

Publikační a pedagogická činnost – prof. Ohad Medalia

Publikační činnost

Počet publikací: 98

Počet citací: na 7300

H-index: 44

1. **Medalia, O.**, Koster, AJ., Tocilj, A., Angenitzki, M., Sperling, J., Berkovitch-Yellin, Z., and Sperling, R. (1997). Automated electron tomography of large nuclear RNP (lnRNP) particles - the naturally assembled complexes of precursor messenger RNA and splicing factors. *J. Struct. Biol.* 120, 228-236.
2. **Medalia, O.**, Heim, M., Guckenberger, R., Sperling, R., and Sperling, J. (1999). Gold tagged RNA- A probe for RNP complexes, *J. Struct. Biol.* 127(2), 113-119.
3. Holzl, H., Kapelari, B., Kellermann, J., Seemuller, E., Sumegi, M., Udvardy, A., **Medalia, O.**, Sperling J, Muller S.A., Engel A., and Baumeister W. (2000). The regulatory complex of Drosophila melanogaster 26S proteasomes: Subunit composition and localization of a deubiquitylating enzyme, *J. Cell Biol.* 150(1), 119-130.
4. Henn, A., **Medalia, O.**, Shu-Ping, S., Franceschi F., and Sagi, I. (2001). Visualization of unwinding activity of duplex RNA by DbpA, a DEAD box helicase, at single-molecule resolution by atomic force microscop *Proc Natl. Acad. Sci. U.S.A.*, 98(9), 5007-5012.
5. **Medalia, O.***, Englander, J., Guckenberger, R., and Sperling, J. (2002). Anchoring of DNA to a Gold Surface Facilitates the Imaging of Protein-DNA Complexes by Atomic Force Microscopy in Solution, *Ultramicroscopy* 90(2-3), 103-112.
*corresponding author
6. **Medalia, O.**, Typke, D., Hegerl R., Angenitzki M., Sperling, J., and Sperling, R. (2002). Cryo-electron microscopy and cryo-electron tomography of the nuclear pre-mRNA processing machine. *J. Struct. Biol.* 138(1-2), 74-84.
7. **Medalia, O.**, Weber, I., Frangakis, A.S., Nicastro, D., Gerisch, G., and Baumeister, W. (2002). Macromolecular Architecture in eukaryotic cells visualized by cryo-electron tomography. *Science*. 298, 1209-1213.
8. Bretschneider, T., Jonkman, J., Köhler, J., **Medalia, O.**, Weber, I., Stelzer, E., Baumeister, W., and Gerisch, G. (2002). Dynamic organization of the actin system in the motile cells of *Dictyostelium*. *J Muscle Res Cell Motil.* 23, 639-649.

