Curriculum Vitae – Eva Nogales

708C Stanley Hall
Molecular and Cell Biology Department
UC Berkeley, Berkeley, CA 94720-3220
(510) 642-0557 enogales@lbl.gov http://cryoem.berkeley.edu/

EDUCATION AND TRAINING

1993 – 95	Postdoctoral training in Biophysics at the Life Sciences Division, Lawrence Berkeley National Laboratory (LBNL). Advisor: Dr. Kenneth H. Downing.
1993	Ph.D. in Biophysics by the Physics Department of Keele University, UK. Advisor: Dr. Joan Bordas, SRS, Daresbury Laboratory.
1988	B.S. in Physics by the Universidad Autónoma de Madrid, Spain

POSITIONS

07/21 – present	**Distinguished Professor** of Biochemistry, Biophysics and Structural Biology, Molecular and Cell Biology Department, UC Berkeley
09/20 – 04/22	Co-director, Cal Cryo Facility, UC Berkeley
08/16 – 08/20	Head, Bay Area Cryo-EM Facility (BACEM), Berkeley Site
12/15 – present	**Senior Faculty Scientist,** Molecular Biophysics and Integrative Bioimaging Division, LBNL.
09/15 – 06/20	Head, Biochemistry, Biophysics and Structural Biology Division, MCB Department, UC Berkeley.
01/12 – 06/15	Head**,** Biophysics Graduate Program, UC Berkeley
01/10 – 01/14	Deputy Director of the Bioenergy/GTL & Structural Biology Department, Life Science Division, LBNL
11/08 – 11/15	Senior Faculty Scientist at LBNL, Life Sciences Division, LBNL
07/06 – 06/21	Professor of Biochemistry, Biophysics and Structural Biology, Molecular and Cell Biology Department, UC Berkeley
07/03 – 06/06	Associate Professor of Biochemistry and Molecular Biology, Molecular and Cell Biology Department, UC Berkeley
09/00 – present	**Investigator**, Howard Hughes Medical Institute
07/98 – 10/08	Faculty Scientist, Life Sciences Division, LBNL
07/98 – 06/03	Assistant Professor of Biochemistry and Molecular Biology, Molecular and Cell Biology Department, UC Berkeley
09/95 – 06/98	Staff Scientist, Life Sciences Division, LBNL

AWARDS AND HONORS

2024	**Doctor Honoris Causa** by the Universidad Autónoma de Madrid
2024	**Doctor Honoris Causa** by the Universidad Carlos III de Madrid
2024	Professional Woman of the year by the Spanish Federation of Women Directors, Executives, Professionals and Entrepreneurs (FEDEPE)
2024	Prize Woman in STEM by the Inspiring Girls Foundation (Spain)
2023	Shaw Prize in Life Science and Medicine (shared with Patrick Cramer)
2023	Distinguished Visitor Medal by the IOCB, Prague.
2022	Paul Sigler Prize, Yale University
2022	Visiting Scholar of the Fundación Jesús Serra (at CNIO, Madrid)
2021	**Fellow of the American Association for the Advancement of Science**
2021	**Foreign Member of the Royal Spanish Academy of Sciences** (Real Academia de Ciencias Exactas, Físicas y Naturales de España)
2021	Biophysical Society Annual Lecturer
2020	Vallee Visiting Professor (delayed to 2022)

2020	Kuggie Vallee Distinguished Lecturer (delayed to 2022)
2020	**Fellow of the Biophysical Society**
2019	**Associate Member of EMBO**
2019	Grimwade Medal by the University of Melbourne
2018	Sandra K. Masur Senior Leadership Award by the American Society for Cell Biology
2017	**Fellow of the American Society for Cell Biology**
2016	LBNL Director's Award for Exceptional Science Achievement
2016	Keith Porter Lecture Award by the American Society for Cell Biology
2016	Mildred Cohn Award in Biological Chemistry by the American Society for Biochemistry and Molecular Biology
2016	**Member of the American Academy of Arts and Sciences**
2015	**Member of the National Academy of Sciences**
2015	Dorothy Crowfoot Hodgkin Award by the Protein Society
2015	Distinguished Role Model in the Life Sciences, Northwestern University
2014 – 2015	Visiting Scholar of the Fundación Jesús Serra (at CNIO, Madrid)
2007 – 2008	Biomedicine Chair, Foundation BBVA (at CNIO, Madrid)
2005	American Society for Cell Biology Early Career Award
2005	Chabot Science Award for Excellence
2000	Burton Award by the Microscopy Society of America
1998	Outstanding Performance Award, LBNL
1989 – 92	Doctoral fellowships, Spanish Ministry of Education and MRC (U.K.)
1984 – 88	Undergraduate fellowship by the Spanish Ministry of Education

