

# Telomerase

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Telomerase is an enzyme that adds specific DNA sequence repeats to the 3' end of DNA strands in the telomere regions, which are found at the ends of eukaryotic chromosomes. The telomeres contain condensed DNA material, giving stability to the chromosomes. The enzyme is a reverse transcriptase that carries its own RNA molecule, which is used as a template when it elongates telomeres, which are shortened after each replication cycle. Telomerase was discovered by Carol W. Greider and Elizabeth Blackburn in 1984 in the ciliate *Tetrahymena*.



## Recent Publications on Telomerase:

- [Thyroglobulin may affect telomerase activity in thyroid follicular cells.](#)  
*Telomerase (TA) activity is known to be present in malignant tumor cells,...*3rd October, 2008  
Department of Internal Medicine, Fujita Health University School of- *J Enzyme Inhib Med Chem.* 2008 Oct 2;1. ([DOI Direct Link](#))
- [Telomerase deficiency affects the formation of chromosomal translocations by homologous recombination in \*Saccharomyces cerevisiae\*.](#)  
*Telomerase is a ribonucleoprotein complex required for the replication and...*3rd October, 2008  
Division of Molecular Biology, Beckman Research Institute of the City of- *PLoS ONE.* 2008 Oct 2;3(10):e3318. ([DOI Direct Link](#))
- [Pericentromeric instability and spontaneous emergence of human neocentric and minute chromosomes in the alternative pathway of telomere lengthening.](#)  
*In the alternative pathway of telomere lengthening (ALT), neoplastic cell...*3rd October, 2008  
Laboratory of Genetics, Biomedical Research Foundation of the Academy of- *Cancer Res.* 2008 Oct 1;68(19):8146-55. ([DOI Direct Link](#))
- [Presentation of telomerase reverse transcriptase, a self-tumor antigen, is down-regulated by histone deacetylase inhibition.](#)  
*Histone deacetylases (HDAC) modify the architecture of chromatin, leading...*3rd October, 2008  
Department of Medicine, Moores Cancer Center, The Laboratory of- *Cancer Res.* 2008 Oct 1;68(19):8085-93. ([DOI Direct Link](#))
- [Nuclear protein tyrosine phosphatase Shp-2 is one important negative regulator of nuclear export of telomerase reverse transcriptase.](#)  
*Ageing is one major risk factor for numerous diseases. The enzyme...*3rd October, 2008  
Molecular Cell & Aging Research, IUF (Institut fuer Umweltmedizinische- *J Biol Chem.* 2008 Oct 1. ([DOI Direct Link](#))
- [Telomerase levels in schizophrenia: A preliminary study.](#)  
*We previously demonstrated that telomere length was markedly reduced in...*3rd October, 2008  
Nathan Kline Institute for Psychiatric Research, 140 Old Orangeburg Road,- *Schizophr Res.* 2008 Sep

