

Publications Stemming From

The Progeria Research Foundation Cell and Tissue Bank

The Progeria Research Foundation Cell and Tissue Bank has contributed to the following medical publications, categorized by cell line for researcher convenience:

HGADFN001

[Anti-hsa-miR-59 alleviates premature senescence associated with Hutchinson-Gilford progeria syndrome in mice](#)

Hu Q, Zhang N, Sui T, et al. [published online ahead of print, 2022 Nov 16]. *EMBO J*. 2022;e110937. doi:10.15252/embj.2022110937

[Age-dependent loss of MMP-3 in Hutchinson-Gilford progeria syndrome.](#)

Harten IA, Zahr RS, Lemire JM, Machan JT, Moses MA, Doiron RJ, Curatolo AS, Rothman FG, Wight TN, Toole BP, Gordon LB. *J Gerontol A Biol Sci Med Sci*. 2011 Nov;66(11):1201-7.

[The mutant form of lamin A that causes Hutchinson-Gilford progeria is a biomarker of cellular aging in human skin.](#)

McClintock D, Ratner D, Lokuge M, Owens DM, Gordon LB, Collins FS, Djabali K. *PLoS One*. 2007 Dec 5;2(12):e1269.

[Hutchinson-Gilford progeria mutant lamin A primarily targets human vascular cells as detected by an anti-Lamin A G608G antibody.](#)

McClintock D, Gordon LB, Djabali K. *Proc Natl Acad Sci U S A*. 2006 Feb 14;103(7):2154-9.

[Aggrecan expression is substantially and abnormally upregulated in Hutchinson-Gilford Progeria Syndrome dermal fibroblasts.](#)

Lemire JM, Patis C, Gordon LB, Sandy JD, Toole BP, Weiss AS. *Mech Ageing Dev*. 2006 Aug;127(8):660-9.

[Rescue of heterochromatin organization in Hutchinson-Gilford progeria by drug treatment.](#)

Columbaro M, Capanni C, Mattioli E, Novelli G, Parnaik VK, Squarzoni S, Maraldi NM, Lattanzi G. *Cell Mol Life Sci*. 2005 Nov;62(22):2669-78.

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8.

HGADFN003

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Deregulated miR-145 and miR-27b in hutchinson-gilford progeria syndrome: implications for adipogenesis](#)

Fenzl FQ, Lederer EM, Brumma L, et al. *Aging (Albany NY)*. Published online August 27, 2025. doi:10.18632/aging.206309

[Impact of miR-181a on SIRT1 Expression and Senescence in Hutchinson-Gilford Progeria Syndrome](#)

Lederer EM, Fenzl FQ, Krüger P, Schroll M, Hartinger R, Djabali K. *Diseases*. 2025;13(8):245. Published 2025 Aug 4. doi:10.3390/diseases13080245

[Enhancing Cellular Homeostasis: Targeted Botanical Compounds Boost Cellular Health Functions in Normal and Premature Aging Fibroblasts](#)

Hartinger R, Singh K, Leverett J, Djabali K. *Biomolecules*. 2024;14(10):1310. Published 2024 Oct 16. doi:10.3390/biom14101310

[Ghrelin delays premature aging in Hutchinson-Gilford progeria syndrome](#)

Ferreira-Marques M, Carvalho A, Franco AC, et al. Ghrelin delays premature aging in Hutchinson-Gilford progeria syndrome [published online ahead of print, 2023 Oct 19]. *Aging Cell*. 2023;e13983. doi:10.1111/accel.13983

[Impact of Combined Baricitinib and FTI Treatment on Adipogenesis in Hutchinson-Gilford Progeria Syndrome and Other Lipodystrophic Laminopathies](#)

Hartinger R, Lederer EM, Schena E, Lattanzi G, Djabali K. *Cells*. 2023;12(10):1350. Published 2023 May 9. doi:10.3390/cells12101350

[Unique progerin C-terminal peptide ameliorates Hutchinson-Gilford progeria syndrome phenotype by rescuing BUBR1.](#)

Zhang N, Hu Q, Sui T, Fu L, Zhang X, Wang Y, Zhu X, Huang B, Lu J, Li Z, Zhang Y. *Nat Aging*. 2023 Feb;3(2):185-201. doi: 10.1038/s43587-023-00361-w. Epub 2023 Feb 2. Erratum in: *Nat Aging*. 2023 May 2;; PMID: 37118121; PMCID: PMC10154249.

[Establishment and Characterization of hTERT Immortalized Hutchinson-Gilford Progeria Fibroblast Cell Lines](#)

Lin H, Mensch J, Haschke M, et al. Published 2022 Sep 6. doi:10.3390/cells11182784

[Impact of MnTBAP and Baricitinib Treatment on Hutchinson-Gilford Progeria Fibroblasts](#)

Vehns E, at R, Djabali K. *Pharmaceuticals (Basel)*. 2022;15(8):945. Published 2022 Jul 29. doi:10.3390/ph15080945

[SerinE1 drives a cell-autonomous pathogenic signaling in Hutchinson-Gilford progeria syndrome](#)

Catarinella G, Nicoletti C, Bracaglia A, et al. *Cell Death Dis.* 2022;13(8):737. Published 2022 Aug 26. doi:10.1038/s41419-022-05168-y

[Isoprenylcysteine Carboxylmethyltransferase-Based Therapy for Hutchinson-Gilford Progeria Syndrome](#)

Marcos-Ramiro B, Gil-Ordóñez A, Marín-Ramos NI, et al. *ACS Cent Sci.* 2021;7(8):1300-1310. doi:10.1021/acscentsci.0c01698

[Baricitinib, a JAK-STAT Inhibitor, Reduces the Cellular Toxicity of the Farnesyltransferase Inhibitor Lonafarnib in Progeria Cells](#)

Arnold R, Vehns E, Randl H, Djabali K. *Int J Mol Sci.* 2021;22(14):7474. Published 2021 Jul 12. doi:10.3390/ijms22147474

[Impact of Progerin Expression on Adipogenesis in Hutchinson-Gilford Progeria Skin-Derived Precursor Cells](#)

Najdi F, Krüger P, Djabali K. *Cells.* 2021;10(7):1598. Published 2021 Jun 25. doi:10.3390/cells10071598

[Nuclear Pore Complexes Cluster in Dysmorphic Nuclei of Normal and Progeria Cells during Replicative Senescence.](#)

Röhrig JM, Arnold R, Djabali K. *Cells.* 2021 Jan 14;10(1):153. doi: 10.3390/cells10010153. PMID: 33466669; PMCID: PMC7828780.

[Self-assembly of multi-component mitochondrial nucleoids via phase separation.](#)

Feric M, Demarest TG, Tian J, Croteau DL, Bohr VA, Misteli T. *EMBO J.* 2021 Mar 15;40(6):e107165. doi: 10.15252/embj.2020107165. Epub 2021 Feb 23. PMID: 33619770; PMCID: PMC7957436.

[Inhibition of JAK-STAT Signaling With Baricitinib Reduces Inflammation and Improves Cellular Homeostasis in Progeria Cells](#)

Liu C, Arnold R, Henriques G, Djabali K. *Cells* 2019;8(10):1276. Published 2019 Oct 18. doi:10.3390/cells8101276

[Analysis of Somatic Mutations Identifies Signs of Selection During in Vitro Aging of Primary Dermal Fibroblasts](#)

Narisu N, Rothwell R, Vrtačnik P, et al. *Aging Cell* 2019;18(6):e13010. doi:10.1111/accel.13010

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell.* 2019;18(4):e12979. doi:10.1111/accel.12979

[Autophagic Removal of Farnesylated Carboxy-Terminal Lamin Peptides](#)

Lu X, Djabali K. *Cells* 2018;7(4):33. Published 2018 Apr 23. doi:10.3390/cells7040033

[Targeting the Phospholipase A2 Receptor Ameliorates Premature Aging Phenotypes](#)

Griveau A, Wiel C, Le Calvé B, et al. *Aging Cell* 2018;17(6):e12835. doi:10.1111/accel.12835

[A Cell-Intrinsic Interferon-like Response Links Replication Stress to Cellular Aging Caused by Progerin.](#)

Kreienkamp R, Graziano S, Coll-Bonfill N, Bedia-Diaz G, Cybulla E, Vindigni A, Dorsett D, Kubben N, Batista LFZ, Gonzalo S. *Cell Rep.* 2018 Feb 20;22(8):2006-2015.

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

[Nucleoplasmic lamins define growth-regulating functions of lamina-associated polypeptide 2 \$\alpha\$ in progeria cells.](#)

Vidak S, Georgiou K, Fichtinger P, Naetar N, Dechat T, Foisner R. *J Cell Sci.* 2017 Dec 28. pii: jcs.208462. doi: 10.1242/jcs.208462. [Epub ahead of print]

[Intermittent treatment with farnesyltransferase inhibitor and sulforaphane improves cellular homeostasis in Hutchinson-Gilford progeria fibroblasts.](#)

Gabriel D, Shafry DD, Gordon LB, Djabali K. *Oncotarget.* 2017 Jul 18;8(39):64809-64826. doi: 10.18632/oncotarget.19363. eCollection 2017 Sep 12.

[Temsirolimus Partially Rescues the Hutchinson-Gilford Progeria Cellular Phenotype.](#)

Gabriel D, Gordon LB, Djabali K. *PLoS One* 2016;11(12):e0168988. Published 2016 Dec 29. doi:10.1371/journal.pone.0168988

[Progerin Impairs Chromosome Maintenance by Depleting CENP-F From Metaphase Kinetochores in Hutchinson-Gilford Progeria Fibroblasts](#)

Eisch V, Lu X, Gabriel D, Djabali K. *Oncotarget* 2016;7(17):24700-24718. doi:10.18632/oncotarget.8267

[Permanent farnesylation of lamin A mutants linked to progeria impairs its phosphorylation at serine 22 during interphase.](#)

Moiseeva O, Lopes-Paciencia S, Huot G, Lessard F, Ferbeyre G. *Aging* 2016 Feb;8(2):366-81.

[Vitamin D Receptor Signaling Improves Hutchinson-Gilford Progeria Syndrome Cellular Phenotypes](#)

Kreienkamp R, Croke M, Neumann MA, et al. *Oncotarget* 2016;7(21):30018-30031. doi:10.18632/oncotarget.9065

[Lamin A Is an Endogenous SIRT6 Activator and Promotes SIRT6-Mediated DNA Repair.](#)

Ghosh S, Liu B, Wang Y, Hao Q, Zhou Z. *Cell Rep.* 2015 Nov 17;13(7):1396-1406. doi: 10.1016/j.celrep.2015.10.006. Epub 2015 Nov 5. PMID:26549451

[Proliferation of progeria cells is enhanced by lamina-associated polypeptide 2 \$\alpha\$ \(LAP2 \$\alpha\$ \) through expression of extracellular matrix proteins.](#)

Vidak S, Kubben N, Dechat T, Foisner R. *Genes & Development.* 2015 Oct 1;29(19):2022-36.

[Sulforaphane enhances progerin clearance in Hutchinson-Gilford progeria fibroblasts.](#)

Gabriel D, Roedl D, Gordon LB, Djabali K. *Aging Cell.* 2014 Dec 16: 1-14.

[Depleting the methyltransferase Suv39h1 improves DNA repair and extends lifespan in a progeria mouse model.](#)

Liu B, Wang Z, Zhang L, Ghosh S, Zheng H, Zhou Z. *Nat Commun.* 2013;4:1868.

[Naïve adult stem cells from patients with Hutchinson-Gilford progeria syndrome express low levels of progerin in vivo.](#)

Wenzel V, Roedl D, Gabriel D, Gordon LB, Herlyn M, Schneider R, Ring J, Djabali K. *Biol Open.* 2012 Jun 15;1(6):516-26. Epub 2012 Apr 16.

[Age-dependent loss of MMP-3 in Hutchinson-Gilford progeria syndrome.](#)

Harten IA, Zahr RS, Lemire JM, Machan JT, Moses MA, Doiron RJ, Curatolo AS, Rothman FG, Wight TN, Toole BP, Gordon LB. *J Gerontol A Biol Sci Med Sci.* 2011 Nov;66(11):1201-7.

[Progerin and telomere dysfunction collaborate to trigger cellular senescence in normal human fibroblasts.](#)

Cao K, Blair CD, Faddah DA, Kieckhafer JE, Olive M, Erdos MR, Nabel EG, Collins FS. *J Clin Invest.* 2011 Jul 1;121(7):2833-44

[Defective lamin A-Rb signaling in Hutchinson-Gilford Progeria Syndrome and reversal by farnesyltransferase inhibition.](#)

Marji J, O'Donoghue SI, McClintock D, Satagopam VP, Schneider R, Ratner D, Worman HJ, Gordon LB, Djabali K. *PLoS One.* 2010 Jun 15;5(6):e11132.

[Effect of progerin on the accumulation of oxidized proteins in fibroblasts from Hutchinson Gilford progeria patients.](#)

Viteri G, Chung YW, Stadtman ER. *Mech Ageing Dev.* 2010 Jan;131(1):2-8.

[Ageing-related chromatin defects through loss of the NURD complex.](#)

Pegoraro G, Kubben N, Wickert U, Göhler H, Hoffmann K, Misteli T. *Nat Cell Biol.* 2009 Oct;11(10):1261-7.

[Lamin A-dependent misregulation of adult stem cells associated with accelerated ageing.](#)

Scaffidi P, Misteli T. *Nat Cell Biol.* 2008 Apr;10(4):452-9.

[Perturbation of wild-type lamin A metabolism results in a progeroid phenotype.](#)

Candelario J, Sudhakar S, Navarro S, Reddy S, Comai L. *Aging Cell*. 2008 Jun;7(3):355-67

[Alterations in mitosis and cell cycle progression caused by a mutant lamin A known to accelerate human aging.](#)

Dechat T, Shimi T, Adam SA, Rusinol AE, Andres DA, Spielmann HP, Sinensky MS, Goldman RD. *Proc Natl Acad Sci USA*. 2007 Mar 20;104(12):4955-60.

[The mutant form of lamin A that causes Hutchinson-Gilford progeria is a biomarker of cellular aging in human skin.](#)

McClintock D, Ratner D, Lokuge M, Owens DM, Gordon LB, Collins FS, Djabali K. *PLoS One*. 2007 Dec 5;2(12):e1269.

[A lamin A protein isoform overexpressed in Hutchinson-Gilford progeria syndrome interferes with mitosis in progeria and normal cells.](#)

Cao K, Capell BC, Erdos MR, Djabali K, Collins FS. *Proc Natl Acad Sci USA*. 2007 Mar 20;104(12):4949-54.

[Hutchinson-Gilford progeria mutant lamin A primarily targets human vascular cells as detected by an anti-Lamin A G608G antibody.](#)

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Columbaro M, Capanni C, Mattioli E, Novelli G, Parnaik VK, Squarzoni S, Maraldi NM, Lattanzi G. *Cell Mol Life Sci*. 2005 Nov;62(22):2669-78.

[Genomic instability in laminopathy-based premature aging.](#)

Liu B, Wang J, Chan KM, Tjia WM, Deng W, Guan X, Huang JD, Li KM, Chau PY, Chen DJ, Pei D, Pendas AM, Cadiñanos J, López-Otín C, Tse HF, Hutchison C, Chen J, Cao Y, Cheah KS, Tryggvason K, Zhou Z. *Nat Med*. 2005 Jul;11(7):780-5.

[Incomplete processing of mutant lamin A in Hutchinson-Gilford progeria leads to nuclear abnormalities, which are reversed by farnesyltransferase inhibition.](#)

Glynn MW, Glover TW. *Hum Mol Genet*. 2005 Oct 15;14(20):2959-69.

[Accumulation of mutant lamin A causes progressive changes in nuclear architecture in Hutchinson-Gilford progeria syndrome.](#)

Goldman RD, Shumaker DK, Erdos MR, Eriksson M, Goldman AE, Gordon LB, Gruenbaum Y, Khuon S, Mendez M, Varga R, Collins FS. *Proc Natl Acad Sci U S A*. 2004

Jun15;101(24):8963-8.

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8.

HGADFN004

[Incomplete processing of mutant lamin A in Hutchinson-Gilford progeria leads to nuclear abnormalities, which are reversed by farnesyltransferase inhibition.](#)

Glynn MW, Glover TW. *Hum Mol Genet*. 2005 Oct 15;14(20):2959-69.

HGADFN005

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8.

HGADFN008

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8.

HGADFN014

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8.

HGMDFN090

[Selection of specific and efficient siRNAs in new cellular model for Hutchinson-Gilford progeria syndrome therapy](#)

Dzianisava V, Piekarowicz K, Machowska M, Rzepecki R. *Mol Ther Nucleic Acids*.

2025;36(4):102727. Published 2025 Oct 3. doi:10.1016/j.omtn.2025.102727

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Activation of endoplasmic reticulum stress in premature aging via the inner nuclear membrane protein SUN2](#)

Vidak S, Serebryanny LA, Pegoraro G, Misteli T. *Cell Rep*. 2023;42(5):112534. doi:10.1016/j.celrep.2023.112534

[Unique progerin C-terminal peptide ameliorates Hutchinson-Gilford progeria syndrome phenotype by rescuing BUBR1.](#)

Zhang N, Hu Q, Sui T, Fu L, Zhang X, Wang Y, Zhu X, Huang B, Lu J, Li Z, Zhang Y. *Nat Aging*. 2023 Feb;3(2):185-201. doi: 10.1038/s43587-023-00361-w. Epub 2023 Feb 2. Erratum in: *Nat Aging*. 2023 May 2;; PMID: 37118121; PMCID: PMC10154249.

[Quantification of Farnesylated Progerin in Hutchinson-Gilford Progeria Patient Cells by Mass Spectrometry](#)

Camafeita E, Jorge I, Rivera-Torres J, Andrés V, Vázquez J. *Int J Mol Sci*. 2022;23(19):11733. Published 2022 Oct 3. doi:10.3390/ijms231911733

[Self-assembly of multi-component mitochondrial nucleoids via phase separation.](#)

Feric M, Demarest TG, Tian J, Croteau DL, Bohr VA, Misteli T. *EMBO J*. 2021 Mar 15;40(6):e107165. doi: 10.15252/embj.2020107165. Epub 2021 Feb 23. PMID: 33619770; PMCID: PMC7957436.

