

# Anthrax

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Anthrax is an acute disease in humans and animals that is caused by the bacterium *Bacillus anthracis* and is highly lethal in some forms. Anthrax is one of only a few bacteria that can form long-lived spores. When the bacteria's life cycle is threatened by factors such as lack of food caused by their host dying or by a change of temperature, the bacteria turn themselves into more or less dormant spores to wait for another host to continue their life cycle. On breathing, ingesting or getting spores in a cut in the skin, a new host allows these spores to reactivate themselves and multiply in their new host very rapidly. The anthrax spores in soil are very tough and can live many decades and perhaps centuries and are known to occur on all continents except Antarctica. Anthrax most commonly occurs in wild and domestic grass-eating mammals who ingest or breathe in the spores while eating grass. Anthrax can also be caught by humans when they are exposed to dead infected pigs, eat tissue from infected animals, or are exposed to a high density of anthrax spores from an animal's fur, hide, or wool. Anthrax spores can be grown outside the body and used as a biological weapon. Anthrax cannot spread directly from human to human; but anthrax spores can be transported by human clothing, shoes etc. and if a person dies of anthrax their body can be a very dangerous source of anthrax spores. The word anthrax is the Greek word for coal, the germ's name is derived from anthrakitis, the Greek word for anthracite, in reference to the black skin lesions victims develop in a cutaneous skin infection. ([From the Wikipedia article Anthrax.](#))

## Recent Publications on Anthrax:



- [Anthrax Lethal Toxin Induced Lysosomal Membrane Permeabilization and Cytosolic Cathepsin Release Is Nlrp1b/Nalp1b-Dependent.](#)  
*NOD-like receptors (NLRs) are a group of cytoplasmic molecules that...* 20th November, 2009  
Department of Microbiology, Immunology & Molecular Genetics, University of- PLoS One. 2009 Nov 18;4(11):e7913. ([DOI Direct Link](#))
- [An anthrax lethal factor mutant that is defective at causing pyroptosis retains proapoptotic activity.](#)  
*Anthrax lethal toxin triggers death in some cell types, such as...* 20th November, 2009  
Department of Laboratory Medicine and Pathobiology, University of Toronto,- FEBS J. 2009 Nov 18. ([DOI Direct Link](#))
- [Anthrax letters: personal exposure, building contamination, and effectiveness of immediate mitigation measures.](#)  
*This report is the first detailed and quantitative study of potential...* 17th November, 2009  
Defence R&D Canada - Suffield, Medicine Hat, Alberta, Canada.- J Occup Environ Hyg. 2010 Feb;7(2):71-9. ([DOI Direct Link](#))
- [Detection of \*B. anthracis\* spores and vegetative cells with the same monoclonal antibodies.](#)  
*Bacillus anthracis, the causative agent of anthrax disease, could be used...* 17th November, 2009  
State Key Laboratory of Virology, Wuhan Institute of Virology, Chinese- PLoS One. 2009 Nov

