# Sergey Leikin

List of Publications by Year
in descending order



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|---|---|---|---|
| 98 papers | 9,526 citations | 38742 50 h-index | 38395 95 g-index |
| 99 all docs | 99 docs citations | 99 times ranked | 9212 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | 4PBA reduces growth deficiency in osteogenesis imperfecta by enhancing transition of hypertrophic chondrocytes to osteoblasts. JCI Insight, 2022, 7, . | 5.0 | 16 |
| 2 | Procollagen Trafficking and its Implications in Osteogenesis Imperfecta. Biology of Extracellular Matrix, 2021, , 23-53. | 0.3 | 0 |
| 3 | The regulatory role of matrix proteins in mineralization of bone. , 2021, , 165-187. | | 2 |
| 4 | Guidelines for the use and interpretation of assays for monitoring autophagy (4th) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622 Td (edition | 9.1 | 1,430 |
| 5 | Noncanonical ERâ€“Golgi trafficking and autophagy of endogenous procollagen in osteoblasts. Cellular and Molecular Life Sciences, 2021, 78, 8283-8300. | 5.4 | 12 |
| 6 | Mechanisms of procollagen and HSP47 sorting during ER-to-Golgi trafficking. Matrix Biology, 2020, 93, 79-94. | 3.6 | 25 |
| 7 | Substitution of murine type I collagen A1 3-hydroxylation site alters matrix structure but does not recapitulate osteogenesis imperfecta bone dysplasia. Matrix Biology, 2020, 90, 20-39. | 3.6 | 11 |
| 8 | COL1A1 C-propeptide mutations cause ER mislocalization of procollagen and impair C-terminal procollagen processing. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2019, 1865, 2210-2223. | 3.8 | 18 |
| 9 | Evidence of biomechanical and collagen heterogeneity in uterine fibroids. PLoS ONE, 2019, 14, e0215646. | 2.5 | 32 |
| 10 | Endoplasmic reticulum stress is induced in growth plate hypertrophic chondrocytes in G610C mouse model of osteogenesis imperfecta. Biochemical and Biophysical Research Communications, 2019, 509, 235-240. | 2.1 | 33 |
| 11 | Noncanonical autophagy at ER exit sites regulates procollagen turnover. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E10099-E10108. | 7.1 | 136 |
| 12 | Substitutions for arginine at position 780 in triple helical domain of the Î±1(I) chain alter folding of the type I procollagen molecule and cause osteogenesis imperfecta. PLoS ONE, 2018, 13, e0200264. | 2.5 | 16 |
| 13 | The chaperone activity of 4PBA ameliorates the skeletal phenotype of Chihuahua, a zebrafish model for dominant osteogenesis imperfecta. Human Molecular Genetics, 2017, 26, 2897-2911. | 2.9 | 68 |
| 14 | P4HA1 mutations cause a unique congenital disorder of connective tissue involving tendon, bone, muscle and the eye. Human Molecular Genetics, 2017, 26, 2207-2217. | 2.9 | 37 |
| 15 | Celecoxib treatment of fibrous dysplasia (FD) in a human FD cell line and FD-like lesions in mice with protein kinase A (PKA) defects. Molecular and Cellular Endocrinology, 2017, 439, 165-174. | 3.2 | 5 |
| 16 | Absence of the ER Cation Channel TMEM38B/TRIC-B Disrupts Intracellular Calcium Homeostasis and Dysregulates Collagen Synthesis in Recessive Osteogenesis Imperfecta. PLoS Genetics, 2016, 12, e1006156. | 3.5 | 49 |
| 17 | Osteoblast Malfunction Caused by Cell Stress Response to Procollagen Misfolding in Î±2(I)-G610C Mouse Model of Osteogenesis Imperfecta. Journal of Bone and Mineral Research, 2016, 31, 1608-1616. | 2.8 | 71 |
