**Titer and Vaccination Explanations – PLEASE READ CAREFULLY (it’ll save you time/$$)**

Serum titers are blood tests that measure whether or not you are immune to a given disease(s). More specifically, a **quantitative serum titer** is a titer with a numerical value indicating your actual degree of immunity to a disease(s). The clinical sites you will be working at require documented proof of immunity in the form of quantitative titers – simply getting the vaccination is not enough. Therefore, **each student must have quantitative titers drawn**, and provide copies of the official laboratory printouts **containing the numerical values** for Mumps, Measles, Rubella, Varicella and Hep B immunity (see examples of sample lab results on the following page).

**IMPORTANT THINGS TO BE AWARE OF/PITFALLS TO AVOID:**

1. If you don’t have a record of the previous vaccinations you’ve received, get your titers drawn first.
   - Why? Measure your immunity level before getting vaccinated to boost it. **Your titers might indicate a high immunity to a specific disease, in which case you won’t need to get vaccinated for that disease.**

2. Please get the exact type of titers we have asked you to.
   - **3 Common Mistakes Students Make:**
     - Quantitative vs. Qualitative titers – quantitative have a numerical value, qualitative simply indicates “immune vs. non-immune” (with no numerical value). **Be sure to get quantitative titers. If you don’t get quantitative titers, we will ask you to get them redone.**
     1. **Got Kaiser?** For Rubella and Hep B titers, Kaiser patients will only receive qualitative results. If that’s the case, you’ll need to set up an appointment at Student Health Services to get these two quantitative titers drawn.
     - IgG vs. IgM titers – **you need IgG titers; DO NOT get labs for IgM titers.**
     - Hbs AB IgG vs. HbsAG IgG titers (for Hep B) – **you need Hep B AB (antibody) titers, NOT Hep B AG (antigen) titers.**

3. If the titer for a specific disease shows that you’re not immune, you need to get vaccinated or re-vaccinated (also known as getting a booster).
   - **Note:** This is where previous vaccination records are helpful. Vaccinations for different diseases have different timelines and numbers of shots needed (ex. Varicella – 2 shot series 4-6 weeks apart vs. Hep B – 3 shot series over 6 months). If a specific titer indicates non-immunity, then your physician (or the Nursing Department) can direct you on next steps for vaccination.

4. Once vaccinated, **titers should not be drawn until 6-8 weeks after the vaccination.**
   - Why? If drawn too soon afterwards, the titers will indicate non-immunity as the vaccine will still be in your system. Don’t make the mistake of getting a titer drawn prematurely in order to meet the Nursing Department deadline, that doesn’t work in your favor.
<table>
<thead>
<tr>
<th>Test Name</th>
<th>Result</th>
<th>Units</th>
<th>Ref. Range</th>
<th>Collected Date/Time</th>
<th>Location*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rubella Immunstatus</strong></td>
<td>3.841</td>
<td>IU/mL</td>
<td></td>
<td></td>
<td>EN</td>
</tr>
<tr>
<td><strong>Measles (Rubella)</strong></td>
<td>0.755</td>
<td>EN</td>
<td></td>
<td></td>
<td>EN</td>
</tr>
<tr>
<td><strong>Varicella Zoster Virus IGG AB</strong></td>
<td>1.65</td>
<td>EIA</td>
<td></td>
<td></td>
<td>EN</td>
</tr>
<tr>
<td><strong>Hepatitis B Surface Antibody (Quant)</strong></td>
<td>584 milU/mL</td>
<td></td>
<td></td>
<td></td>
<td>EN</td>
</tr>
<tr>
<td><strong>Mumps Virus IGG By EIA Serum</strong></td>
<td>2.90</td>
<td>EIA</td>
<td></td>
<td></td>
<td>EN</td>
</tr>
</tbody>
</table>

**Rubella Immunstatus**

- **EIA Value**: 3.841
- **Explanation of Test Results**: The presence of Rubella IgG antibody suggests immunization or past or current infection with Rubella virus.