9. Grunewald, K., **Medalia, O.**, Gross, A., Steven, A.C., and Baumeister, W. (2003). Prospects of Electron Cryotomography to Visualize Macromolecular Complexes Inside Cellular Compartments: Implications of Crowding. *Biophys. Chem.*, 100(1-3), 577-591.
10. Uhle, U., **Medalia, O.**, Dumdey, R., Henklein, P., Bech-Otschir, D., Berndt, C., Berse, M., Sperling, J., and Dubiel, W. (2003). Protein kinase CK2 and protein kinase D are associated with the COP9 signalosome. *EMBO J.*, 22(6), 1302-1312.
11. Kürner, J., **Medalia, O.**, Linaroudis, A.A., and Baumeister, W. (2004). New insights into the structural organization of eukaryotic and prokaryotic cytoskeletons using cryo-electron tomography. *Exp. Cell Res.* 301(1), 38-42.
12. Beck, M., Förster, F., Ecke, M., Plitzko, J.M., Melchior, F., Gerisch, G., Baumeister, W., and **Medalia, O.** (2004). Nuclear pore complex structure and dynamics revealed by cryoelectron tomography. *Science* 306, 1387-1390.
13. Förster, F., **Medalia, O.**, Zauberman, N., Baumeister, W., and Fass, D. (2005). Retrovirus envelope protein complex Structure *in Situ* studied by cryo-electron tomography. *Proc Natl. Acad. Sci. U.S.A.* 102(13), 4729-4734.
14. Medalia, N., Sharon, M., Martinez-Arias, R., Mihalache, O., Robinson, C.V., **Medalia, O.**, and Zwickl, P. (2006). Functional and structural characterization of the *Methanosarcina mazei* proteasome and PAN complexes. *J. Struct. Biol.* 156(1), 84-92.
15. **Medalia, O.**, Beck, M., Ecke, M., Weber, I., Neujahr, R., Baumeister, W., and Gerisch, G. (2007). Organization of Actin Networks in Intact Filopodia. *Curr. Biol.*, 17(1), 79-84.
16. Beck, M., Lucic, V., Förster, F., Baumeister, W. and **Medalia, O.** (2007). Snapshots of Nuclear Pore Complexes in Action Captured by Cryoelectron Tomography. *Nature*. 449(7162), 611-615.
17. Abu-Qarn, M., Yurist, S., Giordano, S., Trauner, A., Morris, H.R., Hitchen, P., **Medalia, O.**, Dell, A., and Eichler, J. (2007). *Haloferax volcanii* AglB and AglD are involved in N-glycosylation of the S-layer glycoprotein and proper assembly of the surface layer. *J. Mol. Biol.* 374, 1224-1236.
18. Wiesel, N., Mattout, A., Melcer, S., Melamed-Book, N., Herrmann, H., **Medalia, O.**, Aeby, U., and Gruenbaum, Y. (2008). Laminopathic mutations interfere with the assembly, localization and dynamics of nuclear lamins. *Proc Natl. Acad. Sci. U.S.A.*, 105(1), 180-1855.
19. Konorts, M., Kahana, N., Linaroudis, A., Minsky, A. and **Medalia, O.** (2008). Structural Analysis of Photosynthetic Membranes by Cryo-Electron Tomography of Intact *Rhodopseudomonas viridis* Cells. *J. Struct. Biol.* 161(3), 393-400.
20. Gruska, M., **Medalia, O.**, Baumeister, W., and Leis, A., (2008). Electron tomography of vitreous sections from cultured mammalian cells. *J. Struct. Biol.* 161(3), 383-392.
21. Marko, M., Ellisman, M., and **Medalia, O.** (2008). The 4th International Conference on Electron Tomography. *Editorial, J. Struct. Biol.* 161(3), Article number:219.