| 18 | Makings of a brittle bone: Unexpected lessons from a low protein diet study of a mouse OI model. Matrix Biology, 2016, 52-54, 29-42. | 3.6 | 15 |

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| 19 | Zebrafish Collagen Type I: Molecular and Biochemical Characterization of the Major Structural Protein in Bone and Skin. Scientific Reports, 2016, 6, 21540. | 3.3 | 97 |
| 20 | MBTPS2 mutations cause defective regulated intramembrane proteolysis in X-linked osteogenesis imperfecta. Nature Communications, 2016, 7, 11920. | 12.8 | 112 |
| 21 | Genetic Defects in TAPT1 Disrupt Ciliogenesis and Cause a Complex Lethal Osteochondrodysplasia. American Journal of Human Genetics, 2015, 97, 521-534. | 6.2 | 39 |
| 22 | Haploinsufficiency for either one of the type-II regulatory subunits of protein kinase A improves the bone phenotype ofPrkar1a+/â^'mice. Human Molecular Genetics, 2015, 24, 6080-6092. | 2.9 | 9 |
| 23 | Abnormal Type I Collagen Post-translational Modification and Crosslinking in a Cyclophilin B KO Mouse Model of Recessive Osteogenesis Imperfecta. PLoS Genetics, 2014, 10, e1004465. | 3.5 | 98 |
| 24 | Pulse-chase analysis of procollagen biosynthesis by azidohomoalanine labeling. Connective Tissue Research, 2014, 55, 403-410. | 2.3 | 10 |
| 25 | Collagen Structure, Folding and Function. , 2014, , 71-84. | | 15 |
| 26 | Collagen degradation by tumor-associated trypsins. Archives of Biochemistry and Biophysics, 2013, 535, 111-114. | 3.0 | 11 |
| 27 | Mutations in WNT1 Cause Different Forms of Bone Fragility. American Journal of Human Genetics, 2013, 92, 565-574. | 6.2 | 240 |
| 28 | Helical Structure Determines Different Susceptibilities of dsDNA, dsRNA, and tsDNA to Counterion-Induced Condensation. Biophysical Journal, 2013, 104, 2031-2041. | 0.5 | 19 |
| 29 | Kuskokwim Syndrome, a Recessive Congenital Contracture Disorder, Extends the Phenotype ofFKBP10â€‰ Mutations. Human Mutation, 2013, 34, 1279-1288. | 2.5 | 53 |
| 30 | Deficiency of CRTAP in nonâ€lethal recessive osteogenesis imperfecta reduces collagen deposition into matrix. Clinical Genetics, 2012, 82, 453-459. | 2.0 | 30 |
| 31 | Absence ofFKBP10in recessive type XI osteogenesis imperfecta leads to diminished collagen cross-linking and reduced collagen deposition in extracellular matrix. Human Mutation, 2012, 33, 1589-1598. | 2.5 | 86 |
| 32 | Deficient degradation of homotrimeric type I collagen, Î±1(I)3 glomerulopathy in oim mice. Molecular Genetics and Metabolism, 2011, 104, 373-382. | 1.1 | 10 |
| 33 | Electrostatic Braiding and Homologous Pairing of DNA Double Helices. Biophysical Journal, 2011, 101, 875-884. | 0.5 | 28 |
| 34 | Chaperoning osteogenesis: new protein-folding disease paradigms. Trends in Cell Biology, 2011, 21, 168-176. | 7.9 | 70 |
| 35 | COL1 C-propeptide cleavage site mutations cause high bone mass osteogenesis imperfecta. Human Mutation, 2011, 32, 598-609. | 2.5 | 119 |
| 36 | Signatures of DNA flexibility, interactions and sequence-related structural variations in classical X-ray diffraction patterns. Nucleic Acids Research, 2011, 39, 7289-7299. | 14.5 | 13 |

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| 37 | Fluctuations and interactions of semi-flexible polyelectrolytes in columnar assemblies. Journal of Physics Condensed Matter, 2010, 22, 072202. | 1.8 | 9 |