[Epigenetic Deregulation of Lamina-Associated Domains in Hutchinson-Gilford Progeria Syndrome](#)

Köhler F, Bormann F, Raddatz G, et al. *Genome Med* 2020;12(1):46. Published 2020 May 25. doi:10.1186/s13073-020-00749-y

[Chromatin and Cytoskeletal Tethering Determine Nuclear Morphology in Progerin-Expressing Cells](#)

Lionetti MC, Bonfanti S, Fumagalli MR, Budrikis Z, Font-Clos F, Costantini G, Chepizhko O, Zapperi S, La Porta CAM. *Biophysical Journal* 2020 May 5;118(9):2319-2332.

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell* 2019;18(4):e12979. doi:10.1111/accel.12979

[A Cell-Intrinsic Interferon-like Response Links Replication Stress to Cellular Aging Caused by Progerin.](#)

Kreienkamp R, Graziano S, Coll-Bonfill N, Bedia-Diaz G, Cybulla E, Vindigni A, Dorsett D,

Kubben N, Batista LFZ, Gonzalo S. *Cell Rep*. 2018 Feb 20;22(8):2006-2015.

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doi:10.18632/aging.101508

[Nucleoplasmic lamins define growth-regulating functions of lamina-associated polypeptide 2α in progeria cells.](#)

Vidak S, Georgiou K, Fichtinger P, Naetar N, Dechat T, Foisner R.
J Cell Sci. 2017 Dec 28. pii: jcs.208462. doi: 10.1242/jcs.208462. [Epub ahead of print]

[Progerin sequestration of PCNA promotes replication fork collapse and mislocalization of XPA in laminopathy-related progeroid syndromes](#)

Hilton BA, Liu J, Cartwright BM, et al. *FASEB J* 2017;31(9):3882-3893.
doi:10.1096/fj.201700014R

[Vitamin D Receptor Signaling Improves Hutchinson-Gilford Progeria Syndrome Cellular Phenotypes](#)

Kreienkamp R, Croke M, Neumann MA, et al. *Oncotarget* 2016;7(21):30018-30031.
doi:10.18632/oncotarget.9065

[Methylene blue alleviates nuclear and mitochondrial abnormalities in progeria.](#)

Xiong ZM, Choi JY, Wang K, Zhang H, Tariq Z, Wu D, Ko E, LaDana C, Sesaki H, Cao K.
Aging Cell. 2015 Dec 14. [Epub ahead of print]

[Proliferation of progeria cells is enhanced by lamina-associated polypeptide 2α \(LAP2α\) through expression of extracellular matrix proteins.](#)

Vidak S, Kubben N, Dechat T, Foisner R. *Genes & Development*. 2015 Oct 1;29(19):2022-36.

[Higher-order unfolding of satellite heterochromatin is a consistent and early event in cell senescence.](#)

Swanson EC, Manning B, Zhang H, Lawrence JB. *J Cell Biol*. 2013 Dec 23;203(6):929-42.

[Correlated alterations in genome organization, histone methylation, and DNA-lamin A/C interactions in Hutchinson-Gilford progeria syndrome.](#)

McCord RP, Nazario-Toole A, Zhang H, Chines PS, Zhan Y, Erdos MR, Collins FS, Dekker J, Cao K. *Genome Res*. 2013 Feb;23(2):260-9. Epub 2012 Nov 14.

[Comparison of constitutional and replication stress-induced genome structural variation by SNP array and mate-pair sequencing.](#)

Arlt MF, Ozdemir AC, Birkeland SR, Lyons RH Jr, Glover TW, Wilson TE. *Genetics*. 2011 Mar;187(3):675-83.

[Hydroxyurea induces de novo copy number variants in human cells.](#)

Arlt MF, Ozdemir AC, Birkeland SR, Wilson TE, Glover TW. *Proc Natl Acad Sci USA*. 2011 Oct 18;108(42):17360-5

[Progerin and telomere dysfunction collaborate to trigger cellular senescence in normal human fibroblasts.](#)

Cao K, Blair CD, Faddah DA, Kieckhafer JE, Olive M, Erdos MR, Nabel EG, Collins FS. *J Clin Invest*. 2011 Jul 1;121(7):2833-44

[CTP:phosphocholine cytidyltransferase \$\alpha\$ \(CCT \$\alpha\$ \) and lamins alter nuclear membrane structure without affecting phosphatidylcholine synthesis.](#)

Gehrig K, Ridgway ND. *Biochim Biophys Acta*. 2011 Jun;1811(6):377-85.

[Effect of progerin on the accumulation of oxidized proteins in fibroblasts from Hutchinson Gilford progeria patients.](#)

Viteri G, Chung YW, Stadtman ER. *Mech Ageing Dev*. 2010 Jan;131(1):2-8.

[Replication stress induces genome-wide copy number changes in human cells that resemble polymorphic and pathogenic variants.](#)

Arlt MF, Mülle JG, Schaibley VM, Ragland RL, Durkin SG, Warren ST, Glover TW. *Am J Hum Genet*. 2009 Mar;84(3):339-50.

[A lamin A protein isoform overexpressed in Hutchinson-Gilford progeria syndrome interferes with mitosis in progeria and normal cells.](#)

Cao K, Capell BC, Erdos MR, Djabali K, Collins FS. *Proc Natl Acad Sci USA*. 2007 Mar 20;104(12):4949-54.

[Incomplete processing of mutant lamin A in Hutchinson-Gilford progeria leads to nuclear abnormalities, which are reversed by farnesyltransferase inhibition.](#)

Glynn MW, Glover TW. *Hum Mol Genet*. 2005 Oct 15;14(20):2959-69.

HGADFN122

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Aberrant migration features in primary skin fibroblasts of Huntington's disease patients hold potential for unraveling disease progression using an image based machine learning tool](#)

Gharaba S, Shalem A, Paz O, Muchtar N, Wolf L, Weil M. *Comput Biol Med*. Published online August 2, 2024. doi:10.1016/j.compbimed.2024.108970

[Perturbed actin cap as a new personalized biomarker in primary fibroblasts of Huntington's disease patients](#)

Gharaba S, Paz O, Feld L, Abashidze A, Weinrab M, Muchtar N, Baransi A, Shalem A, Sprecher U, Wolf L, Wolfenson H, Weil M. *Front Cell Dev Biol*. 2023 Jan 18;11:1013721. doi: 10.3389/fcell.2023.1013721. PMID: 36743412; PMCID: PMC9889876.

[Direct reprogramming of human smooth muscle and vascular endothelial cells reveals defects associated with aging and Hutchinson-Gilford progeria syndrome](#)

Bersini S, Schulte R, Huang L, Tsai H, Hetzer MW. *Elife*. 2020 Sep 8;9:e54383. doi: 10.7554/eLife.54383. PMID: 32896271; PMCID: PMC7478891.

[Epigenetic Deregulation of Lamina-Associated Domains in Hutchinson-Gilford Progeria Syndrome](#)

Köhler F, Bormann F, Raddatz G, et al. *Genome Med*. 2020;12(1):46. Published 2020 May 25. doi:10.1186/s13073-020-00749-y

[PML2-mediated Thread-Like Nuclear Bodies Mark Late Senescence in Hutchinson-Gilford Progeria Syndrome](#)

Wang M, Wang L, Qian M, et al. [published online ahead of print, 2020 Apr 29]. *Aging Cell*
Correction acknowledging PRF for cell lines is pending

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell* 2019;18(4):e12979. doi:10.1111/accel.12979

[Predicting Age From the Transcriptome of Human Dermal Fibroblasts](#)

Fleischer JG, Schulte R, Tsai HH, et al. *Genome Biol* 2018;19(1):221. Published 2018 Dec 20. doi:10.1186/s13059-018-1599-6

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

[Metformin Alleviates Aging Cellular Phenotypes in Hutchinson-Gilford Progeria Syndrome Dermal Fibroblasts.](#)

Park SK, Shin OS. *Exp Dermatol*. 2017 Feb 13. [Epub ahead of print]

[Lamin A Is an Endogenous SIRT6 Activator and Promotes SIRT6-Mediated DNA Repair.](#)

Ghosh S, Liu B, Wang Y, Hao Q, Zhou Z. *Cell Rep*. 2015 Nov 17;13(7):1396-1406. doi: 10.1016/j.celrep.2015.10.006. Epub 2015 Nov 5. PMID:26549451

[Insights into the role of immunosenescence during varicella zoster virus infection \(shingles\) in the aging cell model.](#)

Kim JA, Park SK, Kumar M, Lee CH, Shin OS. *Oncotarget*. 2015 Oct 14. [Epub ahead of print]

[Depleting the methyltransferase Suv39h1 improves DNA repair and extends lifespan in a progeria mouse model.](#)

Liu B, Wang Z, Zhang L, Ghosh S, Zheng H, Zhou Z. *Nat Commun.* 2013;4:1868.

HGADFN127

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv.* 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Deregulated miR-145 and miR-27b in hutchinson-gilford progeria syndrome: implications for adipogenesis](#)

Fenzl FQ, Lederer EM, Brumma L, et al. *Aging (Albany NY).* Published online August 27, 2025. doi:10.18632/aging.206309

[Impact of miR-181a on SIRT1 Expression and Senescence in Hutchinson-Gilford Progeria Syndrome](#)

Lederer EM, Fenzl FQ, Krüger P, Schroll M, Hartinger R, Djabali K. *Diseases.* 2025;13(8):245. Published 2025 Aug 4. doi:10.3390/diseases13080245

[Enhancing Cellular Homeostasis: Targeted Botanical Compounds Boost Cellular Health Functions in Normal and Premature Aging Fibroblasts](#)

Hartinger R, Singh K, Leverett J, Djabali K. *Biomolecules.* 2024;14(10):1310. Published 2024 Oct 16. doi:10.3390/biom14101310

[Aberrant migration features in primary skin fibroblasts of Huntington's disease patients hold potential for unraveling disease progression using an image based machine learning tool](#)

Gharaba S, Shalem A, Paz O, Muchtar N, Wolf L, Weil M. *Comput Biol Med.* Published online August 2, 2024. doi:10.1016/j.compbiomed.2024.108970

[Activation of endoplasmic reticulum stress in premature aging via the inner nuclear membrane protein SUN2](#)

Vidak S, Serebryanny LA, Pegoraro G, Misteli T. *Cell Rep.* 2023;42(5):112534. doi:10.1016/j.celrep.2023.112534

[Ghrelin delays premature aging in Hutchinson-Gilford progeria syndrome](#)

Ferreira-Marques M, Carvalho A, Franco AC, et al. Ghrelin delays premature aging in Hutchinson-Gilford progeria syndrome [published online ahead of print, 2023 Oct 19]. *Aging Cell.* 2023;e13983. doi:10.1111/accel.13983

[Perturbed actin cap as a new personalized biomarker in primary fibroblasts of Huntington's disease patients](#)

Gharaba S, Paz O, Feld L, Abashidze A, Weinrab M, Muchtar N, Baransi A, Shalem A, Sprecher U, Wolf L, Wolfenson H, Weil M. *Front Cell Dev Biol.* 2023 Jan 18;11:1013721. doi: 10.3389/fcell.2023.1013721. PMID: 36743412; PMCID: PMC9889876.

[Establishment and Characterization of hTERT Immortalized Hutchinson-Gilford Progeria Fibroblast Cell Lines](#)

Lin H, Mensch J, Haschke M, et al. Published 2022 Sep 6. doi:10.3390/cells11182784

[Impact of MnTBAP and Baricitinib Treatment on Hutchinson-Gilford Progeria Fibroblasts](#)

Vehns E, Arnold R, Djabali K. *Pharmaceuticals (Basel).* 2022;15(8):945. Published 2022 Jul 29. doi:10.3390/ph15080945

[SerpinE1 drives a cell-autonomous pathogenic signaling in Hutchinson-Gilford progeria syndrome](#)

Catarinella G, Nicoletti C, Bracaglia A, et al. *Cell Death Dis.* 2022;13(8):737. Published 2022 Aug 26. doi:10.1038/s41419-022-05168-y

[Baricitinib, a JAK-STAT Inhibitor, Reduces the Cellular Toxicity of the Farnesyltransferase Inhibitor Lonafarnib in Progeria Cells](#)

Arnold R, Vehns E, Randl H, Djabali K. *Int J Mol Sci.* 2021;22(14):7474. Published 2021 Jul 12. doi:10.3390/ijms22147474

[Impact of Progerin Expression on Adipogenesis in Hutchinson-Gilford Progeria Skin-Derived Precursor Cells](#)

Najdi F, Krüger P, Djabali K. *Cells.* 2021;10(7):1598. Published 2021 Jun 25. doi:10.3390/cells10071598

[Nuclear Pore Complexes Cluster in Dysmorphic Nuclei of Normal and Progeria Cells during Replicative Senescence.](#)

Röhr J, Arnold R, Djabali K. *Cells.* 2021 Jan 14;10(1):153. doi: 10.3390/cells10010153. PMID: 33466669; PMCID: PMC7828780.

[Self-assembly of multi-component mitochondrial nucleoids via phase separation.](#)

Feric M, Demarest TG, Tian J, Croteau DL, Bohr VA, Misteli T. *EMBO J.* 2021 Mar 15;40(6):e107165. doi: 10.15252/embj.2020107165. Epub 2021 Feb 23. PMID: 33619770; PMCID: PMC7957436.

[Direct reprogramming of human smooth muscle and vascular endothelial cells reveals defects associated with aging and Hutchinson-Gilford progeria syndrome](#)

Bersini S, Schulte R, Huang L, Tsai H, Hetzer MW. *Elife.* 2020 Sep 8;9:e54383. doi: 10.7554/eLife.54383. PMID: 32896271; PMCID: PMC7478891.

[Inhibition of JAK-STAT Signaling With Baricitinib Reduces Inflammation and Improves Cellular Homeostasis in Progeria Cells](#)

Liu C, Arnold R, Henriques G, Djabali K. *Cells* 2019;8(10):1276. Published 2019 Oct 18.

doi:10.3390/cells8101276

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell* 2019;18(4):e12979. doi:10.1111/accel.12979

[Predicting Age From the Transcriptome of Human Dermal Fibroblasts](#)

Fleischer JG, Schulte R, Tsai HH, et al. *Genome Biol* 2018;19(1):221. Published 2018 Dec 20. doi:10.1186/s13059-018-1599-6

[Autophagic Removal of Farnesylated Carboxy-Terminal Lamin Peptides](#)

Lu X, Djabali K. *Cells* 2018;7(4):33. Published 2018 Apr 23. doi:10.3390/cells7040033

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

[Intermittent treatment with farnesyltransferase inhibitor and sulforaphane improves cellular homeostasis in Hutchinson-Gilford progeria fibroblasts.](#)

Gabriel D, Shafray DD, Gordon LB, Djabali K. *Oncotarget*. 2017 Jul 18;8(39):64809-64826. doi:10.18632/oncotarget.19363. eCollection 2017 Sep 12.

[Temsirolimus Partially Rescues the Hutchinson-Gilford Progeria Cellular Phenotype.](#)

Gabriel D, Gordon LB, Djabali K. *PLoS One* 2016;11(12):e0168988. Published 2016 Dec 29. doi:10.1371/journal.pone.0168988

[Progerin Impairs Chromosome Maintenance by Depleting CENP-F From Metaphase Kinetochores in Hutchinson-Gilford Progeria Fibroblasts](#)

Eisch V, Lu X, Gabriel D, Djabali K. *Oncotarget* 2016;7(17):24700-24718. doi:10.18632/oncotarget.8267

[Metformin Alleviates Aging Cellular Phenotypes in Hutchinson-Gilford Progeria Syndrome Dermal Fibroblasts.](#)

Park SK, Shin OS. *Exp Dermatol*. 2017 Feb 13. [Epub ahead of print]

[Insights into the role of immunosenescence during varicella zoster virus infection \(shingles\) in the aging cell model.](#)

Kim JA, Park SK, Kumar M, Lee CH, Shin OS. *Oncotarget*. 2015 Oct 14. [Epub ahead of print]

[Sulforaphane enhances progerin clearance in Hutchinson-Gilford progeria fibroblasts.](#)

Gabriel D, Roedl D, Gordon LB, Djabali K. *Aging Cell*. 2014 Dec 16: 1-14.

[A proteomic study of Hutchinson-Gilford progeria syndrome: Application of 2D-chromatography in a premature aging disease.](#)

Wang L, Yang W, Ju W, Wang P, Zhao X, Jenkins EC, Brown WT, Zhong N. *Biochem Biophys Res Commun*. 2012 Jan 27;417(4):1119-26. Epub 2011 Dec 24.

[Age-dependent loss of MMP-3 in Hutchinson-Gilford progeria syndrome.](#)

Harten IA, Zahr RS, Lemire JM, Machan JT, Moses MA, Doiron RJ, Curatolo AS, Rothman FG, Wight TN, Toole BP, Gordon LB. *J Gerontol A Biol Sci Med Sci*. 2011 Nov;66(11):1201-7.

[CTP:phosphocholine cytidyltransferase \$\alpha\$ \(CCT \$\alpha\$ \) and lamins alter nuclear membrane structure without affecting phosphatidylcholine synthesis.](#)

Gehrig K, Ridgway ND. *Biochim Biophys Acta*. 2011 Jun;1811(6):377-85.

[Defective lamin A-Rb signaling in Hutchinson-Gilford Progeria Syndrome and reversal by farnesyltransferase inhibition.](#)

Marji J, O'Donoghue SI, McClintock D, Satagopam VP, Schneider R, Ratner D, Worman HJ, Gordon LB, Djabali K. *PLoS One*. 2010 Jun 15;5(6):e11132.

[Increased mechanosensitivity and nuclear stiffness in Hutchinson-Gilford progeria cells: effects of farnesyltransferase inhibitors.](#)

Verstraeten VL, Ji JY, Cummings KS, Lee RT, Lammerding J. *Aging Cell*. 2008 Jun;7(3):383-93.

[Alterations in mitosis and cell cycle progression caused by a mutant lamin A known to accelerate human aging.](#)

Dechat T, Shimi T, Adam SA, Rusinol AE, Andres DA, Spielmann HP, Sinensky MS, Goldman RD. *Proc Natl Acad Sci USA*. 2007 Mar 20;104(12):4955-60.

