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:

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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.
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.

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HGADFN003

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

Version date December 2020
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/acel.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/acel.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/acel.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.

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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

Permanent farnesylation of lamin A mutants linked to progeria impairs its phosphorylation at

Version date December 2020
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 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.

**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, Kieckhaefer 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 farnesytransferase 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.**
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.

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

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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.

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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.
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/acel.12979

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Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies
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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.
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, Kieckhaefer JE, Olive M, Erdos MR, Nabel EG, Collins FS. J Clin Invest. 2011 Jul 1;121(7):2833-44

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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, Mulle JG, Schaibley VM, Schadland 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
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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
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
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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:
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

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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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 cytidylyltransferase α (CCTα) and lamins alter nuclear membrane structure without affecting phosphatidylcholine synthesis.
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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.
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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

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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 2a 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 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.

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.
SAMMY-seq reveals early alteration of heterochromatin and deregulation of bivalent genes in Hutchinson-Gilford Progeria Syndrome
Sebestyén E, Marullo F, Lucini F, Petruni C, Bianchi A, Valsoni S, Olivieri I, Antonelli L, Gregoretti 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
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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/acer.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/acel.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 β-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

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Epigenetic clock for skin and blood cells applied to Hutchinson Gilford Progeria Syndrome and ex vivo studies
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Page 15 of 38

Version date December 2020
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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.

**Temsrirolimus Partially Rescues the Hutchinson-Gilford Progeria Cellular Phenotype.**
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**Lamin A Is an Endogenous SIRT6 Activator and Promotes SIRT6-Mediated DNA Repair.**
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**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 iPSCs.**
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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.

**Defective lamin A-Rb signaling in Hutchinson-Gilford Progeria Syndrome and reversal by farnesyltransferase inhibition.**
Marji J, O'Donoghue SL, McClintock D, Satagopam VP, Schneider R, Ratner D, Worman HJ, Gordon LB, Djabali K. *PLoS One.* 2010 Jun 15;5(6):e11132.
HGADFN167

SAMMY-seq reveals early alteration of heterochromatin and deregulation of bivalent genes in Hutchinson-Gilford Progeria Syndrome
Sebestyén E, Marullo F, Lucini F, Petriti C, Bianchi A, Valsoni S, Olivieri I, Antonelli L, Gregoretti 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.

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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/ace1.12979

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 β-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, Petrush 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/ace.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 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.

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, Kainc 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.

CTP:phosphocholine cytidylyltransferase α (CCTα) 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.
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.

Epigenetic Deregulation of Lamina-Associated Domains in Hutchinson-Gilford Progeria Syndrome

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Everolimus Rescues Multiple Cellular Defects in Laminopathy-Patient Fibroblasts

DuBose AJ, Lichtenstein ST, Pettrash 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-
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Nucleoplasmic lamins define growth-regulating functions of lamina-associated polypeptide 2α in progeria cells.
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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.
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NANOG reverses the Myogenic Differentiation Potential of Senescent Stem Cells by Restoring ACTIN Filamentous Organization and SRF-Dependent Gene Expression.
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Booth EA, Spagnol ST, Alcser TA, Dahl KN. Soft Matter. 2015 Aug 28;11(32):6412-8. Epub
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Wang K, Das A, Xiong Z, Cao K, Hannenhalli S. IEEE/ACM Trans Comput Biol Bioinform 2015 Jan-Feb;12(1):30-9.

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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

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, Gregoretti 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.

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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

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/acel.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

Version date December 2020
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

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/acel.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

Page 25 of 38

Version date December 2020
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.

**HGADFN188**

**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, Gregoretti 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, Tsi 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/acel.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.

Version date December 2020
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, Mc Clintock D, Satagopam VP, Schneider R, Ratner D, Worman HJ, Gordon LB, Djabali K. *PLoS One*. 2010 Jun 15;5(6):e11132.

HGADFN271

SAMMY-seq reveals early alteration of heterochromatin and deregulation of bivalent genes in Hutchinson-Gilford Progeria SyndromeNat
Sebestyén E, Marullo F, Lucini F, Petrini C, Bianchi A, Valsoni S, Olivieri I, Antonelli L, Gregoretti 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
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Version date December 2020
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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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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
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Horvath S, Oshima J, Martin GM, et al. Aging (Albany NY). 2018;10(7):1758-1775. doi:10.18632/aging.101508

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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

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

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
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

**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.

Version date December 2020
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

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.
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 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.

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
PSADFN373

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, Tüksamme E, Revêchon G, Eriksson M, Wiel C, Bergo MO. Aging Cell. 2020 Aug;19(8):e13200. doi: 10.1111/acel.13200. Epub 2020 Jul 24. PMID: 32910507; PMCID: PMC7431821.

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

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

PSFDFN394

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

PSADFN414

Everolimus Rescues Multiple Cellular Defects in Laminopathy-Patient Fibroblasts
DuBose AJ, Lichtenstein ST, Pettrash 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. Version date December 2020
Everolimus Rescues Multiple Cellular Defects in Laminopathy-Patient Fibroblasts
DuBose AJ, Lichtenstein ST, Petras 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

HGADFN003 iPSC

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 iPSC-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/acel.12621

HGADFN003 iPSC

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Chen Z, Chang WY, Etheridge A, et al. Aging Cell. 2017;16(4):870-887. doi:10.1111/acel.12621

Version date December 2020
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

### HGDFDN168 iPS1P

**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/acel.12621

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### HgalBV009

**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.**
Rodriguez 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.**

Version date December 2020
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**

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.

**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.

**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.
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.

**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.**
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