Individuals using assistive technology may not be able to fully access the information contained in this file. For assistance, please send an e-mail to: ocod@fda.hhs.gov and include 508 Accommodation and the title of the document in the subject line of your e-mail.
HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use AGRIFLU™ (Influenza Virus Vaccine) safely and effectively. See full prescribing information.

AGRIFLU, Influenza Virus Vaccine
Suspension for intramuscular injection

Initial U.S. Approval: 2009

-------------------RECENT MAJOR CHANGES-------------------

USE IN SPECIFIC POPULATIONS (8) 01/2020

-------------------INDICATIONS AND USAGE-------------------

AGRIFLU is a vaccine indicated for the active immunization for the prevention of disease caused by influenza virus subtypes A and type B contained in the vaccine. (1)

AGRIFLU is approved for use in persons 18 years of age and older.

-------------------DOSAGE AND ADMINISTRATION----------------

A single 0.5mL dose for intramuscular injection. (2.2)

-------------------DOSAGE FORMS AND STRENGTHS----------------

AGRIFLU, a sterile suspension for injection, is supplied in two presentations:

- 0.5 mL single-dose pre-filled syringes. (3,11)
- 5.0 mL multi-dose vial containing 10 doses (each dose is 0.5 mL) (3,11)

-------------------CONTRAINDICATIONS-------------------

Hypersensitivity to egg proteins, kanamycin and neomycin or other components of the vaccine, or life-threatening reaction to previous influenza vaccination. (4.1, 11)

-------------------WARNINGS AND PRECAUTIONS-------------------

If Guillain-Barré Syndrome (GBS) has occurred within six weeks of previous influenza vaccination, the decision to give AGRIFLU should be based on careful consideration of the potential benefits and risks. (5.1)

Immunocompromised patients may have a diminished immune response to AGRIFLU. (5.2)

The tip caps of the AGRIFLU prefilled syringes may contain natural rubber latex which may cause allergic reactions in latex sensitive individuals. (5.3)

-------------------ADVERSE REACTIONS-------------------

The most common (≥ 10%) local (injection-site) adverse reactions was injection site pain. (6)

The most common (≥ 10%) systemic adverse reactions were headache, myalgia, and malaise. (6)

To report SUSPECTED ADVERSE REACTIONS, contact Seqirus at 1-855-358-8966 or VAERS at 1-800-822-7967 or www.vaers.hhs.gov.

-------------------DRUG INTERACTIONS-------------------

Do not mix with any other vaccine in the same syringe. (7.1)

-------------------USE IN SPECIFIC POPULATIONS-------------------

Antibody responses were lower in the geriatric population than in adult subjects. (8.5)

See 17 for PATIENT COUNSELING INFORMATION

Issued: JAN 2020, Rev.7

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FULL PRESCRIBING INFORMATION

1. INDICATIONS AND USAGE

AGRIFLU™ is a vaccine indicated for the active immunization for the prevention of disease caused by influenza virus subtypes A and type B contained in the vaccine.

AGRIFLU is approved for use in persons 18 years of age and older. (see CLINICAL STUDIES, [14])

2. DOSAGE AND ADMINISTRATION

2.1 Preparation for Administration

Shake each pre-filled syringe to aid inspection before administering the vaccine and shake the multi-dose vial each time before withdrawing a dose of vaccine. Inspect AGRIFLU visually for the presence of particulate matter or discoloration prior to administration, whenever suspension and container permit. If either of these conditions exists, do not use the contents. (see DESCRIPTION [11])

Between uses, return the multi-dose vial to the recommended storage conditions between 2º and 8ºC (36º and 46ºF). A separate sterile syringe and needle must be used for each injection to prevent transmission of infectious agents from one person to another. It is recommended that small syringes (0.5 mL or 1 mL) should be used to minimize any product loss.

Do not use the vaccine if it has been frozen. Needles should be disposed of properly and not recapped.

2.2 Recommended Dose and Schedule

AGRIFLU should be administered as a single 0.5 mL intramuscular injection, preferably in the region of the deltoid muscle of the upper arm.

The vaccine should not be injected in the gluteal region or areas where there may be a major nerve trunk.

