Study Design

PROJECT 4-Autoimmune children

Title: Systems Biology Approach to Study Influenza Vaccine in Children with Autoimmunity

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AIMS: This Project will study vaccine responses in healthy and sick children. It will address the following questions: 1) which are the best biomarkers of protective immune response to influenza vaccine in healthy children; 2) how unique autoimmune backgrounds set the stage for responsiveness/unresponsiveness to vaccines; 3) whether vaccination contributes to increase the breadth of autoimmunity in a disease-specific manner. Ultimately, we expect that these studies will shed light on basic aspects of humoral immune responses to vaccines and will permit us to discover biomarkers of response that can be applied to healthy children and to the general population.

SUBJECTS: 36 JDM Patients.

Samples collected: 2010 to 2013 season: JDM patients.

VACCINE: TIV (Fluzone Sabofi Pasteur)

IRB number: 011-200

**Assay Overview**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
| Visit | V1 | V2 | V3 | V4 | V5 |
| Day | D0 | 1 | 7 | 28 | 3 M |
| TIV (Fluzone) | Immunization |  |  |  |  |
| Sample collection | 3 ACD, 2 Tempus | 3 ACD, 2 Tempus | 3 ACD, 2 Tempus | 3 ACD, 2 Tempus | 3 ACD, 2 Tempus |
| Progeny samples | Plasma, PBMC, WB | Plasma, PBMC, WB | Plasma, PBMC, WB | Plasma, PBMC, WB | Plasma, PBMC, WB |
| Patient ID | Sample ID | Sample ID | Sample ID | Sample ID | Sample ID |

Clinical data: collected for all time points

CBC: collected for all time points.

Flow cytometry: WB phenotyping for all donors all time points