Title of Trial:
A Phase II, Multicenter, Randomized, Observer-blind, Placebo-controlled Study to Evaluate the Immunogenicity, Safety and Tolerability of CSL’s 2009 H1N1 Influenza Vaccine (CSL425) in Healthy Adults Aged 18 Years and Older

Clinical Trial registration site if applicable (e.g. ClinicalTrials.gov):
ClinicalTrials.gov identifier NCT00958126

Authors/sponsors:
CSL Ltd, Australia

Study Design (including the phase of clinical trial):
A phase II, multicenter, randomized, observer-blind, placebo-controlled study conducted in the USA

Vaccine subtype:
Pandemic H1N1

Virus:
NYMC X-179A derived from A/California/7/2009

Manufacturer:
CSL Ltd, Australia

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

Adjuvant:
None

Delivery system/site:
Intramuscular injection

Doses (antigen and adjuvant, number of doses, intervals between administrations):
Hemagglutinin antigen content of 7.5 µg, 15 µg or 30 µg; two vaccinations administered 21 days apart

Study population
Number of subjects involved: 1313
Age range: 18 to 64 years, and 65 years or older
Health status: Healthy volunteers

Special inclusion/exclusion criteria:
Excluded participants:
• with a history suggestive of a previous 2009 H1N1 infection
• received the 2009-2010 seasonal influenza vaccine within 7 days before the first vaccination
• with a known hypersensitivity to a previous dose of influenza virus vaccine or allergy to eggs, chicken protein, thimerosal, neomycin, polymyxin, or any components of the study vaccine.

Clinical Endpoints Assessed
Safety assessments:
Solicited local and systemic adverse events within 7 days of each vaccination, unsolicited adverse events within 21 days of each vaccination, and serious and other significant adverse events until 180 days after the last vaccination.

Immunogenicity assessments:
Immunogenicity assessed at baseline before vaccination, and 21 days after each vaccination.

Imunoassay type
HI (type of RBC used): Hemagglutination inhibition assay using turkey red blood cells
NT (type of neutralization assay): Not performed
SRH: Not performed

Results
Safety:

<table>
<thead>
<tr>
<th>Solicited Adverse Events after Each Vaccination</th>
<th>After the First Vaccination</th>
<th>After the Second Vaccination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>7.5 µg</td>
<td>15 µg</td>
</tr>
<tr>
<td></td>
<td>13.1%</td>
<td>21.1%</td>
</tr>
<tr>
<td>Solicited local adverse events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solicited systemic adverse events</td>
<td>22.2%</td>
<td>25.8%</td>
</tr>
</tbody>
</table>

SAEs:
There have been 49 serious adverse events reported to date. None of these events were assessed as causally related to study vaccination.

Immunogenicity:

<table>
<thead>
<tr>
<th>HI: Single Vaccination Fulfilled FDA Criteria for Immunogenicity</th>
<th>Adult Cohort (18 to 64 years)</th>
<th>Older Adult Cohort (65 years or older)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>7.5 µg</td>
<td>15 µg</td>
</tr>
<tr>
<td>After the First Vaccination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participants with HI titer 1:40 or more</td>
<td>22.9%</td>
<td>97.0%</td>
</tr>
<tr>
<td>Participants achieving seroconversion</td>
<td>0%</td>
<td>82.0%</td>
</tr>
<tr>
<td>Fold increase in geometric mean titers</td>
<td>1.0</td>
<td>19.4%</td>
</tr>
<tr>
<td>After the Second Vaccination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participants with HI titer 1:40 or more</td>
<td>29.2%</td>
<td>98.5%</td>
</tr>
<tr>
<td></td>
<td>Adult Cohort (18 to 64 years)</td>
<td>Older Adult Cohort (65 years or older)</td>
</tr>
<tr>
<td>---------------------------</td>
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</tr>
<tr>
<td></td>
<td>Placebo 7.5 µg 15 µg 30 µg</td>
<td>Placebo 7.5 µg 15 µg 30 µg</td>
</tr>
<tr>
<td>Participants achieving seroconversion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.3% 83.3% 91.1% 95.9%</td>
<td>10.2% 59.7% 67.5% 75.4%</td>
</tr>
<tr>
<td>Fold increase in geometric mean titers</td>
<td>1.2 19.6 21.1 37.1</td>
<td>1.3 6.1 6.4 8.0</td>
</tr>
</tbody>
</table>

**Current status of the clinical trial (completed, ongoing, in preparation):**
Ongoing safety follow-up.

**Date envisaged for availability of results, if not yet available:**
Final results expected by July 2010

**Planned time schedule for next phase of development:**
Not applicable