22. Beck, M., and **Medalia, O.** (2008). Structural and functional insights into nucleocytoplasmic transport. *Histol. Histopathol.* 23(8), 1025-1033.
23. Lieber, A., Kushmaro, A., Minsky A., and **Medalia, O.** (2009). Chromatin organization and radio-resistance in the bacterium *Gemmata obscuriglobus*. *J. Bacteriol.* 191(5), 1439-1445.
24. Ben-Harush, K., Wiesel, N., Frenkiel-Krispin., D., Herrmann, H., Aebi, U., Gruenbaum, Y., and **Medalia, O.** (2009). Dissecting the supramolecular organization of the nuclear lamin filaments and paracrystalline fibers. *J. Mol. Biol.*, 386(5), 1392-402.
25. Böttcher, R., Wiesner, S., Braun, A., Wimmer, R., Berna, A., Elad, E., **Medalia, O.**, Pfeifer, A., Aszódi, A., Costell, M., and Fässler, R. (2009). Profilin 1 is required for midbody separation during late cytokinesis of chondrocytes. *EMBO J.* 28(8), 1157-1169.
26. Elad, N., Maimon, T., Frenkiel-Krispin, D., Lim, R.Y.H., and **Medalia, O.** (2009). Structural analysis of the nuclear pore complex by integrated approaches. *Curr. Opin. Struct. Biol.* 19(2), 226-232.
27. Medalia, N., Bir, A., Zwickl, Z., Mihalache, O., Beck, M., **Medalia, O.**, and Navon, A., (2009). Architecture and Molecular Mechanism of PAN, the Archaeal Proteasome Regulatory ATPase. *J Biol. Chem.* 284(34), 22952-22960.
28. Konorty, M., Kahana, N., Brumfeld, V., Vermiglio, A., **Medalia, O.**, and Minsky, A. (2009). Photosynthetic system in *Blastochloris viridis* revisited. *Biochem.* 48(22), 4753-4761.
29. Ben-Harush, K., Maimon T., Villa, E., and **Medalia, O.** (2010). Visualizing cellular processes at the molecular level by cryo-electron tomography. *J. Cell Sci.* 123, 7-12.
30. Taimen, P., Pfleghaar, K., Shimi, T., Möller, D., Ben-Harush, K., Erdos, M.R., Adam, S.A., Herrmann, H., **Medalia, O.**, Collins, F., Goldman, A., Goldman, R. (2010). A Progeria Mutation Reveals Functions for Lamin A in Nuclear Assembly, Architecture and Chromosome Organization. *Proc Natl. Acad. Sci. U.S.A.* 106, 22952-22960.
31. Frenkiel-Krispin, D., Mako, B., Aebi, U., and **Medalia, O.** (2010). Structural analysis of a metazoan nuclear pore complex reveals fused concentric rings architecture. *J. Mol. Biol.* 395(3), 578-586.
32. Maimon, T., and **Medalia, O.** (2010). Perspective on the Metazoan Nuclear Pore Complex. *Nucleus* 1(5), 383-386.
34. Patla, I., Volberg, T., Elad, N., Hirschfeld-Warneken, V., Grasshof, C., Fässler, R., Spatz, J., Geiger, B., and **Medalia, O.** (2010). Dissecting the molecular architecture of integrin-mediated focal adhesion by cryo-electron tomography. *Nat. Cell. Biol.* 12(9), 909-915.
35. **Medalia, O.**, and Geiger, B. (2010). Frontiers of microscopy-based research into cell-matrix adhesions. *Curr. Opin. Cell Biol.* 22, 1-10.

33. Mader, A., Elad, N., and **Medalia, O.** (2010). Cryo-electron tomography of eukaryotic cells. *Methods Enzymol.* 483, 245-265.
36. Elad, N., Abramovitch, S., Sabanay, H., and **Medalia, O.**, (2011). Microtubule organization in the final stages of cytokinesis as revealed by cryo-electron tomography. *J. Cell Sci.* 124, 207-215.
37. Bank, EM., Ben-Harush, K., Wiesel-Motiuk., N, Barkan, R., Feinstein, N., Lotan, O., **Medalia, O.**, Gruenbaum, Y. (2011). A laminopathic mutation disrupting lamin filament assembly causes disease-like phenotypes in *C. elegans*. *Mol Biol Cell.* 22(15), 2716-2728.
38. Yahav, T., Maimon, T., Grossman, E., Dahan, I., **Medalia, O.** (2011). Cryo-electron tomography: gaining insight into cellular processes by structural approaches. *Curr Opin Struct Biol.* 21(5), 670-677.
39. Tamir, A., Elad, N., **Medalia, O.** (2011). Assembly and breakdown of microtubules within the midbody. *Commun Integr Biol.* 4(5), 552-553.
40. Bank, EM., Ben-Harush, K., Feinstein, N., **Medalia, O.**, Gruenbaum, Y. (2012). Structural and physiological phenotypes of disease-linked lamin mutations in *C. elegans*. *J Struct Biol.*, 177, 106-112.
41. Grossman, E., Dahan, I., Stick, R., Goldberg, MW., Gruenbaum, Y., **Medalia, O.** (2012). Filament assembly of ectopically expressed *Caenorhabditis elegans* lamin within *Xenopus* oocytes. *J Struct Biol.*, 177, 113-118.
42. Rigort, A., Günther, D., Hegert, R., Baum, D., Weber, B., Prohaska, S., **Medalia, O.**, Baumeister, W., Hege, H.C. (2012). Automated segmentation of electron tomograms for a quantitative description of actin filament networks. *J Struct Biol.* 177, 135-144.
43. Henderson, R., Sali, A., Baker, ML., Carragher, B., Devkota, B., Downing, K.H., Egelman, E.H., Feng, Z., Frank, J., Grigorieff, N., Jiang, W., Lutcke, S.J., **Medalia, O.**, Penczek, P.A., Rosenthal, P.B., Rossmann, M.G., Schmid, M.F., Schröder, G.F., Steven, A.C., Stokes, D.L., Westbrook, J.D., Wriggers, W., Yang, H., Young, J., Berman, H.M., Chiu, W., Kleywegt, G.J. & Lawson, C.L. (2012). Outcome of the first electron microscopy validation task force meeting. *Structure* 20, 205-214.
44. Bokstad, M., Sabanay, H., Dahan, I., Geiger, B., **Medalia, O.** (2012). Reconstructing adhesion structures in tissues by cryo-electron tomography of vitrified frozen sections. *J. Struct. Biol.*, 178, 76-83.
45. Grossmann, E., **Medalia, O.** & Zwerger, M. (2012). Functional architecture of the nuclear pore complex. *Annu Rev. Biophys.* 41, 557-584.
46. **Medalia, O.**, Frangakis, A. (2012). Special issue on electron tomography. *J. Struct. Biol.* 178(2), Article number: 75.
47. Maimon T., Elad, N., Dahan, I., **Medalia, O.** (2012). The human nuclear pore complex as revealed by cryo-electron tomography. *Structure.* 20, 998-1006.