| 38 | Variable bone fragility associated with an Amish COL1A2 variant and a knock-in mouse model. Journal of Bone and Mineral Research, 2010, 25, 247-261. | 2.8 | 98 |
| 39 | Carcinomas Contain a Matrix Metalloproteinaseâ€“Resistant Isoform of Type I Collagen Exerting Selective Support to Invasion. Cancer Research, 2010, 70, 4366-4374. | 0.9 | 89 |
| 40 | Alternate protein kinase A activity identifies a unique population of stromal cells in adult bone. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 8683-8688. | 7.1 | 42 |
| 41 | Lack of Cyclophilin B in Osteogenesis Imperfecta with Normal Collagen Folding. New England Journal of Medicine, 2010, 362, 521-528. | 27.0 | 158 |
| 42 | Undulations Enhance the Effect of Helical Structure on DNA Interactions. Journal of Physical Chemistry B, 2010, 114, 11668-11680. | 2.6 | 22 |
| 43 | Molecular Mechanism of Type I Collagen Homotrimer Resistance to Mammalian Collagenases. Journal of Biological Chemistry, 2010, 285, 22276-22281. | 3.4 | 100 |
| 44 | In utero transplantation of adult bone marrow decreases perinatal lethality and rescues the bone phenotype in the knockin murine model for classical, dominant osteogenesis imperfecta. Blood, 2009, 114, 459-468. | 1.4 | 93 |
| 45 | DNA Double Helices Recognize Mutual Sequence Homology in a Protein Free Environment. Journal of Physical Chemistry B, 2008, 112, 1060-1064. | 2.6 | 73 |
| 46 | Segregation of Type I Collagen Homo- and Heterotrimers in Fibrils. Journal of Molecular Biology, 2008, 383, 122-132. | 4.2 | 28 |
| 47 | Structural Heterogeneity of Type I Collagen Triple Helix and Its Role in Osteogenesis Imperfecta. Journal of Biological Chemistry, 2008, 283, 4787-4798. | 3.4 | 81 |
| 48 | Helical coherence of DNA in crystals and solution. Nucleic Acids Research, 2008, 36, 5540-5551. | 14.5 | 36 |
| 49 | Defective C-propeptides of the ProÎ±2(I) Chain of Type I Procollagen Impede Molecular Assembly and Result in Osteogenesis Imperfecta. Journal of Biological Chemistry, 2008, 283, 16061-16067. | 3.4 | 57 |
| 50 | Selective retention and degradation of molecules with a single mutant Î±1(I) chain in the Brtl IV mouse model of OI. Matrix Biology, 2007, 26, 604-614. | 3.6 | 52 |
| 51 | Structure and interactions of biological helices. Reviews of Modern Physics, 2007, 79, 943-996. | 45.6 | 285 |
| 52 | Prolyl 3-hydroxylase 1 deficiency causes a recessive metabolic bone disorder resembling lethal/severe osteogenesis imperfecta. Nature Genetics, 2007, 39, 359-365. | 21.4 | 429 |
| 53 | Y-position cysteine substitution in type I collagen (Î±1(I) R888C/p.R1066C) is associated with osteogenesis imperfecta/Ehlers-Danlos syndrome phenotype. Human Mutation, 2007, 28, 396-405. | 2.5 | 63 |
| 54 | Procollagen Triple Helix Assembly: An Unconventional Chaperone-Assisted Folding Paradigm. PLoS ONE, 2007, 2, e1029. | 2.5 | 56 |

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| 55 | Deficiency of Cartilage-Associated Protein in Recessive Lethal Osteogenesis Imperfecta. New England Journal of Medicine, 2006, 355, 2757-2764. | 27.0 | 307 |
| 56 | Molecular Mechanism of Î±1(I)-Osteogenesis Imperfecta/Ehlers-Danlos Syndrome. Journal of Biological Chemistry, 2006, 281, 6463-6470. | 3.4 | 77 |
| 57 | Direct Observation of Azimuthal Correlations between DNA in Hydrated Aggregates. Physical Review Letters, 2005, 95, 148102. | 7.8 | 33 |
