

DAVID ROSENTHAL, D.O.
CURRICULUM VITAE

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Citizenship: U.S.A.

EDUCATION:

- July 2006-
(2012) **Elmezzi Graduate School of Molecular Medicine, North Shore-Long Island Jewish Health System, Manhasset, NY**
PhD Candidate in Molecular Medicine. Thesis advisor: Vincent R. Bonagura
- July 2004-
June 2006 **Long Island Jewish Medical Center, The Long Island Campus for Yeshiva University, Albert Einstein College of Medicine, New Hyde Park, NY**
Graduated June 2006, AOA/ACGME accredited Allergy/Immunology Fellowship
- July 2000-
Jun 2003 **Seton Hall University, School of Graduate Medical Education
St. Michael's Medical Center, Newark, NJ**
Graduated Jun 2003, AOA/ACGME dually accredited Internal Medicine Residency
- Jun 2001-
Jun 2003 **University of New England, College of Osteopathic Medicine,
St. Michael's Medical Center, Newark, NJ**
Graduated Jun 2003, AOA/ACGME dually accredited Internal Medicine Residency
- July 2000-
Jun 2001 **University of New England, College of Osteopathic Medicine,
St. Michael's Medical Center, Newark, NJ**
Graduated June 2001, American Osteopathic Association (AOA) Internship
- Aug 1996-
May 2000 **Kansas City University of Medicine and Biosciences College of Osteopathic
Medicine (KCUMB-COM), Kansas City, MO**
Previously named: University of Health Sciences-College of Osteopathic Medicine
Graduated May 2000, Doctor of Osteopathic Medicine (D.O.)
- Aug 1991-
May 1995 **Brandeis University, Waltham, MA**
Graduated *Cum Laude* with a B.A. in Biology; Dean's List
Minor in Near Eastern and Judaic Studies; Completed Pre-Medical Program

GRANTS:

- Jun 2010 **Clinical Immunology Society, 2010 CIS / Talecris Fellowship Awardee**
"Characterization of Deficiency in the Immune Response to Capsular Polysaccharide Antigen" Principle Investigator; mentored by Vincent R. Bonagura, M.D., **\$30,000.**
- Feb 2003 **North Shore-Long Island Jewish Research Institute, Research Fellowship Award,**
"Peripheral Regulation of Disease Specific Rheumatoid Factors", Principle Investigator, mentored by Vincent R. Bonagura, M.D., **\$35,000.**

AWARDS/HONORS:

- May 2008 **North Shore-Long Island Jewish Health System, 2008 Annual Academic
Competition, Basic Science, First Prize**
- Mar 2008 **ST*AR Award, American Academy of Allergy Asthma Immunology**
- Mar 2006 **NYSOMS Eastern Regional Resident Research Competition, First Place Award**
- May 2002 **St. Michael's Medical Center, Teaching Resident of the Year**
- Apr 2002 **Seton Hall University, Research Colloquium, First Place Clinical Investigation**

Apr 2002 **Seton Hall University, Research Colloquium**, Honorable Mention
 Mar 2002 **American Academy of Allergy, Asthma, and Immunology**, National Resident Education Program Attendee, one of 40 selected Residents nationwide
 Feb 2002 **NEOMEN OPTI Research Colloquium**, First Place, Clinical Investigation
 May 2001 **St. Michael's Medical Center**, Dr. Ho Memorial Award for Humanism in Medicine
 May 1995 **Brandeis University, Leadership Prize**, outstanding campus leadership
 May 1994 **Brandeis University, Hyman Rosen Prize**, academic excellence & outstanding leadership in Jewish campus activities.
 1991 **Brandeis University, Merit Scholarship**
 1989 **Boy Scouts of America, Eagle Scout Award**

CLINICAL EXPERIENCE:

July 2006-
 present **North Shore-LIJ Health System, Div. of Allergy/ Immunology**, New Hyde Park, NY
Attending Physician, teaching Fellows and House Staff, budget oversight, coordination and participation in clinical trials and translational research, clinical care for patients with immunodeficiency, including HIV. Experienced in HIV Ryan White Title I and IV funded grants, AIRS software, quality improvement programs and team leading. Laboratory studies as described below. (see Graduate student below)

ACADEMIC EXPERIENCE:

July 2006-
 present **Albert Einstein College of Medicine, Yeshiva University**, Bronx, NY
Assistant Professor of Medicine, teaching Fellows and House Staff. Laboratory studies as described below.

