CV – Dylan Taatjes

Professor
University of Colorado
Department of Biochemistry
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Boulder, CO 80303
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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
  Advisor: Dr. Tad Koch
Postdoc  University of California—Berkeley, CA  1999 – 2004
  Advisor: Dr. Robert Tjian

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):
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.


**Review Articles (peer reviewed):**


**Patents:**


**PUBLICATIONS:** Asterisk (*) denotes publications in which I am corresponding author.
Research Articles (peer reviewed):
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.
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]
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:

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):
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.
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.


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; Cimermancic, 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'Agnese, 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.

48 Guard, SE; Poss, ZC; Ebmeier, CC; Pagratis, M; Simpson, H; Taatjes, DJ; Old, WM. The nuclear interactome of DYRK1A reveals a functional role in DNA damage repair. *Sci Rep.* 2019, 9: 6539.
49 Guo, YE; Manteiga, JC; Henninger, J; Sabari, BR; Dall'Agnesia, A; Hannett, NM; Spille, J-H; Afeyan, LK; Zamudio, AV; Shrinivas, K; Abraham, BJ; Boijs, A; Deckert, TM; Rimel, JK; Fant, CB; Lee, TI; Cisse, IL; Sharp, PA; Taatjes, DJ; Young, RA. RNA polymerase II phosphorylation regulates a switch between transcriptional and splicing condensates. *Nature* 2019, 572: 543 – 548.

50*Steinparzer, I; Sedlyarov, V; Rubin, JD; Eislmayr, K; Galbraith MD; Levandowski, CB; Veelkova, T; Sneezum, L; Wascher, F; Amman, F; Kleinova, R; Bender, H; Andrysik, Z; Espinosa, JM; Superti-Furga, G; Dowell, RD; Taatjes, DJ;* Kovarik, P.* Transcriptional responses to IFNγ require Mediator kinase-dependent pause release and mechanistically distinct CDK8 and CDK19 functions. *Mol Cell* 2019, 76: 485 – 499.

51 Zamudio, AV; Dall’Agnesia, A; Henninger, JE; Manteiga, JC; Afeyan, LK; Hannett, NM; Coffey, EL; Li, CH; Oksuz, O; Boijs, A; Klein, IA; Sabari, BR; Hawken, SW; Spille, JH; Deckert, TM; Cisse, IL; Abraham, BJ; Lee, TI; Taatjes, DJ; Schuijers, J; Young, RA. Mediator condensates localize signaling factors to key cell identity genes. *Mol Cell* 2019, 76: 753 – 766.

52 Fant, CB; Levinandowski, CB; Gupta, K; Maas, ZL; Moir, JT; Rubin, JD; Sawyer, A; Esbin, M; Rimel, JK; Luuyties, O; Marr, MT; Berger, I; Dowell, RD; Taatjes, DJ. TFIIID enables RNA polymerase II promoter-proximal pausing. *Mol Cell* 2020, 78: 785 – 793.

53 Klein, IA; Boijs, A; Afeyan, LK; Hawken, SW; Fan, M; Dall’Agnesia, A; Oksuz, O; Henninger, JE; Shrinivas, K; Sabari, BR; Sagi, I; Clark, V; Platt, J; Kar, M; McCall, P; Zamudio, AV; Manteiga, JC; Coffey, EL; Li, CH; Hannett, NM; Guo, YE; Deckert, TM; Lee, TI; Zhang, T; Weng, JK; Taatjes, DJ; Chakraborty, A; Sharp, PA; Chang, YT; Hyman, AA; Gray, NS; Young, RA. Partitioning of cancer therapeutics in nuclear condensates. *Science* 2020, 368: 1386 – 1392.

54*Rimel, JK; Poss, ZC; Erickson, B; Maas, ZL; Ebmeier, CC; Johnsson, JL; Deckert, T-M; Yaron, TM; Bradley, MJ; Hamman, KB; Hu, S; Malojcic, G; Marineau, JJ; White, PW; Brault, M.; Tao, L.; DeRoy, P; Clavette, C; Nayak, S; Damon, LJ; Kalttheuner, IH; Bunch, H; Cantley, LC; Geyer, M; Iwasa, J; Dowell, RD; Bentley, DL; Old WM;* Taatjes, DJ.* Selective inhibition of CDK7 reveals high-confidence targets and novel mechanisms for TFIIH function in transcription. *Genes Dev* 2020; 34: 1452 – 1473.