48. Zwerger, M. & **Medalia, O.** (2012). Unravelling the lamina network. *Nat. Rev. Mol. Cell Biol.* 13, Article number:140.
49. Fridman, K., Mader, A., Zwerger, M., **Medalia, O.** (2012). Advances in tomography: probing the molecular architecture of cells. *Nat. Rev. Mol. Cell Biol.* 13, 736-742.
50. Zwerger, M. & **Medalia, O.** (2013). From lamins to lamina: a structural perspective. *Histochem Cell Biol.* 140, 3-12.
51. Sandler, I., **Medalia, O.** & Aharoni, A. (2013). Experimental analysis of co-evolution within protein complexes: the yeast exosome as a model. *Proteins.* 81, 1997-2006.
52. Elad, N., Volberg, T., Patla, I., Hirschfeld-Warneken, V., Grashoff, C., Spatz, J.P., Fässler, R., Geiger, B. & **Medalia, O.** (2013). The role of integrin-linked kinase in the molecular architecture of focal adhesions. *J Cell Sci.* 126, 4099-4107.
53. Harapin, J., Eibauer, M., **Medalia, O.** (2013). Structural analysis of supramolecular assemblies by cryo-electron tomography. *Structure.* 21, 1522-1530.
54. Lavelin, I., Wolfenson, H., Patla, I., Henis, Y.I., **Medalia, O.**, Volberg, T., Livne, A., Kam, Z. & Geiger, B. (2013). Differential effect of actomyosin relaxation on the dynamic properties of focal adhesion proteins. *PLoS One* 8, e 73549.
55. Gruenbaum, Y. & **Medalia, O.** (2015). Lamins: the structure and protein complexes. *Curr. Opin. Cell Biol.* 32, 7-12.
56. Sorrentino, S., Studt, J.D., **Medalia, O.** & Tanuj Sapra, K. (2015). Roll, adhere, spread and contract: Structural mechanics of platelet function. *Eur. J. Cell Biol.* 94, 129-38.
57. Eibauer, M., Pellanda, M., Turgay, Y., Dubrovsky, A., Wild, A. & **Medalia, O.** (2015). Structure and gating of the nuclear pore complex. *Nat Commun.* 6, Article number:7532.
58. Harapin, J., Börmel, M., Sapra, K.T., Brunner, D., Kaech, A. & **Medalia, O.** (2015). Structural analysis of multicellular organisms with cryo-electron tomography. *Nat Methods.* 12(7), 634-636.
59. Dubrovsky, A., Sorrentino, S., Harapin, J., Sapra, K.T., **Medalia, O.** (2015). Developments in cryo-electron tomography for in situ structural analysis. *Arch Biochem Biophys.* 581, 78-85.
60. Zwerger, M., Roschitzki-Voser, H., Zbinden, R., Denais, C., Herrmann, H., Lammerding, J., Grütter, M.G. & **Medalia, O.** (2015). Modifying lamin A/C assembly and its nuclear localization by high affinity synthetic binders. *J. Cell Sci.* 128(19), 3607-3620.
61. Tamir, A., Sorrentino, S., Motahedeh, S., Shai, E., Dubrovsky, A., Dahan, I., Eibauer, M., Studt, J.D., Tanuj Sapra, K., Varon, D., **Medalia, O.** (2016). The macromolecular architecture of platelet-derived microparticles. *J. Struct. Biol.* 93(3), 181-187.
62. Irobalieva, R.N., Martins, B., **Medalia, O.** (2016). Cellular structural biology as revealed by cryo-electron tomography. *J. Cell Sci.* 129(3), 469-476.

