

## Medical Devices

### Letter of Authorization: rRT-PCR Swine Flu Panel on JBAIDS (December 18, 2009)

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Dear Dr. Miller:

On August 24, 2009, FDA issued a letter authorizing the emergency use of the CDC swH1N1 (swine) Influenza Virus Real-time RT-PCR Detection Panel on the Joint Biological Agent Identification and Diagnostic System (JBAIDS) Instrument (rRT-PCR Swine Flu Panel on JBAIDS)<sup>1</sup> for the diagnosis of 2009 H1N1 influenza virus infection, pursuant to section 564 of the Federal Food, Drug, and Cosmetic Act (the Act) (21 U.S.C. § 360bbb-3) by qualified Department of Defense (DoD) laboratories that are equipped with the JBAIDS instruments. On November 16, 2009, the Office of the Surgeon General, Department of the Army submitted a request for an amendment to the Emergency Use Authorization. In response to that request, the letter authorizing emergency use of the rRT-PCR Swine Flu Panel on JBAIDS is being reissued in its entirety with the amendments, as requested by the Office of the Surgeon General, Department of the Army, incorporated.<sup>2</sup>

On April 26, 2009, pursuant to section 564(b)(1)(C) of the Act (21 U.S.C. § 360bbb-3(b)(1)(C)), the Secretary of the Department of Health and Human Services (HHS) determined that there is a public health emergency under 42 U.S.C. § 247d that affects, or has a significant potential to affect, national security, and that involves a specified biological, chemical, radiological, or nuclear agent or agents, or a specified disease or condition that may be attributable to such an agent or agents - in this case, 2009 H1N1 influenza virus.<sup>3</sup> Pursuant to section 564(b) of the Act (21 U.S.C. §360bbb-3(b)), and on the basis of such determination, the Secretary of HHS then declared an emergency justifying the authorization of the emergency use of certain in vitro diagnostics for the detection of 2009 H1N1 influenza virus, subject to the terms of any authorization issued under 21 U.S.C. §360bbb-3(a).

Having concluded that the criteria for issuance of this authorization under section 564(c) of the Act (21 U.S.C. §360bbb-3(c)) are met, I am authorizing the emergency use of the rRT-PCR Swine Flu Panel on JBAIDS (as described in the scope section of this letter (Section II)) for the diagnosis of 2009 H1N1 influenza virus infection in individuals with signs and symptoms of respiratory infection , subject to the terms of this authorization .

#### I. Criteria for Issuance of Authorization

I have concluded that the emergency use of the rRT-PCR Swine Flu Panel on JBAIDS for the diagnosis of 2009 H1N1 influenza virus infection in individuals with signs and symptoms of respiratory infection meets the criteria for issuance of an authorization under section 564(c) of the Act, because I have concluded that:

- The 2009 H1N1 influenza virus can cause influenza, a serious or life threatening disease or condition to humans infected by this virus;
- Based on the totality of scientific evidence available to FDA, it is reasonable to believe that the rRT-PCR Swine Flu Panel on JBAIDS may be effective for the diagnosis of 2009 H1N1 influenza virus infection, and that the known and potential benefits of the rRT-PCR Swine Flu Panel on JBAIDS, when used in the diagnosis of 2009 H1N1 influenza virus infection, outweigh the known and potential risks of such products; and
- There is no adequate, approved, and available alternative to the emergency use of the rRT-PCR Swine Flu Panel on JBAIDS for the diagnosis of 2009 H1N1 influenza virus infection.<sup>4</sup>

## II. Scope of Authorization

I have concluded, pursuant to section 564(d)(1) of the Act, that the scope of this authorization is limited to the use of the authorized rRT-PCR Swine Flu Panel on JBAIDS for the diagnosis of 2009 H1N1 influenza virus infection in individuals with signs and symptoms of respiratory infection.

### The authorized rRT-PCR Swine Flu Panel on JBAIDS:

rRT-PCR Swine Flu Panel on JBAIDS is a panel of oligonucleotide primers and dual-labeled hydrolysis (Taqman®) probes for use in the real-time RT-PCR assay on the Joint Biological Agent Identification and Diagnostic System (JBAIDS) instrument for the *in vitro* qualitative detection of 2009 H1N1 influenza viral RNA in upper respiratory tract specimens, such as nasopharyngeal swabs (NPS), nasal swabs (NS), throat swabs (TS), nasal aspirates (NA), nasal washes (NW), and dual nasopharyngeal / throat swabs (NPS/TS), and lower respiratory tract specimens (LRTS), such as bronchoalveolar lavage (BAL), bronchial aspirate (BA), bronchial wash (BW), endotracheal aspirate (EA), endotracheal wash (EW), tracheal aspirate (TA), and lung tissue, from patients with signs and symptoms of respiratory infection and in viral culture.

The rRT-PCR Swine Flu Panel on JBAIDS includes the following primer and probe sets:

- **InfA** detects universal influenza A strains
- **swInfA** specifically detects swine influenza A strains (NP gene)
- **swH1** is specific for swine influenza A, subtype H1 (HA gene)

The rRT-PCR Swine Flu Panel on JBAIDS also includes control materials:

- **RNase P (RP)** detects human RNase P and is used as a positive control with

human clinical specimens to indicate that adequate isolation of nucleic acid resulted from the extraction of the clinical specimen.