3. DOSAGE FORMS AND STRENGTHS

AGRIFLU is a sterile clear aqueous suspension for intramuscular injection that is supplied in two presentations:

- 0.5 mL single-dose pre-filled syringes with no preservative.
- 5.0 mL multi-dose vial containing 10 doses (each dose is 0.5 mL)

(See DESCRIPTION [11] for a listing of vaccine components.)

4. CONTRAINDICATIONS

4.1 Hypersensitivity

Do not administer AGRIFLU to anyone with known systemic hypersensitivity reactions to egg proteins (eggs or egg products), kanamycin and neomycin, or any other constituent of the vaccine (see DESCRIPTION [11]), or to anyone who has had a life-threatening reaction to previous influenza vaccination.
5. WARNINGS AND PRECAUTIONS

5.1 Guillain-Barré Syndrome

If Guillain-Barré syndrome has occurred within 6 weeks of receipt of prior influenza vaccine, the decision to give AGRIFLU should be based on careful consideration of the potential benefits and risks.

5.2 Altered Immunocompetence

The immune response to AGRIFLU in immunocompromised persons, including individuals receiving immunosuppressive therapy, may be lower than in immunocompetent individuals.

5.3 Preventing and Managing Allergic Reactions

Appropriate medical treatment and supervision must be available to manage possible anaphylactic reactions following administration of the vaccine.

The tip caps of the AGRIFLU prefilled syringes may contain natural rubber latex which may cause allergic reactions in latex sensitive individuals.

5.4 Limitations of Vaccine Effectiveness

Vaccination with AGRIFLU may not protect all recipients.

6. ADVERSE REACTIONS

6.1 Overall Adverse Reactions

The most common local (injection site) adverse reactions observed in clinical studies with AGRIFLU were pain, induration, swelling, and erythema. The most common systemic adverse reactions observed were headache, myalgia, and malaise. These reactions are typically mild.

Serious allergic reactions, including anaphylactic shock, have been observed during postmarketing surveillance in individuals receiving AGRIFLU.

6.2 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, the adverse reaction rates observed in the clinical trials of a vaccine cannot be directly compared to rates in the clinical trials of another vaccine, and may not reflect rates observed in clinical practice.

Adults: The most common local and systemic adverse reactions observed with AGRIFLU were pain and erythema at the injection site, headache, myalgia, and malaise.

Clinical safety data have been obtained from three randomized, controlled trials one of which was a placebo controlled efficacy study. In these trials, 13480 subjects were randomized to receive either AGRIFLU (5338 subjects included in the safety analysis), a U.S.-licensed comparator influenza vaccine (435 included in the safety analysis), an investigational inactivated influenza vaccine (3813 included in the safety analysis), or placebo (3894 included in the safety analysis) (see CLINICAL STUDIES [14]). The overall enrolled population from the 3 studies was 18-64 years of age (mean 33 years), 57% were female and 75% were Caucasian, 6% were Black, 18% were Hispanic and 1% were of other ethnic origin. The percentage of subjects who had a record of receiving a previous influenza vaccination was 13% (see CLINICAL STUDIES [14]). In all three studies, solicited local (injection site) and systemic reactions were collected from
subjects who completed a symptom diary card for seven days following vaccination. Safety data are presented in Table 1.

Table 1: Percentage of Subjects Reporting Solicited Adverse Reactions in Days 1–7 After Vaccination With AGRIFLU or Comparators