[The mutant form of lamin A that causes Hutchinson-Gilford progeria is a biomarker of cellular aging in human skin.](#)

McClintock D, Ratner D, Lokuge M, Owens DM, Gordon LB, Collins FS, Djabali K. *PLoS One*. 2007 Dec 5;2(12):e1269.

[Aggrecan expression is substantially and abnormally upregulated in Hutchinson-Gilford Progeria Syndrome dermal fibroblasts.](#)

Lemire JM, Patis C, Gordon LB, Sandy JD, Toole BP, Weiss AS. *Mech Ageing Dev*. 2006 Aug;127(8):660-9

[Hutchinson-Gilford progeria mutant lamin A primarily targets human vascular cells as detected by an anti-Lamin A G608G antibody.](#)

McClintock D, Gordon LB, Djabali K. *Proc Natl Acad Sci U S A*. 2006 Feb 14;103(7):2154-9.

[Rescue of heterochromatin organization in Hutchinson-Gilford progeria by drug treatment.](#)

Columbaro M, Capanni C, Mattioli E, Novelli G, Parnaik VK, Squarzoni S, Maraldi NM, Lattanzi G. *Cell Mol Life Sci*. 2005 Nov;62(22):2669-78.

[Genomic instability in laminopathy-based premature aging.](#)

Liu B, Wang J, Chan KM, Tjia WM, Deng W, Guan X, Huang JD, Li KM, Chau PY, Chen DJ, Pei D, Pendas AM, Cadiñanos J, López-Otín C, Tse HF, Hutchison C, Chen J, Cao Y, Cheah KS, Tryggvason K, Zhou Z. *Nat Med*. 2005 Jul;11(7):780-5.

[Novel progerin-interactive partner proteins hnRNP E1, EGF, Mel 18, and UBC9 interact with lamin A/C.](#)

Zhong N, Radu G, Ju W, Brown WT. *Biochem Biophys Res Commun*. 2005 Dec 16;338(2):855-61.

HGADFN136

[Incomplete processing of mutant lamin A in Hutchinson-Gilford progeria leads to nuclear abnormalities, which are reversed by farnesyltransferase inhibition.](#)

Glynn MW, Glover TW. *Hum Mol Genet*. 2005 Oct 15;14(20):2959-69.

HGADFN143

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Isoprenylcysteine Carboxymethyltransferase-Based Therapy for Hutchinson-Gilford Progeria Syndrome](#)

Marcos-Ramiro B, Gil-Ordóñez A, Marín-Ramos NI, et al. *ACS Cent Sci*. 2021;7(8):1300-1310. doi:10.1021/acscentsci.0c01698

[Direct reprogramming of human smooth muscle and vascular endothelial cells reveals defects associated with aging and Hutchinson-Gilford progeria syndrome](#)

Bersini S, Schulte R, Huang L, Tsai H, Hetzer MW. *Elife*. 2020 Sep 8;9:e54383. doi: 10.7554/eLife.54383. PMID: 32896271; PMCID: PMC7478891.

[Epigenetic Deregulation of Lamina-Associated Domains in Hutchinson-Gilford Progeria Syndrome](#)

Köhler F, Bormann F, Raddatz G, et al. *Genome Med*. 2020;12(1):46. Published 2020 May 25. doi:10.1186/s13073-020-00749-y

[PML2-mediated Thread-Like Nuclear Bodies Mark Late Senescence in Hutchinson-Gilford Progeria Syndrome](#)

Wang M, Wang L, Qian M, et al. [published online ahead of print, 2020 Apr 29]. *Aging Cell*.

Correction acknowledging PRF for cell lines is pending

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell* 2019;18(4):e12979. doi:10.1111/accel.12979

[Predicting Age From the Transcriptome of Human Dermal Fibroblasts](#)

Fleischer JG, Schulte R, Tsai HH, et al. *Genome Biol* 2018;19(1):221. Published 2018 Dec 20. doi:10.1186/s13059-018-1599-6

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

[Depleting the methyltransferase Suv39h1 improves DNA repair and extends lifespan in a progeria mouse model.](#)

Liu B, Wang Z, Zhang L, Ghosh S, Zheng H, Zhou Z. *Nat Commun*. 2013;4:1868.

[CTP:phosphocholine cytidyltransferase \$\alpha\$ \(CCT \$\alpha\$ \) and lamins alter nuclear membrane structure without affecting phosphatidylcholine synthesis.](#)

Gehrig K, Ridgway ND. *Biochim Biophys Acta*. 2011 Jun;1811(6):377-85.

[Increased mechanosensitivity and nuclear stiffness in Hutchinson-Gilford progeria cells: effects of farnesyltransferase inhibitors.](#)

Verstraeten VL, Ji JY, Cummings KS, Lee RT, Lammerding J. *Aging Cell*. 2008 Jun;7(3):383-93.

[The mutant form of lamin A that causes Hutchinson-Gilford progeria is a biomarker of cellular aging in human skin.](#)

McClintock D, Ratner D, Lokuge M, Owens DM, Gordon LB, Collins FS, Djabali K. *PLoS One*. 2007 Dec 5;2(12):e1269.

[Hutchinson-Gilford progeria mutant lamin A primarily targets human vascular cells as detected by an anti-Lamin A G608G antibody.](#)

McClintock D, Gordon LB, Djabali K. *Proc Natl Acad Sci U S A*. 2006 Feb 14;103(7):2154-9.

HGADFN155

[Selection of specific and efficient siRNAs in new cellular model for Hutchinson-Gilford progeria syndrome therapy](#)

Dzianisava V, Piekarowicz K, Machowska M, Rzepecki R. *Mol Ther Nucleic Acids*. 2025;36(4):102727. Published 2025 Oct 3. doi:10.1016/j.omtn.2025.102727

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Angiopoietin-2 reverses endothelial cell dysfunction in progeria vasculature](#)

Vakili S, Izydore EK, Losert L, et al. *Aging Cell*. Published online October 18, 2024. doi:10.1111/accel.14375

[The NLRP3 inhibitor Dapansutrile improves the therapeutic action of lonafarnib on progeroid mice](#)

Muela-Zarzuela I, Suarez-Rivero JM, Boy-Ruiz D, et al. *Aging Cell*. Published online August 27, 2024. doi:10.1111/accel.14272

[Inhibition of the NLRP3 inflammasome improves lifespan in animal murine model of Hutchinson-Gilford Progeria](#)

González-Domínguez A, Montañez R, Castejón-Vega B, et al. [published online ahead of print, 2021 Aug 27]. *EMBO Mol Med*. 2021;e14012. doi:10.15252/emmm.202114012

[Epigenetic Deregulation of Lamina-Associated Domains in Hutchinson-Gilford Progeria Syndrome](#)

Köhler F, Bormann F, Raddatz G, et al. *Genome Med*. 2020;12(1):46. Published 2020 May 25. doi:10.1186/s13073-020-00749-y

[PML2-mediated Thread-Like Nuclear Bodies Mark Late Senescence in Hutchinson-Gilford Progeria Syndrome](#)

Wang M, Wang L, Qian M, et al. [published online ahead of print, 2020 Apr 29]. *Aging Cell*. **Correction acknowledging PRF for cell lines is pending**

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell* 2019;18(4):e12979. doi:10.1111/accel.12979

[Autophagic Removal of Farnesylated Carboxy-Terminal Lamin Peptides](#)

Lu X, Djabali K. *Cells* 2018;7(4):33. Published 2018 Apr 23. doi:10.3390/cells7040033

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

[Nucleoplasmic lamins define growth-regulating functions of lamina-associated polypeptide 2α in progeria cells.](#)

Vidak S, Georgiou K, Fichtinger P, Naetar N, Dechat T, Foisner R.
J Cell Sci. 2017 Dec 28. pii: jcs.208462. doi: 10.1242/jcs.208462. [Epub ahead of print]

[Intermittent treatment with farnesyltransferase inhibitor and sulforaphane improves cellular homeostasis in Hutchinson-Gilford progeria fibroblasts.](#)

Gabriel D, Shafry DD, Gordon LB, Djabali K. *Oncotarget*. 2017 Jul 18;8(39):64809-64826. doi: 10.18632/oncotarget.19363. eCollection 2017 Sep 12.

[Temsirolimus Partially Rescues the Hutchinson-Gilford Progeria Cellular Phenotype.](#)

Gabriel D, Gordon LB, Djabali K. *PLoS One* 2016;11(12):e0168988. Published 2016 Dec 29. doi:10.1371/journal.pone.0168988

[Progerin Impairs Chromosome Maintenance by Depleting CENP-F From Metaphase Kinetochores in Hutchinson-Gilford Progeria Fibroblasts](#)

Eisch V, Lu X, Gabriel D, Djabali K. *Oncotarget* 2016;7(17):24700-24718. doi:10.18632/oncotarget.8267

[Lamin A Is an Endogenous SIRT6 Activator and Promotes SIRT6-Mediated DNA Repair.](#)

Ghosh S, Liu B, Wang Y, Hao Q, Zhou Z. *Cell Rep*. 2015 Nov 17;13(7):1396-1406. doi: 10.1016/j.celrep.2015.10.006. Epub 2015 Nov 5. PMID:26549451

[Proliferation of progeria cells is enhanced by lamina-associated polypeptide 2 \$\alpha\$ \(LAP2 \$\alpha\$ \) through expression of extracellular matrix proteins.](#)

Vidak S, Kubben N, Dechat T, Foisner R. *Genes & Development*. 2015 Oct 1;29(19):2022-36.

[Sulforaphane enhances progerin clearance in Hutchinson-Gilford progeria fibroblasts.](#)

Gabriel D, Roedl D, Gordon LB, Djabali K. *Aging Cell*. 2014 Dec 16: 1-14.

[Higher-order unfolding of satellite heterochromatin is a consistent and early event in cell senescence.](#)

Swanson EC, Manning B, Zhang H, Lawrence JB. *J Cell Biol*. 2013 Dec 23;203(6):929-42.

[Correlated alterations in genome organization, histone methylation, and DNA-lamin A/C interactions in Hutchinson-Gilford progeria syndrome.](#)

McCord RP, Nazario-Toole A, Zhang H, Chines PS, Zhan Y, Erdos MR, Collins FS, Dekker J, Cao K. *Genome Res*. 2013 Feb;23(2):260-9. Epub 2012 Nov 14.

[An inhibitory role of progerin in the gene induction network of adipocyte differentiation from iPS cells.](#)

Xiong ZM, LaDana C, Wu D, Cao K. *Aging (Albany NY)*. 2013 Apr;5(4):288-303.

[Depleting the methyltransferase Suv39h1 improves DNA repair and extends lifespan in a progeria mouse model.](#)

Liu B, Wang Z, Zhang L, Ghosh S, Zheng H, Zhou Z. *Nat Commun*. 2013;4:1868.

[Automated image analysis of nuclear shape: what can we learn from a prematurely aged cell?](#)
Driscoll MK, Albanese JL, Xiong ZM, Mailman M, Losert W, Cao K. *Aging* (Albany NY). 2012 Feb;4(2):119-32.

[Rapamycin reverses cellular phenotypes and enhances mutant protein clearance in Hutchinson-Gilford progeria syndrome cells.](#)
Cao K, Graziotto JJ, Blair CD, Mazzulli JR, Erdos MR, Krainc D, Collins FS. *Sci Transl Med*. 2011 Jun 29;3(89):89ra58.

[Defective lamin A-Rb signaling in Hutchinson-Gilford Progeria Syndrome and reversal by farnesyltransferase inhibition.](#)
Marji J, O'Donoghue SI, McClintock D, Satagopam VP, Schneider R, Ratner D, Worman HJ, Gordon LB, Djabali K. *PLoS One*. 2010 Jun 15;5(6):e11132.

HGADFN164

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)
Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Deregulated miR-145 and miR-27b in hutchinson-gilford progeria syndrome: implications for adipogenesis](#)
Fenzl FQ, Lederer EM, Brumma L, et al. *Aging* (Albany NY). Published online August 27, 2025. doi:10.18632/aging.206309

[Impact of miR-181a on SIRT1 Expression and Senescence in Hutchinson-Gilford Progeria Syndrome](#)
Lederer EM, Fenzl FQ, Krüger P, Schroll M, Hartinger R, Djabali K. *Diseases*. 2025;13(8):245. Published 2025 Aug 4. doi:10.3390/diseases13080245

[Enhancing Cellular Homeostasis: Targeted Botanical Compounds Boost Cellular Health Functions in Normal and Premature Aging Fibroblasts](#)
Hartinger R, Singh K, Leverett J, Djabali K. *Biomolecules*. 2024;14(10):1310. Published 2024 Oct 16. doi:10.3390/biom14101310

[Impact of Combined Baricitinib and FTI Treatment on Adipogenesis in Hutchinson-Gilford Progeria Syndrome and Other Lipodystrophic Laminopathies](#)
Hartinger R, Lederer EM, Schena E, Lattanzi G, Djabali K. *Cells*. 2023;12(10):1350. Published 2023 May 9. doi:10.3390/cells12101350

[Establishment and Characterization of hTERT Immortalized Hutchinson-Gilford Progeria Fibroblast Cell Lines](#)

Lin H, Mensch J, Haschke M, et al. Published 2022 Sep 6. doi:10.3390/cells11182784

[SAMMY-seq reveals early alteration of heterochromatin and deregulation of bivalent genes in Hutchinson-Gilford Progeria Syndrome](#)

Sebestyén E, Marullo F, Lucini F, Petrini C, Bianchi A, Valsoni S, Olivieri I, Antonelli L, Gregoret F, Oliva G, Ferrari F, Lanzuolo C. *Commun.* 2020 Dec 8;11(1):6274. doi: 10.1038/s41467-020-20048-9. PMID: 33293552; PMCID: PMC7722762.

[Direct reprogramming of human smooth muscle and vascular endothelial cells reveals defects associated with aging and Hutchinson-Gilford progeria syndrome](#)

Bersini S, Schulte R, Huang L, Tsai H, Hetzer MW. *Elife.* 2020 Sep 8;9:e54383. doi: 10.7554/eLife.54383. PMID: 32896271; PMCID: PMC7478891.

[Epigenetic Deregulation of Lamina-Associated Domains in Hutchinson-Gilford Progeria Syndrome](#)

Köhler F, Bormann F, Raddatz G, et al. *Genome Med.* 2020;12(1):46. Published 2020 May 25. doi:10.1186/s13073-020-00749-y

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell* 2019;18(4):e12979. doi:10.1111/accel.12979

[Inhibition of JAK-STAT Signaling With Baricitinib Reduces Inflammation and Improves Cellular Homeostasis in Progeria Cells](#)

Liu C, Arnold R, Henriques G, Djabali K. *Cells* 2019;8(10):1276. Published 2019 Oct 18. doi:10.3390/cells8101276

[Analysis of Somatic Mutations Identifies Signs of Selection During in Vitro Aging of Primary Dermal Fibroblasts](#)

Narisu N, Rothwell R, Vrtačnik P, et al. *Aging Cell.* 2019;18(6):e13010. doi:10.1111/accel.13010

[Predicting Age From the Transcriptome of Human Dermal Fibroblasts](#)

Fleischer JG, Schulte R, Tsai HH, et al. *Genome Biol* 2018;19(1):221. Published 2018 Dec 20. doi:10.1186/s13059-018-1599-6

[Diminished Canonical \$\beta\$ -Catenin Signaling During Osteoblast Differentiation Contributes to Osteopenia in Progeria](#)

Choi JY, Lai JK, Xiong ZM, et al. *J Bone Miner Res* 2018;33(11):2059-2070. doi:10.1002/jbmr.3549

[Autophagic Removal of Farnesylated Carboxy-Terminal Lamin Peptides](#)

Lu X, Djabali K. *Cells.* 2018;7(4):33. Published 2018 Apr 23. doi:10.3390/cells7040033

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

[Intermittent treatment with farnesyltransferase inhibitor and sulforaphane improves cellular homeostasis in Hutchinson-Gilford progeria fibroblasts.](#)

Gabriel D, Shafry DD, Gordon LB, Djabali K. *Oncotarget*. 2017 Jul 18;8(39):64809-64826. doi: 10.18632/oncotarget.19363. eCollection 2017 Sep 12.

[Temsirolimus Partially Rescues the Hutchinson-Gilford Progeria Cellular Phenotype.](#)

Gabriel D, Gordon LB, Djabali K. *PLoS One* 2016;11(12):e0168988. Published 2016 Dec 29. doi:10.1371/journal.pone.0168988

[Lamin A Is an Endogenous SIRT6 Activator and Promotes SIRT6-Mediated DNA Repair.](#)

Ghosh S, Liu B, Wang Y, Hao Q, Zhou Z. *Cell Rep*. 2015 Nov 17;13(7):1396-1406. doi: 10.1016/j.celrep.2015.10.006. Epub 2015 Nov 5. PMID: 26549451

[Sulforaphane enhances progerin clearance in Hutchinson-Gilford progeria fibroblasts.](#)

Gabriel D, Roedl D, Gordon LB, Djabali K. *Aging Cell*. 2014 Dec 16: 1-14.

[Mechanisms controlling the smooth muscle cell death in progeria via down-regulation of poly\(ADP-ribose\) polymerase 1.](#)

Zhang H, Xiong ZM, Cao K. *Proc Natl Acad Sci U S A*. 2014 Jun 3;111(22):E2261-70. Epub 2014 May 19.

[Correlated alterations in genome organization, histone methylation, and DNA-lamin A/C interactions in Hutchinson-Gilford progeria syndrome.](#)

McCord RP, Nazario-Toole A, Zhang H, Chines PS, Zhan Y, Erdos MR, Collins FS, Dekker J, Cao K. *Genome Res*. 2013 Feb;23(2):260-9. Epub 2012 Nov 14.

[An inhibitory role of progerin in the gene induction network of adipocyte differentiation from iPS cells.](#)

Xiong ZM, LaDana C, Wu D, Cao K. *Aging* (Albany NY). 2013 Apr;5(4):288-303.

[Depleting the methyltransferase Suv39h1 improves DNA repair and extends lifespan in a progeria mouse model.](#)

Liu B, Wang Z, Zhang L, Ghosh S, Zheng H, Zhou Z. *Nat Commun*. 2013;4:1868.

[Naïve adult stem cells from patients with Hutchinson-Gilford progeria syndrome express low levels of progerin in vivo.](#)

Wenzel V, Roedl D, Gabriel D, Gordon LB, Herlyn M, Schneider R, Ring J, Djabali K. *Biol Open*. 2012 Jun 15;1(6):516-26. Epub 2012 Apr 16.