63. Dubey, G.P., Mohan1, G.B.M., Dubrovsky, A., Amen, T., Tsipshtein, S., Rouvinski, A., Rosenberg, A., Kaganovich, D., Sherman, E., **Medalia, O.**, and Ben-Yehuda, S. (2016). Architecture and Characteristics of Bacterial Nanotubes. *Dev. Cell.* 36(4), 453-461.
64. Zwerger, M., Eibauer, M., **Medalia, O.** (2016). Insights into the gate and scaffold of the nuclear pore complex. *Nucleus.* 22, 1-7.
65. Sorrentino, S., Studt, J.D., Bokstad-Horev, M., **Medalia, O.**, and Tanuj Sapra, K. (2016). Toward correlating structure and mechanics of platelets. *Cell Adhesion & Migration* 10(5), 568-575.
66. Zuela, N., Zwerger, M., Levin, T., **Medalia, O.** & Gruenbaum, Y. (2016). Impaired mechanical response of an EDMD mutation leads to motility phenotypes that are repaired by loss of prenylation. *J Cell Sci.* 129(9), 1781-1791.
67. Zingerman-Koladko, I., Khayat, M., Harapin, J., Shoekeyov, O., Gruenbaum, Y., Salman, A., **Medalia, O.**, Ben-Harush, K. (2016). The assembly of *C. elegans* lamins into macroscopic fibers. *J Mech Behav Biomed Mater.* 63, 35-43.
68. Turgay, Y., Eibauer, M., Goldman, AE., Shimi, T., Khayat, M., Ben-Harush, K., Dubrovsky-Gaupp, A., Sapra, K.T., Goldman, R.D. & **Medalia, O.** (2017). The molecular architecture of lamins in somatic cells. *Nature* 543, 261-264.
69. Malka-Gibor, E., Kornreich, M., Laser-Azogui, A., Doron, O., Zingerman-Koladko, I., Harapin, J., **Medalia, O.** & Beck, R. (2017). Phosphorylation-Induced Mechanical Regulation of Intrinsically Disordered Neurofilament Proteins. *Biophys. J.* 112, 892-900.
70. Turgay, Y., & **Medalia, O.** (2017). The structure of lamin filaments in somatic cells as revealed by cryo-electron tomography. *Nucleus* 8(5), 475-481.
71. de Leeuw, R., Gruenbaum, Y & **Medalia, O.** (2018). Nuclear lamins:Thin filaments with major functions. *Trends Cell Biol.* 28(1), 34-45.
72. Schmid, M., Ernst, P., Honegger, A., Suomalainen, M., Zimmermann, M., Braun, L., Stauffer, S., Thom, C., Dreier, B., Eibauer, M., Kipar, A., Vogel, V., Greber, UF., **Medalia, O.**, & Plückthun, A. (2018). Adenoviral vector with shield and adapter increases tumor specificity and escapes liver and immune control. *Nat Comm.* 9(1), Article number:450.
73. Horev, D.S., Volberg, T., Livne, A., Eisenstein, M., Martins, B., Kam, Z., Jockusch, B.M., **Medalia, O.**, Sharon, M., & Geiger, B. (2018). Conformational states during vinculin unlocking differentially regulate focal adhesion properties. *Sci. Rep.* 8(1), Article number:2693.
74. Lickert, S., Sorrentino, S., Studt, J.D., **Medalia, O.**, Vogel V., Schoen I. (2018). Morphometric analysis of spread platelets identifies integrin α IIb β 3-specific contractile phenotype. *Sci. Rep.* 8(1), Article number:5428.