<table>
<thead>
<tr>
<th>Study</th>
<th>NCT</th>
<th>Age Range</th>
<th>AGRIFLU</th>
<th>Comparator</th>
<th>AGRIFLU</th>
<th>Comparator</th>
<th>AGRIFLU</th>
<th>Comparator</th>
<th>Placebo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>00464672</td>
<td>18-64</td>
<td>460</td>
<td>233</td>
<td>1209</td>
<td>202</td>
<td>3669</td>
<td>3895</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>00617</td>
<td>18-49</td>
<td>207</td>
<td>102</td>
<td>678</td>
<td>320</td>
<td>1051</td>
<td>1230</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>00630331</td>
<td>18-49</td>
<td>3669</td>
<td>202</td>
<td>3895</td>
<td>3895</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local Adverse Reactions</th>
<th>Percentage of Subjects with Adverse Reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injection site pain</td>
<td>Study 1</td>
</tr>
<tr>
<td>Any pain</td>
<td>25</td>
</tr>
<tr>
<td>Severe painb</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Induration</td>
<td>2</td>
</tr>
<tr>
<td>Swelling</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Erythema</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Ecchymosis</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Systemic Adverse Reactions</th>
<th>Percentage of Subjects with Adverse Reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>Study 1</td>
</tr>
<tr>
<td>Myalgia</td>
<td>14</td>
</tr>
<tr>
<td>Malaise</td>
<td>12</td>
</tr>
<tr>
<td>Fatigue</td>
<td>10</td>
</tr>
<tr>
<td>Chills</td>
<td>5</td>
</tr>
<tr>
<td>Arthralgia</td>
<td>7</td>
</tr>
<tr>
<td>Sweating</td>
<td>5</td>
</tr>
<tr>
<td>Fever (≥38oC)</td>
<td>2</td>
</tr>
</tbody>
</table>

aComparator is U.S.-licensed trivalent, inactivated influenza virus vaccine (Fluvirin).
bSevere injection site pain= local reaction leading to the inability to perform normal daily activities.

In studies 1 and 2 with a U.S.-licensed influenza comparator vaccine, unsolicited adverse events were reported by subjects over a 3-week period after vaccination. Unsolicited adverse events that occurred in > 1% of subjects included influenza-like illness (4% of AGRIFLU subjects and 3% of active comparator subjects) and headache (2% of AGRIFLU and comparator subjects). A total of 17% of subjects in both the AGRIFLU and the comparator groups reported unsolicited adverse events: 15% and 16% of subjects in the AGRIFLU and in the comparator groups, respectively, had mild unsolicited adverse events, 2% and 1% of subjects had moderate adverse events, and <1 % of subjects in both groups had severe adverse events.
In study 3, the placebo controlled efficacy study, all unsolicited adverse events were collected for 7 days after vaccination and selected adverse events (serious adverse events, onset of chronic illness, AEs that necessitated a physician consultation and/or led to withdrawal from the study) for up to 3 weeks after vaccination. A total of 13% and 14% of subjects in the AGRIFLU and the comparator groups reported unsolicited adverse events: in both the AGRIFLU and in the comparator groups, 7% of subjects had mild unsolicited adverse events, 5% of subjects had moderate adverse events, and 2% of subjects had severe adverse events. Unsolicited adverse events reported in the 3 week period that occurred in > 1% of subjects included pharyngolaryngeal pain (2% of both AGRIFLU and placebo subjects).

6.3  Postmarketing Experience

The following additional adverse events have been identified during postapproval use of AGRIFLU in Europe since 2003. Because these events are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to the vaccine.

Blood and lymphatic system disorders:
Thrombocytopenia (some very rare cases were severe with platelet counts less than 5,000 per mm$^3$).

Eye disorders:
Conjunctivitis, eyelid edema, eye redness

Gastrointestinal disorders:
Diarrhea, nausea, vomiting, abdominal pain

General disorders and administration site conditions:
Local injection site reactions, including pain, pain limiting limb movement, redness, swelling, warmth, ecchymosis, induration, local lymphadenopathy, injection-site cellulitis-like reaction (some cases of swelling, pain, and redness extending more than 10 cm and lasting more than one week), extensive swelling of injected limb lasting more than one week, and general disorders including, chills, fever, malaise, fatigue, asthenia, facial edema.

Immune system disorders:
Hypersensitivity reactions (including throat and/or mouth edema, anaphylaxis, and anaphylactic shock)

Musculoskeletal and connective tissue disorders:
Arthralgia, myalgia.

Nervous system disorders:
Headache, syncope shortly after vaccination, dizziness, neuralgia, paraesthesia, convulsion, myelitis (including encephalomyelitis and transverse myelitis), neuropathy (including neuritis and brachial plexus neuropathy), paralysis (including Bell’s Palsy and other cranial nerve paralyses), Guillain-Barré Syndrome
Skin and Subcutaneous disorders:
Pruritus, urticaria and non-specific rash

Vascular disorders:
Vasculitis (in rare cases associated with transient renal involvement), hot flush

6.4   Adverse events associated with influenza vaccines

Anaphylaxis has been reported after administration of AGRIFLU. AGRIFLU contains egg proteins, which can induce immediate hypersensitivity reactions among persons who have severe egg allergy. Allergic reactions include hives, angioedema, allergic asthma, and systemic anaphylaxis [see CONTRAINDICATIONS (4) and DESCRIPTION (11)].