[Defective lamin A-Rb signaling in Hutchinson-Gilford Progeria Syndrome and reversal by farnesyltransferase inhibition.](#)

Marji J, O'Donoghue SI, McClintock D, Satagopam VP, Schneider R, Ratner D, Worman HJ, Gordon LB, Djabali K. *PLoS One*. 2010 Jun 15;5(6):e11132.

HGADFN167

Generation of Nonintegrative-Induced Pluripotent Stem Cells in Hutchinson-Gilford Progeria Syndrome: Enhancing Aging Research

Kadiwala J, Shakur R. *Aging Med (Milton)*. 2025;8(5):493-498. Published 2025 Sep 22. doi:10.1002/agm2.70041

A longevity-associated variant of the human BPIFB4 gene prevents diastolic dysfunction in progeria mice

Qiu Y, Cattaneo M, Maciag A, Puca AA, Madeddu P. *Signal Transduct Target Ther*. 2025;10(1):314. Published 2025 Sep 29. doi:10.1038/s41392-025-02416-3

Manipulation of the nucleoscaffold potentiates cellular reprogramming kinetics

Yang BA, Vesga-Castro C, Monteiro da Rocha A, et al. *PNAS Nexus*. 2025;4(10):pgaf307. Published 2025 Sep 25. doi:10.1093/pnasnexus/pgaf307

Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

Angiopoietin-2 reverses endothelial cell dysfunction in progeria vasculature

Vakili S, Izydore EK, Losert L, et al. *Aging Cell*. Published online October 18, 2024. doi:10.1111/ace1.14375

Progerin mRNA expression in non-HGPS patients is correlated with widespread shifts in transcript isoforms

Yu R, Xue H, Lin W, Collins FS, Mount SM, Cao K. *NAR Genom Bioinform*. 2024;6(3):lqae115. Published 2024 Aug 29. doi:10.1093/nargab/lqae115

Coaching ribosome biogenesis from the nuclear periphery

Zhuang Y, Guo X, Razorenova OV, Miles CE, Zhao W, Shi X. *bioRxiv* [Preprint]. 2024 Jun 22:2024.06.21.597078. doi: 10.1101/2024.06.21.597078. PMID: 38948754; PMCID: PMC11212990.

Activation of endoplasmic reticulum stress in premature aging via the inner nuclear membrane protein SUN2

Vidak S, Serebryanny LA, Pegoraro G, Misteli T. *Cell Rep*. 2023;42(5):112534. doi:10.1016/j.celrep.2023.112534

Hutchinson-Gilford progeria patient-derived cardiomyocyte model of carrying LMNA gene

[variant c.1824 C > T](#)

Perales S, Sigamani V, Rajasingh S, Czirok A, Rajasingh J. [published online ahead of print, 2023 Aug 12]. *Cell Tissue Res*. 2023;10.1007/s00441-023-03813-2. doi:10.1007/s00441-023-03813-2

[Unique progerin C-terminal peptide ameliorates Hutchinson-Gilford progeria syndrome phenotype by rescuing BUBR1.](#)

Zhang N, Hu Q, Sui T, Fu L, Zhang X, Wang Y, Zhu X, Huang B, Lu J, Li Z, Zhang Y. *Nat Aging*. 2023 Feb;3(2):185-201. doi: 10.1038/s43587-023-00361-w. Epub 2023 Feb 2. Erratum in: *Nat Aging*. 2023 May 2;; PMID: 37118121; PMCID: PMC10154249.

[Lonafarnib and everolimus reduce pathology in iPSC-derived tissue engineered blood vessel model of Hutchinson-Gilford Progeria Syndrome.](#)

Abutaleb NO, Atchison L, Choi L, Bedapudi A, Shores K, Gete Y, Cao K, Truskey GA. *Sci Rep*. 2023 Mar 28;13(1):5032. doi: 10.1038/s41598-023-32035-3. PMID: 36977745; PMCID: PMC10050176.

[Achieving single nucleotide sensitivity in direct hybridization genome imaging](#)

Wang Y, Cottle WT, Wang H, et al. *Nat Commun*. 2022;13(1):7776. Published 2022 Dec 15. doi:10.1038/s41467-022-35476-y

[Transcriptional profiling of Hutchinson-Gilford Progeria syndrome fibroblasts reveals deficits in mesenchymal stem cell commitment to differentiation related to early events in endochondral ossification](#)

San Martin R, Das P, Sanders JT, Hill AM, McCord RP. [published online ahead of print, 2022 Dec 29]. *Elife*. 2022;11:e81290. doi:10.7554/eLife.81290

[Anti-hsa-miR-59 alleviates premature senescence associated with Hutchinson-Gilford progeria syndrome in mice](#)

Hu Q, Zhang N, Sui T, et al. [published online ahead of print, 2022 Nov 16]. *EMBO J*. 2022;e110937. doi:10.15252/embj.2022110937

[Quantification of Farnesylated Progerin in Hutchinson-Gilford Progeria Patient Cells by Mass Spectrometry](#)

Camafeita E, Jorge I, Rivera-Torres J, Andrés V, Vázquez J. *Int J Mol Sci*. 2022;23(19):11733. Published 2022 Oct 3. doi:10.3390/ijms231911733

[Combined alteration of lamin and nuclear morphology influences the localization of the tumor-associated factor AKTIP](#)

La Torre M, Merigliano C, Maccaroni K, et al. *J Exp Clin Cancer Res*. 2022;41(1):273. Published 2022 Sep 13. doi:10.1186/s13046-022-02480-5

[SerpinE1 drives a cell-autonomous pathogenic signaling in Hutchinson-Gilford progeria](#)

[syndrome](#)

Catarinella G, Nicoletti C, Bracaglia A, et al. *Cell Death Dis.* 2022;13(8):737. Published 2022 Aug 26. doi:10.1038/s41419-022-05168-y

[Impaired LEF1 Activation Accelerates iPSC-Derived Keratinocytes Differentiation in Hutchinson-Gilford Progeria Syndrome](#)

Mao X, Xiong ZM, Xue H, et al. *Int J Mol Sci.* 2022;23(10):5499. Published 2022 May 14. doi:10.3390/ijms23105499

[Isoprenylcysteine Carboxylmethyltransferase-Based Therapy for Hutchinson-Gilford Progeria Syndrome](#)

Marcos-Ramiro B, Gil-Ordóñez A, Marín-Ramos NI, et al. *ACS Cent Sci.* 2021;7(8):1300-1310. doi:10.1021/acscentsci.0c01698

[Mechanisms of angiogenic incompetence in Hutchinson-Gilford progeria via downregulation of endothelial NOS.](#)

Gete YG, Koblan LW, Mao X, Trappio M, Mahadik B, Fisher JP, Liu DR, Cao K. *Aging Cell.* 2021 Jun 4:e13388. doi: 10.1111/ace1.13388. Epub ahead of print. PMID: 34086398.

[In vivo base editing rescues Hutchinson-Gilford progeria syndrome in mice.](#)

Koblan LW, Erdos MR, Wilson C, Cabral WA, Levy JM, Xiong ZM, Tavarez UL, Davison LM, Gete YG, Mao X, Newby GA, Doherty SP, Narisu N, Sheng Q, Krilow C, Lin CY, Gordon LB, Cao K, Collins FS, Brown JD, Liu DR. *Nature.* 2021 Jan;589(7843):608-614. doi: 10.1038/s41586-020-03086-7. Epub 2021 Jan 6. PMID: 33408413; PMCID: PMC7872200.

[Self-assembly of multi-component mitochondrial nucleoids via phase separation.](#)

Feric M, Demarest TG, Tian J, Croteau DL, Bohr VA, Misteli T. *EMBO J.* 2021 Mar 15;40(6):e107165. doi: 10.15252/embj.2020107165. Epub 2021 Feb 23. PMID: 33619770; PMCID: PMC7957436.

[A targeted antisense therapeutic approach for Hutchinson-Gilford progeria syndrome](#)

Erdos MR, Cabral WA, Tavarez UL, Cao K, Gvozdenovic-Jeremic J, Narisu N, Zervas PM, Crumley S, Boku Y, Hanson G, Mourich DV, Kole R, Eckhaus MA, Gordon LB, Collins FS. *Nat Med.* 2021 Mar;27(3):536-545. doi: 10.1038/s41591-021-01274-0. Epub 2021 Mar 11. PMID: 33707773.

[SAMMY-seq reveals early alteration of heterochromatin and deregulation of bivalent genes in Hutchinson-Gilford Progeria Syndrome](#)

Sebestyén E, Marullo F, Lucini F, Petrini C, Bianchi A, Valsoni S, Olivieri I, Antonelli L, Gregoret F, Oliva G, Ferrari F, Lanzaolo C. *Commun.* 2020 Dec 8;11(1):6274. doi: 10.1038/s41467-020-20048-9. PMID: 33293552; PMCID: PMC7722762.

[Epigenetic Deregulation of Lamina-Associated Domains in Hutchinson-Gilford Progeria Syndrome](#)

Köhler F, Bormann F, Raddatz G, et al. *Genome Med.* 2020;12(1):46. Published 2020 May 25.

doi:10.1186/s13073-020-00749-y

[iPSC-Derived Endothelial Cells Affect Vascular Function in a Tissue-Engineered Blood Vessel Model of Hutchinson-Gilford Progeria Syndrome](#)

Atchison L, Abutaleb NO, Snyder-Mounts E, et al. *Stem Cell Reports* 2020;14(2):325-337. doi:10.1016/j.stemcr.2020.01.005

[Chromatin and Cytoskeletal Tethering Determine Nuclear Morphology in Progerin-Expressing Cells](#)

Lionetti MC, Bonfanti S, Fumagalli MR, Budrikis Z, Font-Clos F, Costantini G, Chepizhko O, Zapperi S, La Porta CAM. *Biophysical Journal* 2020 May 5;118(9):2319-2332.

[Phosphorylated Lamin A/C in the Nuclear Interior Binds Active Enhancers Associated with Abnormal Transcription in Progeria](#)

Ikegami K, Secchia S, Almakki O, Lieb JD, Moskowitz IP. *Dev Cell* 2020;52(6):699-713.e11. doi:10.1016/j.devcel.2020.02.011

[Peroxisomal Abnormalities and Catalase Deficiency in Hutchinson-Gilford Progeria Syndrome](#)

Mao X, Bharti P, Thaivalappil A, Cao K. *Aging* (Albany NY) 2020;12(6):5195-5208. doi:10.18632/aging.102941

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell* 2019;18(4):e12979. doi:10.1111/accel.12979

[Restoring Extracellular Matrix Synthesis in Senescent Stem Cells](#)

Rong N, Mistriotis P, Wang X, et al. *FASEB J.* 2019;33(10):10954-10965. doi:10.1096/fj.201900377R

[Imbalanced Nucleocytoskeletal Connections Create Common Polarity Defects in Progeria and Physiological Aging](#)

Chang W, Wang Y, Luxton GWG, Östlund C, Worman HJ, Gundersen GG. *Proc Natl Acad Sci U S A* 2019;116(9):3578-3583. doi:10.1073/pnas.1809683116

[Predicting Age From the Transcriptome of Human Dermal Fibroblasts](#)

Fleischer JG, Schulte R, Tsai HH, et al. *Genome Biol* 2018;19(1):221. Published 2018 Dec 20. doi:10.1186/s13059-018-1599-6

[Diminished Canonical \$\beta\$ -Catenin Signaling During Osteoblast Differentiation Contributes to Osteopenia in Progeria](#)

Choi JY, Lai JK, Xiong ZM, et al. *J Bone Miner Res* 2018;33(11):2059-2070. doi:10.1002/jbmr.3549

[Everolimus Rescues Multiple Cellular Defects in Laminopathy-Patient Fibroblasts](#)

DuBose AJ, Lichtenstein ST, Petrash NM, Erdos MR, Gordon LB, Collins FS [published

correction appears in Proc Natl Acad Sci U S A. 2018 Apr 16;]. *Proc Natl Acad Sci U S A* 2018;115(16):4206-4211. doi:10.1073/pnas.1802811115

[Smurf2 regulates stability and the autophagic-lysosomal turnover of lamin A and its disease-associated form progerin.](#)

Borroni AP, Emanuelli A, Shah PA, Ilić N, Apel-Sarid L, Paolini B, Manikoth Ayyathan D, Koganti P, Levy-Cohen G, Blank M. *Aging Cell*. 2018 Feb 5. doi: 10.1111/accel.12732. [Epub ahead of print].

[A Cell-Intrinsic Interferon-like Response Links Replication Stress to Cellular Aging Caused by Progerin.](#)

Kreienkamp R, Graziano S, Coll-Bonfill N, Bedia-Diaz G, Cybulla E, Vindigni A, Dorsett D, Kubben N, Batista LFZ, Gonzalo S. *Cell Rep*. 2018 Feb 20;22(8):2006-2015.

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

[Identification of novel PDEδ interacting proteins.](#)

Küchler P, Zimmermann G, Winzker M, Janning P, Waldmann H, Ziegler S. *Bioorg Med Chem*. 2017 Aug 31. pii: S0968-0896(17)31182-3. doi: 10.1016/j.bmc.2017.08.033. [Epub ahead of print]

[Nucleolar expansion and elevated protein translation in premature aging.](#)

Buchwalter A, Hetzer MW. *Nat Commun*. 2017 Aug 30;8(1):328. doi: 10.1038/s41467-017-00322-z.

[Reprogramming progeria fibroblasts re-establishes a normal epigenetic landscape.](#)

Chen Z, Chang WY, Etheridge A, Strickfaden H, Jin Z, Palidwor G, Cho JH, Wang K, Kwon SY, Doré C, Raymond A, Hotta A, Ellis J, Kandel RA, Dilworth FJ, Perkins TJ, Hendzel MJ, Galas DJ, Stanford WL. *Aging Cell*. 2017 Jun 8. [Epub ahead of print]

[Metformin Alleviates Aging Cellular Phenotypes in Hutchinson-Gilford Progeria Syndrome Dermal Fibroblasts.](#)

Park SK, Shin OS. *Exp Dermatol*. 2017 Feb 13. [Epub ahead of print]

[Loss of H3K9me3 Correlates with ATM Activation and Histone H2AX Phosphorylation Deficiencies in Hutchinson-Gilford Progeria Syndrome.](#)

Zhang H, Sun L, Wang K, Wu D, Trappio M, Witting C, Cao K. *PLoS One*. 2016 Dec 1;11(12):e0167454. doi: 10.1371/journal.pone.0167454.

[NANOG reverses the Myogenic Differentiation Potential of Senescent Stem Cells by Restoring](#)

[ACTIN Filamentous Organization and SRF-Dependent Gene Expression.](#)

Mistriotis P, Bajpai VK, Wang X, Rong N, Shahini A, Asmani M, Liang MS, Wang J, Lei P, Liu S, Zhao R, Andreadis ST. *Stem Cells*. 2016 Jun 28. doi: 10.1002/stem.2452. [Epub ahead of print]

[Vitamin D Receptor Signaling Improves Hutchinson-Gilford Progeria Syndrome Cellular Phenotypes](#)

Kreienkamp R, Croke M, Neumann MA, et al. *Oncotarget* 2016;7(21):30018-30031. doi:10.18632/oncotarget.9065

[Methylene blue alleviates nuclear and mitochondrial abnormalities in progeria.](#)

Xiong ZM, Choi JY, Wang K, Zhang H, Tariq Z, Wu D, Ko E, LaDana C, Sesaki H, Cao K. *Aging Cell*. 2015 Dec 14. [Epub ahead of print]

[Insights into the role of immunosenescence during varicella zoster virus infection \(shingles\) in the aging cell model.](#)

Kim JA, Park SK, Kumar M, Lee CH, Shin OS. *Oncotarget*. 2015 Oct 14. [Epub ahead of print]

[Proliferation of progeria cells is enhanced by lamina-associated polypeptide 2 \$\alpha\$ \(LAP2 \$\alpha\$ \) through expression of extracellular matrix proteins.](#)

Vidak S, Kubben N, Dechat T, Foisner R. *Genes & Development*. 2015 Oct 1;29(19):2022-36.

[Nuclear stiffening and chromatin softening with progerin expression leads to an attenuated nuclear response to force.](#)

Booth EA, Spagnol ST, Alcoser TA, Dahl KN. *Soft Matter*. 2015 Aug 28;11(32):6412-8. Epub 2015 Jul 14.

[Phenotype-Dependent Coexpression Gene Clusters: Application to Normal and Premature Ageing.](#)

Wang K, Das A, Xiong Z, Cao K, Hannenhalli S. *IEEE/ACM Trans Comput Biol Bioinform* 2015 Jan-Feb;12(1):30-9.

[Mechanisms controlling the smooth muscle cell death in progeria via down-regulation of poly\(ADP-ribose\) polymerase 1.](#)

Zhang H, Xiong ZM, Cao K. *Proc Natl Acad Sci U S A*. 2014 Jun 3;111(22):E2261-70. Epub 2014 May 19.

[Higher-order unfolding of satellite heterochromatin is a consistent and early event in cell senescence.](#)

Swanson EC, Manning B, Zhang H, Lawrence JB. *J Cell Biol*. 2013 Dec 23;203(6):929-42.

[Correlated alterations in genome organization, histone methylation, and DNA-lamin A/C interactions in Hutchinson-Gilford progeria syndrome.](#)

McCord RP, Nazario-Toole A, Zhang H, Chines PS, Zhan Y, Erdos MR, Collins FS, Dekker J, Cao K. *Genome Res.* 2013 Feb;23(2):260-9. Epub 2012 Nov 14.

[Progeria: translational insights from cell biology.](#)

Gordon LB, Cao K, Collins FS. *J Cell Biol.* 2012 Oct 1;199(1):9-13. doi: 10.1083/jcb.201207072.

[Automated image analysis of nuclear shape: what can we learn from a prematurely aged cell?](#)

Driscoll MK, Albanese JL, Xiong ZM, Mailman M, Losert W, Cao K. *Aging* (Albany NY). 2012 Feb;4(2):119-32.

[Computational image analysis of nuclear morphology associated with various nuclear-specific aging disorders.](#)

Choi S, Wang W, Ribeiro AJ, Kalinowski A, Gregg SQ, Opresko PL, Niedernhofer LJ, Rohde GK, Dahl KN. *Nucleus.* 2011 Nov 1;2(6):570-9. Epub 2011 Nov 1.