July 2009-
 present **North Shore-LIJ Hofstra School of Medicine**, Hempstead, NY
Assistant Professor of Medicine, teaching Fellows and House Staff. Laboratory studies as described below.

RESEARCH EXPERIENCE:

July 2006-
 Present **North Shore-LIJ Health System, Division of Allergy/Immunology**, New Hyde Park, NY
Elmezzi Scholar (Graduate Student in Molecular Medicine), Exploring TH₂/TH₁ cytokine and chemokine expression from T-cells and macrophages in HPV-induced recurrent respiratory papillomatosis and cervical cancer. HPV peptides response to anergy. Role of various antigen presenting cells in HPV-associated disease.

July 2004-
 Jun 2006 **Fellow-In-Training**, Continued projects began as a Research Fellow.

July 2003-
 June 2004 **Research Fellow**, 1) Exploring TH₂/TH₁ balance in HPV-induced recurrent respiratory papillomatosis by producing and maturing myeloid-derived dendritic cells and measuring their morphology and function via flow cytometry, immunohistochemistry, and microarrays as well as measuring cytokine, chemokine, and prostoglandin production via ELISA, and rtPCR. Associations with HLA alleles, COX-2 expression, and other variables is being performed. 2) Studying qualitative humoral deficiency post-chemotherapy in children with ALL. 3) Producing, screening, and cloning B-cell-derived, rheumatoid factor (RF)-specific hybridomas and investigating these clones IgG isotype specificity by ELISA in order to understand the peripheral regulation of RF. 4) Analyzing data, writing and editing NIH, private and internal grants, manuscripts, and institutional review board proposals.

Nov 2001 **Resident Rotation**, Stimulated isolated PBMC with Ginseng, extracted RNA and performed rtPCR to amplify clones which were screened on a microarray and analyzed in order to determine the effects of Ginseng on immune modulation. Designed data coding and statistical analysis schema with a Fellow planning a clinical asthma study.

- Nov 1999 **Medical Student Rotation**, Designed sequential PCRs to create a fusion gene containing HPV6 and 11 E6 or E7 and the HIV tat gene for use in ongoing research. Performed multiple sequence alignment of human and chimpanzee IL-2 promoter regions. Designed and conducted several other PCR experiments.
- May 1995-
Aug 1996 **University of Missouri**, Kansas City, MO
Research Associate, Planned, initiated and conducted molecular biological research to localize pro-opiomelanocortin (POMC), the pre-prohormone for β -endorphin, β -lipotropin, and ACTH in the heart of rat models. Localize POMC in the nucleus of the solitarius tract in humans. Taught medical students, graduate students, and anesthesia fellows molecular biological techniques and theory. Coordinated lab purchasing and lab activities. Employed immunohistochemical, reverse transcriptase PCR, northern blotting and in situ hybridization techniques.
- Jun-Aug 1994 **Children's Mercy Hospital**, Kansas City, MO
Research Assistant, Planned, organized, & conducted molecular biological research to characterize the allergens of a common mold, *Alternaria Alternata*, in the laboratory of Charles Barnes, PhD. & Jay Portnoy, MD. Initiated experiments comparing different strains of *Alternata* through northern blotting techniques. Standardized & correlated results with 5.8S rRNA probing & sandwich ELISA assays respectively. Created & analyzed probes using PCR & DNA sequencing.
- Jun-Aug 1993 **Research Assistant**, Examined molecular differences in strains of *Alternata* through RNA extraction & northern blotting work. Created new probes to identify the allergen via PCR. Manipulated gene products & vectors creating an allergenic fusion protein. Analyzed DNA sequencing results & searched GeneBank.
- Jun-Aug 1992 **Research Assistant**, Initiated the use of molecular biological techniques in this laboratory in order to characterize *Alternata*. Observed and studied different techniques and taught co-workers methods such as PCR, RNA extraction. Created and screened a cDNA library. Published and presented three abstracts at the 1993 AAAI meeting.
- ACTIVITIES:**
1995-present **Hebrew College**, Boston, MA
My Jewish Learning, Inc. New York, NY
Coordinator, Shamash: The Jewish Network <<http://shamash.org>>
Coordinate staff and volunteers, install and maintain UNIX software, provide technical support for users, create and maintain web content and Internet databases, create, administer and oversee 600+ mailing lists, author application documentation. Coordinate fundraising and budgets, supervise paid technical and administrative staff, create new projects, and maintain current projects. Report to lay leadership committee as well as organizational professional administration. Skilled in apache, ListProc/ListServ software, UNIX shell programming, help desk support, system administration.
- 2000-2003 **Northeast Osteopathic Medical Education Network (NEOMEN) OPTI**, Biddeford, ME
NEOMEN Southern Region, Resident Representative (2000-2003)
Video Conference Lecture Series, Seton Hall Univ Site Coordinator (2001-2003)
NEOMEN Board of Governors (BOG), Member (2002-2003)
NEOMEN BOG Education Program Committee, Member (2002-2003)
- 1997-2002 **Center for Research in Education Network (CREN)**, Washington DC
ListProc™ Support Staff, Created documentation, frequently asked questions web pages, and small support applications for the ListProc™ software. Created an automatically-updated, web-accessible, fully-searchable archive of all mailing list correspondence. Responded to questions from site administrators using ListProc™ and worked with product developers to identify and fix software bugs and beta test releases.