75. Stritt, S., Birkholz, I., Beck, S., Sorrentino, S., Sapra, K.T., Viaud J., Heck J., Gaits-Iacovoni, F., Schulze, H., Du X., Hartwig, J.H., Braun, A., Bender, M., **Medalia, O.**, Nieswandt, B. (2018). Profilin 1-mediated cytoskeletal rearrangements regulate integrin function in mouse platelets. *Blood Adv.* 2(9), 1040-1045.
76. Tattli, M. & **Medalia, O.** (2018). Insight into the functional organization of nuclear lamins in health and disease. *Curr. Opin. Cell Biol.* 54, 72-79.
77. Dahan, I., Sorrentino, S., Boujema-Paterski, R., and **Medalia, O.** (2018). Tiopronin-protected gold nanoparticles as a potential marker for cryo-EM and tomography. *Structure.* 26 (10), 1408-1413.
78. Weber, M.S., Wojtynek, M., and **Medalia, O.** (2019). Cellular and structural studies of eukaryotic cells by cryo-electron tomography. *Cells.* 8 (1), Article number:57.
79. Qi C., Sorrentino, S., **Medalia, O.**, Korkhov, V.M. (2019). The structure of a membrane adenylyl cyclase bound to an activated stimulatory G protein. *Science* 364, 389-394.
80. Stivala, S., Sorrentino, S., Gobbato, S., Bonetti, N., Camici, G., Lüscher, TF., **Medalia, O.**, and Beer, JH. (2019). Glycoprotein Ib clustering in platelets can be inhibited by alpha-linolenic acid as revealed by cryo-electron tomography. *Haematologica.* 105 (6), 1660-1666.
81. Karoutas, A., Szymanski, W., Rausch, T., Rog-Zielinska, E.A., Peyronnet, R., Guhathakurta, S., Seyfferth, J., Chen, H., de Leeuw, R., Herquel, B., Kimura, H., Mittler, G., Kohl, P., **Medalia, O.**, Korbel, J.O., Akhtar, A. (2019). The NSL complex regulates nuclear architecture via Lamin A/C acetylation. *Nat. Cell Biol.* 21, 1248-1260.
82. Arnold, F.M., Weber, M.S., Gonda, I., Gallenito, MJ., Adenau, S., Egloff, P., Zimmermann, I., Hutter, C.A.J., Hürlimann, LM., Peters, EE., Piel, J., Meloni, G., **Medalia, O.**, Seeger, M.A. (2020). The ABC Exporter IrtAB Imports and Reduces Mycobacterial Siderophores. *Nature.* 580(7803), 413-417.
83. Bertrand, A.T., Brull, A., Azibani, F., Benarroch, L., Chikhaoui, K., Stewart, C.L., **Medalia, O.**, Ben Yaou, R., Bonne, G. (2020). Lamin A/C Assembly Defects in LMNA-Congenital Muscular Dystrophy Is Responsible for the Increased Severity of the Disease Compared with Emery-Dreifuss Muscular Dystrophy. *Cells.* 9(4), Article number:844.
84. Horev, M.B., Zabary, Y., Zarka, R., Sorrentino, S., **Medalia, O.**, Zaritsky, A., Geiger, B. (2020). Differential dynamics of early stages of platelet adhesion and spreading on collagen IV-and fibrinogen-coated surfaces. *F1000Res.* 27:9:ISF-449.
85. Tenga, R., **Medalia, O.** (2020). Structure and unique mechanical aspects of nuclear lamin filaments. *Curr Opin Struct Biol.* 65,152-159.
86. Khayat, M, Deri, S, Wolf, D, Trigano, T, **Medalia, O.**, Ben-Harush, K. (2020). Biomimetic nuclear lamin fibers with remarkable toughness and stiffness. *Int J Biol Macromol.* 163, 2060-2067.
87. Sapra, T.K., Qin, Z., Buehler, M.J., Aebi, U., Dubrowsky-Gaupp, A., Mueller, D.J.,