29. ([DOI Direct Link](#))
- [Telomeres and telomerase in lung cancer.](#)  
*Protected telomeres ensure normal chromosomal segregation during mitosis...*2nd October, 2008  
Oncology Division, Center for Applied Medical Research (CIMA), University- J Thorac Oncol. 2008  
Oct;3(10):1085-8. ([DOI Direct Link](#))
  - [\[Regulation of the life span in unicellular eukaryotes\]](#)  
*The review considers the mechanisms of nucleic and mitochondrial control...*1st October, 2008  
- Tsitologiia. 2008;50(8):647-62.
  - [Significance of p57\(Kip2\) down-regulation in oncogenesis of bladder carcinoma: an immunohistochemical study.](#)  
*AIMS AND BACKGROUND: Cyclin-dependent kinase inhibitors have important...*1st October, 2008  
Pathology Department, Kirikkale University Medical School, Kirikkale,- Tumori. 2008  
Jul-Aug;94(4):556-62.
  - [Transfection of adult canine Schwann cells and olfactory ensheathing cells at early and late passage with human TERT differentially affects growth factor responsiveness and in vitro growth.](#)  
*Adult canine Schwann cells and olfactory ensheathing cells (OECs) are...*30th September, 2008  
Department of Pathology, University of Veterinary Medicine Hannover,- J Neurosci Methods. 2008 Sep  
7. ([DOI Direct Link](#))
  - [Drosophila telomeres: A variation on the telomerase theme.](#)  
*In Drosophila, the role of telomerase is carried out by three specialized...*30th September, 2008  
Department of Biology, Massachusetts Institute of Technology, Cambridge,- Fly (Austin). 2008 May  
4;2(3).
  - [Association of hsp90 to the hTERT promoter is necessary for hTERT expression in human oral cancer cells.](#)  
*Enhanced expression of human telomerase reverse transcriptase (hTERT)...*30th September, 2008  
UCLA School of Dentistry, Los Angeles, CA 90095.- Carcinogenesis. 2008 Sep 26. ([DOI Direct Link](#))
  - [The PPAR{alpha}/p16INK4a Pathway Inhibits Vascular Smooth Muscle Cell Proliferation by Repressing Cell Cycle-Dependent Telomerase Activation.](#)  
*Peroxisome proliferator-activated receptor (PPAR)alpha, the molecular...*27th September, 2008  
Division of Endocrinology and Molecular Medicine, University of Kentucky- Circ Res. 2008 Sep 25. ([DOI Direct Link](#))
  - [Cell-restricted immortalization by HPV correlates with telomerase activation and Myc engagement of the hTERT promoter.](#)  
*The high-risk human papillomaviruses are the causative agents of nearly...*27th September, 2008  
Department of Pathology, Georgetown University Medical School, Washington,- J Virol. 2008 Sep 25. ([DOI Direct Link](#))
  - [Bmi1 promotes prostate tumorigenesis via inhibiting p16\(INK4A\) and p14\(ARF\) expression.](#)  
*We report here that the polycomb group protein Bmi1 promotes prostate...*27th September, 2008  
Division of Nephrology, Department of Medicine, McMaster University,- Biochim Biophys Acta. 2008  
Sep 6. ([DOI Direct Link](#))

## BioNews Results for Telomerase

- [The Breath Of... 'Long' Life? Breathing Exercise For Lower Blood Pressure And Longer Living](#)  
*American Chronicle: Sep 29 2008 9:00PM Matching: telomerase*
- [Researchers find new anti-cancer mechanism in rodents](#)  
*Campus Times: Sep 26 2008 6:16AM Matching: telomerase*
- [Do squirrels really know how to avoid cancer?](#)  
*ZDNet: Sep 21 2008 5:26PM Matching: telomerase*
- [On the Mark\(ers\) Rapid Advances Seen in Diagnostics, Risk Assessment for Cardiovascular Disease](#)

- AHC: Sep 20 2008 6:42AM Matching: telomerase
- [Novel Anti-cancer Mechanism Found In Long-lived Rodents](#)  
Science Daily: Sep 19 2008 9:45AM Matching: telomerase
  - [Squirrels may know a cure for cancer!](#)  
News-Medical.Net: Sep 18 2008 11:50PM Matching: telomerase
  - [Novel anti-cancer mechanism found in long-lived rodents](#)  
PhysOrg.com: Sep 18 2008 5:12PM Matching: telomerase
  - [Novel anti-cancer mechanism found in long-lived rodents](#)  
Genetic Engineering News: Sep 18 2008 4:46AM Matching: telomerase
  - [Comprehensive Lifestyle Changes Improve Levels Of Enzyme Telomerase Involved In Cell Ageing](#)  
Medical News Today: Sep 16 2008 7:38AM Matching: telomerase
  - [Active lifestyle boosts anti-cancer enzyme](#)  
NetDoctor.co.uk: Sep 16 2008 11:51AM Matching: telomerase
  - [Healthy lifestyle 'boosts anti-cancer enzyme'](#)  
View London: Sep 16 2008 12:29AM Matching: telomerase
  - [Telomerase activity linked to lifestyle changes](#)  
Lancet: Sep 15 2008 11:39PM Matching: telomerase
  - [RevGenetics Offers New Science-Based Telomere Health Supplements for DNA and Chromosome Health](#)  
Street Insider: Sep 9 2008 7:31AM Matching: telomerase
  - [RevGenetics Offers New Science-Based Telomere Health Supplements for DNA and Chromosome Health](#)  
Houston Chronicle: Sep 9 2008 7:29AM Matching: telomerase
  - [RevGenetics Offers New Science-Based Telomere Health Supplements for DNA and Chromosome Health](#)  
Earthtimes.org: Sep 9 2008 7:19AM Matching: telomerase

