

Telophase

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that can still be seen. Telophase, from the ancient Greek "τέλος" (telos) and "φαση" (phasi), is a stage in either meiosis or mitosis in a eukaryotic cell reversing the effects of prophase and prometaphase events. During those events, the nucleus was dissolved and the chromatin in the cell was condensed into chromosomes. Telophase thus "cleans up" the secondary after-effects of mitosis. Corresponding sister chromosomes, which are the results of anaphase, attach at opposite ends of the cell. A new nuclear envelope, using fragments of the parent cell's nuclear membrane, form around each set of separated sister chromosomes. Both sets of chromosomes, now surrounded by new nuclei, unfold back into chromatin. Cytokinesis, if slated to occur, usually occurs at the same time the nuclear envelope is reforming, although they are distinct processes. In animal cells, a cleavage furrow develops where the metaphase plate used to be, pinching off the separated nuclei. In plant cells, vesicles derived from the Golgi apparatus move to the middle of the cell along a microtubule scaffold called the phragmoplast. This structure directs packets of cell wall materials which coalesce into a disk-shaped structure called a cell plate. The cell plate grows out centrifugally and eventually develops into a proper cell wall, separating the two nuclei. Each daughter cell has a complete copy of the genome of its parent cell, and mitosis is complete.

Temperature is a physical property of a system that underlies the common notions of hot and cold; something that is hotter generally has the greater temperature. Temperature is one of the principal parameters of thermodynamics. On the microscopic scale, temperature is defined as simply the average energy of microscopic motions of a single particle in the system per degree of freedom. On the bulk scale, common to non-scientists, temperature is defined as that unique physical property that is shared between two otherwise entirely unlike things that happen to be in thermal equilibrium with each other. For a solid, these microscopic motions are principally the vibrations of the constituent atoms about their sites in the solid. For an ideal monatomic gas, the microscopic motions are the translational motions of the constituent gas particles. For multiatomic gas vibrational and rotational motion should be included too. Temperature is measured with thermometers that may be calibrated to a variety of temperature scales. In most of the world, the Celsius scale is used for most temperature measuring purposes. The entire scientific world measures temperature using the Celsius scale and thermodynamic temperature using the kelvin scale, which is just the Celsius scale shifted downwards so that $0 \text{ K} = -273.15 \text{ }^\circ\text{C}$, or absolute zero. Many engineering fields in the U.S., especially high-tech ones, also use the kelvin and Celsius scales. The bulk of the U.S. however, relies upon the Fahrenheit scale. Other engineering fields in the U.S. also rely upon the Rankine scale when working in thermodynamic-related disciplines such as combustion.

Recent Publications on Telophase:



- [Deregulation of the centrosome cycle and the origin of chromosomal instability in cancer.](#)
*Although we have begun to tap into the mechanisms behind Boveri's initial...*30th August, 2008
Mayo Clinic College of Medicine, Mayo Clinic Foundation, Mayo Clinic- Adv Exp Med Biol. 2005;570:393-421.
- [Megakaryocyte endomitosis is a failure of late cytokinesis related to defects in the contractile ring and Rho/Rock signaling.](#)
*Megakaryocyte is the naturally polyploid cell that gives rise to...*8th August, 2008
Unit 790, Institut National de la Sante et de la Recherche Medicale,- Blood. 2008 Aug 6. ([DOI Direct Link](#))
- [A differential phenotypic expression of a divergent spindle mutation in interspecific Brachiaria hybrids.](#)
*Several mutations are known to alter the normal progression of meiosis and...*5th August, 2008
Department of Cell Biology and Genetics, State University of Maringa,- Cell Biol Int. 2008 Jul 15. ([DOI Direct Link](#))
- [A Mitotic GlcNAcylation/Phosphorylation Signaling Complex Alters the Post-Translational State of the Cytoskeletal Protein Vimentin.](#)
*Monitoring Editor: M. Bishr Omary O-linked beta-N-acetylglucosamine...*26th July, 2008
Department of Biological Chemistry, The Johns Hopkins School of Medicine,- Mol Biol Cell. 2008 Jul 23. ([DOI Direct Link](#))
- [Sequential Cyk-4 binding to ECT2 and FIP3 regulates cleavage furrow ingression and abscission during cytokinesis.](#)
*Cytokinesis is a highly regulated and dynamic event that involves the...*23rd July, 2008
Department of Cellular and Developmental Biology, School of Medicine,- EMBO J. 2008 Jul 9;27(13):1791-803. Epub 2008 May 29. ([DOI Direct Link](#))
- [Live cell imaging and electron microscopy reveal dynamic processes of BAF-directed nuclear envelope assembly.](#)
*Assembly of the nuclear envelope (NE) in telophase is essential for higher...*17th July, 2008
CREST Research Project, Kobe Advanced ICT Research Center, National- J Cell Sci. 2008 Aug 1;121(Pt 15):2540-54. Epub 2008 Jul 15. ([DOI Direct Link](#))
- [Desynapsis and precocious cytokinesis in Brachiaria humidicola \(Poaceae\) compromise meiotic division.](#)
*The forage grass species Brachiaria humidicola is native to African...*19th June, 2008
Department of Cell Biology and Genetics, State University of Maringa,- J Genet. 2008 Apr;87(1):27-31.
- [The herbicide flamprop-M-methyl has a new antimicrotubule mechanism of action.](#)
*BACKGROUND: The herbicidal mode of action of flamprop-M-methyl [methyl...*14th June, 2008
BASF Agricultural Centre Limburgerhof, D-67117 Limburgerhof, Germany.- Pest Manag Sci. 2008 Jun 13. ([DOI Direct Link](#))
- [Arabidopsis SMG7 protein is required for exit from meiosis.](#)
*Meiosis consists of two nuclear divisions that are separated by a short...*12th June, 2008
Gregor Mendel Institute of Molecular Plant Biology, Austrian Academy of- J Cell Sci. 2008 Jul 1;121(Pt 13):2208-16. Epub 2008 Jun 10. ([DOI Direct Link](#))
- [Classification of chromosome segregation errors in cancer.](#)
*Abnormal chromosome segregation at mitosis is one way by which neoplastic...*6th June, 2008
Department of Clinical Genetics, University Hospital, SE 221 85, Lund,- Chromosoma. 2008 Jun 6. ([DOI Direct Link](#))
- [Spindle disturbances in human-hamster hybrid \(A\(L\)\) cells induced by mobile communication frequency range signals.](#)
*The production of spindle disturbances in FC2 cells, a human-hamster...*3rd June, 2008
Physikalisch-Technische Bundesanstalt (PTB), Braunschweig, Germany.- Bioelectromagnetics. 2008 May 30. ([DOI Direct Link](#))
- [Asymmetrical distribution of the transcriptionally competent NORs in mitosis.](#)
*Ribosomal genes are organized in clusters termed Nucleolus Organizer...*27th May, 2008
Institute of Cellular Biology and Pathology, First Faculty of Medicine,- J Struct Biol. 2008 Jul;163(1):40-4. Epub 2008 Apr 14. ([DOI Direct Link](#))

- [The genotoxicity of vitamin C in vitro.](#)
*The genotoxic effects of Vitamin C (ascorbic acid) on human lymphocytes in...*24th May, 2008
Department of Biology, Faculty of Science, University of Sarajevo,- Bosn J Basic Med Sci. 2008 May;8(2):141-6.
- [Critical roles of actin-interacting protein 1 in cytokinesis and chemotactic migration of mammalian cells.](#)
*Cofilin regulates actin filament dynamics by stimulating actin filament...*23rd May, 2008
Department of Biomolecular Sciences, Graduate School of Life Sciences,- Biochem J. 2008 Sep 1;414(2):261-70. ([DOI Direct Link](#))
- [Birth of Normal Offspring from Mouse Eggs Activated by a Phospholipase Czeta Protein Lacking Three EF-hand Domains.](#)
*Sperm-specific phospholipase C, PLCzeta, is a candidate for the Ca(2+)...*21st May, 2008
Graduate School of Life and Environmental Sciences, University of Tsukuba.- J Reprod Dev. 2008 Aug;54(4):244-9. Epub 2008 May 19.