- Medalia, O.** (2020). Nonlinear mechanics of lamin filaments and the meshwork topology build an emergent nuclear lamina. *Nat. Comm.* 11(1), Article number:6205.
88. Boujema-Paterski, R., Martins, B., Eibauer, M., Beals, C.T., Geiger, B., **Medalia, O.** (2020). Talin-activated vinculin interacts with branched actin networks to initiate bundles. *eLife*. 9:e53990.
 89. Kittisopikul, M., Shimi, T., Tatli, M., Tran, J.R., Zheng, Y., **Medalia, O.**, Jaqaman, K., Adam, S., Goldman, R.D. (2021). Computational analysis of lamin isoform interactions with nuclear pore complexes. *J. Cell Biol.* 220(4):e202007082.
 90. Martins, B., Sorrentino, S., Chung, W., Tatli, M., **Medalia, O.***, Eibauer, E. (2021). Revealing the polarity of actin filaments by cryo-electron tomography. *Structure*. S0969-2126(20)30481-0.
 91. Kronenberg-Tenga, R., Tatli, M., Eibauer, M., Wu, W., Shin, J.Y., Bonne, G., Worman, H.J., **Medalia, O.** (2021). A lamin A/C variant causing striated muscle disease provides insights into filament organization. *J. Cell Science*. 134(6):jcs256156
 92. Li W., Sancho, A., Chung, W.L., Vinik, Y., Groll, J., Zick, Y., **Medalia, O.**, Bershadsky, A.D., Geiger B. (2021). Differential cellular responses to adhesive interactions with galectin-8 and fibronectin coated substrates. *J. Cell Science*, 134(8):jcs252221.
 93. Weber, M.S., Eibauer, E., Sivagurunathan, S., Magin, T.M., Goldman, R.D., **Medalia, O.** (2021). Structural heterogeneity of cellular K5/K14 filaments as revealed by cryo-electron microscopy. *eLife* 10:e70307.
 94. Sapra T.K., **Medalia, O.** (2021). Bend, push, stretch: remarkable structure and mechanics of single intermediate filaments and meshworks. *Cells* 10, 1960.
 95. Schuller, A., Wojtynek, M., Mankus D., Tatli M., Kronenberg-Tenga, R., Regmi, S., Dasso, M., Weis, K., **Medalia, O.***, Schwartz, T.U.* (2021). The cellular environment shapes the nuclear pore complex architecture. *Nature* 598(7882), 667-+, *in press*.
 96. Sorrentino, S., Conesa, J.J., Cuervo, A., Melero, R., Martins, B., Fernandez-Gimenez, E., de Isidro-Gomez, F.P., de la Morena, J., Studt, J.D., Sorzano, C.O.S., Eibauer, M., Carazo, J.M., **Medalia, O.** (2021). Structural analysis of receptors and actin polarity in platelet protrusions. *Proc Natl. Acad. Sci. U.S.A.* 118(37):e2105004118.
 97. Wu, H., Shen, Y., Sivagurunathan, S., Weber, M.S., Adam, S.A., Shin, J.H., Fredberg, J.J., **Medalia, O.**, Goldman, R.D., and Weitz D.A. (2021). Vimentin Intermediate Filaments and filamentous actin form unexpected interpenetrating networks that redefine the cell cortex. *Proc Natl. Acad. Sci. U.S.A.* (*communicated by DA Weitz*).
 98. Tatli M., Moraïs S., Tovar-Herrera O.E., Bomble Y., Bayer E.A., **Medalia, O.***, Mizrahi, I.*. Nanoscale resolution of microbial fiber degradation in action. *In revisions*
doi: <https://doi.org/10.1101/2021.02.16.431430>