55 Tomko, EJ; Luuyties, O; Rimel, JK; Tsai, C; Fuss, JO; Fishburn, J; Hahn, S; Tsutakawa, SE; Taatjes, DJ; Galburt, EA. The role of XPB/Ssl2 dsDNA translocation processivity in transcription start-site scanning. *J Mol Biol* 2021; 433: 166813.

56 Rubin, JD; Stanely, JT; Sigauke, RS; Levandowski, CB; Maas, ZL; Westfall, J; Taatjes, DJ; Dowell, RD. Transcription factor enrichment analysis (TFEA): Quantifying the activity of hundreds of TFs from a single experiment. *Commun Biol* 2021; 4: 661.


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


66 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.


**Patents:**

Provisional Patent Application No 63/073,245

Title: *Methods and Compositions for Modifying Transcription Factor Activity by Targeting the Human Mediator Complex Using Cell Penetrating Memetic Peptides and Methods of Treating Cancer Using the Same*

CU Reference No.: CU5149B-PPA1

Filed Sept. 1, 2020

**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

2009

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

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
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
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
(Keynote speaker)
34th Summer Symposium in Molecular Biology, “Chromatin and Epigenetic Regulation of Transcription.” Penn State University, July 21 – 24, 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

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

2018
SMICH (Signaling Mechanisms In Cellular Homeostasis) PhD program retreat, sponsored by Austrian Science Fund; Strass im Strossertale, 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
Symposium on “Regulation of transcription: from genetics and biochemistry to single molecule visualization” Asilomar Hotel & Conference Grounds, Pacific Grove, CA, September 20 – 22, 2019.
University of South Carolina, College of Pharmacy, Columbia, SC, December 3, 2019.

2020
University of Texas-Austin, Dept. of Molecular Biosciences, Austin, TX, February 5, 2020
Erasmus University, Dept. of Biochemistry, Rotterdam, Netherlands, April 2, 2020 [Canceled]
Signaling Mechanisms in Cellular Homeostasis (SMICH) PhD Symposium, Vienna, Austria, April 14-15, 2020. [Canceled]
Dahlen Colloquium Series, Max Planck Institute for Molecular Genetics, Berlin, Germany, April 20, 2020 [Canceled]

2021
Simons Foundation Autism Research Initiative (SFARI) MED13L Scientific Meeting, May 26, 2021. [ONLINE/REMOTE]

MEETING ABSTRACTS:


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.


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; 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.


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 TFIIF. “Mechanisms of Eukaryotic Transcription” 8/25/15 – 8/29/15 Cold Spring Harbor, NY. Meeting abstract.


Steinparzer, I; Bancerek, J; Poss, ZC; Sedlyarov, V; Eislmayr, K; Taatjes, DJ; Kovarik, P. The role of

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, BL; Rubin, JD; Quach, K; Fant, CB; Esbin, M; Poss, ZC; Shair, MD; Old, W; Scheibert, A; Dowell, RD; Taatjes, DJ. 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.


Rubin, JD; Poss, ZC; Erickson, B; Bentley, DL; Old, WM; Taatjes, DJ. Inhibition of Human TFIIH Kinase CDK7 Reveals Novel Substrates and Mechanistic Insights. “Transcriptional Regulation by Chromatin and RNA Polymerase II” Oct. 4 – 7, 2018, Snowbird, UT. Meeting abstract.


Levandowski CB; Jones, T; Gruca, M; Dowell, RD; Taatjes, DJ. The naturally occurring Δ40p53 isoform alters WTp53 function through metabolic changes and non-coding transcription. “The International p53/p63/p73 isofoms Workshop” Nov. 3-6, 2019, Dubrovnik, Croatia. p53 May 2019


Rimel, JK; Hu, S; Hamman, K; Marineau, J; Rajagopal, N; D'Ippolito, A; Carulli, J; Chaqui, C; Dowell, RD; Taatjes, DJ. Elucidating the roles of the TFIH kinase CDK7 in pol II transcriptional regulation. Cold Spring Harbor Laboratory “Mechanisms of Eukaryotic Transcription” Meeting, Cold Spring Harbor, NY 8/31/21 – 9/3/21.

Tomko, EJ; Luyties, O; Rimel, JK; Tsai, C; Fuss, JO; Fishburn, J; Hahn, S; Tsutakawa, SE; Taatjes, DJ; Galburt, EA. The role of XPB/Ssl2 dsDNA translocase processivity in transcription start-site scanning. Cold Spring Harbor Laboratory “Mechanisms of Eukaryotic Transcription” Meeting, Cold Spring Harbor, NY 8/31/21 – 9/3/21.