KEYNOTES AND NAMED LECTURES

2025	Tsoo King Memorial Lecture, Oregon State University
2025	Verna and Marrs McLean Lecture, Baylor College of Medicine
2024	Mary Ellen Jones Distinguished Women in Science Lecture, UNC Chapel Hill
2024	Keynote, Goeddel Family Technology Sandbox Grand Opening, UCSD
2024	Keynote presentation, Kuo Symposium on Cryo-EM, Shenzhen
2024	Plenary speaker, European South Atlantic Biophysics Congress, San Sebastián
2024	Keynote, Annual Meeting of the Brazilian Society for Biochemistry and Molecular Biology, Aguas de Lindóia
2023	Keynote presentation, Chemical Biology and Physiology Conference, OHSU
2023	Dorothy Crowfoot Hodgkin Inaugural Memorial Lecture, Oxford University
2023	Keynote presentation, Proteins GRC
2023	Frederick Seitz Lecture, University of Chicago
2022	Schmidt Lecture, Tuffs University
2022	Severo Ochoa Lecture, NYU Medical School
2022	Bruce Merrifield Lecture, Rockefeller University
2022	Pace Lecture in Biochemistry, University of Utah
2022	Keynote, Annual Symposium, Cleveland Center for Membrane and Structural Biology, Case Western Reserve University
2022	Caspar Lecture, Florida State University
2022	Keynote, Annual Cellular, Biochemical and Molecular Sciences Retreat, University of Rochester.
2022	Erlanger-Gasser Lecture, Washington University School of Medicine
2021	James M. Akagi Lecture, University of Kansas
2021	Keynote, UCSC Chemistry and Biochemistry Annual Meeting
2021	Plenary Lecture, Nebraska Drug Development Pipeline Symposium
2021	Kendall-Maddox Lectureship, Mayo Clinic
2021	David L. Weaver Lecture in Biophysics and Computational Biology, UC Davis
2021	Harry Steenbock Lectures, University of Wisconsin-Madison
2021	Martha L. Ludwig Lecture, University of Michigan

2020 Keynote, Buffalo Hamilton Toronto Symposium (BHT2020)
2020 Keynote, University of Virginia's Molecular Physiology and Biological Physics Department Retreat
2020 Inaugural Brigid L.M. Hogan Keynote Lecture, Duke University
2019 Inaugural Donald G. Comb Honorary Lecture, New England Biolabs
2019 Keynote, Nature Conferences: Functional Dynamics - Visualizing Molecules in Action
2019 Blaffer Lecture, MD Anderson
2019 Solvay Conference, invited speaker and Public Seminar presenter
2019 Keynote speaker, Center for Cellular and Biomolecular Machines, UC Merced.
2019 Kensal E. van Holde Lecture, Marine Biology Laboratory
2019 Plenary Talk, European Biophysical Society Meeting
2019 Onasis Lectures, invited speaker
2019 Dean's Lecture, Virginia Commonwealth University
2019 Keynote, Molecular Mechanistic Biology Symposium, Harvard Medical School
2019 Hadad Lecture, Haverford College
2019 Chipperfield Lecture, MIT
2018 Edward A. Doisy Lecture, Saint Louis University School of Medicine
2018 Hans Neurath Lecture, University of Washington
2018 Paul M. Horowitz Lecture, UT Health San Antonio
2018 Rosalind Franklin Lecture, Institute of Structural and Molecular Biology Symposium, UCL/Birbeck, London
2018 Keynote speaker, Transcriptional Regulation ASBMB Symposium
2018 Keynote speaker, Cytoskeletal Motors GRC
2018 Keynote speaker, Machines on Genes FASEB Conference
2018 Keynote speaker, 3D-EM GRC
2018 Keynote speaker, EMBL Symposium "Microtubules: from atoms to complex systems"
2018 Gruber Lecture, Yale University
2017 Russell Marker Lectures, University of Maryland
2017 Benning Lecture, University of Utah
2017 Plenary lecture, ESRF Cryo-EM Symposium
2017 Ernest C. Pollard Lecture in Biophysics, Penn State University
2017 Katherine D. McCormick Distinguished Lecture, Stanford University
2016 NCI Distinguished Scientist lecture
2016 James P. Holland Memorial Lecture, Indiana University
2016 Harvey Lecture, New York
2015 Dr. Smith Freeman Endowed Lecture, Chicago Cytoskeleton Meeting
2014 Symposium speaker ASCB meeting, "Cell Structure across Scales"
2014 Lamport Lecture, Dept. of Biophysics and Physiology, University of Washington
2014 Dean's Distinguished Lecture, University of Colorado Medical School
2013 Keynote speaker, Proteins GRC
2013 NIH WALS Lecture
2012 Fitzgerald Lecture, Duke University
2011 Keynote speaker, Motile and Contractile systems GRC
2011 Keynote speaker, IUCr Annual Meeting, Madrid
2009 Max Birnstiel Lecture at IMP, Vienna
2009 Distinguished Lecture at EMBL, Heidelberg
2006 Annual Hamilton Memorial Lecture, Temple University