**Measles (Rubella)**

- **EIA Value**: 0.755
- **Explanation of Test Results**: Positive results suggest recent or previous infection with measles (Rubella) virus and imply immunity. Patients exhibiting equivocal results should be retested in one month, if clinically indicated.

**Varicella Zoster Virus IGG AB**

- **EIA Value**: 1.65
- **Explanation of Test Results**: A positive result indicates that the patient has antibody to VZV. It does not differentiate between an active or past infection. The clinical diagnosis must be interpreted in conjunction with the clinical signs and symptoms of the patient.

**Hepatitis B Surface Antibody (Quant)**

- **Value**: 584 milU/mL
- **Explanation**: The patient has immunity to Hepatitis B virus.

**Mumps Virus IGG By EIA Serum**

- **EIA Value**: 2.90
- **Explanation of Test Results**: A positive result indicates that the patient has antibody.
## NON-Immune Sample Titer

### Patient Information
- **Name:** Nakamura, Fred A
- **DOB:**
- **Gender:**
- **Age:**
- **ID:**

### Test Results

<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference Range</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varicella-Zoster Virus</td>
<td>1.75</td>
<td></td>
<td>EIA value</td>
<td>EN</td>
</tr>
<tr>
<td>IGG AB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EIA VALUE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; OR = 0.90</td>
<td></td>
<td></td>
<td>NEGATIVE - NO VZV IGG ANTIBODY DETECTED</td>
<td></td>
</tr>
<tr>
<td>0.91 - 1.09</td>
<td></td>
<td></td>
<td>EQUIVOCAL</td>
<td></td>
</tr>
<tr>
<td>&gt; OR = 1.10</td>
<td></td>
<td></td>
<td>POSITIVE - VZV IGG ANTIBODY DETECTED</td>
<td></td>
</tr>
</tbody>
</table>

A positive result indicates that the patient has antibody to VZV. It does not differentiate between an active or past infection. The clinical diagnosis must be interpreted in conjunction with the clinical signs and symptoms of the patient.

The presence of IGG VZV antibody is consistent with immunity.

### Measles IGG AB (Rubeola)

<table>
<thead>
<tr>
<th>Measles IGG AB (Rubeola)</th>
<th>&lt; OR = 0.90</th>
<th>EIA value</th>
<th>EN</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA VALUE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; OR = 0.90</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Positive results suggest recent or previous infection with measles (rubeola) virus and imply immunity. Patients exhibiting equivocal results should be retested in one month, if clinically indicated.

---

### Performing Laboratory Information:
- **EN:** Quest Diagnostics-West Nile 3401 Pulaski Ave West Nile CA 91304 Laboratory Director: Dee M. Milburne M.D.
- **EZ:** Quest Diagnostics Westlake Village-2nd St 2664 Office Plaza 2664 Office Plaza Westlake CA 91361 Laboratory Director: Dee M. Milburne M.D., M.D.

---

Page 2 - End of Report
WHAT TO DO IF ANY OF YOUR QUANTITATIVE TITERS COME BACK NOT- IMMUNE:

1. Consult your physician about your vaccination history – how many immunizations have you already received for the disease(s)?
2. If you haven’t already had it, start the vaccination series for the non-immune disease. If you’re part way through the vaccination series, complete it.
3. If you’ve completed the series, you will need to get an additional immunization (also known as a booster) for that disease.
4. After completing the series, or getting the booster, wait 6 weeks and then get a follow-up titer. DO NOT GET THE TITER TOO EARLY OR IT WILL COME BACK NON- IMMUNE.

WHAT TO DO IF YOUR FOLLOW-UP TITER STILL COMES BACK NON- IMMUNE:

- If you have received all the immunizations possible (by completing the series and getting boosters), you may not convert to immunity. At this point, it is okay. The CSULB School of Nursing will need all documentation indicating your non-immunity to the disease(s), in the form of your follow-up titer(s). With this, you will be allowed to participate in clinical.