- **Swine Influenza Panel Real-Time RT-PCR Positive Control (SIPC)** is a positive control designed to react with all the primer and probe sets including RNase P.

The rRT-PCR Swine Flu Panel on JBAIDS requires the following hardware and software:

- **JBAIDS Instrument** is a real-time polymerase chain reaction (PCR) instrument developed as part of a biothreat detection system for the Department of Defense (DoD). It comes with a ruggedized laptop computer loaded with specific, user-friendly system software.
- **JBAIDS Influenza Specific Macro** is a compact disc (CD) provided by the JBAIDS Training Facility that contains the Influenza specific macro with Operating Instructions.

The rRT-PCR Swine Flu Panel on JBAIDS requires the use of the following nucleic acid extraction kit:

- **Qiagen QIAamp Viral RNA Mini kit and protocol**

The above described rRT-PCR Swine Flu Panel on JBAIDS, when labeled consistently with the labeling authorized by FDA, entitled CDC swH1N1 (swine) Influenza Virus Real-time RT-PCR Detection Panel (rRT-PCR Swine Flu Panel) on JBAIDS (see <http://www.fda.gov/medicaldevices/Safety/emergencysituations/ucm161496.htm>), as may be revised with written permission of FDA, is authorized to be distributed to and used by qualified Department of Defense (DoD) laboratories<sup>5</sup> that are equipped with the JBAIDS instruments under this EUA, despite the fact that it does not meet certain requirements otherwise required by federal law.

**The above described rRT-PCR Swine Flu Panel on JBAIDS is authorized to be accompanied by the following information pertaining to the emergency use, which is authorized to be made available to healthcare providers and patients:**

- Fact Sheet For Healthcare Providers: Interpreting Test Results Obtained with the CDC swH1N1 (swine) Influenza Virus Real-time RT-PCR Detection Panel on the Joint Biological Agent Identification and Diagnostic System (JBAIDS) Instrument
- Fact Sheet For Patients: Understanding Test Results Obtained with the CDC swH1N1 (swine) Influenza Virus Real-time RT-PCR Detection Panel on the Joint Biological Agent Identification and Diagnostic System (JBAIDS) Instrument

As described in section IV below, DoD and JBAIDS are also authorized to make available additional information relating to the emergency use of the authorized rRT-PCR Swine Flu Panel on JBAIDS that is consistent with, and does not exceed, the terms of this letter of authorization.

I have concluded, pursuant to section 564(d)(2) of the Act, that it is reasonable to believe

that the known and potential benefits of the authorized rRT-PCR Swine Flu Panel on JBAIDS in the specified population, when used for diagnosis of 2009 H1N1 influenza virus infection, outweigh the known and potential risks of such a product.

I have concluded, pursuant to section 564(d)(3) of the Act, based on the totality of scientific evidence available to FDA, that it is reasonable to believe that the authorized rRT-PCR Swine Flu Panel on JBAIDS may be effective in the diagnosis of 2009 H1N1 influenza virus infection pursuant to section 564(c)(2)(A) of the Act. FDA has reviewed the scientific information available including the information supporting the conclusions described in Section I above, and concludes that the authorized rRT-PCR Swine Flu Panel on JBAIDS, when used to diagnose 2009 H1N1 influenza virus infection in the specified population, meets the criteria set forth in section 564(c) of the Act concerning safety and potential effectiveness.

The emergency use of the authorized rRT-PCR Swine Flu Panel on JBAIDS under this EUA must be consistent with, and may not exceed, the terms of this letter, including the scope and the conditions of authorization set forth below. Subject to the terms of this EUA and under the circumstances set forth in the Secretary of HHS's determination under section 564(b)(1)(C) described above and the Secretary of HHS's corresponding declaration under section 564(b)(1), the rRT-PCR Swine Flu Panel on JBAIDS described above is authorized to diagnose 2009 H1N1 influenza virus infection in individuals with signs and symptoms of respiratory infection.

This EUA will cease to be effective when the declaration of emergency is terminated under section 564(b)(2) of the Act or when the EUA is revoked under section 564(g) of the Act.

### **III. Waiver of Certain Requirements**

I am waiving the following requirements for the rRT-PCR Swine Flu Panel on JBAIDS during the duration of this emergency use authorization:

- Current good manufacturing practice requirements, including the quality system requirements under 21 CFR Part 820 with respect to the design, manufacture, packaging, labeling, storage, and distribution of the rRT-PCR Swine Flu Panel on JBAIDS
- Labeling requirements for cleared, approved, or investigational devices, including labeling requirements under 21 CFR 809.10 and 809.30, except for the intended use statement (21 CFR 809.10(a)(2), (b)(2)), adequate directions for use (21 U.S.C. 352(f)), (21 CFR 809.10(b)(5) and (8)), any appropriate limitations on the use of the device including information required under 21 CFR 809.10(a)(4), and any available information regarding performance of the device, including requirements under 21 CFR 809.10(b)(12).