99. Eibauer M., Weber M.S., Turgay Y., Sivagurunathan S., Goldman R.D., **Medalia, O.** The modulated pentameric structure of vimentin polymers. *Submitted*
doi: <https://doi.org/10.1101/2021.07.15.452584>
100. Thom, C., Ehrenmann, J., Vacca, S., Waltenspühl, J., Schöppe, J., **Medalia, O.**, Plückthun A. Structures of the NK₁R in complex with Substance P and two different G proteins. *In revisions*

Book Chapters

1. Bokstad, M. and **Medalia, O.** (2014). Correlative Light Electron Microscopy as a Navigating tool for cryo-Electron Tomography. 121-133. In Fluorescence Microscopy: Super-Resolution and other Novel Techniques, Edited by A Cornea, PM Conn. Elsevier

Patents

1. Sperling, J. and **Medalia, O.** (2005). Pre-existing nucleic acids covalently attached to a metal surface or a metal cluster, intermediates thereof and methods of using same. US patent 06979729.

10 publikací z poslední doby:

1. Schuller, A., Wojtynek, M., Mankus D., Tatli M., Kronenberg-Tenga R., Regmi S., Dasso M., Weis K., **Medalia, O.***, Schwartz, T.U.*. (2021). The cellular environment shapes the nuclear pore complex architecture. *Nature* 598(7882), 667-+, *in press*.
2. Sorrentino, S., Conesa, J.J., Cuervo, A., Melero, R., Martins, B., Fernandez-Gimenez, E., de Isidro-Gomez, F.P., de la Morena, J., Studt, J.D., Sorzano, C.O.S., Eibauer, M., Carazo, J.M., **Medalia, O.** (2021). Structural analysis of receptors and actin polarity in platelet protrusions. *Proc Natl. Acad. Sci. U.S.A.* 118 (37):e2105004118.
3. Sapra, T.K., **Medalia, O.** (2021). Bend, push, stretch: remarkable structure and mechanics of single intermediate filaments and meshworks. *Cells* 10, 1960.
4. Weber, M.S., Eibauer, E., Sivagurunathan, S., Magin T.M., Goldman, R.D., **Medalia, O.** (2021). Structural heterogeneity of cellular K5/K14 filaments as revealed by cryo-electron microscopy. *eLife* 10:e70307.
5. Li, W., Sancho, A., Chung, WL., Vinik, Y., Groll, J., Zick, Y., **Medalia, O.**, Bershadsky, A.D., Geiger, B. (2021). Differential cellular responses to adhesive interactions with galectin-8 and fibronectin coated substrates. *J. Cell Science* 134(8):jcs252221.
6. Kronenberg-Tenga, R., Tatli, M., Eibauer, M., Wu, W., Shin, J.Y., Bonne, G., Worman, H.J., **Medalia, O.** (2021). A lamin A/C variant causing striated muscle disease provides insights into filament organization. *J. Cell Science* 134(6):jcs256156.
7. Martins, B., Sorrentino, S., Chung, W., Tatli, M., **Medalia, O.***, Eibauer, E. (2021). Revealing the polarity of actin filaments by cryo-electron tomography. *Structure*. S0969-2126(20)30481-0.

8. Kittisopikul, M., Shimi, T., Tatli, M., Tran, J.R., Zheng, Y., **Medalia, O.**, Jaqaman, K., Adam, S., Goldman, R.D. (2021). Computational analysis of lamin isoform interactions with nuclear pore complexes. *J. Cell Biol.* 220(4):e202007082.
9. Boujemaa-Paterski, R., Martins, B., Eibauer, M., Beals, C.T., Geiger, B., **Medalia, O.** (2020). Talin-activated vinculin interacts with branched actin networks to initiate bundles. *eLife*. 13;9:e53990.
10. Sapra, T.K., Qin, Z., Buehler, M.J., Aebi, U., Dubrowsky-Gaupp, A., Mueller, D.J., **Medalia O.** (2020) Nonlinear mechanics of lamin filaments and the meshwork topology build an emergent nuclear lamina. *Nat. Comm.* 11(1), Article number:6205.

Pedagogická činnost

Přednášky na Univerzitě v Curychu,

Vedení PhD. studentů v programu “Molecular life sciences” na Univerzitě v Curychu.