

BISC/ImmPort Data Release 6 studies

December 2013

Study Program: Systems Analysis Vaccine Responses in Healthy and Hyporesponsive Humans

Title: Systems scale interactive exploration reveals quantitative and qualitative differences in response to influenza and pneumococcal vaccines

Accession: SDY180

Subjects: 46

Study PI, contact: A. Karolina Palucka, Baylor Institute for Immunology Research, Dallas, TX

Study Description: Systems approach to study immune response to seasonal influenza and 23-valent pneumococcal vaccination in healthy adults.

Publication(s):

Systems scale interactive exploration reveals quantitative and qualitative differences in response to influenza and pneumococcal vaccines. *Immunity* 2013 Apr 18;38(4):831-44. [[PubMed](#)]

Assays in ImmPort:

Assay Type	Number of Exp. Samples
Array	542
Flow Cytometry	2208
Luminex xMAP	182
Virus Neutralization	89

Clinical Assessments in ImmPort: none

Notes: new study

Study Program: University of Rochester Center for Biodefense Immune Modeling

Title: Simulation and Prediction of the Adaptive Immune Response and Quantification of Early and Adaptive Immune Response Kinetics to Influenza A Virus Infection

Accession: SDY241

Subjects: 313

Study PI, contact: David Topham, Hulin Wu, University of Rochester, Rochester, NY

Study Description: Modeling approaches were combined with experimental data to investigate innate and adaptive immune responses to IAV infection.

Publication(s):

- Simulation and prediction of the adaptive immune response to influenza A virus infection. *Journal of Virology* 2009 Jul;83(14):7151-65. doi: 10.1128/JVI.00098-09 [[PubMed](#)]
- Quantifying the early immune response and adaptive immune response kinetics in mice infected with influenza A virus. *Journal of Virology* 2010 Jul;84(13):6687-98. doi: 10.1128/JVI.00266-10. [[PubMed](#)]
- Modeling of influenza-specific CD8+ T cells during the primary response indicates that the spleen is a major source of effectors. *Journal of Immunology* 2011 Nov 1;187(9):4474-82. doi: 10.4049/jimmunol.1101443 [[PubMed](#)]
- Functionally Distinct Subpopulations of CpG-Activated Memory B Cells. *Scientific Reports* 2012;2:345. doi: 10.1038/srep00345. [[PubMed](#)]
- Ki-67 expression reveals strong, transient influenza specific CD4 T cell responses after adult vaccination. *Vaccine* 2012 Jun 29;30(31):4581-4. doi: 10.1016/j.vaccine.2012.04.059. [[PubMed](#)]
- High-resolution temporal response patterns to influenza vaccine reveal a distinct human plasma cell gene signature. *Scientific Reports* 2013;3:2327. doi: 10.1038/srep02327. [[PubMed](#)]

Assays in ImmPort:

Assay Type	Number of Exp. Samples
ELISA	1866
ELISPOT	485
Flow cytometry	6389

Clinical Assessments in ImmPort:

Notes: new study

Study Program: Inner City Asthma Consortium (ICAC)**Title:** Asthma Control Evaluation (ACE): A Biomarker-Based Approach to Improving Asthma Control and Mechanistic Studies**Accession:** SDY210**Subjects:** 546**Study PI, contact:** William Busse, Ph.D., University of Wisconsin, Madison, WI**Study Description:** The purpose of ICAC-01 is to determine whether an asthma treatment strategy that measures exhaled nitric oxide (eNO) to indicate disease progression is more effective in treating asthma symptoms when combined with existing asthma treatment guidelines than treatment using the guidelines alone**Publication:**Management of asthma based on exhaled nitric oxide in addition to guideline-based treatment for inner-city adolescents and young adults: a randomised controlled trial. *Lancet*. 2008 Sep 20;372(9643):1065-72. doi: 10.1016/S0140-6736(08)61448-8. [[PMC free article](#)] [[PubMed](#)]**Assays in ImmPort:**

none	
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Clinical Assessments in ImmPort: Adherence Barriers, Adverse Events, Concomitant Medication, Allergen Skin Test, Brief Symptom Inventory, Follow-up Physical Exam, Exhaled Breath Condensates, etc...

Notes: Data formatting corrections

Study Program: Inner City Asthma Consortium (ICAC)**Title:** Inner-City Anti-IgE Therapy for Asthma**Accession:** SDY211**Subjects:** 419**Study PI, contact:** William Busse, Ph.D., University of Wisconsin, Madison, WI**Study Description:** Inner-City Anti-IgE Therapy for Asthma (ICAC-08) is a multi-center, randomized, double-blind, placebo-controlled, parallel group efficacy and safety trial designed to compare 250 inner-city children and adolescents age 6-20 years old with moderate-to-severe allergic asthma receiving standardized specialist care, including basic asthma education, with 250 similar children and adolescents receiving comparable standardized specialist care and treatment with Xolair (tm) (omalizumab).**Publication:**Randomized trial of omalizumab (anti-IgE) for asthma in inner-city children *N Engl J Med*. 2011 Mar 17;364(11):1005-15. doi: 10.1056/NEJMoa1009705. [[PMC free article](#)] [[PubMed](#)]**Assays in ImmPort:**

none	
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Clinical Assessments in ImmPort: ICATA Anaphylaxis Assessment, Asthma Attitudes, Adherence Barriers, Asthma Control Follow-up, Adverse Events, Allergen Skin Test, Asthma Symptoms and Utilization, Bioelectrical Impedance Analysis, Concomitant Medications, etc...

Notes: Updated with addition of Case Report Form and formatting corrections for numeric data

Study Program: Vaccination and Infection: Indicators of Immunologic Health and Responsiveness

Title: Apoptosis and other immune biomarkers predict influenza vaccine responsiveness

Accession: SDY212

Subjects: 91

Study PI, contact: Mark M. Davis, Stanford University School of Medicine, Stanford, CA

Study Description: In an effort to identify benchmarks of immunological health, influenza vaccination was used in 30 young (20 to 30 years) and 59 older subjects (60 to 89 years) as models for strong and weak immune responses, respectively.

Publication: Apoptosis and other immune biomarkers predict influenza vaccine responsiveness.

Molecular Systems Biology 2013 Apr 16;9:659. doi: 10.1038/msb.2013.15. [[PubMed](#)]

Assays in ImmPort:

Assay Type	Number of Exp. Samples
HAI	267
DNA Microarray	91
Peptide Microarray	91
PhosphoFlow	63
Flow Cytometry	540
MBAA, Luminex	91

Clinical Assessments in ImmPort: none

Notes: Updated experiment type for EXP13382

Study Program: Inner City Asthma Consortium (ICAC)

Title: Biomarker-based Cockroach Sublingual Immunotherapy Study (BioCSI)

Accession: SDY223

Subjects: 54

Study PI, contact: Robert Wood, MD, Johns Hopkins University School of Medicine, Baltimore, MD

Study Description: The purpose of this study is to evaluate the safety and efficacy of a sublingual cockroach extract given to adults with perennial allergic rhinitis, asthma, or both.

Publication: none

Assays in ImmPort:

none	
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Clinical Assessments in ImmPort: Adverse Events, Allergy History, Allergen Skin Test, Concomitant Medication, Dose Escalation, Hematology/Chemistry, IgE and IgG results, Peak Flow, Prescribed Medications, etc....

Notes: Updated with addition of Case Report Form and formatting corrections for numeric data