### **IV. Conditions of Authorization**

Pursuant to section 564 of the Act, I am establishing the following conditions on this authorization:

**DoD/ Joint Project Management Office (JPMO), Chemical Biological Medical Systems (CBMS)**

- A. DoD/JPMO,CBMS will distribute the rRT-PCR Swine Flu Panel on JBAIDS with the authorized labeling, as may be revised with written permission of FDA, only to qualified DoD laboratories that are equipped with the JBAIDS instruments.
- A. DoD/JPMO,CBMS will provide to the qualified DoD laboratories the authorized rRT-PCR Swine Flu Panel on JBAIDS Fact Sheets for Healthcare Providers, and the authorized rRT-PCR Swine Flu Panel on JBAIDS Fact Sheets for Patients.
  - B. DoD/JPMO,CBMS will make available on its website the authorized rRT-PCR Swine Flu Panel on JBAIDS Fact Sheets for Healthcare Providers, and the authorized rRT-PCR Swine Flu Panel on JBAIDS Fact Sheets for Patients.
  - C. DoD/JPMO,CBMS will ensure that the state and/or local public health authority(ies) are informed of this EUA, including the terms and conditions herein.
  - D. DoD/JPMO,CBMS will ensure that qualified DoD laboratories using the authorized rRT-PCR Swine Flu Panel on JBAIDS have a process in place for reporting test results to health care providers and federal, state and/or local public health authorities, as appropriate.
  - E. DoD/JPMO,CBMS will track adverse events and report to FDA as required under 21 CFR part 803.
  - F. Through a process of inventory control, DoD/JPMO,CBMS will maintain records of device usage.
  - G. DoD/JPMO,CBMS will collect information on the performance of the assay, to include the incidence of false positive and negative results.

**Qualified DoD Laboratories**

- H. Qualified DoD laboratories will include with reports of the results of the rRT-PCR Swine Flu Panel on JBAIDS, the authorized Fact Sheets for Healthcare Providers and the authorized Fact Sheet for Patients.
- I. Qualified DoD laboratories will perform the assay on a JBAIDS instrument.
- J. Qualified DoD laboratories will have a process in place for reporting test results to health care providers and federal, state and/or local public health authorities, as appropriate.
- K. Qualified DoD laboratories will collect information on the performance of the assay, and report to DoD/JPMO,CBMS any suspected occurrence of false positive or false negative results of which Qualified DoD laboratories become aware.

**DoD/ Joint Project Management Office (JPMO), Chemical Biological Medical Systems (CBMS) and Qualified DoD Laboratories**

- L. DoD/JPMO,CBMS is authorized to make available additional information relating to the emergency use of the authorized rRT-PCR Swine Flu Panel on JBAIDS that is consistent with, and does not exceed, the terms of this letter of authorization.
- M. Only DoD/JPMO,CBMS may request changes to the authorized rRT-PCR Swine Flu Panel on JBAIDS Fact Sheet for Healthcare Providers or the authorized rRT-PCR Swine Flu Panel on JBAIDS Fact Sheet for Patients. Such requests will be made by

contacting FDA concerning FDA review and approval.

- N. DoD/JPMO, CBMS and the qualified DoD laboratories will ensure that any records associated with this EUA are maintained until notified by FDA. Such records will be made available to FDA for inspection upon request.

The emergency use of the authorized rRT-PCR Swine Flu Panel on JBAIDS as described in this letter of authorization must comply with the conditions above and all other terms of this authorization.

## V. Duration of Authorization

This EUA will be effective until the declaration of emergency is terminated under section 564(b)(2) of the Act or the EUA is revoked under section 564(g) of the Act.

Margaret A. Hamburg, M.D.  
Commissioner of Food and Drugs

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<sup>1</sup> For ease of reference, this letter will use the term the "rRT-PCR Swine Flu Panel on JBAIDS."

<sup>2</sup> The amendments to the August 24, 2009 letter authorize use of additional upper respiratory tract samples, such as nasal swabs (NS), throat swabs (TS), nasal aspirates (NA), nasal washes (NW), and dual nasopharyngeal / throat swabs (NPS/TS), and lower respiratory tract specimens, such as bronchoalveolar lavage (BAL), bronchial aspirate (BA), bronchial wash (BW), endotracheal aspirate (EA), endotracheal wash (EW), tracheal aspirate (TA), and lung tissue. There are also corrections to the waiver section, an additional condition for DoD Laboratories, and minor wording changes made to be consistent with more recently issued Emergency Use Authorizations for in vitro diagnostic devices.

<sup>3</sup> Memorandum, Determination Pursuant to § 564 of the Federal Food, Drug, and Cosmetic Act (April 26, 2009).

<sup>4</sup> No other criteria of issuance have been prescribed by regulation under section 564(c)(4) of the Act.

<sup>5</sup> All users, analysts, and any person reporting diagnostic results from use of this device should be trained to perform and interpret the results from this procedure by JBAIDS instructors or designees prior to use. Use of this device is limited to qualified Department of Defense (DoD) laboratories equipped with the JBAIDS instruments. See "Conditions of Authorization" below.