin, JD¹; Quach, K²; Fant, CB¹; Ebsin, M¹; Poss, ZC¹; Shair, MD³; Old, W¹; Schepartz, A²; Dowell, RD¹; Taatjes, DJ.¹ Mechanistic studies of human Mediator and Mediator kinases. “Mechanisms of Eukaryotic Transcription” 8/29/17 – 9/2/17 Cold Spring Harbor, NY. Meeting abstract.
- Rubin, JD; Fant, CB; Esbin, M; Poss, Z; Old, WM; Dowell, RD; Taatjes, DJ. Non-coding RNAs, Mediator, and Mediator kinases. "The Biology of RNA-Protein Complexes" 10/11/17 – 10/14/17 Regensburg, Germany. Meeting abstract.
- Taatjes, DJ. Understanding transcription regulation through kinase inhibition and biochemical reconstitution. “Transcriptional Regulation by Chromatin and RNA Polymerase II” Oct. 4 – 7, 2018, Snowbird, UT. Meeting abstract.
- Rimel, JK; Poss, ZC; Erickson, B; Bentley, DL; Old, WM; Taatjes, DJ. Inhibition of Human TFIID Kinase CDK7 Reveals Novel Substrates and Mechanistic Insights. “Transcriptional Regulation by Chromatin and RNA Polymerase II” Oct. 4 – 7, 2018, Snowbird, UT. Meeting abstract.
- Rubin, JD; Dowell, RD; Taatjes, DJ. Transcriptional regulation by Mediator kinases during serum response. “Transcriptional Regulation by Chromatin and RNA Polymerase II” Oct. 4 – 7, 2018, Snowbird, UT. Meeting abstract.

TEACHING—Graduate and undergraduate courses

CHEM6711/PHYS7810/MCDB6400 Foundations of Quantitative Biology
Fall 2012 (1 lecture)

Graduate course, 10 students. Gave lecture on image processing techniques associated with electron microscopy and single-particle reconstruction. Focused on docking high-resolution crystal structure data into cryo-EM maps for obtaining pseudo-atomic resolution structural information of large protein assemblies.

CHEM5801

Spring 2012, Spring 2014, Spring 2016, Spring 2018 (2 lectures of a team-taught course)

Graduate course, approximately 20 students per year. Taught 3 hours on gene expression and its regulation by cellular signaling cascades. Designed lectures and assigned homework; led class discussions of student assignments. Wrote and graded exam questions related to my section of the course.

CHEM5771 Advanced General Biochemistry I.

Fall 2004, Fall 2005, Fall 2010, Fall 2011.

Approximately 15 students per year. 5 credits, taught 45 hours. Organized class lectures, wrote exams, assigned papers for discussion and led discussions in class. Graded exams, homework, and student research proposals.

CHEM5781 Advanced General Biochemistry II.

Spring 2016, 2017, 2018

8 students 2016, 13 students 2017; 14 students 2018; 4 credits, taught 40 hours. Organized class lectures, wrote tests and exams, assigned papers for discussion and led discussions in class. Graded tests and exams and student research proposals.

CHEM5776 Scientific ethics course.

Fall 2004, Fall 2005, Fall 2010, Fall 2011.

Graduate course, 1 credit; approximately 20 students per year. Led in-class discussions of case studies.

CHEM5611 Methods in Molecular Biophysics.

Fall 2004, Fall 2006, Fall 2008, Fall 2010 (2 lectures of a team-taught course)

Graduate course, approximately 20 students per year. Taught 3 hours on electron microscopy and single-particle reconstruction techniques. Designed lectures and assigned homework; led class discussions of student assignments. Wrote and graded exam questions related to my section of the course.

CHEM4711/5711 Biochemistry I (CHEM 5711 for graduate students)

Fall 2006, Fall 2007, Fall 2008, Fall 2009, Fall 2013, Fall 2014

Undergraduate course, approximately 75 students per year. 3 credits, teaching 45 hours. Organized and delivered class lectures, and wrote problem sets and exams. Graded exams and problem sets.