[Rapamycin reverses cellular phenotypes and enhances mutant protein clearance in Hutchinson-Gilford progeria syndrome cells.](#)

Cao K, Graziotto JJ, Blair CD, Mazzulli JR, Erdos MR, Krainc D, Collins FS. *Sci Transl Med.* 2011 Jun 29;3(89):89ra58.

[Progerin and telomere dysfunction collaborate to trigger cellular senescence in normal human fibroblasts.](#)

Cao K, Blair CD, Faddah DA, Kieckhafer JE, Olive M, Erdos MR, Nabel EG, Collins FS. *J Clin Invest.* 2011 Jul 1;121(7):2833-44

[CTP:phosphocholine cytidyltransferase \$\alpha\$ \(CCT \$\alpha\$ \) and lamins alter nuclear membrane structure without affecting phosphatidylcholine synthesis.](#)

Gehrig K, Ridgway ND. *Biochim Biophys Acta.* 2011 Jun;1811(6):377-85.

[Effect of progerin on the accumulation of oxidized proteins in fibroblasts from Hutchinson Gilford progeria patients.](#)

Viteri G, Chung YW, Stadtman ER. *Mech Ageing Dev.* 2010 Jan;131(1):2-8.

[A lamin A protein isoform overexpressed in Hutchinson-Gilford progeria syndrome interferes with mitosis in progeria and normal cells.](#)

Cao K, Capell BC, Erdos MR, Djabali K, Collins FS. *Proc Natl Acad Sci USA.* 2007 Mar 20;104(12):4949-54.

HGFDFN168

[A longevity-associated variant of the human BPIFB4 gene prevents diastolic dysfunction in](#)

[progeria mice](#)

Qiu Y, Cattaneo M, Maciag A, Puca AA, Madeddu P. *Signal Transduct Target Ther*. 2025;10(1):314. Published 2025 Sep 29. doi:10.1038/s41392-025-02416-3

[Manipulation of the nucleoscaffold potentiates cellular reprogramming kinetics](#)

Yang BA, Vesga-Castro C, Monteiro da Rocha A, et al. *PNAS Nexus*. 2025;4(10):pgaf307. Published 2025 Sep 25. doi:10.1093/pnasnexus/pgaf307

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Angiopoietin-2 reverses endothelial cell dysfunction in progeria vasculature](#)

Vakili S, Izydore EK, Losert L, et al. *Aging Cell*. Published online October 18, 2024. doi:10.1111/ace1.14375

[Progerin mRNA expression in non-HGPS patients is correlated with widespread shifts in transcript isoforms](#)

Yu R, Xue H, Lin W, Collins FS, Mount SM, Cao K. *NAR Genom Bioinform*. 2024;6(3):lqae115. Published 2024 Aug 29. doi:10.1093/nargab/lqae115

[Activation of endoplasmic reticulum stress in premature aging via the inner nuclear membrane protein SUN2](#)

Vidak S, Serebryanny LA, Pegoraro G, Misteli T. *Cell Rep*. 2023;42(5):112534. doi:10.1016/j.celrep.2023.112534

[Hutchinson-Gilford progeria patient-derived cardiomyocyte model of carrying LMNA gene variant c.1824 C > T](#)

Perales S, Sigamani V, Rajasingh S, Czirok A, Rajasingh J. [published online ahead of print, 2023 Aug 12]. *Cell Tissue Res*. 2023;10.1007/s00441-023-03813-2. doi:10.1007/s00441-023-03813-2

[Unique progerin C-terminal peptide ameliorates Hutchinson-Gilford progeria syndrome phenotype by rescuing BUBR1.](#)

Zhang N, Hu Q, Sui T, Fu L, Zhang X, Wang Y, Zhu X, Huang B, Lu J, Li Z, Zhang Y. *Nat Aging*. 2023 Feb;3(2):185-201. doi: 10.1038/s43587-023-00361-w. Epub 2023 Feb 2. Erratum in: *Nat Aging*. 2023 May 2;; PMID: 37118121; PMCID: PMC10154249.

[Lonafarnib and everolimus reduce pathology in iPSC-derived tissue engineered blood vessel model of Hutchinson-Gilford Progeria Syndrome.](#)

Abutaleb NO, Atchison L, Choi L, Bedapudi A, Shores K, Gete Y, Cao K, Truskey GA. *Sci Rep*. 2023 Mar 28;13(1):5032. doi: 10.1038/s41598-023-32035-3. PMID: 36977745; PMCID: PMC10050176.

[Transcriptional profiling of Hutchinson-Gilford Progeria syndrome fibroblasts reveals deficits in mesenchymal stem cell commitment to differentiation related to early events in endochondral ossification](#)

San Martin R, Das P, Sanders JT, Hill AM, McCord RP. [published online ahead of print, 2022 Dec 29]. *Elife*. 2022;11:e81290. doi:10.7554/eLife.81290

[Quantification of Farnesylated Progerin in Hutchinson-Gilford Progeria Patient Cells by Mass Spectrometry](#)

Camafeita E, Jorge I, Rivera-Torres J, Andrés V, Vázquez J. *Int J Mol Sci*. 2022;23(19):11733. Published 2022 Oct 3. doi:10.3390/ijms231911733

[Impaired LEF1 Activation Accelerates iPSC-Derived Keratinocytes Differentiation in Hutchinson-Gilford Progeria Syndrome](#)

Mao X, Xiong ZM, Xue H, et al. *Int J Mol Sci*. 2022;23(10):5499. Published 2022 May 14. doi:10.3390/ijms23105499

[Isoprenylcysteine Carboxylmethyltransferase-Based Therapy for Hutchinson-Gilford Progeria Syndrome](#)

Marcos-Ramiro B, Gil-Ordóñez A, Marín-Ramos NI, et al. *ACS Cent Sci*. 2021;7(8):1300-1310. doi:10.1021/acscentsci.0c01698

[Mechanisms of angiogenic incompetence in Hutchinson-Gilford progeria via downregulation of endothelial NOS.](#)

Gete YG, Koblan LW, Mao X, Trappio M, Mahadik B, Fisher JP, Liu DR, Cao K. *Aging Cell*. 2021 Jun 4:e13388. doi: 10.1111/accel.13388. Epub ahead of print. PMID: 34086398.

[Self-assembly of multi-component mitochondrial nucleoids via phase separation.](#)

Feric M, Demarest TG, Tian J, Croteau DL, Bohr VA, Misteli T. *EMBO J*. 2021 Mar 15;40(6):e107165. doi: 10.15252/embj.2020107165. Epub 2021 Feb 23. PMID: 33619770; PMCID: PMC7957436.

[A targeted antisense therapeutic approach for Hutchinson-Gilford progeria syndrome](#)

Erdos MR, Cabral WA, Tavares UL, Cao K, Gvozdenovic-Jeremic J, Narisu N, Zerfas PM, Crumley S, Boku Y, Hanson G, Mourich DV, Kole R, Eckhaus MA, Gordon LB, Collins FS. *Nat Med*. 2021 Mar;27(3):536-545. doi: 10.1038/s41591-021-01274-0. Epub 2021 Mar 11. PMID: 33707773.

[Epigenetic Dereglulation of Lamina-Associated Domains in Hutchinson-Gilford Progeria Syndrome](#)

Köhler F, Bormann F, Raddatz G, et al. *Genome Med*. 2020;12(1):46. Published 2020 May 25. doi:10.1186/s13073-020-00749-y

[Peroxisomal Abnormalities and Catalase Deficiency in Hutchinson-Gilford Progeria Syndrome](#)

Mao X, Bharti P, Thaivalappil A, Cao K. *Aging* (Albany NY) 2020;12(6):5195-5208.

doi:10.18632/aging.102941

[iPSC-Derived Endothelial Cells Affect Vascular Function in a Tissue-Engineered Blood Vessel Model of Hutchinson-Gilford Progeria Syndrome](#)

Atchison L, Abutaleb NO, Snyder-Mounts E, et al. *Stem Cell Reports* 2020;14(2):325-337. doi:10.1016/j.stemcr.2020.01.005

[Restoring Extracellular Matrix Synthesis in Senescent Stem Cells](#)

Rong N, Mistriotis P, Wang X, et al. *FASEB J.* 2019;33(10):10954-10965. doi:10.1096/fj.201900377R

[Imbalanced Nucleocytoskeletal Connections Create Common Polarity Defects in Progeria and Physiological Aging](#)

Chang W, Wang Y, Luxton GWG, Östlund C, Worman HJ, Gundersen GG. *Proc Natl Acad Sci U S A* 2019;116(9):3578-3583. doi:10.1073/pnas.1809683116

[Diminished Canonical \$\beta\$ -Catenin Signaling During Osteoblast Differentiation Contributes to Osteopenia in Progeria](#)

Choi JY, Lai JK, Xiong ZM, et al. *J Bone Miner Res* 2018;33(11):2059-2070. doi:10.1002/jbmr.3549

[Everolimus Rescues Multiple Cellular Defects in Laminopathy-Patient Fibroblasts](#)

DuBose AJ, Lichtenstein ST, Petrash NM, Erdos MR, Gordon LB, Collins FS [published correction appears in *Proc Natl Acad Sci U S A* 2018 Apr 16;:]. *Proc Natl Acad Sci U S A.* 2018;115(16):4206-4211. doi:10.1073/pnas.1802811115

[Smurf2 regulates stability and the autophagic-lysosomal turnover of lamin A and its disease-associated form progerin.](#)

Borroni AP, Emanuelli A, Shah PA, Ilić N, Apel-Sarid L, Paolini B, Manikoth Ayyathan D, Koganti P, Levy-Cohen G, Blank M. *Aging Cell.* 2018 Feb 5. doi: 10.1111/accel.12732. [Epub ahead of print].

[Nucleoplasmic lamins define growth-regulating functions of lamina-associated polypeptide 2 \$\alpha\$ in progeria cells.](#)

Vidak S, Georgiou K, Fichtinger P, Naetar N, Dechat T, Foisner R. *J Cell Sci.* 2017 Dec 28. pii: jcs.208462. doi: 10.1242/jcs.208462. [Epub ahead of print]

[Nucleolar expansion and elevated protein translation in premature aging.](#)

Buchwalter A, Hetzer MW. *Nat Commun.* 2017 Aug 30;8(1):328. doi: 10.1038/s41467-017-00322-z.

[Reprogramming progeria fibroblasts re-establishes a normal epigenetic landscape.](#)

Chen Z, Chang WY, Etheridge A, Strickfaden H, Jin Z, Palidwor G, Cho JH, Wang K, Kwon

SY, Doré C, Raymond A, Hotta A, Ellis J, Kandel RA, Dilworth FJ, Perkins TJ, Hendzel MJ, Galas DJ, Stanford WL. *Aging Cell*. 2017 Jun 8. [Epub ahead of print]

[Loss of H3K9me3 Correlates with ATM Activation and Histone H2AX Phosphorylation Deficiencies in Hutchinson-Gilford Progeria Syndrome.](#) Zhang H, Sun L, Wang K, Wu D, Trappio M, Witting C, Cao K. *PLoS One*. 2016 Dec 1;11(12):e0167454. doi: 10.1371/journal.pone.0167454.

[NANOG reverses the Myogenic Differentiation Potential of Senescent Stem Cells by Restoring ACTIN Filamentous Organization and SRF-Dependent Gene Expression.](#)

Mistriotis P, Bajpai VK, Wang X, Rong N, Shahini A, Asmani M, Liang MS, Wang J, Lei P, Liu S, Zhao R, Andreadis ST. *Stem Cells*. 2016 Jun 28. doi: 10.1002/stem.2452. [Epub ahead of print]

[Methylene blue alleviates nuclear and mitochondrial abnormalities in progeria.](#)

Xiong ZM, Choi JY, Wang K, Zhang H, Tariq Z, Wu D, Ko E, LaDana C, Sesaki H, Cao K. *Aging Cell*. 2015 Dec 14. [Epub ahead of print]

[Proliferation of progeria cells is enhanced by lamina-associated polypeptide 2 \$\alpha\$ \(LAP2 \$\alpha\$ \) through expression of extracellular matrix proteins.](#)

Vidak S, Kubben N, Dechat T, Foisner R. *Genes & Development*. 2015 Oct 1;29(19):2022-36.

[Nuclear stiffening and chromatin softening with progerin expression leads to an attenuated nuclear response to force.](#)

Booth EA, Spagnol ST, Alcoser TA, Dahl KN. *Soft Matter*. 2015 Aug 28;11(32):6412-8. Epub 2015 Jul 14.

[Phenotype-Dependent Coexpression Gene Clusters: Application to Normal and Premature Ageing.](#)

Wang K, Das A, Xiong Z, Cao K, Hannenhalli S. *IEEE/ACM Trans Comput Biol Bioinform* 2015 Jan-Feb;12(1):30-9.

[Mechanisms controlling the smooth muscle cell death in progeria via down-regulation of poly\(ADP-ribose\) polymerase 1.](#)

Zhang H, Xiong ZM, Cao K. *Proc Natl Acad Sci U S A*. 2014 Jun 3;111(22):E2261-70. Epub 2014 May 19.

[Correlated alterations in genome organization, histone methylation, and DNA-lamin A/C interactions in Hutchinson-Gilford progeria syndrome.](#)

McCord RP, Nazario-Toole A, Zhang H, Chines PS, Zhan Y, Erdos MR, Collins FS, Dekker J, Cao K. *Genome Res*. 2013 Feb;23(2):260-9. Epub 2012 Nov 14.

[Automated image analysis of nuclear shape: what can we learn from a prematurely aged cell?](#)
Driscoll MK, Albanese JL, Xiong ZM, Mailman M, Losert W, Cao K. *Aging* (Albany NY). 2012 Feb;4(2):119-32.

[Computational image analysis of nuclear morphology associated with various nuclear-specific aging disorders.](#)

Choi S, Wang W, Ribeiro AJ, Kalinowski A, Gregg SQ, Opresko PL, Niedernhofer LJ, Rohde GK, Dahl KN. *Nucleus*. 2011 Nov 1;2(6):570-9. Epub 2011 Nov 1.

[Rapamycin reverses cellular phenotypes and enhances mutant protein clearance in Hutchinson-Gilford progeria syndrome cells.](#)

Cao K, Graziotto JJ, Blair CD, Mazzulli JR, Erdos MR, Krainc D, Collins FS. *Sci Transl Med*. 2011 Jun 29;3(89):89ra58.

[Progerin and telomere dysfunction collaborate to trigger cellular senescence in normal human fibroblasts.](#)

Cao K, Blair CD, Faddah DA, Kieckhaefer JE, Olive M, Erdos MR, Nabel EG, Collins FS. *J Clin Invest*. 2011 Jul 1;121(7):2833-44

[Effect of progerin on the accumulation of oxidized proteins in fibroblasts from Hutchinson Gilford progeria patients.](#)

Viteri G, Chung YW, Stadtman ER. *Mech Ageing Dev*. 2010 Jan;131(1):2-8.

[A lamin A protein isoform overexpressed in Hutchinson-Gilford progeria syndrome interferes with mitosis in progeria and normal cells.](#)

Cao K, Capell BC, Erdos MR, Djabali K, Collins FS. *Proc Natl Acad Sci USA*. 2007 Mar 20;104(12):4949-54.

HGADFN169

[A longevity-associated variant of the human BPIFB4 gene prevents diastolic dysfunction in progeria mice](#)

Qiu Y, Cattaneo M, Maciag A, Puca AA, Madeddu P. *Signal Transduct Target Ther*. 2025;10(1):314. Published 2025 Sep 29. doi:10.1038/s41392-025-02416-3

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Aberrant migration features in primary skin fibroblasts of Huntington's disease patients hold potential for unraveling disease progression using an image based machine learning tool](#)

Gharaba S, Shalem A, Paz O, Muchtar N, Wolf L, Weil M. *Comput Biol Med*. Published online August 2, 2024. doi:10.1016/j.compbiomed.2024.108970

[Perturbed actin cap as a new personalized biomarker in primary fibroblasts of Huntington's disease patients](#)

Gharaba S, Paz O, Feld L, Abashidze A, Weinrab M, Muchtar N, Baransi A, Shalem A, Sprecher U, Wolf L, Wolfenson H, Weil M. *Front Cell Dev Biol*. 2023 Jan 18;11:1013721. doi: 10.3389/fcell.2023.1013721. PMID: 36743412; PMCID: PMC9889876.

[SerpinE1 drives a cell-autonomous pathogenic signaling in Hutchinson-Gilford progeria syndrome](#)

Catarinella G, Nicoletti C, Bracaglia A, et al. *Cell Death Dis*. 2022;13(8):737. Published 2022 Aug 26. doi:10.1038/s41419-022-05168-y

[SAMMY-seq reveals early alteration of heterochromatin and deregulation of bivalent genes in Hutchinson-Gilford Progeria Syndrome](#)

Sebestyén E, Marullo F, Lucini F, Petrini C, Bianchi A, Valsoni S, Olivieri I, Antonelli L, Gregoret F, Oliva G, Ferrari F, Lanzaolo C. *Commun*. 2020 Dec 8;11(1):6274. doi: 10.1038/s41467-020-20048-9. PMID: 33293552; PMCID: PMC7722762.

[Direct reprogramming of human smooth muscle and vascular endothelial cells reveals defects associated with aging and Hutchinson-Gilford progeria syndrome](#)

Bersini S, Schulte R, Huang L, Tsai H, Hetzer MW. *Elife*. 2020 Sep 8;9:e54383. doi: 10.7554/eLife.54383. PMID: 32896271; PMCID: PMC7478891.