- 13;4(11):e7810. ([DOI Direct Link](#))
- [\[Production and characteristics of monoclonal antibodies to the diphtheria toxin.\]](#)  
*Monoclonal antibodies to the diphtheria toxin were produced without cross...*17th November, 2009  
 Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy- Bioorg Khim. 2009  
 Sep-Oct;35(5):618-28.
  - [\[Regulatory Interactions of a Virulence-Associated Serine/Threonine Phosphatase-Kinase Pair in Bacillus anthracis.\]](#)  
*In the current study we examined the regulatory interactions of a...*17th November, 2009  
 Department of Microbiology and Immunology, The University of Oklahoma- J Bacteriol. 2009 Nov 13. ([DOI Direct Link](#))
  - [\[Mucosal delivery of antigens using adsorption to bacterial spores.\]](#)  
*The development of new-generation vaccines has followed a number of...*17th November, 2009  
 School of Biological Sciences, Royal Holloway, University of London,- Vaccine. 2009 Nov 12. ([DOI Direct Link](#))
  - [\[Three related cases of cutaneous anthrax in France: clinical and laboratory aspects.\]](#)  
*Anthrax is an acute bacterial infection caused by Bacillus anthracis. The...*17th November, 2009  
 Service de Dermatologie, Service de Medecine Interne et Maladies- Medicine (Baltimore). 2009  
 Nov;88(6):371-5. ([DOI Direct Link](#))
  - [\[BslA, the S-layer adhesin of B. anthracis, is a virulence factor for anthrax pathogenesis.\]](#)  
*Microbial pathogens use adhesive surface proteins to bind to and interact...*13th November, 2009  
 Department of Microbiology, University of Chicago, 920 East 58 Street,- Mol Microbiol. 2009 Nov 10. ([DOI Direct Link](#))
  - [\[Anthrax toxin receptor 2 is expressed in murine and tumor vasculature and functions in endothelial proliferation and morphogenesis.\]](#)  
*The Capillary Morphogenesis Gene 2 (CMG2) gene encodes an Anthrax toxin...*11th November, 2009  
 [1] OB/GYN, Columbia University Medical Center, New York, NY, USA [2]- Oncogene. 2009 Nov 9. ([DOI Direct Link](#))
  - [\[Comparative performance of a licensed anthrax vaccine versus electroporation based delivery of a PA encoding DNA vaccine in rhesus macaques.\]](#)  
*DNA vaccination is a promising immunization strategy that could be applied...*10th November, 2009  
 Ichor Medical Systems, 6310 Nancy Ridge Drive, Suite 107, San Diego, CA- Vaccine. 2009 Nov 5. ([DOI Direct Link](#))
  - [\[Differential staining of bacteria: endospore stain.\]](#)  
*Endospore production is a very important characteristic of some bacteria,...*4th November, 2009  
 Richland College, Dallas, Texas, USA.- Curr Protoc Microbiol. 2009 Nov;Appendix 3:Appendix 3J. ([DOI Direct Link](#))
  - [\[A new generation of stable, non-antibiotic, low copy number plasmids improve immune responses to foreign antigens in Salmonella enterica serovar Typhi live vectors.\]](#)  
*We hypothesized that adequately engineered attenuated Salmonella enterica...*4th November, 2009  
 Center for Vaccine Development, Division of Infectious Diseases and- Infect Immun. 2009 Nov 2. ([DOI Direct Link](#))
  - [\[Immunologic response of unvaccinated workers exposed to anthrax, Belgium.\]](#)  
*To determine immunologic reactivity to Bacillus anthracis antigens, we...*29th October, 2009  
 Veterinary and Agro-chemical Research Centre, Department of Bacterial- Emerg Infect Dis. 2009  
 Oct;15(10):1637-40.
  - [\[Lethal factor unfolding is the most force-dependent step of anthrax toxin translocation.\]](#)  
*Cellular compartmentalization requires machinery capable of translocating...*24th September, 2008  
 Departments of Chemistry and Molecular and Cell Biology and California- Proc Natl Acad Sci U S A.  
 2009 Nov 19. ([DOI Direct Link](#))



- [First nationwide human immunology registry for infectious disease research](#)  
*News-Medical.Net: Nov 21 2009 5:19AM Matching: anthrax*
- [Human Immunology Registry A Research Milestone](#)  
*Freshnews.com: Nov 21 2009 12:42AM Matching: anthrax*
- [Elsevier journal Vaccine releases a supplement dedicated to vaccines for biodefense](#)  
*News-Medical.Net: Nov 20 2009 8:12AM Matching: anthrax*
- [Human Genome Gets FDA Response Letter for Raxibacumab Biologics License Application](#)  
*TradingMarkets: Nov 19 2009 4:36AM Matching: anthrax*
- [HGS's Anthrax Drug Delayed by FDA](#)  
*AAPS Pharmceutica: Nov 19 2009 5:26PM Matching: anthrax*
- [HGSI's ABthrax Faces FDA Delay](#)  
*Individual.com: Nov 19 2009 3:47AM Matching: anthrax*
- [Milestone biodefense publication by Elsevier journal Vaccine](#)  
*Research & Development: Nov 19 2009 3:55PM Matching: anthrax*
- [US FDA seeks additional information from HGS's raxibacumab BLA](#)  
*PharmaBiz: Nov 18 2009 10:30AM Matching: anthrax*
- [Gregg A. Mosley, President of Biotest Laboratories of Minneapolis, MN, to Address Biological Counter-Terrorism](#)  
*Genetic Engineering News: Nov 18 2009 3:58PM Matching: anthrax*
- [Human Genome sees FDA delay with anthrax treatment](#)  
*KNDO KNDU: Nov 17 2009 2:17PM Matching: anthrax*
- [Human Genome Sciences faces FDA regulatory delay on anthrax treatment](#)  
*Chicago Tribune: Nov 17 2009 11:11AM Matching: anthrax*
- [Human Genome sees FDA delay with anthrax treatment](#)  
*WSFA: Nov 17 2009 5:58AM Matching: anthrax*
- [FDA seeks more data on Human Genome Sciences' anthrax drug](#)  
*SmartBrief: Nov 17 2009 4:28PM Matching: anthrax*
- [AVANIR Pharmaceuticals Invites Investors to Fourth Quarter and Fiscal Year End Conference Call](#)  
*Business Wire UK: Nov 17 2009 1:59PM Matching: anthrax*
- [AVANIR Pharmaceuticals Invites Investors to Fourth Quarter and Fiscal Year End Conference Call](#)  
*Yahoo! Canada: Nov 17 2009 1:47PM Matching: anthrax*