CHEM4400/5400 Physical Chemistry for Biochemists (CHEM 5400 for graduate students)

Spring 2019

Undergraduate course, approximately 40 students. 4 credits, (class + recitation). Organized recitation sections and delivered class lectures; wrote problem sets, tests, and exams. Graded exams and problem sets.

TEACHING—Present and past lab members

Graduate Students – current

Charli Fant (14-present)

Cecilia Levandowski (14-present)

Jenna Rimel (17-present)

Jonathan Rubin (15-present)

Allison Schier (18-present)

Graduate Students – past

Krista Meyer (04-09) Ph D. January 2009, now a senior scientist at Biodesix, Inc.

Thesis title: “*Mechanisms regulating the human Mediator complex*”

Sarah Venezia (04-05) Masters May 2005. Coursework masters.

Matthew Knuesel (05-09) Ph D. November 2009. Currently a postdoc with Dr. Keith Yamamoto, UCSF.

Thesis title: “*Characterizing the roles of the CDK8 Module in human Mediator structure and function*”

Carrie Bernecky (05-10) Ph D. July 2010. Currently Assistant Professor at the Institute of Science and Technology, Vienna, Austria.

Thesis title: “*Molecular architecture of the human Mediator–RNA polymerase II–TFIIF assembly*”

Yuefeng Gao (07-10) Masters August 2010. Thesis title: “*Biochemical characterization of human Mediator complex*”

Christopher Ebmeier (06-11) Ph D. December 2011. Currently a postdoc with Dr. William Old (MCDB Dept. UC-Boulder).

Thesis title: “*Targeted proteomics and Molecular Mechanisms of Gene Activation*”

Vanessa Bowman (10-11) Masters May 2011. Coursework masters. Currently teaching high school science in New York state.

Kristin Hamman (11-12) Masters May 2012. Coursework masters. Currently a scientist at Syros Pharmaceuticals, Cambridge, MA.

Zachary Poss (10-15) Ph D. July 2015. Currently a postdoc with Dr. William Old (MCDB Dept. UC-Boulder).

Thesis title: “*Characterization of a novel inhibitor and substrates of Mediator kinases CDK8 and CDK19*”

Audrey Audetat (14-16) Ph D. November 2016. Currently scientist at Biodesix, Inc.

Thesis title: “*Regulation of gene expression by the Mediator kinase CDK19*” Note: Audrey joined my lab from MCDB after she decided to leave her previous lab (Dr. J. Espinosa).

Benjamin Allen (12-17) Ph D. July 2017. Thesis title: “*Disruption of p53 activated transcription by a rationally designed peptide*”

Post-doctoral Students – current

Tim Decker (18-present)

Post-Doctoral Students – past

Derek Taylor (08-09; co-mentor with Dr. Tom Cech). Derek is now an Assistant Professor (tenure track) at Case Western Reserve University.

Heeyoun Bunch (10-11) Heeyoun is now an Assistant Professor (tenure-track) at Kyungpook National University in South Korea.

Christopher Ebmeier (12-13) Dr. Ebmeier is currently a senior scientist working in the lab of my colleague in MCDB, Dr. William Old.

Shih-Chieh Lin (08-14) Dr. Lin is currently working in biotech in the SF bay area.

Timothy Read (16-17) Dr. Read joined my lab in the summer of 2016 and was awarded his own NIH postdoctoral fellowship (F32 GM122361) to pursue studies related to p53 and transcription regulation. Because of family issues, he had to relocate to Boston; he is now a postdoc in the lab of Martha Bulyk at Harvard University.