PARTICIPATION IN SOCIETIES, ADVISORY BOARDS, JOURNALS, CONFERENCE ORGANIZATION AND REVIEW PANELS

2024 - present **Member**, Scientific Advisory Board Gadea Foundation for Science

2024	Conference co-organizer, Exploring cytoskeletal mechanisms at the scales of life – from molecules to organisms, Tourtor
2024	Symposium co-organizer, Cell biology at the nanoscale, Berkeley
2023 - present	**Member**, Board of Directors of the Vallee Foundation
2022	Invited participant, NS184 Nobel Symposia, “Towards characterizing the human 3D-proteome”
2021-2026	**Chair**, Scientific Advisory Board of the Max Planck Institute for Molecular Physiology, Dortmund
2021-2026	**Member**, Scientific Advisory Board of the Max Planck Institute for Biochemistry, Martinsried
2021-2023	Member, CZI Visual Proteomics Steering Council
2021-2024	**Member**, Scientific Advisory Board of the Institute for Molecular Physiology, Vienna
2021-present	**Member**, Vallee Scholars Selection Committee
2021	Reviewer for the Medical Research Council, UK
2021	Ad Hoc Reviewer for NHLBI, National Institutes of Health (NIH)
2021	Past President, American Society for Cell Biology (ASCB)
2020	Reviewer for the French National Research Agency
2020	Ad Hoc Reviewer for NINDS, NIH
2020	President, ASCB
2019	Reviewer for the Natural Sciences and Engineering Research Council of Canada
2019	Co-organizer and co-chair of the Symposium “Cryo-EM – from physics to biology: honoring the remarkable legacy of Ken Downing”, M&M Annual Meeting, Portland.
2019	Congressional Briefing on Cryo-EM as part of the Biophysics Week organized by the Biophysical Society
2019	President Elect, ASCB
2019 - present	**Member**, External Advisory Committee, Pacific Northwestern Center for Cryo-EM
2019 - present	**Chair**, National Advisory Committee for the Latin American Fellows Program, PEW Charitable Foundation
2018 - present	**Member**, Advisory Board of CryoEM 101, University of Utah.
2018 - present	**Member**, Life Sciences Institute Scientific Advisory Board, University of Michigan
2017	Reviewer for the Villum Fonden, Denmark
2016 – 2021	Member, International Academic Advisory Committee for the Beijing Innovation Center for Structural Biology at Tsinghua University.
2016 – present	**Member**, External Advisory Board for the NSF-CREST Center for Cellular and Biomolecular Machines at UC Merced.
2016	Ad hoc scientific advisor for the Beckmann Foundation
2016	Member, External Advisory Board for CUNY ASRC-SBI
2015	NIH special study section panel member
2015 – 2023	Member**,** Advisory Council for Princeton’s Molecular Biology Department
2015 – 2019	Member, Krios Oversight Committee, OHSU
2015 – present	**Member,** Editorial Board of Journal of Cell Biology
2015	Elected Chair, 3-D Electron Microscopy GRC
01/14 – 09/15	Member of the Scientific Advisory Committee for the Life Sciences Division, LBNL
2015 – 2018	Associate Editor of Journal of Structural Biology
2013	CMP study section, ad hoc member
2013	NCSD study section, ad hoc member
2012	Co-chair "New Technologies in Imaging", ASCB Annual meeting
2012 – 2018	Member, Editorial Board of Journal of Molecular Biology
2012	MSFC study section, ad hoc member
2011 – 2018	National Advisory Committee Member, PEW Latin American Fellows Program

