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   Titolo Animal models for assessing countermeasures to bioterrorism agents / / Committee on Animal Models for Assessing Countermeasures to Bioterrorism Agents

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   Sommario/riassunto "The Transformational Medical Technologies (TMT) has been a unique component of the U.S. Department of Defense (DoD) medical biodefense efforts since 2006. Its mission is to advance

countermeasure research and development in support of the broader goal of the DoD to protect warfighters from emerging infectious diseases and future genetically engineered biological weapons. The TMT, using advanced science and technology approaches, focused on the development of roadspectrum countermeasures that target common host and pathogen pathways or enhance the host's immune response. Many of these pathogens are lethal or cause such debilitating diseases in humans that it is ethically inappropriate to test the efficacy of these countermeasures in human volunteers. In lieu of human participants, these products may be tested in animals and approved for human use under the provisions of the Food and Drug Administration (FDA)'s 2002 Animal Rule. The reliance on animal models for the development and licensure of medical countermeasures against biothreats is challenging for a number of reasons. The ad hoc Committee on Animal Models for Assessing Countermeasures to Bioterrorism Agents prepared a consensus report that would address the challenges stemming from developing and testing medical countermeasures against biothreat agents in animal models. Animal Models for Assessing Countermeasures to Bioterrorism Agents evaluates how well the existing TMT-employed or candidate animal models reflect the pathophysiology, clinical picture, and treatment of human disease as related to the agents of interest. The report addresses the process and/or feasibility of developing new animal models for critical biodefense research, placing emphasis on the need for a robust and expeditious validation process in terms of the FDA's Animal Rule. The report also evaluates alternatives to the use of animal models based on the premise of the Three Rs"--Publisher's description.

2.	Record Nr.	UNINA9911019762003321
	Titolo	Antiviral drug discovery for emerging diseases and bioterrorism threats / / edited by Paul F. Torrence
	Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, c2005
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	Nota di contenuto	Viral bioterrorism and antiviral countermeasures / M. Bray -- Research on emerging and bioterror threats / C. Tseng -- Antiviral drug targets and strategies for emerging viral diseases and bioterrorism threats / E. de Clercq -- Perspectives for the therapy against arenavirus infections / E.B. Damonte, C.C. Garcia -- S-adenosylhomocysteine hydrolase inhibitors as a source of anti-filovirus agents / S.W. Schneller, M. Yang -- Antiviral strategies for Ebola virus / R.N. Harty and J. M. Licata -- IMPDH inhibitors : discovery of antiviral agents against emerging diseases / V. Nair -- Lethal mutagenesis : exploiting error-prone replication of riboviruses for -- Antiviral therapy / J.D. Graci, C.E. Cameron -- Structural biology of flavivral replications and opportunities for drug design / K. Murthy -- Confronting new and old antiviral threats : broad spectrum potential of prenylation inhibitors / M. Elazar, J.S. Glenn -- The discovery and development of new antivirals for smallpox / E.R.

Kern -- Prevention of viral infection by immunocamouflage of target tissues / L. McCoy, M.D. Scott -- Viral evasion of the interferon system : novel targets for drug discovery / L. Powell, P.F. Torrence -- The emergence of pandemic influenza : bioterrorist vs. mother nature / J. S. Oxford, A. Catchpole, R. Lambkin -- Novel approach to smallpox (variola) inhibitors / A. Rich, B. Jacobs -- Structure-based design of anti-SARS drug / R. Hilgenfeld.

Sommario/riassunto	Antiviral Drug Discovery gives readers a cutting-edge view of how chemical concepts are being mobilized to develop novel approaches that will effectively confront emerging diseases and biowarfare. Among the many topics discussed are smallpox, the Ebola virus, influenza, SARS, arenaviruses and flaviviruses. Each chapter discusses hypothetical strategies for the discovery of relevant antiviral agents, recent findings related to biochemistry or drug discovery, and advances in the further development of established leads in the area. Timely and informative, this book clearly delineates the efforts being made to develop new and effective broad-spectrum antiviral agents.