| 58 | Mutations Near Amino End of Î±1(I) Collagen Cause Combined Osteogenesis Imperfecta/Ehlers-Danlos Syndrome by Interference with N-propeptide Processing. Journal of Biological Chemistry, 2005, 280, 19259-19269. | 3.4 | 118 |
| 59 | Torsional Deformation of Double Helix in Interaction and Aggregation of DNA. Journal of Physical Chemistry B, 2004, 108, 6508-6518. | 2.6 | 63 |
| 60 | Interactions of Inorganic Phosphate and Sulfate Anions with Collagen. Biochemistry, 2004, 43, 14901-14912. | 2.5 | 67 |
| 61 | Structure, stability and interactions of type I collagen with GLY349-CYS substitution in Î±1(I) chain in a murine Osteogenesis Imperfecta model. Matrix Biology, 2004, 23, 101-112. | 3.6 | 32 |
| 62 | Changes in Thermal Stability and Microunfolding Pattern of Collagen Helix Resulting from the Loss of Î±2(I) Chain in Osteogenesis Imperfecta Murine. Journal of Molecular Biology, 2003, 331, 191-200. | 4.2 | 64 |
| 63 | Type I Collagen Triplet Duplication Mutation in Lethal Osteogenesis Imperfecta Shifts Register of Î± Chains throughout the Helix and Disrupts Incorporation of Mutant Helices into Fibrils and Extracellular Matrix. Journal of Biological Chemistry, 2003, 278, 10006-10012. | 3.4 | 29 |
| 64 | Type I collagen is thermally unstable at body temperature. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 1314-1318. | 7.1 | 488 |
| 65 | Temperature-Dependent DNA Condensation Triggered by Rearrangement of Adsorbed Cations. Journal of Physical Chemistry B, 2002, 106, 13362-13369. | 2.6 | 64 |
| 66 | Osteogenesis Imperfecta Murine: Interaction Between Type I Collagen Homotrimers. Journal of Molecular Biology, 2001, 309, 807-815. | 4.2 | 22 |
| 67 | Measurement of Forces between Hydroxypropylcellulose Polymers:â€‰ Temperature Favored Assembly and Salt Exclusion. Journal of Physical Chemistry B, 2001, 105, 1877-1886. | 2.6 | 37 |
| 68 | Sequence Recognition in the Pairing of DNA Duplexes. Physical Review Letters, 2001, 86, 3666-3669. | 7.8 | 94 |
| 69 | Twist in Chiral Interaction between Biological Helices. Physical Review Letters, 2000, 84, 2537-2540. | 7.8 | 35 |
| 70 | Electrostatic interaction between long, rigid helical macromolecules at all interaxial angles. Physical Review E, 2000, 62, 2576-2596. | 2.1 | 57 |
| 71 | Does the Triple Helical Domain of Type I Collagen Encode Molecular Recognition and Fiber Assembly while Telopeptides Serve as Catalytic Domains?. Journal of Biological Chemistry, 1999, 274, 36083-36088. | 3.4 | 97 |
| 72 | Electrostatic Zipper Motif for DNA Aggregation. Physical Review Letters, 1999, 82, 4138-4141. | 7.8 | 205 |

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| 73 | Sugars and Polyols Inhibit Fibrillogenesis of Type I Collagen by Disrupting Hydrogen-Bonded Water Bridges between the Helices. Biochemistry, 1998, 37, 11888-11895. | 2.5 | 90 |
| 74 | Symmetry Laws for Interaction between Helical Macromolecules. Biophysical Journal, 1998, 75, 2513-2519. | 0.5 | 40 |
| 75 | Electrostatic interaction between helical macromolecules in dense aggregates: An impetus for DNA poly- and meso-morphism. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 13579-13584. | 7.1 | 91 |
| 76 | Raman spectral evidence for hydration forces between collagen triple helices. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 11312-11317. | 7.1 | 155 |
| 77 | Solvent hydrogen-bond network in protein self-assembly: solvation of collagen triple helices in nonaqueous solvents. Biophysical Journal, 1997, 72, 353-362. | 0.5 | 56 |