2010	Co-organizer, Structural Biology Workshop at Janelia Farm
2009	Member, Search Committee for the LBNL Director
2009	Chair, Early Career Selection Committee of the ASCB
2008	Co-organizer, Workshop "Frontiers in Cryo-EM" at Janelia Farm.
2008	Co-organizer, CNIO Cancer Conference "Structure and mechanism of essential complexes for cell survival".
2007	Co-organizer, Imaging Techniques workshop of the GTL-DOE Annual Conference
2007	Co-editor, Macromolecular Section, Current Opinion in Structural Biology
2006	Co-organizer, Imaging Mini-symposium of the ASCB Meeting
2005-2009	Member, Macromolecular Structure and Function C Study Section
2004	Co-organizer, HHMI-MPI Workshop on Molecular and Cellular Imaging
2003	Organizer, QB3 Symposium: "Challenges in Biological Imaging: from cells to molecules", UC Berkeley
2003 – 2005	Elected member, Biophysical Society Executive Board
2002 – 2020	Chair**,** Advisory Board for the National Resource for Automated Molecular Microscopy
2002	Co-organizer, Frontiers in structural cell biology Biophysical Discussion, Biophysical Society
2000 – 2015	Member of the editorial board of Journal of Structural Biology.
1999	Editor, Special issue of Journal of Structural Biology on Electron Crystallography
1999	Chair, Visualizing Function: a new revolution in electron microscopy" symposium, ASCB Annual meeting.
1998	Co-organizer, Electron crystallography of biological macromolecules workshop, Granlibakken.

RESEARCH STATEMENT

My lab is dedicated to the ***visualization of macromolecular function***, using cryo-EM as a main experimental tool. We study two different areas of essential eukaryotic biology: molecular machinery in the control of gene expression, and microtubule cytoskeleton interactions and dynamics in cell division. The unifying principle in our work is the study of macromolecular assemblies as whole units of molecular function by direct visualization of their architecture, functional states, and regulatory interactions.

PUBLICATIONS

1. Furong Liu, F., Yang, Z., Chao Wang, C., Martin, R., Qiao[5], W., Carette, J., Luan, S., Nogales, E, and Staskawicz, B. (2024) The activated plant NRC4 immune receptor forms a hexameric resistosome. Cell **187**, 4877-4889.
2. Sauer, P.V., Pavlenko, E., Cookis, T., Zirden, L.C., Renn, J., Singhal, A., Hunold, P., Hoehne, M.N., van Ray, O., Hänsel-Hertsch, R., Sanbonmatsu, K.Y., Nogales, E., and Simon Poepsel, S. (2023) Activation of automethylated PRC2 by dimerization on chromatin. Mol. Cell, in press.
3. Yang, Z., Mameri, A., Cattoglio, C., Lachance, C., Florez Ariza, J.F., Luo, J., Humbert, J., Sudarshan, D., Banerjea, A., Galloy, M., Fradet-Turcotte, A., Lambert, J.-P., Ranish, J.A., Jacques Côté, J. and Nogales, E. (2024) Structural insights into the human NuA4/TIP60 acetyltransferase and chromatin remodeling complex. Science **385**, eadl5816.
4. Nogales, E. (2024) Building up complexity in structural biology studies. NSMB **31**, 847–848.
5. Perez-Bertoldi, J.M., Zhao, Y., Thawani, A., Yildiz, A., and Nogales (2024) Molecular interplay between HURP and Kif18A in mitotic spindle regulation. BioRkiv doi: https://doi.org/10.1101/2024.04.11.589088
6. Trinity Cookis, T., Lydecker, A., Sauer, P., Kasinath, V. and Nogales, E. (2024) Structural basis for the inhibition of PRC2 by active transcription histone posttranslational modifications. BioRkiv https://doi.org/10.1101/2024.02.09.579730.
7. Nogales, E. and Mahamid, J. (2024) Bridging structural and cell biology through cryo-electron microscopy. Nature **628**, 47-56.