[Epigenetic Deregulation of Lamina-Associated Domains in Hutchinson-Gilford Progeria Syndrome](#)

Köhler F, Bormann F, Raddatz G, et al. *Genome Med*. 2020;12(1):46. Published 2020 May 25. doi:10.1186/s13073-020-00749-y

[PML2-mediated Thread-Like Nuclear Bodies Mark Late Senescence in Hutchinson-Gilford Progeria Syndrome](#)

Wang M, Wang L, Qian M, et al. [published online ahead of print, 2020 Apr 29]. *Aging Cell*. **Correction acknowledging PRF for cell lines is pending**

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell* 2019;18(4):e12979. doi:10.1111/accel.12979

[Predicting Age From the Transcriptome of Human Dermal Fibroblasts](#)

Fleischer JG, Schulte R, Tsai HH, et al. *Genome Biol* 2018;19(1):221. Published 2018 Dec 20. doi:10.1186/s13059-018-1599-6

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

[Methylene blue alleviates nuclear and mitochondrial abnormalities in progeria.](#)

Xiong ZM, Choi JY, Wang K, Zhang H, Tariq Z, Wu D, Ko E, LaDana C, Sesaki H, Cao K. *Aging Cell*. 2015 Dec 14. [Epub ahead of print]

[Lamin A Is an Endogenous SIRT6 Activator and Promotes SIRT6-Mediated DNA Repair.](#)

Ghosh S, Liu B, Wang Y, Hao Q, Zhou Z. *Cell Rep*. 2015 Nov 17;13(7):1396-1406. doi: 10.1016/j.celrep.2015.10.006. Epub 2015 Nov 5. PMID:26549451

[Correlated alterations in genome organization, histone methylation, and DNA-lamin A/C interactions in Hutchinson-Gilford progeria syndrome.](#)

McCord RP, Nazario-Toole A, Zhang H, Chines PS, Zhan Y, Erdos MR, Collins FS, Dekker J, Cao K. *Genome Res*. 2013 Feb;23(2):260-9. Epub 2012 Nov 14.

[Depleting the methyltransferase Suv39h1 improves DNA repair and extends lifespan in a progeria mouse model.](#)

Liu B, Wang Z, Zhang L, Ghosh S, Zheng H, Zhou Z. *Nat Commun*. 2013;4:1868.

[Rapamycin reverses cellular phenotypes and enhances mutant protein clearance in Hutchinson-Gilford progeria syndrome cells.](#)

Cao K, Graziotto JJ, Blair CD, Mazzulli JR, Erdos MR, Krainc D, Collins FS. *Sci Transl Med*. 2011 Jun 29;3(89):89ra58.

HGADFN178

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Deregulated miR-145 and miR-27b in hutchinson-gilford progeria syndrome: implications for adipogenesis](#)

Fenzl FQ, Lederer EM, Brumma L, et al. *Aging* (Albany NY). Published online August 27, 2025. doi:10.18632/aging.206309

[Impact of miR-181a on SIRT1 Expression and Senescence in Hutchinson-Gilford Progeria Syndrome](#)

Lederer EM, Fenzl FQ, Krüger P, Schroll M, Hartinger R, Djabali K. *Diseases*. 2025;13(8):245. Published 2025 Aug 4. doi:10.3390/diseases13080245

[Senotherapeutic peptide treatment reduces biological age and senescence burden in human skin](#)

[models](#)

Zonari A, Brace LE, Al-Katib K, et al. 2024 Feb 15;10(1):14]. *NPJ Aging*. 2023;9(1):10. Published 2023 May 22. doi:10.1038/s41514-023-00109-1

[Activation of endoplasmic reticulum stress in premature aging via the inner nuclear membrane protein SUN2](#)

Vidak S, Serebryanny LA, Pegoraro G, Misteli T. *Cell Rep*. 2023;42(5):112534. doi:10.1016/j.celrep.2023.112534

[Impact of Combined Baricitinib and FTI Treatment on Adipogenesis in Hutchinson-Gilford Progeria Syndrome and Other Lipodystrophic Laminopathies](#)

Hartinger R, Lederer EM, Schena E, Lattanzi G, Djabali K. *Cells*. 2023;12(10):1350. Published 2023 May 9. doi:10.3390/cells12101350

[Quantification of Farnesylated Progerin in Hutchinson-Gilford Progeria Patient Cells by Mass Spectrometry](#)

Camafeita E, Jorge I, Rivera-Torres J, Andrés V, Vázquez J. *Int J Mol Sci*. 2022;23(19):11733. Published 2022 Oct 3. doi:10.3390/ijms231911733

[Establishment and Characterization of hTERT Immortalized Hutchinson-Gilford Progeria Fibroblast Cell Lines](#)

Lin H, Mensch J, Haschke M, et al. Published 2022 Sep 6. doi:10.3390/cells11182784

[Nuclear Pore Complexes Cluster in Dysmorphic Nuclei of Normal and Progeria Cells during Replicative Senescence.](#)

Röhl JM, Arnold R, Djabali K. *Cells*. 2021 Jan 14;10(1):153. doi: 10.3390/cells10010153. PMID: 33466669; PMCID: PMC7828780.

[Self-assembly of multi-component mitochondrial nucleoids via phase separation.](#)

Feric M, Demarest TG, Tian J, Croteau DL, Bohr VA, Misteli T. *EMBO J*. 2021 Mar 15;40(6):e107165. doi: 10.15252/embj.2020107165. Epub 2021 Feb 23. PMID: 33619770; PMCID: PMC7957436.

[Direct reprogramming of human smooth muscle and vascular endothelial cells reveals defects associated with aging and Hutchinson-Gilford progeria syndrome](#)

Bersini S, Schulte R, Huang L, Tsai H, Hetzer MW. *Elife*. 2020 Sep 8;9:e54383. doi: 10.7554/eLife.54383. PMID: 32896271; PMCID: PMC7478891.

[Epigenetic Deregulation of Lamina-Associated Domains in Hutchinson-Gilford Progeria Syndrome](#)

Köhler F, Bormann F, Raddatz G, et al. *Genome Med*. 2020;12(1):46. Published 2020 May 25. doi:10.1186/s13073-020-00749-y

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell* 2019;18(4):e12979. doi:10.1111/ace1.12979

[Predicting Age From the Transcriptome of Human Dermal Fibroblasts](#)

Fleischer JG, Schulte R, Tsai HH, et al. *Genome Biol* 2018;19(1):221. Published 2018 Dec 20. doi:10.1186/s13059-018-1599-6

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

[Progerin sequestration of PCNA promotes replication fork collapse and mislocalization of XPA in laminopathy-related progeroid syndromes](#)

Hilton BA, Liu J, Cartwright BM, et al. *FASEB J* 2017;31(9):3882-3893. doi:10.1096/fj.201700014R

[Naïve adult stem cells from patients with Hutchinson-Gilford progeria syndrome express low levels of progerin in vivo.](#)

Wenzel V, Roedel D, Gabriel D, Gordon LB, Herlyn M, Schneider R, Ring J, Djabali K. *Biol Open*. 2012 Jun 15;1(6):516-26. Epub 2012 Apr 16.

HGADFN188

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Impact of miR-181a on SIRT1 Expression and Senescence in Hutchinson-Gilford Progeria Syndrome](#)

Lederer EM, Fenzl FQ, Krüger P, Schroll M, Hartinger R, Djabali K. *Diseases*. 2025;13(8):245. Published 2025 Aug 4. doi:10.3390/diseases13080245

[Aberrant migration features in primary skin fibroblasts of Huntington's disease patients hold potential for unraveling disease progression using an image based machine learning tool](#)

Gharaba S, Shalem A, Paz O, Muchtar N, Wolf L, Weil M. *Comput Biol Med*. Published online August 2, 2024. doi:10.1016/j.compbiomed.2024.108970

[Perturbed actin cap as a new personalized biomarker in primary fibroblasts of Huntington's disease patients](#)

Gharaba S, Paz O, Feld L, Abashidze A, Weinrab M, Muchtar N, Baransi A, Shalem A, Sprecher U, Wolf L, Wolfenson H, Weil M. *Front Cell Dev Biol*. 2023 Jan 18;11:1013721. doi: 10.3389/fcell.2023.1013721. PMID: 36743412; PMCID: PMC9889876.

[Establishment and Characterization of hTERT Immortalized Hutchinson-Gilford Progeria Fibroblast Cell Lines](#)

Lin H, Mensch J, Haschke M, et al. Published 2022 Sep 6. doi:10.3390/cells11182784

[SerpinE1 drives a cell-autonomous pathogenic signaling in Hutchinson-Gilford progeria syndrome](#)

Catarinella G, Nicoletti C, Bracaglia A, et al. Cell Death Dis. 2022;13(8):737. Published 2022 Aug 26. doi:10.1038/s41419-022-05168-y

[Nuclear Pore Complexes Cluster in Dysmorphic Nuclei of Normal and Progeria Cells during Replicative Senescence.](#)

Röhl JM, Arnold R, Djabali K. Cells. 2021 Jan 14;10(1):153. doi: 10.3390/cells10010153. PMID: 33466669; PMCID: PMC7828780.

[In vivo base editing rescues Hutchinson-Gilford progeria syndrome in mice.](#)

Koblan LW, Erdos MR, Wilson C, Cabral WA, Levy JM, Xiong ZM, Tavarez UL, Davison LM, Gete YG, Mao X, Newby GA, Doherty SP, Narisu N, Sheng Q, Krilow C, Lin CY, Gordon LB, Cao K, Collins FS, Brown JD, Liu DR. Nature. 2021 Jan;589(7843):608-614. doi: 10.1038/s41586-020-03086-7. Epub 2021 Jan 6. PMID: 33408413; PMCID: PMC7872200.

[SAMMY-seq reveals early alteration of heterochromatin and deregulation of bivalent genes in Hutchinson-Gilford Progeria Syndrome](#)

Sebestyén E, Marullo F, Lucini F, Petrini C, Bianchi A, Valsoni S, Olivieri I, Antonelli L, Gregoret F, Oliva G, Ferrari F, Lanzaolo C. Commun. 2020 Dec 8;11(1):6274. doi: 10.1038/s41467-020-20048-9. PMID: 33293552; PMCID: PMC7722762.

[Direct reprogramming of human smooth muscle and vascular endothelial cells reveals defects associated with aging and Hutchinson-Gilford progeria syndrome](#)

Bersini S, Schulte R, Huang L, Tsai H, Hetzer MW. Elife. 2020 Sep 8;9:e54383. doi: 10.7554/eLife.54383. PMID: 32896271; PMCID: PMC7478891.

[Epigenetic Deregulation of Lamina-Associated Domains in Hutchinson-Gilford Progeria Syndrome](#)

Köhler F, Bormann F, Raddatz G, et al. Genome Med 2020;12(1):46. Published 2020 May 25. doi:10.1186/s13073-020-00749-y

[Inhibition of JAK-STAT Signaling With Baricitinib Reduces Inflammation and Improves Cellular Homeostasis in Progeria Cells](#)

Liu C, Arnold R, Henriques G, Djabali K. Cells 2019;8(10):1276. Published 2019 Oct 18. doi:10.3390/cells8101276

[Analysis of Somatic Mutations Identifies Signs of Selection During in Vitro Aging of Primary Dermal Fibroblasts](#)

Narisu N, Rothwell R, Vrtačnik P, et al. Aging Cell 2019;18(6):e13010. doi:10.1111/ace1.13010

[Predicting Age From the Transcriptome of Human Dermal Fibroblasts](#)

Fleischer JG, Schulte R, Tsai HH, et al. *Genome Biol* 2018;19(1):221. Published 2018 Dec 20. doi:10.1186/s13059-018-1599-6

[p53 isoforms regulate premature aging in human cells.](#)

von Muhlinen N, Horikawa I, Alam F, Isogaya K, Lissa D, Vojtesek B, Lane DP, Harris CC. *Oncogene*. 2018 Feb 12. doi: 10.1038/s41388-017-0101-3. [Epub ahead of print]

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

[Temsirolimus Partially Rescues the Hutchinson-Gilford Progeria Cellular Phenotype.](#)

Gabriel D, Gordon LB, Djabali K. *PLoS One* 2016;11(12):e0168988. Published 2016 Dec 29. doi:10.1371/journal.pone.0168988

[Progerin Impairs Chromosome Maintenance by Depleting CENP-F From Metaphase Kinetochores in Hutchinson-Gilford Progeria Fibroblasts](#)

Eisch V, Lu X, Gabriel D, Djabali K. *Oncotarget* 2016;7(17):24700-24718. doi:10.18632/oncotarget.8267

[Sulforaphane enhances progerin clearance in Hutchinson-Gilford progeria fibroblasts.](#)

Gabriel D, Roedl D, Gordon LB, Djabali K. *Aging Cell*. 2014 Dec 16: 1-14.

[Depleting the methyltransferase Suv39h1 improves DNA repair and extends lifespan in a progeria mouse model.](#)

Liu B, Wang Z, Zhang L, Ghosh S, Zheng H, Zhou Z. *Nat Commun*. 2013;4:1868.

[Naïve adult stem cells from patients with Hutchinson-Gilford progeria syndrome express low levels of progerin in vivo.](#)

Wenzel V, Roedl D, Gabriel D, Gordon LB, Herlyn M, Schneider R, Ring J, Djabali K. *Biol Open*. 2012 Jun 15;1(6):516-26. Epub 2012 Apr 16.

[Defective lamin A-Rb signaling in Hutchinson-Gilford Progeria Syndrome and reversal by farnesyltransferase inhibition.](#)

Marji J, O'Donoghue SI, McClintock D, Satagopam VP, Schneider R, Ratner D, Worman HJ, Gordon LB, Djabali K. *PLoS One*. 2010 Jun 15;5(6):e11132.

HGADFN271

[Senescence-inhibitory \$\Delta 133p53\alpha\$ counteracts accelerated ageing and mortality](#)

Yamada L, Liu H, von Muhlinen N, Harris CC, Horikawa I. Preprint. *bioRxiv*. 2026;2025.12.31.697195. Published 2026 Jan 20. doi:10.64898/2025.12.31.697195

[Selection of specific and efficient siRNAs in new cellular model for Hutchinson-Gilford progeria syndrome therapy](#)

Dzianisava V, Piekarowicz K, Machowska M, Rzepecki R. *Mol Ther Nucleic Acids*. 2025;36(4):102727. Published 2025 Oct 3. doi:10.1016/j.omtn.2025.102727

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Impact of miR-181a on SIRT1 Expression and Senescence in Hutchinson-Gilford Progeria Syndrome](#)

Lederer EM, Fenzl FQ, Krüger P, Schroll M, Hartinger R, Djabali K. *Diseases*. 2025;13(8):245. Published 2025 Aug 4. doi:10.3390/diseases13080245

[Pharmacologic activation of \$\Delta 133p53\alpha\$ reduces cellular senescence in progeria patients-derived cells](#)

Joruiz SM, Lissa D, Von Muhlinen N, et al. Preprint. *bioRxiv*. 2025;2025.07.28.667224. Published 2025 Aug 2. doi:10.1101/2025.07.28.667224

[A Quantitative High-Throughput Screen Identifies Compounds that Upregulate the p53 Isoform \$\Delta 133p53\alpha\$ and Inhibit Cellular Senescence](#)

Lissa D, Joruiz SM, Dranchak PK, et al. *ACS Pharmacol Transl Sci*. 2025;8(7):2061-2074. Published 2025 Jun 20. doi:10.1021/acsptsci.5c00186

[Enhancing Cellular Homeostasis: Targeted Botanical Compounds Boost Cellular Health Functions in Normal and Premature Aging Fibroblasts](#)

Hartinger R, Singh K, Leverett J, Djabali K. *Biomolecules*. 2024;14(10):1310. Published 2024 Oct 16. doi:10.3390/biom14101310

[Aberrant migration features in primary skin fibroblasts of Huntington's disease patients hold potential for unraveling disease progression using an image based machine learning tool](#)

Gharaba S, Shalem A, Paz O, Muchtar N, Wolf L, Weil M. *Comput Biol Med*. Published online August 2, 2024. doi:10.1016/j.compbiomed.2024.108970

[Perturbed actin cap as a new personalized biomarker in primary fibroblasts of Huntington's disease patients](#)

Gharaba S, Paz O, Feld L, Abashidze A, Weinrab M, Muchtar N, Baransi A, Shalem A, Sprecher U, Wolf L, Wolfenson H, Weil M. *Front Cell Dev Biol*. 2023 Jan 18;11:1013721. doi: 10.3389/fcell.2023.1013721. PMID: 36743412; PMCID: PMC9889876.

[SAMMY-seq reveals early alteration of heterochromatin and deregulation of bivalent genes in Hutchinson-Gilford Progeria Syndrome](#)*Nat*

Sebestyén E, Marullo F, Lucini F, Petrini C, Bianchi A, Valsoni S, Olivieri I, Antonelli L, Gregoret F, Oliva G, Ferrari F, Lanzuolo C. *Commun.* 2020 Dec 8;11(1):6274. doi: 10.1038/s41467-020-20048-9. PMID: 33293552; PMCID: PMC7722762.

[Epigenetic Deregulation of Lamina-Associated Domains in Hutchinson-Gilford Progeria Syndrome](#)

Köhler F, Bormann F, Raddatz G, et al. *Genome Med.* 2020;12(1):46. Published 2020 May 25. doi:10.1186/s13073-020-00749-y

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell* 2019;18(4):e12979. doi:10.1111/accel.12979

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

HGADFN367

[Generation of Nonintegrative-Induced Pluripotent Stem Cells in Hutchinson-Gilford Progeria Syndrome: Enhancing Aging Research](#)

Kadiwala J, Shakur R. *Aging Med (Milton)*. 2025;8(5):493-498. Published 2025 Sep 22. doi:10.1002/agm2.70041

[Selection of specific and efficient siRNAs in new cellular model for Hutchinson-Gilford progeria syndrome therapy](#)

Dzianisava V, Piekarowicz K, Machowska M, Rzepecki R. *Mol Ther Nucleic Acids.* 2025;36(4):102727. Published 2025 Oct 3. doi:10.1016/j.omtn.2025.102727

[A longevity-associated variant of the human BPIFB4 gene prevents diastolic dysfunction in progeria mice](#)

Qiu Y, Cattaneo M, Maciag A, Puca AA, Madeddu P. *Signal Transduct Target Ther.* 2025;10(1):314. Published 2025 Sep 29. doi:10.1038/s41392-025-02416-3

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv.* 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[The NLRP3 inhibitor Dapansutride improves the therapeutic action of lonafarnib on progeroid mice](#)

Muela-Zarzuela I, Suarez-Rivero JM, Boy-Ruiz D, et al. *Aging Cell*. Published online August 27, 2024. doi:10.1111/accel.14272

[Aberrant migration features in primary skin fibroblasts of Huntington's disease patients hold potential for unraveling disease progression using an image based machine learning tool](#)

Gharaba S, Shalem A, Paz O, Muchtar N, Wolf L, Weil M. *Comput Biol Med*. Published online August 2, 2024. doi:10.1016/j.compbimed.2024.108970

[Hutchinson-Gilford progeria patient-derived cardiomyocyte model of carrying LMNA gene variant c.1824 C > T](#)

Perales S, Sigamani V, Rajasingh S, Czirok A, Rajasingh J. [published online ahead of print, 2023 Aug 12]. *Cell Tissue Res*. 2023;10.1007/s00441-023-03813-2. doi:10.1007/s00441-023-03813-2

[Perturbed actin cap as a new personalized biomarker in primary fibroblasts of Huntington's disease patients](#)

Gharaba S, Paz O, Feld L, Abashidze A, Weinrab M, Muchtar N, Baransi A, Shalem A, Sprecher U, Wolf L, Wolfenson H, Weil M. *Front Cell Dev Biol*. 2023 Jan 18;11:1013721. doi: 10.3389/fcell.2023.1013721. PMID: 36743412; PMCID: PMC9889876.