#### Telomerase Clinical Trials:



- [GV 1001 Immunotherapy in Patients With Non-Small Cell Lung Cancer \(NSCLC\) Carcinoma, Non-Small-Cell Lung](#)

#### Telomerase Patents:



- 7413734- [Treatment of retinitis pigmentosa with human umbilical cord cells](#)
- 7417116- [PRO7155 polypeptides](#)
- 7417123- [PRO4399 Antibodies](#)
- 7417125- [Antibodies that bind a PRO1158 polypeptide](#)

- 7419787- [Mass spectrometric methods for detecting mutations in a target nucleic acid](#)
- 7419826- [Human schwannoma cell line](#)
- 7419827- [Cell lines](#)
- 7419964- [Treatment of HSV-related pathologies using ssDNA](#)
- 7419975- [Organic compounds](#)
- 7420031- [Intracellular delivery of small molecules, proteins, and nucleic acids](#)
- 7420099- [Transgenic animals and uses thereof](#)
- 7417115- [PRO6027 polypeptides](#)
- 7417065- [Immunosuppressant compounds and compositions](#)
- 7416888- [Cell lines](#)
- 7413850- [Uses of carbamoyl phosphate synthetase for the diagnosis of inflammatory diseases and sepsis](#)
- 7413864- [Treating cancer using a telomerase vaccine](#)
- 7413874- [Nucleic acid encoding fluorescent proteins from aquatic species](#)
- 7413897- [Primitive and proximal hepatic stem cells](#)
- 7413902- [Feeder-free culture method for embryonic stem cells or primate primordial stem cells](#)
- 7413904- [Human embryonic stem cells having genetic modifications](#)
- 7414062- [Triazaspiro compounds useful for treating or preventing pain](#)
- 7414170- [Transgenic bovines capable of human antibody production](#)
- 7415358- [Molecular toxicology modeling](#)
- 7416885- [Proliferated cell lines and uses thereof](#)
- 7422736- [Somatic pluripotent cells](#)
- 7422853- [RNA interference using a universal target](#)
- 7426441- [Methods for determining renal toxins](#)
- 7427502- [Methods for identifying stem cells based on nuclear morphotypes](#)
- 7427638- [\(+\)-2-\[1-\(3-ethoxy-4-methoxyphenyl\)-2-methylsulfonylethyl\]-4-acetylaminois-  
oindoline-1,3-dione:, and methods of synthesis and compositions thereof](#)
- 7427667- [PRO9835 antibodies](#)
- 7429454- [DNA probes useful in detecting .delta.-endotoxin-encoding sequences and uses thereof](#)
- 7429467- [Emulsion compositions](#)
- 7429578- [Tricyclic inhibitors of poly\(ADP-ribose\) polymerases](#)
- 7429640- [PRO6181 polypeptides](#)
- 7429641- [PRO9830 polypeptides](#)
- 7429660- [ATM inhibitors](#)
- 7425621- [Antibodies against the PRO4401 polypeptide](#)
- 7425620- [Fc.gamma.RIIB-specific antibodies and methods of use thereof](#)
- 7425619- [Fc.gamma.RIIB specific antibodies and methods of use thereof](#)
- 7422899- [Antibodies to the human prolactin receptor](#)
- 7423119- [Secreted and transmembrane polypeptides and nucleic acids encoding the same](#)
- 7423120- [PRO19814 polypeptides](#)
- 7423127- [Antibodies to a polypeptide encoded by a nucleic acid overexpressed in melanoma](#)
- 7423130- [PRO1158 polypeptides](#)
- 7425319- [Method for enhancing protective cellular responses to genotoxic stress in skin](#)
- 7425448- [Cardiomyocyte precursors from human embryonic stem cells](#)
- 7425605- [PRO1486 polypeptides](#)
- 7425606- [Method for screening peptides for use in immunotherapy](#)
- 7425609- [PRO4330 polypeptides](#)
- 7429690- [Transgenic bovines having reduced prion protein production](#)

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