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**Laboratory animal - Guideline of COVID-19 animal models
preparation**

实验动物 新型冠状病毒肺炎（COVID-19）动物模型制备指南

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Foreword

This guiding technical document was drafted in accordance with the rules given in GB/T 1.1-2009. This guiding technical document was proposed and managed by the National Laboratory Animal Standardization Technical Committee (SAC/TC281). Drafting units of this guiding technical document. Institute of Medical Laboratory Animals, Chinese Academy of Medical Sciences, Wuhan Institute of Virology, Chinese Academy of Sciences, Institute of

Medical Biology, Chinese Academy of Medical Sciences, Harbin Veterinary Research Institute, Chinese Academy of Agricultural Sciences. The main drafters of this guiding technical document. Qin Chuan, Wei Qiang, Yuan Zhiming, Peng Xiaozhong, Bu Zhigao, Bao Linlin, Gao Hong, Deng Wei, Liu Jiangning, Kong Qi. Experimental animal novel coronavirus pneumonia (COVID-19) Animal Model Preparation Guide Important note. The animal model preparation and experimental process in this document require exposure to the new coronavirus, and operators should control the infection risk based on the risk assessment.

1 Scope

GB/Z 39502-2020 is the Chinese national standard on laboratory animal - guideline of covid-19 animal models preparation, in the field of agriculture. The /Z suffix marks it as a guiding technical document: it does not prescribe requirements that can be certified against, but sets out the technique, the method or the state of the art that the standards bodies recommend following. It was issued on 19 November 2020 by the State Administration for Market Regulation; Standardization Administration of China. As a guiding technical document it carries no separate date of entry into force: it applies from publication. Classification: ICS 65.020.30, CCS B44. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This technical guidance document provides guidance on the preparation principles, preparation methods and evaluation indicators of animal models of novel coronavirus pneumonia (COVID-19). This technical guidance document is applicable to the preparation and evaluation of animal models of novel coronavirus pneumonia (COVID-19).

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this document. For undated references, the latest version (including all amendments) applies to this document.

GB 14925-2010 Laboratory Animal Environment and Facilities

GB 19489-2008 General requirements for laboratory biosafety

GB/T 35892 Guidelines for Ethical Review of Laboratory Animal Welfare

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Novel Coronavirus Pneumonia (COVID-19) Animal Model Artificially infect animals with the new coronavirus (SARS-CoV-2) strain, so that it can simulate the clinical manifestations and onset of COVID-

19 Disease animals with characteristics such as process, pathophysiological changes, immunological response, etc.

4 Preparation principles

4.1 Choose susceptible animals It should be based on the animal's breed, genetic classification, microbiological grade, and sensitivity to the new coronavirus (SARS-CoV-2), etc. Choose experimental animals.

4.2 Selection of representative pathogens According to the clinical epidemiological data of human COVID-19 and the experimental purpose of the animal model, select the relevant pathogenic representative strains and fill them. Consider the active state of the pathogen.

4.3 Maximizing disease reproduction When preparing the COVID-19 animal model, it simulates the clinical manifestations, disease process, and pathophysiology of human COVID-19 disease to the greatest extent