[Serpine1 drives a cell-autonomous pathogenic signaling in Hutchinson-Gilford progeria syndrome](#)

Catarinella G, Nicoletti C, Bracaglia A, et al. *Cell Death Dis*. 2022;13(8):737. Published 2022 Aug 26. doi:10.1038/s41419-022-05168-y

[Inhibition of the NLRP3 inflammasome improves lifespan in animal murine model of Hutchinson-Gilford Progeria](#)

González-Domínguez A, Montañez R, Castejón-Vega B, et al. [published online ahead of print, 2021 Aug 27]. *EMBO Mol Med*. 2021;e14012. doi:10.15252/emmm.202114012

[A targeted antisense therapeutic approach for Hutchinson-Gilford progeria syndrome](#)

Erdos MR, Cabral WA, Tavaréz UL, Cao K, Gvozdenovic-Jeremic J, Narisu N, Zervas PM, Crumley S, Boku Y, Hanson G, Mourich DV, Kole R, Eckhaus MA, Gordon LB, Collins FS. *Nat Med*. 2021 Mar;27(3):536-545. doi: 10.1038/s41591-021-01274-0. Epub 2021 Mar 11. PMID: 33707773.

[Direct reprogramming of human smooth muscle and vascular endothelial cells reveals defects associated with aging and Hutchinson-Gilford progeria syndrome](#)

Bersini S, Schulte R, Huang L, Tsai H, Hetzer MW. *Elife*. 2020 Sep 8;9:e54383. doi: 10.7554/eLife.54383. PMID: 32896271; PMCID: PMC7478891.

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell* 2019;18(4):e12979. doi:10.1111/accel.12979

[Predicting Age From the Transcriptome of Human Dermal Fibroblasts](#)

Fleischer JG, Schulte R, Tsai HH, et al. *Genome Biol* 2018;19(1):221. Published 2018 Dec 20.

doi:10.1186/s13059-018-1599-6

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775.
doi:10.18632/aging.101508

HGMDEN368

[Selection of specific and efficient siRNAs in new cellular model for Hutchinson-Gilford progeria syndrome therapy](#)

Dzianisava V, Piekarowicz K, Machowska M, Rzepecki R. *Mol Ther Nucleic Acids*. 2025;36(4):102727. Published 2025 Oct 3. doi:10.1016/j.omtn.2025.102727

[A longevity-associated variant of the human BPIFB4 gene prevents diastolic dysfunction in progeria mice](#)

Qiu Y, Cattaneo M, Maciag A, Puca AA, Madeddu P. *Signal Transduct Target Ther*. 2025;10(1):314. Published 2025 Sep 29. doi:10.1038/s41392-025-02416-3

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Impact of miR-181a on SIRT1 Expression and Senescence in Hutchinson-Gilford Progeria Syndrome](#)

Lederer EM, Fenzl FQ, Krüger P, Schroll M, Hartinger R, Djabali K. *Diseases*. 2025;13(8):245. Published 2025 Aug 4. doi:10.3390/diseases13080245

[Enhancing Cellular Homeostasis: Targeted Botanical Compounds Boost Cellular Health Functions in Normal and Premature Aging Fibroblasts](#)

Hartinger R, Singh K, Leverett J, Djabali K. *Biomolecules*. 2024;14(10):1310. Published 2024 Oct 16. doi:10.3390/biom14101310

[The NLRP3 inhibitor Dapansutrile improves the therapeutic action of lonafarnib on progeroid mice](#)

Muela-Zarzuela I, Suarez-Rivero JM, Boy-Ruiz D, et al. *Aging Cell*. Published online August 27, 2024. doi:10.1111/accel.14272

[Hutchinson-Gilford progeria patient-derived cardiomyocyte model of carrying LMNA gene variant c.1824 C > T](#)

Perales S, Sigamani V, Rajasingh S, Czirok A, Rajasingh J. [published online ahead of print, 2023 Aug 12]. *Cell Tissue Res*. 2023;10.1007/s00441-023-03813-2. doi:10.1007/s00441-023-03813-2

[Inhibition of the NLRP3 inflammasome improves lifespan in animal murine model of Hutchinson-Gilford Progeria](#)

González-Domínguez A, Montañez R, Castejón-Vega B, et al. [published online ahead of print, 2021 Aug 27]. *EMBO Mol Med*. 2021;e14012. doi:10.15252/emmm.202114012

[A targeted antisense therapeutic approach for Hutchinson-Gilford progeria syndrome](#)

Erdos MR, Cabral WA, Tavares UL, Cao K, Gvozdenovic-Jeremic J, Narisu N, Zerfas PM, Crumley S, Boku Y, Hanson G, Mourich DV, Kole R, Eckhaus MA, Gordon LB, Collins FS. *Nat Med*. 2021 Mar;27(3):536-545. doi: 10.1038/s41591-021-01274-0. Epub 2021 Mar 11. PMID: 33707773.

[Direct reprogramming of human smooth muscle and vascular endothelial cells reveals defects associated with aging and Hutchinson-Gilford progeria syndrome](#)

Bersini S, Schulte R, Huang L, Tsai H, Hetzer MW. *Elife*. 2020 Sep 8;9:e54383. doi: 10.7554/eLife.54383. PMID: 32896271; PMCID: PMC7478891.

[Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells](#)

Li Y, Zhou G, Bruno IG, et al. *Aging Cell* 2019;18(4):e12979. doi:10.1111/accel.12979

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

HGFDFN369

[A longevity-associated variant of the human BPIFB4 gene prevents diastolic dysfunction in progeria mice](#)

Qiu Y, Cattaneo M, Maciag A, Puca AA, Madeddu P. *Signal Transduct Target Ther*. 2025;10(1):314. Published 2025 Sep 29. doi:10.1038/s41392-025-02416-3

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv*. 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Impact of miR-181a on SIRT1 Expression and Senescence in Hutchinson-Gilford Progeria Syndrome](#)

Lederer EM, Fenzl FQ, Krüger P, Schroll M, Hartinger R, Djabali K. *Diseases*. 2025;13(8):245. Published 2025 Aug 4. doi:10.3390/diseases13080245

[Enhancing Cellular Homeostasis: Targeted Botanical Compounds Boost Cellular Health Functions in Normal and Premature Aging Fibroblasts](#)

Hartinger R, Singh K, Leverett J, Djabali K. *Biomolecules*. 2024;14(10):1310. Published 2024 Oct 16. doi:10.3390/biom14101310

[Hutchinson-Gilford progeria patient-derived cardiomyocyte model of carrying LMNA gene variant c.1824 C > T](#)

Perales S, Sigamani V, Rajasingh S, Czirok A, Rajasingh J. [published online ahead of print, 2023 Aug 12]. *Cell Tissue Res*. 2023;10.1007/s00441-023-03813-2. doi:10.1007/s00441-023-03813-2

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

HGADFN370

[Imbalanced Nucleocytoskeletal Connections Create Common Polarity Defects in Progeria and Physiological Aging](#)

Chang W, Wang Y, Luxton GWG, Östlund C, Worman HJ, Gundersen GG. *Proc Natl Acad Sci U S A*. 2019;116(9):3578-3583. doi:10.1073/pnas.1809683116

HGMDFN371

[Imbalanced Nucleocytoskeletal Connections Create Common Polarity Defects in Progeria and Physiological Aging](#)

Chang W, Wang Y, Luxton GWG, Östlund C, Worman HJ, Gundersen GG. *Proc Natl Acad Sci U S A*. 2019;116(9):3578-3583. doi:10.1073/pnas.1809683116

[A mutation abolishing the ZMPSTE24 cleavage site in prelamin A causes a progeroid disorder](#)

Wang Y, Lichter-Konecki U, Anyane-Yeboah K, et al. A mutation abolishing the ZMPSTE24 cleavage site in prelamin A causes a progeroid disorder. *J Cell Sci*. 2016;129(10):1975-1980. doi:10.1242/jcs.187302

HGADFN496

[A targeted antisense therapeutic approach for Hutchinson-Gilford progeria syndrome](#)

Erdos MR, Cabral WA, Tavaréz UL, Cao K, Gvozdenovic-Jeremic J, Narisu N, Zervas PM, Crumley S, Boku Y, Hanson G, Mourich DV, Kole R, Eckhaus MA, Gordon LB, Collins FS. *Nat Med*. 2021 Mar;27(3):536-545. doi: 10.1038/s41591-021-01274-0. Epub 2021 Mar 11. PMID: 33707773.

HGMDFN717

[A longevity-associated variant of the human BPIFB4 gene prevents diastolic dysfunction in progeria mice](#)

Qiu Y, Cattaneo M, Maciag A, Puca AA, Madeddu P. *Signal Transduct Target Ther.* 2025;10(1):314. Published 2025 Sep 29. doi:10.1038/s41392-025-02416-3

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv.* 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[Hutchinson-Gilford progeria patient-derived cardiomyocyte model of carrying LMNA gene variant c.1824 C > T](#)

Perales S, Sigamani V, Rajasingh S, Czirok A, Rajasingh J. [published online ahead of print, 2023 Aug 12]. *Cell Tissue Res.* 2023;10.1007/s00441-023-03813-2. doi:10.1007/s00441-023-03813-2

HGMDFN718

[A longevity-associated variant of the human BPIFB4 gene prevents diastolic dysfunction in progeria mice](#)

Qiu Y, Cattaneo M, Maciag A, Puca AA, Madeddu P. *Signal Transduct Target Ther.* 2025;10(1):314. Published 2025 Sep 29. doi:10.1038/s41392-025-02416-3

[Transcriptional profiling of Hutchinson-Gilford Progeria patients identifies primary target pathways of progerin](#)

Vidak S, Kim S, Misteli T. Preprint. *bioRxiv.* 2025;2025.09.18.677125. Published 2025 Sep 20. doi:10.1101/2025.09.18.677125

[A targeted antisense therapeutic approach for Hutchinson-Gilford progeria syndrome](#)

Erdos MR, Cabral WA, Tavarez UL, Cao K, Gvozdenovic-Jeremic J, Narisu N, Zerfas PM, Crumley S, Boku Y, Hanson G, Mourich DV, Kole R, Eckhaus MA, Gordon LB, Collins FS. *Nat Med.* 2021 Mar;27(3):536-545. doi: 10.1038/s41591-021-01274-0. Epub 2021 Mar 11. PMID: 33707773.

PSADFN086 **(formally HGADFN086)**

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775.
doi:10.18632/aging.101508

[Increased progerin expression associated with unusual LMNA mutations causes severe progeroid syndromes.](#)

Moulson CL, Fong LG, Gardner JM, Farber EA, Go G, Passariello A, Grange DK, Young SG, Miner JH. *Hum Mutat*. 2007 Sep;28(9):882-9.

PSADFN257

[A Cell-Intrinsic Interferon-like Response Links Replication Stress to Cellular Aging Caused by Progerin.](#)

Kreienkamp R, Graziano S, Coll-Bonfill N, Bedia-Diaz G, Cybulla E, Vindigni A, Dorsett D, Kubben N, Batista LFZ, Gonzalo S. *Cell Rep*. 2018 Feb 20;22(8):2006-2015.

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775.
doi:10.18632/aging.101508

[Vitamin D Receptor Signaling Improves Hutchinson-Gilford Progeria Syndrome Cellular Phenotypes](#)

Kreienkamp R, Croke M, Neumann MA, et al. *Oncotarget* 2016;7(21):30018-30031.
doi:10.18632/oncotarget.9065

PSADFN317

[Impact of Combined Baricitinib and FTI Treatment on Adipogenesis in Hutchinson-Gilford Progeria Syndrome and Other Lipodystrophic Laminopathies](#)

Hartinger R, Lederer EM, Schena E, Lattanzi G, Djabali K. *Cells*. 2023;12(10):1350. Published 2023 May 9. doi:10.3390/cells12101350

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775.
doi:10.18632/aging.101508

PSADFN318

[Impact of Combined Baricitinib and FTI Treatment on Adipogenesis in Hutchinson-Gilford](#)

[Progeria Syndrome and Other Lipodystrophic Laminopathies](#)

Hartinger R, Lederer EM, Schena E, Lattanzi G, Djabali K. *Cells*. 2023;12(10):1350. Published 2023 May 9. doi:10.3390/cells12101350

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

PSFDEN319

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

[Rapamycin reverses cellular phenotypes and enhances mutant protein clearance in Hutchinson-Gilford progeria syndrome cells.](#)

Cao K, Graziotto JJ, Blair CD, Mazzulli JR, Erdos MR, Krainc D, Collins FS. *Sci Transl Med*. 2011 Jun 29;3(89):89ra58.

PSMDEN320

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

[Rapamycin reverses cellular phenotypes and enhances mutant protein clearance in Hutchinson-Gilford progeria syndrome cells.](#)

Cao K, Graziotto JJ, Blair CD, Mazzulli JR, Erdos MR, Krainc D, Collins FS. *Sci Transl Med*. 2011 Jun 29;3(89):89ra58.

PSMDEN326

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

PSFDEN327

[A Cell-Intrinsic Interferon-like Response Links Replication Stress to Cellular Aging Caused by Progerin.](#)

Kreienkamp R, Graziano S, Coll-Bonfill N, Bedia-Diaz G, Cybulla E, Vindigni A, Dorsett D, Kubben N, Batista LFZ, Gonzalo S. *Cell Rep.* 2018 Feb 20;22(8):2006-2015.

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775.
doi:10.18632/aging.101508

[Vitamin D Receptor Signaling Improves Hutchinson-Gilford Progeria Syndrome Cellular Phenotypes](#)

Kreienkamp R, Croke M, Neumann MA, et al. *Oncotarget* 2016;7(21):30018-30031.
doi:10.18632/oncotarget.9065

PSMDFN346

[A Cell-Intrinsic Interferon-like Response Links Replication Stress to Cellular Aging Caused by Progerin.](#)

Kreienkamp R, Graziano S, Coll-Bonfill N, Bedia-Diaz G, Cybulla E, Vindigni A, Dorsett D, Kubben N, Batista LFZ, Gonzalo S. *Cell Rep.* 2018 Feb 20;22(8):2006-2015.

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775.
doi:10.18632/aging.101508

[Vitamin D Receptor Signaling Improves Hutchinson-Gilford Progeria Syndrome Cellular Phenotypes](#)

Kreienkamp R, Croke M, Neumann MA, et al. *Oncotarget* 2016;7(21):30018-30031.
doi:10.18632/oncotarget.9065

PSADFN363

[The farnesyl transferase inhibitor \(FTI\) lonafarnib improves nuclear morphology in ZMPSTE24-deficient fibroblasts from patients with the progeroid disorder MAD-B](#)

Odinammadu KO, Shilagardi K, Tuminelli K, Judge DP, Gordon LB, Michaelis S. *Nucleus.* 2023;14(1):2288476. doi:10.1080/19491034.2023.2288476

PSADFN373

[The farnesyl transferase inhibitor \(FTI\) lonafarnib improves nuclear morphology in ZMPSTE24-deficient fibroblasts from patients with the progeroid disorder MAD-B](#)

Odinammadu KO, Shilagardi K, Tuminelli K, Judge DP, Gordon LB, Michaelis S. *Nucleus*. 2023;14(1):2288476. doi:10.1080/19491034.2023.2288476

[Targeting RAS-converting enzyme 1 overcomes senescence and improves progeria-like phenotypes of ZMPSTE24 deficiency](#)

Yao H, Chen X, Kashif M, Wang T, Ibrahim MX, Tüksammel E, Revêchon G, Eriksson M, Wiel C, Bergo MO. *Aging Cell*. 2020 Aug;19(8):e13200. doi: 10.1111/accel.13200. Epub 2020 Jul 24. PMID: 32910507; PMCID: PMC7431821.

PSADFN386

[MG132 Induces Progerin Clearance and Improves Disease Phenotypes in HGPS-like Patients' Cells](#)

Harhoury K, Cau P, Casey F, et al. *Cells*. 2022;11(4):610. Published 2022 Feb 10. doi:10.3390/cells11040610

[A novel somatic mutation achieves partial rescue in a child with Hutchinson-Gilford progeria syndrome](#)

Bar DZ, Arlt MF, Brazier JF, et al. *J Med Genet*. 2017;54(3):212-216. doi:10.1136/jmedgenet-2016-104295

PSMDFN387

[A novel somatic mutation achieves partial rescue in a child with Hutchinson-Gilford progeria syndrome](#)

Bar DZ, Arlt MF, Brazier JF, et al. *J Med Genet*. 2017;54(3):212-216. doi:10.1136/jmedgenet-2016-104295

PSFDFN388

[A novel somatic mutation achieves partial rescue in a child with Hutchinson-Gilford progeria syndrome](#)

Bar DZ, Arlt MF, Brazier JF, et al. *J Med Genet*. 2017;54(3):212-216. doi:10.1136/jmedgenet-2016-104295

PSADFN392

[A Cell-Intrinsic Interferon-like Response Links Replication Stress to Cellular Aging Caused by Progerin.](#)

Kreienkamp R, Graziano S, Coll-Bonfill N, Bedia-Diaz G, Cybulla E, Vindigni A, Dorsett D, Kubben N, Batista LFZ, Gonzalo S. *Cell Rep*. 2018 Feb 20;22(8):2006-2015.