Research Assistants – past

Ellen Roper (05-06)

Hong Wang (09-10)

Carly Loner (10-11)
Jesse Goossens (10-11)
Vishnu Raman (13-14)
Radhika Rawat (15-16)
Meagan Esbin (Paul) (16-17)

Undergraduate Students – current

Sam Liang (2016-present)
Robert Meushaw (2017 – present)
John Moir (2017 - present)
Zachary Maas (2017 - present)

Undergraduate Students – past

Autumn York (06-08) graduated with honors in 2008, obtained PhD from UCLA in 2015.

Undergraduate Thesis title: “*Structural and functional examination of Sp1/SREBP-Mediator transcriptional synergy*”

Luke Garcia (05-06) HHMI minority scholar; now graduate student at Harvard.

Luis Morales (05) SMART summer program.

Anthony Velasquez (06) SMART summer program, now medical student at Dartmouth.

Mark Bessette (06-07) technician. Now Associate Scientist II at Thermo Fisher Scientific.

Lauren Matelski (07) summer student. Now lab technician with Dr. Eric Davidson at Caltech.

Jesse Goossens (07-09) graduated with honors in 2009, currently Ph D student at Loyola University (Chicago). Thesis title: “*A novel role of Cohesin in eukaryotic transcription*”

Carly Loner (08-10) graduated with honors in 2010, currently MD/Ph D. student at University of Wisconsin, Madison. Thesis title: “*Characterizing the interaction of human Mediator subunit MED1 with thyroid hormone receptor TR α* ”

Nicholas Parsonnet (09-11) graduated with honors in 2011, now Ph D. student at University of Colorado, Boulder. Thesis title: “*Cofactors of the p65-Mediator Complex*”

Oluwafunmilayo Ogunremi (10-11) graduated with honors in 2011, now in MD program at UC-Denver (Anschutz Medical Campus). Thesis title: “*Subunit Composition of the human Mediator Complex in Neuronal cell lines*”

Faria Ahmed (09-11) graduated *summa cum laude* in 2011, plans to attend medical school. Currently working as lab technician with Dr. David Hawkins (University of Washington). Thesis title: “*Examination of Mediator composition and p53 in distinct breast cancer lines: MCF7 and MDA-MB-231*”

Richard Alexander (10-11) graduated *summa cum laude* in 2011, currently in MD program at UCSF. Thesis title: “*Mechanisms of eukaryotic transcriptional regulation: the human Mediator complex and Saccharomyces Cerevisiae Set3 histone deacetylase complex*”

Vishnu Raman (11-13). Graduated Spring 2013; currently technician in Taatjes lab and is pursuing PhD (UMass) in chemical engineering.

Taylor Simmons (12-14). Graduated *magna cum laude* in 2014, currently in graduate school at Columbia working toward a Masters degree in public health.

Eliza Foster (14-15). Graduated *magna cum laude* in 2015. Thesis title: “*A distinct subunit composition of chromatin-bound Mediator*” Eliza is currently teaching high school math & science as part of the UCCSTeach program (UC-Colorado Springs).

Meagan Paul (15-16). Graduated *summa cum laude* in 2016. Thesis title: “*Examining the role of RNA secondary structure on human RNA polymerase II pausing*” Currently pursuing PhD in biophysics at UC-Berkeley.

Elaine Shults (15-16). Graduated *magna cum laude* in 2016. Thesis title: “*Improving the efficiency of CRISPR-Cas9: expression and purification of Cas9*” Masters program in Biotechnology at Georgetown University.

UNIVERSITY AND PUBLIC SERVICE

Department

Taught Biochemistry course (CHEM5711) as a volunteer for 3 weeks in 2/04.

Graduate student recruiting trip to Calvin College (Grand Rapids, MI) and Hope College (Holland, MI) Oct. 2005.

Graduate student recruiting trip to California State Polytechnic University (Cal Poly, San Luis Obispo, CA) July, 2016.

Graduate student recruiting trip to Calvin College (Grand Rapids, MI) and Hope College (Holland, MI) September 2017.