The 1976 swine influenza vaccine was associated with an increased frequency of Guillain-Barré syndrome (GBS). Evidence for a causal relation of GBS with subsequent vaccines prepared from other influenza viruses is unclear. If influenza vaccine does pose a risk, it is probably slightly more than 1 additional case/1 million persons vaccinated.

Neurological disorders temporally associated with influenza vaccination such as encephalopathy, optic neuritis/neuropathy, partial facial paralysis, and brachial plexus neuropathy have been reported.

Microscopic polyangitis (vasculitis) has been reported temporally associated with influenza vaccination.

7.   DRUG INTERACTIONS

7.1   Concomitant Use With Other Vaccines

There are no data to assess the concomitant administration of AGRIFLU with other vaccines. If AGRIFLU is to be given at the same time as other injectable vaccine(s), the vaccine(s) should be administered at different injection sites.

AGRIFLU should not be mixed with any other vaccine in the same syringe.

7.2   Concurrent Use With Immunosuppressive Therapies

Immunosuppressive therapies including corticosteroids may reduce the immune response to AGRIFLU.

8.   USE IN SPECIFIC POPULATIONS

8.1   Pregnancy

Risk Summary

All pregnancies have a risk of birth defect, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

There are insufficient data for AGRIFLU in pregnant women to inform vaccine-associated risks in pregnancy.
Developmental toxicity studies have been performed in female rabbits administered AGRIFLU prior to mating and during gestation. A single dose (0.5 mL) was injected on each occasion. There was no evidence of harm to the fetus due to AGRIFLU (see Animal Data (8.1)).

Clinical Considerations

Disease-associated Maternal and/or Embryo-Fetal Risk

Pregnant women are at increased risk for severe illness due to influenza compared to non-pregnant women. Pregnant women with influenza may be at increased risk for adverse pregnancy outcomes, including preterm labor and delivery.

Data

Animal Data

In two developmental toxicity studies, female rabbits were administered a full human dose (0.5 mL) of AGRIFLU by intramuscular injection 1, 3 and 5 weeks before mating and on gestation days 7 and 20. Effects on post-natal development could not be fully evaluated, however, there were no adverse effects attributable to the vaccine on mating, female fertility, pregnancy, or embryo-fetal development. There were no vaccine related fetal malformations or other evidence of teratogenesis.

8.2 Lactation

Risk Summary

It is not known whether AGRIFLU is excreted in human milk. Data are not available to assess the effects of AGRIFLU on the breastfed infant or on milk production/excretion.

The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for AGRIFLU and any potential adverse effects on the breastfed child from AGRIFLU or from the underlying maternal condition. For preventive vaccines, the underlying maternal condition is susceptibility to disease prevented by the vaccine.

8.4 Pediatric Use

Safety and effectiveness of AGRIFLU were evaluated in two clinical trials conducted in children and adolescents 6 months through 17 years of age. Data from these trials are inconclusive to establish the effectiveness of the vaccine in this population. The safety and effectiveness of AGRIFLU in infants less than 6 months of age have not been evaluated.

8.5 Geriatric Use

In nine clinical studies, 1956 subjects 65 years of age and older received AGRIFLU. Antibody responses in geriatric subjects were lower after administration of AGRIFLU in comparison to younger adult subjects. Adverse event rates were generally similar in frequency in geriatric subjects (≥65 years of age) to those reported in younger adults, although some differences were observed.

11. DESCRIPTION

AGRIFLU, Influenza Virus Vaccine, for intramuscular injection is a trivalent inactivated influenza virus vaccine prepared from virus propagated in the allantoic cavity of embryonated
hens’ eggs inoculated with an influenza virus suspension containing kanamycin and neomycin sulphate. Each of the influenza virus strains is harvested and clarified separately by centrifugation and filtration prior to inactivation with formaldehyde. The inactivated virus is concentrated and purified by zonal centrifugation. The surface antigens, hemagglutinin and neuraminidase, are obtained from the influenza virus particle by further centrifugation in the presence of cetyltrimethylammonium bromide (CTAB), a process which removes most of the internal proteins. The CTAB is removed from the vaccine preparation by subsequent purification steps.