Telophase Patents:



- 6979551- [Assays for identifying ubiquitin agents and for identifying agents that modify the activity of ubiquitin agents](#)
- 7105156- [Method of using an adenoviral vector encoding a retinoblastoma protein to treat hyperproliferating cells](#)
- 7119081- [Oestrogen-17-sulphamates as inhibitors of steroid sulphatase](#)
- 7136699- [Apparatus for destroying dividing cells](#)
- 7146210- [Apparatus and method for optimizing tumor treatment efficiency by electric fields](#)
- 7154024- [Male tissue-preferred regulatory sequences of Ms45 gene and method of using same](#)
- 7176293- [Compositions and methods to enhance sensitivity of cancer cells to mitotic stress](#)
- 7183046- [Methods for identifying inhibitors of cytokinesis using CYK-4 proteins](#)
- 7189569- [Modulation of cell division by an early mitotic inhibitor protein](#)
- 7211398- [Human genes and gene expression products: II](#)
- 7230020- [11.beta.-hydroxysteroid dehydrogenase inhibitors](#)
- 7098343- [Compound](#)
- 7098218- [Steroidal compounds for inhibiting steroid sulphatase](#)
- 7089054- [Apparatus and method for treating a tumor or the like](#)
- 6995252- [PT32 sperm protein, sperm c-Yes, oocyte cytoplasmic c-Yes and uses thereof](#)
- 7009043- [Plus end-directed microtubule motor required for chromosome congression](#)
- 7016725- [Method and apparatus for destroying dividing cells](#)
- 7022493- [Ubiquitin conjugation assays](#)
- 7030227- [Cell regulatory genes, encoded products, and uses related thereto](#)
- 7041437- [Therapeutic and diagnostic tools for impaired glucose tolerance conditions](#)
- 7041783- [Survivin-binding proteins, encoding nucleic acids, and methods of use](#)
- 7067503- [17-aryl linker derivatised estrogen 3-sulphamates as inhibitors of steroid sulphatase](#)
- 7067646- [Methods and compositions for modulating tumor suppression](#)
- 7078395- [Methods for treating or preventing cancer by preventing, inhibiting or arresting cell cycling](#)
- 7235401- [Method for determining cell cycle position](#)
- 7253338- [Genes involved in tolerance to environmental stress](#)

- 7354703- [Securin is required for chromosomal stability in human cells](#)
- 7354709- [Collapsin response mediator protein-1](#)
- 7358090- [Establishment of cellular manipulations which enhance oligo-mediated gene targeting](#)
- 7361677- [Polycyclic sulphamate compounds suitable for use as inhibitors of aromatase and/or sulphatase](#)
- 7368248- [Eukaryotic cell division genes and their use in diagnosis and treatment of proliferative diseases](#)
- 7369696- [Classification of cells into subpopulations using cell classifying data](#)
- 7371922- [Nuclear transfer with porcine embryonic stem cells](#)
- 7384913- [PT32 sperm protein, sperm c-Yes, oocyte cytoplasmic c-Yes, and uses thereof](#)
- 7402394- [Centrosome-associated protein and applications thereof](#)
- 7414169- [Therapeutic and diagnostic tools for impaired glucose tolerance conditions](#)
- 7342004- [Thioether sulphamate steroids as steroid inhibitors and anti-cancer compounds](#)
- 7335811- [Method for collecting cells in M phase or G.sub.1 phase and method for nuclear transplantation using the cells](#)
- 7335650- [Composition](#)
- 7258973- [Method for detecting a differentially expressed sequence](#)
- 7276331- [Plus end-directed microtubule motor required for chromosome congression](#)
- 7276513- [Steroidal compounds for inhibiting steroid sulphatase](#)
- 7279566- [Centrosome proteins and uses thereof](#)
- 7294459- [Cell regulatory genes, encoded products, and uses related thereto](#)
- 7297492- [LMNA gene and its involvement in Hutchinson-Gilford Progeria Syndrome \(HGPS\) and arteriosclerosis](#)
- 7306916- [Methods for detecting chromosome aberrations](#)
- 7309715- [Compound](#)
- 7312237- [Combination of epothilone analogs and chemotherapeutic agents for the treatment of proliferative diseases](#)
- 7333852- [Method and apparatus for destroying dividing cells](#)
- 7416885- [Proliferated cell lines and uses thereof](#)

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