8. Sauer, P.V., Cupellini, L., Sutter, M., Bondanza, M., Dominguez Martin, M.A., Kirst, H., Bína, D., Fujiet Koh, A., Kotecha, A., Greber[1], B.J., Nogales, E., Polivka, T., Mennucci, B., and Kerfeld, C.A. (2023) Structural and quantum chemical basis for OCP-mediated quenching of phycobilisomes. Sci. Adv.**10**, 7535.
9. Thawani, A., Florez Ariza, A.J., Nogales, E. and Collins, K. (2024) Mechanism of template and target site recognition by human LINE-1 ORF2 in retrotransposition. Nature **626**, 186–193.
10. Cookis, T., Sauer, P., Poepsel, S., Han, B.-G., Herbst, D.A., Glaeser, R.M. and Nogales, E. (2023) Optimized protocol for streptavidin-affinity grid fabrication for cryo-electron microscopy sample preparation. JoVE **202**, e66197.
11. Nogales, E. and Kellogg, E. (2023) Structure challenges in the multivalency of Tau-microtubule interactions. Cytoskeleton **81**, 53–56.
12. Liu, A., Kaeser, B., Chen, L-X., West-Roberts, J., Taylor-Kearney, L., Lavy, A., Günzing, D., Li, W-J., Hammel, M., Nogales, E., Banfield, J., and Shih, P. (2023). Deep-branching evolutionary intermediates reveal structural origins of form I rubisco. Curr. Biol. **33**, 5316–5325.
13. Ferlez, B.h., irst, H., Greber, B.J., Nogales, E., Sutter, M. and Kerfeld, C.A. (2023) Heterologous assembly of pleomorphic bacterial microcompartment shell architecture spanning the nano- to microscale. Adv. Materials **35**, e2212065.
14. Nogales, E. (2023) The tubulin structure, a quoter of a century later. MBoC **34**, 1-4.
15. Wee, L.M., Tong, A.B., Florez Ariza, F.J., Cañari-Chumpitaz, C, Grob, P., Nogales, E. and Bustamante, C.J. (2023) A trailing ribosome speeds up RNA polymerase at the expense of transcript fidelity via force and allostery. Cell **186**, 1244–1262
16. Zukin, S.A., Marunde, M.R., Popova, I.K., Nogales, E. and Patel, A.B. (2022) Structure and flexibility of the yeast NuA4 histone acetyltransferase complex. eLife **11**: e81400.
17. Domínguez-Martín, M.A., Sauer, P.V., Kirst, H., Sutter, M., Bina, D., Greber, B.J., Nogales, E., Polívka, T. and Kerfeld, C.A. (2022) Structures of a phycobilisome in light-harvesting and photoprotected states. Nature **609**, 835-845.
18. Meng Zhang, M., César Díaz-Celis, C., Onoa, B., Cañari-Chumpitaz, C., Requejo, K.I., Liu, J., Vien, M., Nogales, E., Ren, G., and Bustamante, C. (2022) Molecular organization of the early stages of nucleosome phase separation visualized by cryo-electron tomography. Mol. Cell **82**, 3000-3014.
19. Cofsky, J.C., Soczek, K.M., Knott, G.J., Nogales, E., and Doudna J.A. (2022) CRISPR-Cas9 bends and twists DNA to read its sequence. NSMB **29**, 395-40
20. Tsuchida, C.A., Zhang, S., Saffari Doost, M, Zhao, Y., O'Brien, E., Fang, H., Wang, J., Hai, Z.-Y., Chuck, J., Brötzmann, J., Vartoumian, A., Burstein, D., Chen X.-W., Nogales, E., Doudna, J.A. and Liu J.-J. (2022) Chimeric CRISPR-CasX enzymes and guide RNAs for improved genome editing activity. Mol. Cell **82**, 1199-1209.
21. Ferro, L.S., Fang, Q., Eshun-Wilson, L., Fernandes, J., Jack, A., Farrell, D., Gölcük,M., Huijben, T., Costa, K., Gür, M., DiMaio, F., Nogales, E. and Yildiz, A. (2022) Structural and functional insight into the regulation of kinesin-1 by MAP7. Science **375**, 326-331.
22. LaFrance B.J., Roostalu, J., Henkin, G., Greber, B.J., Zhang, R., Normanno, D., McCollum, C. Surrey, T. and Nogales E. (2022) Structural transitions in the GTP cap visualized by cryo-EM of catalytically inactive microtubules. PNAS **119**, e2114994119.
23. LaFrance, B.J., Cassidy-Amstutz, C., Nichols, R.J., Oltrogge, L.M., Nogales, E and Savage, D.F. (2021) The encapsulin from Thermotoga maritima is a flavoprotein with a symmetry matched ferritin-like cargo protein. Scientific Reports **11**:22810.
24. Herbst, D.A., Esbin, M.N., Louder, R.K., Dugast-Darzacq, C., Dailey, G.M., Fang, Q., Darzacq, X., Tjian, R., and Nogales, E. (2021) Structure of the human SAGA coactivator complex. NSMB **28**, 989-996.
25. Pausch, P., Soczek, K.M., Herbst, D.A., Al-Shayeb, B., Banfield, J.F., Nogales, E. and Doudna, J.A. (2021) DNA interference states of the hypercompact CRISPR-CasΦ effector. NSMB **28**, 652-661.
26. Glaeser, R.M., Nogales, E. and Chiu, W. (2021) Single particle cryo-EM of biological macromolecules. Biophysical Society-IOP series. IOP Publishing. Online ISBN: 978-0-7503-3039-8. Print ISBN: 978-0-7503-3037-4