AGRIFLU is a sterile clear aqueous suspension and is formulated to contain a total of 45 micrograms (mcg) hemagglutinin (HA) per 0.5-mL dose in the recommended ratio of 15 mcg HA of each of the following three influenza virus strains recommended for the 20XX-20XY influenza season: A/[placeholder] (H1N1); A/[placeholder] (H3N2); and B/[placeholder].

The 0.5 mL pre-filled syringe presentation is manufactured and formulated without thimerosal or any other preservative.

The 5.0 mL multi-dose vial presentation contains thimerosal, a mercury derivative, added as a preservative. Each 0.5 mL dose from the multi-dose vial contains 25 mcg mercury.

Each 0.5 mL dose from the pre-filled syringe or multi-dose vial may contain residual amounts of egg proteins (<0.4 mcg), formaldehyde (≤10 mcg), polysorbate 80 (≤50 mcg), and CTAB (≤12 mcg). Each dose may also contain residual amounts of neomycin (≤0.02 mcg by calculation), kanamycin (≤0.03 mcg by calculation), and barium (<0.5 mcg by calculation), which are used during the initial stages of manufacture. The tip caps of the syringes may contain natural rubber latex. The syringe plunger and the multi-dose vial do not contain natural rubber latex.

12. CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Influenza illness and its complications follow infection with influenza viruses. Global surveillance of influenza identifies yearly antigenic variants. For example, since 1977, antigenic variants of influenza A (H1N1 and H3N2) viruses and influenza B viruses have been in global circulation. Specific levels of hemagglutination inhibition (HI) antibody titers induced by vaccination with inactivated influenza virus vaccine have not been correlated with protection from influenza illness. In some human studies, HI antibody titers of 1:40 or greater have been associated with protection from influenza illness in up to 50% of subjects4.

Antibody against one influenza virus type or subtype confers limited or no protection against another. Furthermore, antibody to one antigenic variant of influenza virus might not protect against a new antigenic variant of the same type or subtype. Frequent development of antigenic variants through antigenic drift is the virologic basis for seasonal epidemics and the reason for the usual change of one or more new strains in each year’s influenza vaccine. Therefore, inactivated influenza vaccines are standardized to contain the hemagglutinin of influenza virus strains (typically two type A and one type B), representing the influenza viruses likely to be circulating in the United States in the upcoming winter.

Annual revaccination with the current vaccine is recommended because immunity declines during the year after vaccination, and because circulating strains of influenza virus change from year to year5.
13. NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

AGRIFLU has not been evaluated for carcinogenic or mutagenic potential, or for impairment of male fertility.

14. CLINICAL STUDIES

14.1 Efficacy against culture-confirmed influenza in adults

A multinational (U.S., Finland, and Poland), randomized, observer-blind, placebo controlled trial (Study 3) was performed to assess clinical efficacy and safety of AGRIFLU in the 2007-2008 influenza season in adults aged 18 to 49 years. A total of 11404 subjects were enrolled to receive in a 1:1:1 ratio AGRIFLU (N=3676), an investigational inactivated influenza vaccine (N=3828) or placebo (N=3900). Among the overall study population enrolled, the mean age was 33 years, 55% were women; 84% were Caucasian, 7% were Hispanic, 7% were Black, and 2% were of other ethnic origin.

AGRIFLU efficacy was assessed by the prevention of culture-confirmed symptomatic influenza illness caused by vaccine-like virus strains compared to placebo. Influenza cases were identified by active and passive surveillance of influenza-like illness (ILI). ILI was defined according to Centers for Disease Control and Prevention (CDC) case definition, i.e., a fever (oral temperature $\geq 100.0^{\circ}\text{F} / 38^{\circ}\text{C}$) and cough or sore throat. After an episode of ILI, nose and throat swab samples were collected for analysis. Vaccine efficacy against vaccine-matched influenza strains, against all influenza strains, and against individual influenza subtypes was calculated (Tables 2 and 3).