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, 37 students, 4 credits (class + recitation). Organized recitation sections and delivered class lectures and group activities; wrote/assigned homework, tests, exams, and group presentations. Graded exams, tests, etc.

BCHM2700 Foundations of Biochemistry
Spring 2021, 2022
Undergraduate course, approximately 30 students, 4 credits (class + recitation). Organized and delivered class lectures and wrote quizzes, tests, and exams. Organized weekly recitation sessions for TA; selected online homework problems (Sapling/MacMillan) and created in-class presentation topics and guidelines for students, working in small groups. Created in-class group activities to test comprehension in real time. Graded tests and exams. Course was remote in 2021.

TEACHING—Present and past lab members

Graduate Students – current
Jenna Rimel (17-present)
Allison Schier (18-present)
Olivia Luyties (19-present)
Taylor Jones (19-present)
Kevin Clopper (19-present)
Megan Palacio (20-present)
Kira Cozzolino (21-present)
Ariel Eraso (21-present)
Michael Nagel (21-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”
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.


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).


Charli Fant (14-19) PhD July 2019. Thesis title: "Design and implementation of a fully reconstituted assay to investigate mechanisms of early human pol II transcription"


Post-doctoral Scholars – current

Haitham Sobhy (21-present)
William Richter (21-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 the 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.

Tim-Michael Decker (18-20). Tim is now working as a biochemist at a company called The Cultivated B in Heidelberg, Germany. The company specializes in the sustainable production of animal proteins for commercial purposes.

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)
Robert Meushaw (20-present)

Undergraduate Students – current
Kayla Molison (2020 – present)
Alexander Woyciehowsky (2020 - present)
Mirzam Saucedo (2021 - 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.
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 TRα”
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 (Anshutz Medical Campus). Thesis title: “Subunit Composition of the human Mediator Complex in Neuronal cell lines”

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.


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 ORISE Fellow at US Dept of Health & Human Services (Infectious Disease Policy); 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 Regulatory Intelligence Analyst at Genentech, Inc; Zachary Maas (2019), currently PhD student in the IQBiology program at UC-Boulder; John Moir (2020), currently in medical school; Robert Meushaw (2020), currently a research technician in Taatjes lab.

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.
Charli Fant (2019), currently working for biotech company Zoetis, Inc., based in Fort Collins, CO.
Cecilia Levandowski (2020), returning to medical school to complete her MD degree (Dr. Levandowski is an MD/PhD student).
Jonathan Rubin (2020), currently working at ArcherDX, Inc. (Boulder, CO).

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, Justin Moser, Roman Iwasaki, Garrett Edwards, Devin Tauber, Rob Abrisch, Thao Huynh, Price Kirby, Stephen Archuleta, Giulia Corbet, Leah Damon, Devin Hamilton, Jon Markert

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); Fall 2019 - Spring 2020 for targeted cryoEM search (K. Luger Chair), hired V. Kasinath and H. Aydin.

Biochemistry Chair, Faculty Diversity Action Plan (FDAP) faculty search 2020 – present

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 – 2018).

Promotion and Tenure Committee (2013 – present)

Executive Committee 2015 – 2017; 2021 – present
Writing/grading written exams for first-year graduate students 2020 – present

**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), Jessica Westfall (MCDB), Samuel Hunter (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. Re-application to the Scholars program occurred in 2020, and the award was renewed for another 3 years.

Advisory Board for the Cell Technologies Shared Resource (UC-Denver School of Medicine; 2016 - present)

**Scientific Community**
*Journal of Molecular Biology* (2016+)

Editor of Special Issue for the *Journal of Molecular Biology*, devoted to RNA polymerase II transcription (2021).

Member, Molecular Genetics A (MGA) NIH study section (July 2019+)

American Cancer Society, DNA Mechanisms in Cancer (DMC) review panel (09-13)
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 an 8-year commitment (2017+).

Scientific Advisory Board, Dewpoint Therapeutics (2020+)


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. Since 2013, 10 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

**Ongoing Research Support:**

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<th>Active Research Support:</th>
<th>Taatjes (PI)</th>
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**NIAID**  
9/22/20 – 8/31/25  
Mediator kinases as interferon antagonists in Down syndrome  

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**Completed (within past 3 years):**

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