27. Patel, A., Toso, D., Litvak, A., and Nogales, E. (2021) Efficient graphene oxide coating improves cryo-EM sample preparation and data collection from tilted grids. bioRkiv 2021.03.08.434344. doi: https://doi.org/10.1101/2021.03.08.434344.
28. Nichols, R.J., LaFrance, B., Phillips, N.R., Oltrogge, L.M., Valentin-Alvarado, L.E., Bischoff, L.E., Nogales, E., and Savage, D.F. (2021) Discovery and characterization of a novel family of prokaryotic nanocompartments involved in sulfur metabolism. eLife **59288**.
29. Greber, B.J., Remis, J., Ali, S. Nogales, E. (2021) Structure of the CDK-activating kinase bound to the clinical inhibitor ICE0942 at 2.5 Å resolution. Biophys. J. **120**, 677-686.
30. Kasinath, V., Beck, C., Sauer, P., Poepsel, S., Kosmatka, J., Faini, M., Toso, D., Aebersold, R., and Nogales, E. (2021) JARID2 and AEBP2 regulate PRC2 activity in the presence of H2A ubiquitination or other histone modifications. Science **371**, 6527.
31. Martin, R., Tiancong Qi, T., Zhang, H., Liu, F., King, M., Toth, C., Nogales, E and Staskawicz, B.J. (2020) Structure of the activated Roq1 resistosome directly recognizing the pathogen effector XopQ. Science **370**, eabd 9993.
32. Castañeda, A.F., Didychuk, A.L., Louder, R.K., McCollum, C.O., Davis, Z.H., Nogales E. and Glaunnsinger, B.A. (2020) The gammaherpesviral TATA box binding protein interacts directly with the C-terminal domain of RNA polymerase II to direct late gene transcription. PLOS Pathogenes https://doi.org/10.1371/journal.ppat.1008843.
33. Greber, B.J., Perez Bertoldi, J.M., Lim, K., Iavarone, A.T., Toso, D.B. and Nogales, E. (2020) The cryo-electron microscopy structure of the human CDK activating kinase. PNAS **549**, 414-417.
34. Mena, E.L., Jevtić , P., Greber, B.J., Gee, C.L., Lew, B.G., Akopian, D., Nogales, E., Kuriyan, J., and Rape, M. (2020) Structural basis for dimerization quality control. Nature 586, **452**–456.
35. García-Cerdán, Schmid, E.M., Takeuchi, T., McRae, I., McDonald, K.L., Yordduangjun, N., Hassan, A.M., Grob, P., Xu, C.S., Hess, H.F., Fletcher, D.A., Nogales, E., and Niyogi, K.K. (2020) Chloroplast Sec14-like 1 (CPSFL1) is essential for normal chloroplast development and affects carotenoid accumulation in *Chlamydomonas.* PNAS **117**, 12452–12463.
36. Greber, B.J. and Nogales, E. (2019) The structures of eukaryotic transcription pre-initiation complexes and their functional implications. Subcellular Biochemistry **93**, 143-192.
37. Patel, A.B., Moore, C.M., Greber, B.J., Luo, J., Zukin, S.A., Ranish, J. and Nogales, E. (2019) Architecture of the chromatin remodeler RSC and insights into its nucleosome engagement. Elife **54449**.
38. Patel, A.B., Greber B.J. and Nogales, E. (2019) Recent insights into the structure of TFIID, its assembly, and its binding to core promote. COSB **61**, 17-24.
39. Ghanim, G., Kellogg, E., Nogales, E. and Rio, D.C. (2019) Structure of a P element transposase-DNA complex reveals unusual DNA structures and GTP-DNA contacts. NSMB **26**, 1013-1022.
40. Nogales E., and Greber, B.J. (2019) Structures of TFIIH and their functional implications. COSB **59**, 188-194.
41. Carragher, B., Cheng, Y., Frost, A, Glaeser, G.M., Lander, G.C., Nogales, E. and Wang, H-W. (2019) Compendium of current outcomes when optimizing sample preparation of single-particle cryo-EM. J. Micros. **276**, 39-45.
42. Haloupek, N., Grob, P., Tenthorey, J., Vance, R. and Nogales, E. (2019) Cryo-EM Studies of NAIP–NLRC4 Inflammasomes. Methods in Enzymology Volume **625**: DNA Sensors and Inflammasomes, Ch. 12, 177, 204.
43. Liu, T., Liu, J.-J., Aditham, A., Nogales, E. and Doudna, J. (2019) Target preference of Type III-A CRISPR-Cas complexes at the transcription bubble. Nat. Commun.**10**, 3001.
44. Nguyen, T.H.D., Collins, K. and Nogales, E. (2019) Telomerase structures and regulation: shedding light on the chromosome end. COSB **55**, 185-193.
45. Eshun-Wilson, L., Zhang, R., Portran, D., Nachury, M.V., Toso, D., Lohr, T., Vendruscolo, M., Bonomi, M., Fraser, J.S. and Nogales, E. (2019) Effects of α-tubulin acetylation on microtubule structure and stability. PNAS **116**, 10366-10371.
46. Greber, B.J., Toso, D.B., Fang, J. and Nogales, E. (2019) The complete structure of the human TFIIH core complex. eLife **44771**.
47. Liu, J-J. Orlova, N., Oakes, B.L., Ma, E., Spinner, H.B., Baney, K.L.M., Chuck, J., Tan, D., Knott, G.J., Harrington, L.B., Al-Shayeb, B., Wagner, A., Brötzmann, J., Staahl, B.T., Talyor, K.L.,