Table 2: Vaccine Efficacy against Culture-Confirmed Influenza (Study 3, NCT00630331)\(^1\)

<table>
<thead>
<tr>
<th></th>
<th>Attack Rate</th>
<th>Vaccine Efficacy(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N(^3)</td>
<td>N(^4)</td>
</tr>
<tr>
<td>Antigenically Matched Strains</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGRIFLU</td>
<td>3638</td>
<td>9</td>
</tr>
<tr>
<td>Placebo</td>
<td>3843</td>
<td>44</td>
</tr>
<tr>
<td>All Culture-Confirmed Influenza</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGRIFLU</td>
<td>3638</td>
<td>49</td>
</tr>
<tr>
<td>Placebo</td>
<td>3843</td>
<td>140</td>
</tr>
</tbody>
</table>

\(^1\)Study 3 was conducted during the 2007/2008 influenza season; \(^2\)Simultaneous one-sided 97.5\% confidence intervals for the vaccine efficacy of each influenza vaccine relative to placebo based on the Sidak-corrected score confidence intervals for the two relative risks. Vaccine Efficacy = (1 - Relative Risk) x 100\%; \(^3\)N = number of subjects in the per protocol efficacy population; \(^4\)n = number of subjects with Influenza; \(^5\)LL = lower limit of one-sided 97.5\% CI
Table 3: Comparative Efficacy of AGRIFLU versus Placebo Against Culture-Confirmed Influenza by Influenza Subtype (Study 3, NCT00630331)

<table>
<thead>
<tr>
<th>AGRIFLU (N=3638)</th>
<th>Placebo (N=3843)</th>
<th>Vaccine Efficacy^2</th>
<th>Lower Limit of One-Sided 97.5% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attack Rate</td>
<td>Number of Subjects with Influenza</td>
<td>Attack Rate</td>
<td>Number of Subjects with Influenza</td>
</tr>
<tr>
<td>A/H3N2^3</td>
<td>0.03%</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>A/H1N1</td>
<td>0.22%</td>
<td>8</td>
<td>1.12%</td>
</tr>
<tr>
<td>B^3</td>
<td>0</td>
<td>0</td>
<td>0.03%</td>
</tr>
</tbody>
</table>

- Antigenically Matched Strains
- All Culture-Confirmed Influenza

^1 Study 3 was conducted during the 2007/2008 influenza season; ^2 Simultaneous one-sided 97.5% confidence intervals for the vaccine efficacy of each influenza vaccine relative to placebo based on the Sidak-corrected score confidence intervals for the two relative risks. Vaccine Efficacy = (1 - Relative Risk) x 100%; ^3 There were too few cases of influenza due to vaccine-matched influenza H3N2 or B to adequately assess vaccine efficacy.

14.2 Immunological Evaluation in Adults

In the three randomized, controlled clinical trials with AGRIFLU, immune responses, specifically hemagglutination inhibition (HI) antibody titers to each virus strain in the vaccine, were evaluated in sera obtained 21 days after administration of AGRIFLU. These studies included Study 3, in which immunogenicity was evaluated in a subset of subjects, comprised of the first 1045 subjects enrolled and randomized at the US sites.

In the first clinical trial (Study 1^1), performed in Argentina, 643 adult subjects (424 and 219 for AGRIFLU and U.S.-licensed comparator influenza vaccine, respectively) were enrolled and evaluable. Among the overall study population enrolled, 61% were women, and the distribution of subjects by ethnicity was 79% Caucasian, 20% Hispanic, and 1% Asian; the subjects’ age ranged between 18 and 64 years (mean age of 38.5 years).

In the second clinical trial (Study 2^2), performed in the Dominican Republic, subjects were randomly assigned at a 2:2:2:1 ratio to receive either one of three consecutive AGRIFLU lots or the U.S.-licensed influenza vaccine used for comparison of the safety profile. A total of 1376 adult subjects 18 to 49 years of age were enrolled and evaluable (1182 and 194 for AGRIFLU and comparator influenza vaccine, respectively). Among the overall study population enrolled, 70% were women; 97% were Hispanic, 2% were Black, and 1% were of other ethnic origin; subjects’ age ranged between 18 and 49 years (mean of 31 years).

