

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

[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.](#)

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[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, Squarzone 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

[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

[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](#)

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[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

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

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[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.](#)

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[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](#)

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

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

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[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.

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[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.

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[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 Jun 15;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

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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.](#)

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HGMDFN090

[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.

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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.

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[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.](#)

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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.](#)

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[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

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[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.

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

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

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HGADFN122

[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.

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[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

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HGMDFN368

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HGFDEFN369

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HGADFN370

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HGMDFN371

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HGADFN496

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HGMDEN718

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PSADEN086
(formally HGADFN086)

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PSADFN317

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doi:10.18632/aging.101508

PSADFN318

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doi:10.18632/aging.101508

PSFDNF319

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

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PSMDFN320

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PSMDFN326

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doi:10.18632/aging.101508

PSFDEN327

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PSMDFN346

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PSADEN373

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PSADEN386

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PSADEN392

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PSMDFN393

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PSFDEN394

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PSADFN414

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PSADFN425

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HGADFN003 iPS1B

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HGADFN003 iPS1C

[Telomerase therapy reverses vascular senescence and extends lifespan in progeria mice](#)

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[Model of Hutchinson-Gilford Progeria Syndrome](#)

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HGADFN003 iPS1D

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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

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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](#)

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HGMDFN090 iPS1C

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HGADFN167 iPS1J

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HGADFN167 iPS1Q

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[Reprogramming Progeria Fibroblasts Re-Establishes a Normal Epigenetic Landscape](#)

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HGFDEFN168 iPS1D2

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Zhang H, Xiong ZM, Cao K. *Proc Natl Acad Sci U S A* 2014;111(22):E2261-E2270. doi:10.1073/pnas.1320843111

HGFDEFN168 iPS1P

[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

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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-Dominguez 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

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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.

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HGALBV011

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

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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

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[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.](#)

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HGALBV071

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