Undergraduate honors thesis mentor: Autumn York (2008), now postdoc at Yale (R. Flavell lab); Jesse Goossens (2009), currently in Ph D. program at Loyola University (Chicago); Carly Loner (2010), now MD/Ph D. student at University of Wisconsin-Madison; Nicholas Parsonnet (2011), now Ph D. student at University of Colorado-Boulder (Wuttke lab); Funmi Ogunremi (2011), currently MD student at CU-Denver, Faria Ahmed (2011), now technician in lab of Dr. David Hawkins, University of Washington; Richard Alexander (2011), currently in MD/Ph D program at UCSF; Vishnu Raman (2013), currently PhD student at the University of Massachusetts (Chemical Engineering); Taylor Simmons (2014), currently pursuing a Masters degree in public health at Columbia University; Eliza Foster (2015), currently teaching high school math & science as part of the UCCSTeach program (UC-Colorado Springs); Meagan Paul (now Meagan Esbin) (2016), currently in PhD program in Biophysics at UC-Berkeley; Elaine Shults (2016), currently in Masters program in Biotechnology at Georgetown University.

Ph D. Thesis Mentor: Krista Meyer (2009), now senior scientist at Biodesix (Boulder, CO) Matthew Knuesel (2009), now postdoc with Dr. Keith Yamamoto (UCSF). Carrie Bernecky (2010), now Assistant Professor (tenure track) at the Institute of Science and Technology in Vienna, Austria. Christopher Ebmeier (2011), currently senior postdoc in the Old laboratory (UC-Boulder MCDB Dept.) Zachary Poss (2015), currently postdoctoral researcher in lab of Dr. William Old (UC-Boulder MCDB Dept.) Audrey Audetat (2016), currently working as a scientist at Biodesix (Boulder, CO). Benjamin Allen (2017), plans to work as postdoc or in industry in Greensboro, NC area.

Ph D. Thesis Committee: Celso Espinosa, Stacey Wagner, Ben Barthel, John Hardin, Kristen Bjorkman, J'aime Manion, Jessica Hattle, Dana Ungermannova, Rebecca Montange, Kyle Landgraf, Pablo Ceres, Jen Gifford, Francis Reyes, Dan Rudnicki, Miguel Gonzalez, Ryan Walters, Joel Baskin, Gilson Sanchez, Jake Polaski, Alex Hopkins, Sarah Dickerson, Tyler Matheny, Abigail Horn, Garrett Edwards, David Smith

Comprehensive Exam: Rebecca Blair, Michelle Turco, Travis Lund, Andrew Garst, Jessica Rouge, Cristina Sandoval, J'aime Manion, Jessica Hattle, Tianjing Hu, Mikal Sherman, Philip Calabrese, Eli Porter, Jeff Swan, Joanna Duncan, others.

Undergraduate honors thesis committee member: Craig Manahan (Biochemistry), Richard Paucek (Biochemistry).

M.S. Thesis Committee: Kellen Sakrison

Organizer of Biochemistry Dept. retreat, held each year in Winter Park, CO. A 2-day event that features talks and posters from graduate students and postdocs in the department (2008 – 2012).

Coordinator of Biochemistry departmental seminar series, held each Wednesday during the fall and spring semester (2005 – 2008).

Faculty Search Committee for synthesis/organic/bio-organic chemist, Fall 2007 – Spring 2008. (Hired Xiang Wang)

Faculty Search Committee for Biochemistry, Fall 2013 – Spring 2014; Fall 2016 - Spring 2017; Chair of search committee for junior faculty hire in 2018 (P. Hosseinzadeh).

Graduate student admissions committee: review ca. 150 applications per year, select candidates for invitation and admission into Biochemistry graduate program; organize recruitment weekends in March each year (2011 – present).

Promotion and Tenure Committee (2013 – present).