Desmarais, J., Nogales, E., Doudna, J.A. (2019) CRISPR-CasX is an RNA-dominated enzyme active for human genome editing. Nature **566**, 218-223.
48. Jiang, F., Liu J.-J., Osuna, B.A., Xu, M., Berry, J.D., Rauch, J.B., Nogales, E., Bondy-Denomy, J, and Doudna, J.A. (2019) Temperature-responsive competitive inhibition of CRISPR-Cas. Mol. Cell **73**, 1-10.
49. Kasinath, V, Pöpsel, S and Nogales, E. (2019) Recent structural insights into PRC2 regulation and substrate binding. Biochem. **58**, 346-354.
50. Nogales, E. (2018) Tubulin and its isoforms. Reference Module in Biomedical Sciences. Elsevier. 28-Dec-2018 doi:10.1016/B978-0-12-801238-3.11142-0.
51. Patel, A. Louder, R.K., Greber, B.J., Grünberg, S., Luo, J., Fang, J., Liu, Y., Ranish, J., Hahn, S. and Nogales, E. (2018) Structure of human TFIID and mechanism of TBP loading onto promoter DNA. Science **362**, eaau8872.
52. Iwai, M., Grob, P., Iavarone, A.T., Nogales, E. and Niyogi, K.K. (2018) A unique supramolecular organization of photosystem I in the moss Physcomitrella patens. Nat. Plants **4**, 904-909.
53. Nogales, E. (2018) Who mentors whom? MBoC **29**, 2606-2607.
54. Nogales, E. (2018) Cryo-EM. Curr. Biol. **28**, R1127-1128.
55. Zhang, R, LaFrance, B. and Nogales E. (2018) Separating the effect of nucleotide and EB binding on microtubule structure. PNAS **115**, E6191-E6200.
56. Kellogg, E.H., Hejab, N.M.A., Poepsel, S., Downing, K.H., DiMaio, F. and Nogales, E. (2018) Near-atomic model of microtubule-bound tau. Science **360**, 1242-1246.
57. Nguyen, T.H.D., Tam, J., Wu, R.A., Greber, B.J., Toso, D., Nogales, E., Collins, K. (2018) Cryo-EM structure of substrate-bound human telomerase holoenzyme. Nature **557**, 190-195.
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