| 78 | â€œOverscreeningâ€•in a polar liquid as a result of coupling between polarization and density fluctuations. Electrochimica Acta, 1997, 42, 849-865. | 5.2 | 43 |
| 79 | Measured effects of diacylglycerol on structural and elastic properties of phospholipid membranes. Biophysical Journal, 1996, 71, 2623-2632. | 0.5 | 240 |
| 80 | Temperature-favoured assembly of collagen is driven by hydrophilic not hydrophobic interactions. Nature Structural and Molecular Biology, 1995, 2, 205-210. | 8.2 | 150 |
| 81 | Landau Theory of a System with Two Bilinearly Coupled Order Parameter sin External Field: Exact Mean Field Solution, Critical Properties and Isothermal Susceptibility. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1995, 50, 789-794. | 1.5 | 0 |
| 82 | Temperature-induced complementarity as a mechanism for biomolecular assembly. Proteins: Structure, Function and Bioinformatics, 1994, 19, 73-76. | 2.6 | 21 |
| 83 | Bending, hydration and interstitial energies quantitatively account for the hexagonal-lamellar-hexagonal reentrant phase transition in dioleoylphosphatidylethanolamine. Biophysical Journal, 1994, 67, 1603-1611. | 0.5 | 134 |
| 84 | Direct measurement of forces between self-assembled proteins: temperature-dependent exponential forces between collagen triple helices.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 276-280. | 7.1 | 137 |
| 85 | Hydration Forces. Annual Review of Physical Chemistry, 1993, 44, 369-395. | 10.8 | 489 |
| 86 | Chain-melting reentrant transition in bimolecular layers at large separations. Physical Review Letters, 1993, 70, 3623-3626. | 7.8 | 7 |
| 87 | Surface phase transitions and hydration forces. Journal of Chemical Physics, 1992, 97, 6809-6820. | 3.0 | 17 |
| 88 | On the theory of electrostatic interaction of neutral lipid bilayers separated by thin water film. Journal of Chemical Physics, 1991, 95, 5224-5229. | 3.0 | 12 |
| 89 | Measured entropy and enthalpy of hydration as a function of distance between DNA double helices. Physical Review A, 1991, 44, 5272-5278. | 2.5 | 75 |
| 90 | Mean-field theory of dehydration transitions. Physical Review A, 1991, 44, 1156-1168. | 2.5 | 30 |

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| 91 | Theory of hydration forces. Nonlocal electrostatic interaction of neutral surfaces. Journal of Chemical Physics, 1990, 92, 6890-6898. | 3.0 | 62 |
| 92 | Stalk mechanism of vesicle fusion. European Biophysics Journal, 1989, 17, 121-9. | 2.2 | 151 |
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| 94 | Fluctuation theory of hydration forces: The dramatic effects of inhomogeneous boundary conditions. Physical Review A, 1989, 40, 6431-6437. | 2.5 | 91 |
| 95 | Reversible electrical breakdown of lipid bilayers: formation and evolution of pores. Biochimica Et Biophysica Acta - Biomembranes, 1988, 940, 275-287. | 2.6 | 528 |
| 96 | Definition of surface tension at a non-spherical interface. Journal of the Chemical Society, Faraday Transactions 2, 1988, 84, 1149. | 1.1 | 32 |
| 97 | Membrane fusion: Overcoming of the hydration barrier and local restructuring. Journal of Theoretical Biology, 1987, 129, 411-425. | 1.7 | 142 |
| 98 | Localization of nonlinear waves in randomly inhomogeneous media. Physics Letters, Section A: General, Atomic and Solid State Physics, 1984, 105, 31-33. | 2.1 | 9 |