For all three studies, the following immunogenicity endpoints were assessed: 1) the lower bounds of the 2-sided 95% confidence intervals (CI) for the proportion of subjects with HI
antibody titers of 1:40 or greater after vaccination, should meet or exceed 70% for each vaccine antigen strain; and 2) the lower bounds of the 2-sided 95% CI for rates of seroconversion (defined as ≥ 4-fold increase in post-vaccination HI antibody titers from pre-vaccination titers of ≥ 1:10 or an increase in titers from < 1:10 to ≥ 1:40), should meet or exceed 40% for each vaccine antigen strain. In studies 1 and 2 with a U.S.-licensed influenza vaccine comparator the active comparator arm was used for comparison of safety only.

Table 4: Serum HI Antibody Responses in Adults 21 Days After Vaccination With AGRIFLU

<table>
<thead>
<tr>
<th>Study 1</th>
<th>Vaccine Strain</th>
<th>% HI Titer ≥1:40 (95% CI)</th>
<th>% Seroconversionb (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>A/H1N1</td>
<td>93 (90-95)</td>
<td>74 (69-78)</td>
</tr>
<tr>
<td></td>
<td>A/H3N2</td>
<td>96 (94-98)</td>
<td>72 (68-76)</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>91 (87-93)</td>
<td>77 (72-81)</td>
</tr>
<tr>
<td>2007</td>
<td>A/H1N1</td>
<td>98 (97-99)</td>
<td>94 (93-95)</td>
</tr>
<tr>
<td></td>
<td>A/H3N2</td>
<td>99 (98-100)</td>
<td>67 (65-70)</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>87 (85-89)</td>
<td>84 (82-86)</td>
</tr>
<tr>
<td>2007</td>
<td>A/H1N1</td>
<td>98 (97-99)</td>
<td>75 (71-78)</td>
</tr>
<tr>
<td></td>
<td>A/H3N2</td>
<td>99 (98-100)</td>
<td>68 (64-71)</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>92 (90-94)</td>
<td>68 (65-72)</td>
</tr>
</tbody>
</table>

*a pooled number of subjects receiving one of the three manufacturing lots of AGRIFLU.

b Rates of seroconversion = percentage of subjects with either a pre-vaccination HI titer < 1:10 and a post-vaccination HI titer ≥ 1:40 or a pre-vaccination HI titer > 1:10 and at least a four-fold rise in post-vaccination HI antibody titer.
15. REFERENCES

1. NCT00464672: see www.clinicaltrials.gov
2. NCT00617851: see www.clinicaltrials.gov
3. NCT00630331: see www.clinicaltrials.gov

16. HOW SUPPLIED/STORAGE AND HANDLING

16.1 How Supplied

AGRIFLU product presentations are listed in Table 5 below:

Table 5: AGRIFLU Product Presentations

<table>
<thead>
<tr>
<th>Presentation</th>
<th>Carton NDC Number</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-filled syringe</td>
<td>70461-XXX-XX</td>
<td>Ten 0.5 mL single-dose pre-filled syringes without needles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(tip cap may contain latex; plunger contains no latex)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[NDC 70461-XXX-XX]</td>
</tr>
<tr>
<td>Multi-dose vial</td>
<td>70461-XXX-XX</td>
<td>One 5.0 mL multi-dose vial, containing ten 0.5 mL doses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(contains no latex)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[NDC 70461-XXX-XX]</td>
</tr>
</tbody>
</table>

16.2 Storage and Handling

Store refrigerated at +2°C to +8°C (36°F to 46°F).

Do not freeze. Discard if the vaccine has been frozen.

Protect from light.

Do not use after the expiration date.

Between uses, return the multi-dose vial to the recommended storage conditions.

17. PATIENT COUNSELING INFORMATION

17.1 Information for Patients

Provide the following information or instructions to vaccine recipients:

Inform on potential benefits and risks of immunization with AGRIFLU.
Explain that (1) AGRIFLU contains non-infectious particles and cannot cause influenza and (2) AGRIFLU is intended to provide protection against illness due to influenza viruses only, and cannot provide protection against other respiratory illnesses.

Instruct to report any severe or unusual adverse reactions to their healthcare provider.

Instruct that annual vaccination is recommended.

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US License No. 2049
Distributed by: Seqirus USA Inc., 25 Deforest Avenue, Summit, NJ 07901, USA
Tel: 1-855-358-8966