Pandemic Influenza Vaccine Clinical Trial Abstract Minimum information:

**Title of Trial:** This Phase II randomized, double-blinded, controlled study in up to 1000 males and non-pregnant females, 19 to 64 years old, inclusive, who are in good health and meet all eligibility criteria is designed to provide data on an A/H7N9 vaccine made with HA antigen derived from the influenza A/Shanghai/2/2013 virus

**Clinical Trial registration site if applicable (e.g. ClinicalTrials.gov):** NCT01942265

**Authors/sponsors:** National Institute of Allergy and Infectious Diseases (NIAID)

**Study Design:** Randomized, Safety/Efficacy Study, Parallel Assignment, Double Blind

**Vaccine:** H7N9

**Manufacturer:** Sanofi Pasteur

**Type (whole virus/subvirion/subunit/live/recombinant/DNA/vector):** Inactivated split

**Adjuvant:** MF59, AS03

**Delivery system/site:** Intramuscular injection

**Doses (antigen and adjuvant):**
- Experimental: Group 1
  - 100 subjects receive 3.75mcg sanofi A/H7N9 antigen plus GSK AS03 adjuvant on Day 0 and 21
- Experimental: Group 2
  - 100 subjects receive 7.5mcg sanofi A/H7N9 antigen plus GSK AS03 adjuvant on Day 0 and 21
- Experimental: Group 7
  - 100 subjects receive 15mcg sanofi A/H7N9 antigen plus NVD MF59 adjuvant on Day 0 and 15mcg sanofi A/H7N9 antigen plus GSK AS03 adjuvant on Day 21
- Experimental: Group 3
  - 100 subjects receive 15mcg sanofi A/H7N9 antigen plus GSK AS03 adjuvant on Day 0 and 21
- Experimental: Group 4
  - 100 subjects receive 15mcg sanofi A/H7N9 antigen plus GSK AS03 adjuvant on Day 0 and 15mcg sanofi A/H7N9 antigen on Day 21
- Experimental: Group 9
  - 100 subjects receive 15mcg sanofi A/H7N9 antigen on Day 0 and 21
- Experimental: Group 8
  - 100 subjects receive 15mcg sanofi A/H7N9 antigen plus NVD MF59 adjuvant on Day 0 and 21
- Experimental: Group 10
  - 100 subjects receive 45 mcg sanofi A/H7N9 antigen on Day 0 and 21
- Experimental: Group 5
  - 100 subjects receive 15mcg sanofi A/H7N9 antigen on Day 0 and 15mcg sanofi A/H7N9 antigen plus GSK AS03 adjuvant on Day 21
- Experimental: Group 6
  - 100 subjects receive 15mcg sanofi A/H7N9 antigen plus GSK AS03 adjuvant on Day 0 and 15mcg sanofi A/H7N9 antigen plus NVD MF59 adjuvant on Day 21

**Study population:**
Age range: 980 volunteers of 19-64 years

Health status: Healthy

Specific inclusion criteria:
• Provide written informed consent prior to initiation of any study procedures.
• Are able to understand and comply with planned study procedures and be available for all study visits.
• Are males or non-pregnant females, 19 to 64 years old, inclusive.
• Are in good health, as determined by vital signs (oral temperature, pulse, and blood pressure), medical history, and targeted physical examination based on medical history to ensure any existing medical diagnoses or conditions (except those in the Subject Exclusion Criteria) are stable. Subjects may be on chronic or as needed (prn) medications if, in the opinion of the site principal investigator or appropriate sub-investigator, they pose no additional risk to subject safety or assessment of reactogenicity and immunogenicity. Note: Topical, nasal, and inhaled medications (with the exception of steroids as outlined in the Subjects Exclusion Criteria (see Section 5.2), vitamins, and contraceptives are permitted.
• Oral temperature is less than 100.4 degrees F.
• Pulse is 50 to 115 bpm, inclusive.
• Systolic blood pressure is 85 to 150 mm Hg, inclusive.
• Diastolic blood pressure is 55 to 95 mmHg, inclusive.
• Erythrocyte sedimentation rate (ESR) is less than 30 mm per hour.
• Alanine aminotransferase (ALT) is less than 44 IU/L for females or is less than 61 IU/L for males.
• Creatinine is less than 1.11 mg/dL for females or is less than 1.38 mg/dL for males.
• White blood cells (WBC) are greater than 3.9 x10^3/UL and less than 10.6 x10^3/UL.
• Hemoglobin is greater than 11.4 g/dL for females or is greater than 12.4 g/dL for males.
• Platelets are greater than 139 x10^3/UL and less than 416 x10^3/UL.
• Total bilirubin is less than 1.3 mg/dL.
• Female subjects of childbearing potential who are not surgically sterile via tubal sterilization, bilateral oophorectomy, or hysterectomy or who are not postmenopausal for >/= 1 year must agree to practice highly effective contraception that may include, but is not limited to, abstinence from intercourse with a male partner, monogamous relationship with a vasectomized partner, male condoms with the use of applied spermicide, intrauterine devices, and licensed hormonal methods with use of a highly effective method of contraception for a minimum of 30 days prior to study product exposure and agree to practice highly effective contraception for the duration of study product exposure, including 2 months (defined as 60 days) after the last study vaccination. A highly effective method of contraception is defined as one which results in a low failure rate (i.e., less than 1 percent per year) when used consistently and correctly. Method of contraception will be captured on the appropriate data collection form.
• Female subjects of childbearing potential must have a negative urine or serum pregnancy test within 24 hours prior to study vaccination.

Clinical Endpoints Assessed:

Safety assessments:

• Occurrence of solicited injection site and systemic reactogenicity on the day of each study vaccination through 7 days after each study vaccination.
• Occurrence of study vaccine-related serious adverse events from the time of the first study vaccination through approximately 13 months after the first study vaccination.
• Occurrence of clinical safety laboratory adverse events from the time of each study vaccination through approximately 8 days after each study vaccination.

Immunogenicity assessments:
• Percentage of subjects achieving seroconversion (defined as either a pre-vaccination HAI titer <1:10 and a post-vaccination HAI titer >/=1:40 or a pre-vaccination HAI titer >/=1:10 and a minimum four-fold rise in post-vaccination HAI antibody titer). 42
• Percentage of subjects achieving a serum HAI antibody titer of 1:40 or greater against the A/H7N9 antigen contained in the study vaccine at approximately 21 days after the second study vaccination

**Results:** Not yet available

**Safety:**

**Immunogenicity**

**GMTs:**

**GMT Ratios (post:pre):**

Per cent responding (4 fold or greater rise and definition for reporting):

Per cent responders at specified tite:

**Others assays:**

**Status of trial (ongoing/completed):** 2013-2014 (ongoing)