Executive Committee (2015 – 2017)

University of Colorado

Adjunct Ph D. thesis advisor: David Smith (advisor: Dr. Christopher Lowry, IPHY)

Undergraduate honors thesis committee member: Claire Egan (MCDB), Jordan Lewandowski (MCDB), Daniel Yuan (MCDB), Lauren Bauer (MCDB), Kirsten Miller (MCDB), Elizabeth Doggett (MCDB), Ellen Goodall (MCDB), Alexander Bally (MCDB), Michael Cookson (MCDB), Alexis Johnson (MCDB), Tara Peters (MCDB).

Ph D. Thesis Committee: Stephanie Williams (UC-Denver), Candice Wike (UC-Denver), Tom Armel (MCDB), Megan Philbin (UC-Denver), Nathan Gomes (MCDB), Myrriah Chavez (UC-Denver), Becky Fusby (UC-Denver), Joanna Duncan/Brown (MCDB), Audrey Audetat (MCDB), Hanzeng Li (MCDB), Roni Dengler (MCDB).

Ph D. Comprehensive Exam: Seth Noone (UC-Denver), Candice Wike (UC-Denver), Becky Fusby (UC-Denver), Hanzeng Li (MCDB).

Recommendation letters for students pursuing graduate degrees: I have written dozens and dozens of reference letters for undergraduate students whom I have taught in the classroom or supervised in my laboratory. Part of this process includes advising each of these students with respect to their career

goals and field of study. These letters were included as part of the application materials for admission into a graduate program (Ph D, MD, etc.).

Was part of a group of PIs (Biochemistry and MCDB faculty) that submitted an application for the **Beckman Scholars Program**, which funds undergraduate research at UC-Boulder. This application was funded for 2017, with 3 years of support for ~6 undergraduates.

Internal Advisory Board for the Protein Production, Monoclonal Antibody and Tissue Culture Shared Resource (UC-Denver School of Medicine; 2016 - present)

Scientific Community

Editorial Board: *Molecular and Cellular Biology* (2015+)
Journal of Molecular Biology (2016+)

Reviewer: NSF ad-hoc reviewer, MCB-Biomolecular Systems 2013, Genetic Mechanisms 2016. American Cancer Society, DNA Mechanisms in Cancer (DMC) review panel (09-13) NIH ad-hoc reviewer, MGA study section: 2013, 2015, 2016, 2017.
ad-hoc reviewer: Medical Research Council (MRC, UK) 2010; Genesis Oncology Trust (New Zealand) 2011; European Research Council 2016
NIH ad-hoc reviewer NIH Challenge grants; Competing Revisions for Macromolecular Interactions in Cells; Macromolecular interactions in cells; Functional Epigenomics; S10 Shared Instrumentation Grants, others.

Instructor, Eukaryotic Gene Expression course (2010 – 2016). This is a 3-week laboratory course that trains 16 graduate students and post-docs selected from around the world about techniques used to study gene expression and regulation in eukaryotic organisms. Course is held at Cold Spring Harbor Laboratories, Cold Spring Harbor, NY.

Co-organizer of ASBMB Special Symposium on "Transcriptional regulation by chromatin and RNA polymerase II." This meeting is held every other year and this is a 6-year commitment (2017+).

Scientific Advisory Board, Colorado Cancer League (07-08).

Textbook reviewer, "Principles of Biochemistry" 4th Edition. Undergraduate textbook, Horton et al. Pearson/Prentice Hall Publishers, Upper Saddle River, NJ.

Manuscript Reviewer: *Science, Nature, Mol Cell, J Mol Biol., Mol Cell Biol., Cell Reports, Genes & Development, Oncogene, Nucleic Acids Research, PLoS Biology, Nature SMB, Cell, PNAS, etc.*

Local Community

Instructor for the CU Wizards program (2010 – 2017). This includes putting on a free, 1-hour show designed to inform and entertain children about the wonders of science. It is free and open to the public, geared towards 5-9 year-olds.