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775.
doi:10.18632/aging.101508

[A novel somatic mutation achieves partial rescue in a child with Hutchinson-Gilford progeria syndrome](#)

Bar DZ, Arlt MF, Brazier JF, et al. *J Med Genet*. 2017;54(3):212-216. doi:10.1136/jmedgenet-2016-104295

[Vitamin D Receptor Signaling Improves Hutchinson-Gilford Progeria Syndrome Cellular Phenotypes](#)

Kreienkamp R, Croke M, Neumann MA, et al. *Oncotarget* 2016;7(21):30018-30031.
doi:10.18632/oncotarget.9065

PSMDFN393

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

Horvath S, Oshima J, Martin GM, et al. *Aging* (Albany NY). 2018;10(7):1758-1775.
doi:10.18632/aging.101508

[A novel somatic mutation achieves partial rescue in a child with Hutchinson-Gilford progeria syndrome](#)

Bar DZ, Arlt MF, Brazier JF, et al. *J Med Genet*. 2017;54(3):212-216. doi:10.1136/jmedgenet-2016-104295

PSFDFN394

[Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies](#)

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doi:10.18632/aging.101508

[A novel somatic mutation achieves partial rescue in a child with Hutchinson-Gilford progeria syndrome](#)

Bar DZ, Arlt MF, Brazier JF, et al. *J Med Genet.* 2017;54(3):212-216. doi:10.1136/jmedgenet-2016-104295

PSADFN414

[Everolimus Rescues Multiple Cellular Defects in Laminopathy-Patient Fibroblasts](#)

DuBose AJ, Lichtenstein ST, Petrash NM, Erdos MR, Gordon LB, Collins FS [published correction appears in *Proc Natl Acad Sci U S A.* 2018 Apr 16;:]. *Proc Natl Acad Sci U S A.* 2018;115(16):4206-4211. doi:10.1073/pnas.1802811115

PSADFN423

[A novel somatic mutation achieves partial rescue in a child with Hutchinson-Gilford progeria syndrome](#)

Bar DZ, Arlt MF, Brazier JF, et al. *J Med Genet.* 2017;54(3):212-216. doi:10.1136/jmedgenet-2016-104295

PSADFN425

[Everolimus Rescues Multiple Cellular Defects in Laminopathy-Patient Fibroblasts](#)

DuBose AJ, Lichtenstein ST, Petrash NM, Erdos MR, Gordon LB, Collins FS [published correction appears in *Proc Natl Acad Sci U S A.* 2018 Apr 16;:]. *Proc Natl Acad Sci U S A.* 2018;115(16):4206-4211. doi:10.1073/pnas.1802811115

PSADFN485

[The farnesyl transferase inhibitor \(FTI\) lonafarnib improves nuclear morphology in ZMPSTE24-deficient fibroblasts from patients with the progeroid disorder MAD-B](#)

Odinammadu KO, Shilagardi K, Tuminelli K, Judge DP, Gordon LB, Michaelis S. *Nucleus.* 2023;14(1):2288476. doi:10.1080/19491034.2023.2288476

PSADFN542

[The farnesyl transferase inhibitor \(FTI\) lonafarnib improves nuclear morphology in ZMPSTE24-](#)

[deficient fibroblasts from patients with the progeroid disorder MAD-B](#)

Odinammadu KO, Shilagardi K, Tuminelli K, Judge DP, Gordon LB, Michaelis S. *Nucleus*. 2023;14(1):2288476. doi:10.1080/19491034.2023.2288476

HGADFN003 iPS1B

[Gaussian curvature dilutes the nuclear lamina, favoring nuclear rupture, especially at high strain rate](#)

Pfeifer CR, Tobin MP, Cho S, et al. *Nucleus*. 2022;13(1):129-143. doi:10.1080/19491034.2022.2045726

[iPSC-Derived Endothelial Cells Affect Vascular Function in a Tissue-Engineered Blood Vessel Model of Hutchinson-Gilford Progeria Syndrome](#)

Atchison L, Abutaleb NO, Snyder-Mounts E, et al. *Stem Cell Reports* 2020;14(2):325-337. doi:10.1016/j.stemcr.2020.01.005

[Progerin Phosphorylation in Interphase Is Lower and Less Mechanosensitive Than lamin-A,C in iPS-derived Mesenchymal Stem Cells](#)

Cho S, Abbas A, Irianto J, et al. *Nucleus* 2018;9(1):230-245. doi:10.1080/19491034.2018.1460185

[Reprogramming Progeria Fibroblasts Re-Establishes a Normal Epigenetic Landscape](#)

Chen Z, Chang WY, Etheridge A, et al. *Aging Cell* 2017;16(4):870-887. doi:10.1111/accel.12621

HGADFN003 iPS1C

[Adenine base editing rescues pathogenic phenotypes in tissue engineered vascular model of Hutchinson-Gilford progeria syndrome](#)

Abutaleb NO, Gao XD, Bedapudi A, et al. *APL Bioeng*. 2025;9(1):016110. Published 2025 Feb 26. doi:10.1063/5.0244026

[Progeria-based vascular model identifies networks associated with cardiovascular aging and disease](#)

Ngubo M, Chen Z, McDonald D, et al. *Aging Cell*. Published online April 4, 2024. doi:10.1111/accel.14150

[iPSC-Derived Endothelial Cells Affect Vascular Function in a Tissue-Engineered Blood Vessel Model of Hutchinson-Gilford Progeria Syndrome](#)

Atchison L, Abutaleb NO, Snyder-Mounts E, et al. *Stem Cell Reports* 2020;14(2):325-337. doi:10.1016/j.stemcr.2020.01.005

[Telomerase therapy reverses vascular senescence and extends lifespan in progeria mice](#)

Mojiri A, Walther BK, Jiang C, et al. [published online ahead of print, 2021 Aug 14]. *Eur Heart J*. 2021;ehab547. doi:10.1093/eurheartj/ehab547

[Reprogramming Progeria Fibroblasts Re-Establishes a Normal Epigenetic Landscape](#)

Chen Z, Chang WY, Etheridge A, et al. *Aging Cell*. 2017;16(4):870-887. doi:10.1111/accel.12621

HGADFN003 iPS1D

[Adenine base editing rescues pathogenic phenotypes in tissue engineered vascular model of Hutchinson-Gilford progeria syndrome](#)

Abutaleb NO, Gao XD, Bedapudi A, et al. *APL Bioeng*. 2025;9(1):016110. Published 2025 Feb 26. doi:10.1063/5.0244026

[Lonafarnib and everolimus reduce pathology in iPSC-derived tissue engineered blood vessel model of Hutchinson-Gilford Progeria Syndrome.](#)

Abutaleb NO, Atchison L, Choi L, Bedapudi A, Shores K, Gete Y, Cao K, Truskey GA. *Sci Rep*. 2023 Mar 28;13(1):5032. doi: 10.1038/s41598-023-32035-3. PMID: 36977745; PMCID: PMC10050176.

[iPSC-Derived Endothelial Cells Affect Vascular Function in a Tissue-Engineered Blood Vessel Model of Hutchinson-Gilford Progeria Syndrome](#)

Atchison L, Abutaleb NO, Snyder-Mounts E, et al. *Stem Cell Reports* 2020;14(2):325-337. doi:10.1016/j.stemcr.2020.01.005

[Dysfunction of iPSC-derived Endothelial Cells in Human Hutchinson-Gilford Progeria Syndrome](#)

Matrone G, Thandavarayan RA, Walther BK, Meng S, Mojiri A, Cooke JP. *Cell Cycle* 2019;18(19):2495-2508. doi:10.1080/15384101.2019.1651587

HGMDFN090 iPS1B

[Telomerase therapy reverses vascular senescence and extends lifespan in progeria mice](#)

Mojiri A, Walther BK, Jiang C, et al. [published online ahead of print, 2021 Aug 14]. *Eur Heart J*. 2021;ehab547. doi:10.1093/eurheartj/ehab547

[Dysfunction of iPSC-derived Endothelial Cells in Human Hutchinson-Gilford Progeria Syndrome](#)

Matrone G, Thandavarayan RA, Walther BK, Meng S, Mojiri A, Cooke JP. *Cell Cycle* 2019;18(19):2495-2508. doi:10.1080/15384101.2019.1651587

[Reprogramming Progeria Fibroblasts Re-Establishes a Normal Epigenetic Landscape](#)

Chen Z, Chang WY, Etheridge A, et al. *Aging Cell*. 2017;16(4):870-887. doi:10.1111/accel.12621

HGMDFN090 iPS1C

[Progeria-based vascular model identifies networks associated with cardiovascular aging and disease](#)

Ngubo M, Chen Z, McDonald D, et al. *Aging Cell*. Published online April 4, 2024.
doi:10.1111/accel.14150

[Aging Model for Analyzing Drug-Induced Proarrhythmia Risks Using Cardiomyocytes Differentiated from Progeria-Patient-Derived Induced Pluripotent Stem Cells](#)

Daily N, Elson J, Wakatsuki T. *Int J Mol Sci*. 2023;24(15):11959. Published 2023 Jul 26.
doi:10.3390/ijms241511959

[Reprogramming Progeria Fibroblasts Re-Establishes a Normal Epigenetic Landscape](#)

Chen Z, Chang WY, Etheridge A, et al. *Aging Cell*. 2017;16(4):870-887. doi:10.1111/accel.12621

HGADFN167 iPS1J

[Patient-Derived Cortical Organoids Reveal Senescence of Neural Progenitor Cells in Hutchinson-Gilford Progeria Syndrome](#)

Jeon S, Park CS, Hong J, et al. *Aging Cell*. Published online June 30, 2025.
doi:10.1111/accel.70143

[Aging Model for Analyzing Drug-Induced Proarrhythmia Risks Using Cardiomyocytes Differentiated from Progeria-Patient-Derived Induced Pluripotent Stem Cells](#)

Daily N, Elson J, Wakatsuki T. *Int J Mol Sci*. 2023;24(15):11959. Published 2023 Jul 26.
doi:10.3390/ijms241511959

[Modelling premature cardiac aging with induced pluripotent stem cells from a Hutchinson-Gilford Progeria Syndrome patient](#)

Monnerat G, Kasai-Brunswick TH, Asensi KD, et al. *Front Physiol*. 2022;13:1007418. Published 2022 Nov 23. doi:10.3389/fphys.2022.1007418

[Reprogramming Progeria Fibroblasts Re-Establishes a Normal Epigenetic Landscape](#)

Chen Z, Chang WY, Etheridge A, et al. *Aging Cell*. 2017;16(4):870-887. doi:10.1111/accel.12621

[Mechanisms Controlling the Smooth Muscle Cell Death in Progeria via Down-Regulation of poly\(ADP-ribose\) Polymerase 1](#)

Zhang H, Xiong ZM, Cao K. *Proc Natl Acad Sci U S A*. 2014;111(22):E2261-E2270.
doi:10.1073/pnas.1320843111

HGADFN167 iPS1O

Circular RNA Telomerase Reverses Endothelial Senescence in Progeria

Qin W, Castillo KD, Li H, et al. *Aging Cell*. Published online February 23, 2025.
doi:10.1111/accel.70021

Vascular senescence in progeria: role of endothelial dysfunction

Xu Q, Mojiri A, Boulahouache L, Morales E, Walther BK, Cooke JP. *Eur Heart J Open*. 2022;2(4):oeac047. Published 2022 Jul 28. doi:10.1093/ehjopen/oeac047

Telomerase therapy reverses vascular senescence and extends lifespan in progeria mice

Mojiri A, Walther BK, Jiang C, et al. [published online ahead of print, 2021 Aug 14]. *Eur Heart J*. 2021;ehab547. doi:10.1093/eurheartj/ehab547

Dysfunction of iPSC-derived Endothelial Cells in Human Hutchinson-Gilford Progeria Syndrome

Matrone G, Thandavarayan RA, Walther BK, Meng S, Mojiri A, Cooke JP. *Cell Cycle* 2019;18(19):2495-2508. doi:10.1080/15384101.2019.1651587

Reprogramming Progeria Fibroblasts Re-Establishes a Normal Epigenetic Landscape

Chen Z, Chang WY, Etheridge A, et al. *Aging Cell* 2017;16(4):870-887. doi:10.1111/accel.12621

HGFDFN168 iPS1D2

Patient-Derived Cortical Organoids Reveal Senescence of Neural Progenitor Cells in Hutchinson-Gilford Progeria Syndrome

Jeon S, Park CS, Hong J, et al. *Aging Cell*. Published online June 30, 2025.
doi:10.1111/accel.70143

Adenine base editing rescues pathogenic phenotypes in tissue engineered vascular model of Hutchinson-Gilford progeria syndrome

Abutaleb NO, Gao XD, Bedapudi A, et al. *APL Bioeng*. 2025;9(1):016110. Published 2025 Feb 26. doi:10.1063/5.0244026

Reprogramming Progeria Fibroblasts Re-Establishes a Normal Epigenetic Landscape

Chen Z, Chang WY, Etheridge A, et al. *Aging Cell*. 2017;16(4):870-887. doi:10.1111/accel.12621

Mechanisms Controlling the Smooth Muscle Cell Death in Progeria via Down-Regulation of poly(ADP-ribose) Polymerase 1

Zhang H, Xiong ZM, Cao K. *Proc Natl Acad Sci U S A* 2014;111(22):E2261-E2270.
doi:10.1073/pnas.1320843111

HGFDFN168 iPS1P

[Circular RNA Telomerase Reverses Endothelial Senescence in Progeria](#)

Qin W, Castillo KD, Li H, et al. *Aging Cell*. Published online February 23, 2025. doi:10.1111/accel.70021

[Vascular senescence in progeria: role of endothelial dysfunction](#)

Xu Q, Mojiri A, Boulahouache L, Morales E, Walther BK, Cooke JP. *Eur Heart J Open*. 2022;2(4):oeac047. Published 2022 Jul 28. doi:10.1093/ehjopen/oeac047

[Telomerase therapy reverses vascular senescence and extends lifespan in progeria mice](#)

Mojiri A, Walther BK, Jiang C, et al. [published online ahead of print, 2021 Aug 14]. *Eur Heart J*. 2021;ehab547. doi:10.1093/eurheartj/ehab547

[Dysfunction of iPSC-derived Endothelial Cells in Human Hutchinson-Gilford Progeria Syndrome](#)

Matrone G, Thandavarayan RA, Walther BK, Meng S, Mojiri A, Cooke JP. *Cell Cycle* 2019;18(19):2495-2508. doi:10.1080/15384101.2019.1651587

[Reprogramming Progeria Fibroblasts Re-Establishes a Normal Epigenetic Landscape](#)

Chen Z, Chang WY, Etheridge A, et al. *Aging Cell* 2017;16(4):870-887. doi:10.1111/accel.12621

HGALBV009

[Inhibition of the NLRP3 inflammasome improves lifespan in animal murine model of Hutchinson-Gilford Progeria](#)

González-Domínguez A, Montañez R, Castejón-Vega B, et al. [published online ahead of print, 2021 Aug 27]. *EMBO Mol Med*. 2021;e14012. doi:10.15252/emmm.202114012

[Stem cell depletion in Hutchinson-Gilford progeria syndrome.](#)

Rosengardten Y, McKenna T, Grochová D, Eriksson M. *Aging Cell*. 2011 Dec;10(6):1011-20. Epub 2011 Oct 11.

[Low and high expressing alleles of the LMNA gene: implications for laminopathy disease development.](#)

Rodríguez S, Eriksson M. *PLoS One*. 2011;6(9):e25472. Epub 2011 Sep 29.

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGMLBV010

[Stem cell depletion in Hutchinson-Gilford progeria syndrome.](#)

Rosengardten Y, McKenna T, Grochová D, Eriksson M. *Aging Cell*. 2011 Dec;10(6):1011-20. Epub 2011 Oct 11.

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGALBV011

[Low and high expressing alleles of the LMNA gene: implications for laminopathy disease development.](#)

Rodríguez S, Eriksson M. *PLoS One*. 2011;6(9):e25472. Epub 2011 Sep 29.

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGMLBV013

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGFLBV021

[Inhibition of the NLRP3 inflammasome improves lifespan in animal murine model of Hutchinson-Gilford Progeria](#)

González-Domínguez A, Montañez R, Castejón-Vega B, et al. [published online ahead of print, 2021 Aug 27]. *EMBO Mol Med*. 2021;e14012. doi:10.15252/emmm.202114012

[Stem cell depletion in Hutchinson-Gilford progeria syndrome.](#)

Rosengardten Y, McKenna T, Grochová D, Eriksson M. *Aging Cell*. 2011 Dec;10(6):1011-20. Epub 2011 Oct 11.

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGMLBV023

[Stem cell depletion in Hutchinson-Gilford progeria syndrome.](#)

Rosengardten Y, McKenna T, Grochová D, Eriksson M. *Aging Cell*. 2011 Dec;10(6):1011-20. Epub 2011 Oct 11.

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGFLBV031

[Stem cell depletion in Hutchinson-Gilford progeria syndrome.](#)

Rosengardten Y, McKenna T, Grochová D, Eriksson M. *Aging Cell*. 2011 Dec;10(6):1011-20. Epub 2011 Oct 11.

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGFLBV050

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGALBV057

[Stem cell depletion in Hutchinson-Gilford progeria syndrome.](#)

Rosengardten Y, McKenna T, Grochová D, Eriksson M. *Aging Cell*. 2011 Dec;10(6):1011-20. Epub 2011 Oct 11.

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGMLBV058

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGSLBV059

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGMLBV066

[Stem cell depletion in Hutchinson-Gilford progeria syndrome.](#)

Rosengardten Y, McKenna T, Grochová D, Eriksson M. *Aging Cell*. 2011 Dec;10(6):1011-20. Epub 2011 Oct 11.

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGFLBV067

[Stem cell depletion in Hutchinson-Gilford progeria syndrome.](#)

Rosengardten Y, McKenna T, Grochová D, Eriksson M. *Aging Cell*. 2011 Dec;10(6):1011-20. doi: 10.1111/j.1474-9726.2011.00743.x. Epub 2011 Oct 11.

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM,

Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGALBV071

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGMLBV081

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.

HGFLBV082

[Recurrent de novo point mutations in lamin A cause Hutchinson-Gilford progeria syndrome.](#)

Eriksson M, Brown WT, Gordon LB, Glynn MW, Singer J, Scott L, Erdos MR, Robbins CM, Moses TY, Berglund P, Dutra A, Pak E, Durkin S, Csoka AB, Boehnke M, Glover TW, Collins FS. *Nature*. 2003 May 15;423(6937):293-8. Epub 2003 Apr 25.