#### Anthrax Clinical Trials:



- [Plasmapheresis of Anthrax-Vaccinated Subjects for Production of Anthrax Immune Globulin](#)

#### Anthrax Patents:



- 7595193- [Propagation and/or derivation of embryonic stem cells](#)
- 7603894- [Self-powered tire monitoring system](#)
- 7604780- [Ozone disinfection apparatus](#)
- 7604938- [Devices and methods for monitoring genomic DNA of organisms](#)
- 7604978- [Inhibition of biofilm formation](#)
- 7605138- [Nucleic acid compositions for stimulating immune responses](#)
- 7605143- [2-propynyl adenosine analogs with modified 5'-ribose groups having A.sub.2A agonist activity](#)
- 7605238- [Human CTLA-4 antibodies and their uses](#)
- 7608419- [Method and apparatus for detecting and quantifying bacterial spores on a surface](#)
- 7608425- [Methods for protein expression in mammalian cells in serum-free medium](#)
- 7610074- [Multi-functional plasmon-resonant contrast agents for optical coherence tomography](#)
- 7601825- [Nucleic acid and corresponding protein entitled 121P1F1 useful in treatment and detection of cancer](#)
- 7601745- [Heterocyclic NF-kB inhibitors](#)
- 7601545- [Automated macromolecule sample preparation system](#)
- 7595379- [Antibodies and related molecules that bind to PSCA proteins](#)
- 7596242- [Image processing for vehicular applications](#)
- 7598034- [Method of identifying hairpin DNA probes by partial fold analysis](#)
- 7598345- [Immunostimulatory compositions and methods](#)
- 7598348- [Adiponectin receptor variant, AdipoR2v2](#)
- 7600439- [Apparatus and method for storage of atmospheric sample for eventual chemical analysis](#)
- 7600460- [On-site land mine removal system](#)
- 7601351- [Antibodies against protective antigen](#)
- 7601355- [Compositions and methods for altering immune function](#)
- 7601526- [Purified FabI polypeptides from Francisella tularensis](#)
- 7611481- [Transdermal delivery device](#)
- 7611713- [Inducing cellular immune responses to hepatitis B virus using peptide compositions](#)
- 7615762- [Method and apparatus for low quantity detection of bioparticles in small sample volumes](#)
- 7617113- [Medical waste sorting method](#)
- 7617829- [Apparatus and method for cleaning and decontaminating an air distribution system](#)
- 7618625- [Compositions comprising large and small binding fragments of antibodies against the same toxin](#)
- 7618641- [Functionally reconstituted viral membranes containing adjuvant](#)
- 7618783- [Anthrax specific antibodies](#)
- 7618788- [Proteome epitope tags and methods of use thereof in protein modification analysis](#)
- 7618829- [Method of detecting multiple analytes](#)
- 7619819- [Method and apparatus for drug product tracking using encoded optical identification elements](#)
- 7620148- [X-ray diffraction \(Xrd\) means for identifying the content in a volume of interest and a method thereof](#)
- 7615539- [Nucleic acid-lipophilic conjugates](#)
- 7615530- [Immunogenic compositions and methods of use](#)
- 7615379- [Nucleic acid and corresponding protein entitled 193P1E1B useful in treatment and detection of cancer](#)
- 7611862- [Method and apparatus for detecting and quantifying bacterial spores on a surface](#)
- 7611866- [Selection of bacterial inner-membrane anchor polypeptides](#)
- 7612035- [Inhibition of mitogen-activated protein kinase \(MAPK\) pathway: a selective therapeutic strategy against melanoma](#)
- 7612045- [Compounds, compositions and methods for controlling biofilms and bacterial infections](#)
- 7612172- [Nucleic acids and corresponding proteins entitled 282P1G3 useful in treatment and detection of cancer](#)
- 7612185- [Nucleic acid biosensors](#)
- 7612492- [Lighting apparatus and system for decontamination](#)
- 7612680- [First aid information for cellular telephones and electronic devices](#)

- 7613620- [Physician to patient network system for real-time electronic communications and transfer of patient health information](#)
- 7614280- [Quantitative fit test system and method for assessing respirator biological fit factors](#)
- 7620559- [System for facilitating medical waste disposal](#)

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