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.
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

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.
Röhrl 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
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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/acel.13010

Transient Introduction of Human Telomerase mRNA Improves Hallmarks of Progeria Cells
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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.
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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 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.
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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 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.

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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 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.

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

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

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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
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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.
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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.
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, 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.
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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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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

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

HGADFN127

Baricitinib, a JAK-STAT Inhibitor, Reduces the Cellular Toxicity of the Farnesyltransferase Inhibitor Lonafarnib in Progeria Cells
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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.
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HGADFN367

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HGFDFN369

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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

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HGADFN496

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HGMDFN718

A targeted antisense therapeutic approach for Hutchinson-Gilford progeria syndrome
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PSADFN086 (formally HGADFN086)

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PSADFN317

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PSADFN318

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PSFDFN319

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PSMDFN320

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PSMDFN326

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PSFDFN327

A Cell-Intrinsic Interferon-like Response Links Replication Stress to Cellular Aging Caused by Progerin.
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PSMDFN346

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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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PSADFN373

Targeting RAS-converting enzyme 1 overcomes senescence and improves progeria-like phenotypes of ZMPSTE24 deficiency
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PSADFN386

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PSADFN392

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PSMDFN393

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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

PSFDFN394

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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

PSADFN425

Everolimus Rescues Multiple Cellular Defects in Laminopathy-Patient Fibroblasts
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HGADFN003 iPS1B

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HGADFN003 iPS1D

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Dysfunction of iPSC-derived Endothelial Cells in Human Hutchinson-Gilford Progeria Syndrome
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HGMDFN090 iPS1B

Telomerase therapy reverses vascular senescence and extends lifespan in progeria mice
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HGADFN167 iPS1J

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HGADFN167 iPS1Q

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HGFDFN168 iPS1D2

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HGFDFN168 iPS1P

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HGALBV009

Inhibition of the NLRP3 inflammasome improves lifespan in animal murine model of Hutchinson-Gilford Progeria
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HGMLBV010

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HGALBV011

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HGMLBV013

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HGFLBV021

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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.
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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.

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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. 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.

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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.
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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.

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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.

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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.
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