Outreach to local high school students. My lab began a partnership in 2010 (and still ongoing) with Boulder or Fairview high school. As part of an honors science curriculum, students from Boulder

High work on a project in my laboratory for 4 months. The results from this work are then described in a short thesis and are presented as part of a local science fair.

Speaker at Relay for Life event and fundraiser for the American Cancer Society (ACS). Event held at the Tebo Family Pavilion, Boulder Community Hospital 6/14/11. Described basic research and its role in providing key targets and strategies for cancer treatment, and how academic research synergizes with research in the pharmaceutical realm. Also discussed my role on the Scientific Advisory Board for the ACS, which is responsible for awarding grants that are derived from private donor contributions. Audience included clinicians, cancer survivors, advocates, and donors.

Speaker at Relay for Life event for the American Cancer Society (ACS). Event held on CU-Boulder campus (Hellems 252) 11/12/13. Described basic research and its role in providing key targets and strategies for cancer treatment, and how academic research synergizes with research in the pharmaceutical realm. Also discussed my role on the Scientific Advisory Board for the ACS, which is responsible for awarding grants that are derived from private donor contributions. Audience included ACS volunteers and CU students organizing the fundraising event.

Mentored high school students during the summer months to help them gain experience in an academic science lab. Since 2013, 6 high school students from around the state of Colorado have worked in the Taatjes lab. In each case, the student was put on a project with a graduate student and was required to keep a lab notebook and write a report on their summer project results.

GRANT SUPPORT (note: all grant support listed was obtained since becoming Associate Professor)

Ongoing Research Support:

R01 GM117370
NIGMS

Taatjes (PI)

6/28/16 – 3/31/20

Mediator kinases and transcription regulation

R01 GM110064 (MPI)
NIGMS

Taatjes (PI); Jeff Ranish (PI)

9/22/16 – 6/30/20

TFIIH and transcription regulation

R21 CA205912 (MPI)
NCI

Taatjes (PI); William Old (PI)

4/1/16 – 3/31/19

Mediator kinases and AML cell proliferation

F30 AG054091
NIH/NIA

Levandowski (PI); Taatjes (mentor)

6/1/16 – 5/30/20

Δ Np53 as a regulator of p53 biology

F32 GM122361
NIH/NIGMS

Read (PI); Taatjes (mentor)

1/1/17 – 12/31/19

How does p53 binding affect eRNA-dependent transcriptional regulation?

Note: In July, 2017, this award was transferred to Harvard University but I remain a co-mentor on this project. Dr. Read had to relocate to the Boston area for family reasons; we were able to transfer his NIH Fellowship to the Bulyk lab at Harvard.

MCB 1818147
NSF

Taatjes (PI)

8/1/18 – 7/31/22

Dynamic regulation of initiation and pausing of transcription by human RNA polymerase II

R03 AG061466 (MPI)
NIA

Dowell (PI); Taatjes (PI)

2/1/19 – 12/31/20

How does the naturally-occurring delta-Np53 isoform influence aging?

Completed (within past 3 years):

MCB 1244175 (MPI)
NSF

Taatjes (PI); Shimon Weiss (PI)

2/1/13 – 1/31/19

Collaborative research: elucidating pre-initiation complex assembly and transcription initiation by pol II using advanced single molecule and microfluidic methods

Supplement request for R01 GM117370
NIGMS
Request for a new -80C freezer

Taatjes (PI)

Awarded 8/23/2017

R01 CA170741 (MPI)
NCI

Taatjes (PI); Alanna Schepartz (PI)

8/1/12 – 11/30/17

Directing the Mediator complex: bivalent approaches to reconstitution or inhibiting transcription factor function (NCI PQ #18)

R01 GM058272
NIH

Kadonaga (PI); Taatjes (collaborator)

7/1/15 – 6/30/18

Chromatin dynamics and gene expression

S10 OD021603
NIH

Taatjes (PI)

7/1/16 – 6/30/17

Microscale Thermophoresis – Monolith NT.115

Pending:

None.