- 1997-1998 **Kansas City University of Medicine and Biosciences College of Osteopathic Medicine Vice President, Student Senate.** Coordinated senate activities, planned meetings, assisted member groups, assisted in financial allocations, maintained open lines of communication between the study body and the administration, rewrote senate constitution, organized elections.
- 1996-1998 **Founder and Chairperson, Computer Issues committee.** Created a committee to bring student/faculty input to campus technologies needs. Worked closely with the director of Network Services to prioritize campus technologies needs. Founded the student web site, worked with Network Services to hire additional full time technology staff, and to update and reorganize institutional hardware and software to improve technological educational resources.
- 1996-1997 **Class Representative, Student Senate.** Represented the class of 2000 in Senate events. Coordinated a voter registration drive, revised the constitution, worked closely with administration
- 1996-1997 **Committee Member, KCUMB-COM Syllabus committee** Reviewed and evaluated syllabi for completeness and content in a faculty/student committee.
- 1991-1995 **Brandeis University, Waltham, MA**
Chairperson, Project Unity. Initiated coalition building and mediated in conflict resolution to break down stereotypes. Coordinated & supervised programs about different movements in Judaism. (1994-1995)
- Teaching Assistant & Computer Specialist.** Transferred the 1990 National Jewish Population Survey statistical dataset to a user- friendly student interface. Re-coded statistical data. Planned computer assignments, taught several classes. (1994-1995)
- Founder and Chairperson, Hillel Internet System,** Established and maintained web, gopher and mailing list systems. Trained personnel to manage these systems. Created e-mail distribution lists for each of the 40 Hillel organizations based on manipulations of the Hillel database. (1993-1995)
- Hillel President,** Oversaw the management of 40 constituent groups, an executive board, and programs involving over 600 participants. Coordinated activities, delegated responsibility, engaged in leadership development, served in conflict resolution, advocacy, advisory, and crisis management roles. Approximately 40 hours/week was spent performing these duties. (1993-1994)

HOSPITAL PRIVILEGES:

- Oct 10, 2006- **North Shore University Hospital, Manhasset, NY** (Pediatrics, Internal Medicine)
present **Long Island Jewish Medical Center, New Hyde Park, NY** (Internal Medicine)
 Cohen Children’s Medical Center, New Hyde Park, NY (Pediatrics)
 Forest Hills Medical Center, Forest Hills, NY (Pediatrics, Internal Medicine)

BOARD CERTIFICATIONS:

- Diplomat, National Board of Osteopathic Medical Examiners (2002)
Board Eligible, American Board of Internal Medicine (2003)
Board Eligible, American Osteopathic Board of Internal Medicine (2003)
Board Eligible, American Board of Allergy and Immunology (2006)
Credentialed, American Academy of HIV Medicine (2012)

PROFESSIONAL MEMBERSHIPS:

- National:** Member, American Academy of HIV Medicine (2011-)
 Member, Federation of Clinical Immunology Societies (2010-)
 Member, Clinical Immunology Society (2010-)
 Member, American Academy of Allergy, Asthma & Immunology (2003-)
 Member, American College of Allergy, Asthma & Immunology (2004-)
 Member, American Medical Association (1996-)
 Member, American Osteopathic Association (1996-)
- State:** Member, New York Allergy and Asthma Society (2004-)
 Member, New York Chapter of American College of Physicians (2005-)
 Member, New York Medical Society (2006-)
 Member, New York State Osteopathic Medicine Society (2003-)
- Regional:** Member, Nassau County Medical Society (2006-)
 Member, Long Island Allergy and Asthma Society (2005-)

PROFESSIONAL LEADERSHIP:

- National:** Committee Member, Basic and Clinical Immunology Cmte, American College of Allergy
 Asthma and Immunology (2008-)
- International:** Board Member, Allergists for Israel (2005-)

INVITED PRESENTATIONS:

1. HIV in Adolescents. CME Conference: Current Issues in Pediatric and Adolescent Gynecology. North Shore University Hospital. Manhasset, NY. Nov 2, 2011.
2. Allergic Diseases: The Molecular Immunology of Atopy. Internal Medicine Grand Rounds. North Shore-LIJ Health System. New Hyde Park, NY. Sept 22, 2011.
3. Management and Testing for HIV in 2011. Pediatric Grand Rounds, Cohen Children's Medical Center Long Island Jewish Medical Center. New Hyde Park, NY, January 14, 2011.
4. Management and Testing for HIV in 2011. Pediatric Grand Rounds, North Shore University Hospital, Manhasset, NY, Feb 4, 2011.
5. An update in Clinical Immunology in 2011. Nassau County Association of School Nurses, Bellmore, NY, February 9, 2011.
6. An update in HIV management in 2010. New York College of Osteopathic Medicine, 2010, Westbury, NY.
7. The role of immune defects in Common Granulomatous Disease and Recurrent Respiratory Papillomatosis. Joint conference of the American College of Allergy Asthma and Immunology and the Israeli Academy of Allergy and Clinical Immunology. December 2008. Jerusalem, Israel.
8. Human Papillomavirus causes a T_H2-like Chemokine Predominance in Recurrent Respiratory Papillomatosis (RPR). Presented at the ST*AR program, Am Acad Allergy Asthma Immunology 2008, Philadelphia, PA.
9. CD4⁺Foxp3⁺CD127^{low} T-regulatory cells are increased in HPV infected Papillomas in patients with Recurrent Respiratory Papillomatosis (RRP) 24th International Papillomavirus Conference and Clinical Workshop, Beijing, China, 2007.
10. New Developments in HIV Management and Therapy. Grand Rounds, North Shore University Hospital, Manhasset, NY. Jan 31, 2007.
11. Evaluation of Atypical Cystic Fibrosis (CF) in Chronic Sinusitis Patients: A Case Report. American College Allergy Asthma Immunology Philadelphia, PA, Nov 13, 2006.
12. Increased Type 2 Chemokine Expression in Recurrent Respiratory Papillomatosis (RRP). 23rd International Papillomavirus Conference, Prague, Czech Republic, Sept 3-7, 2006. (Presented by my mentor, due to travel cost limitations)
13. Northern Blot Identification of Alt aI mRNA in 8 strains of Alternaria, Amer. Acad. Allergy Asthma Immunol. Anaheim, CA. Mar 7, 1994.

PUBLICATIONS (in chronological order):

ORIGINAL COMMUNICATIONS IN REVIEWED JOURNALS:

1. Hatam LJ, DeVoti JA, Rosenthal DW, Steinberg BM, Abramson A, Bonagura VR. Immune Suppression in Premalignant Respiratory Papillomas: Enriched Functional CD4+Foxp3+ Regulatory T-cells And PD-1/PD-L1/L2 Expression. *Clinical Cancer Res*. 2012. Epub 2012 Feb9. doi: 10.1158/1078-0432.CCR-11-2941
2. James EA, DeVoti JA, Rosenthal DW, Hatam LJ, Steinberg BM, Abramson A, Kwok WW, Bonagura VR, Papillomavirus-Specific CD4+ T-cells Exhibit Reduced STAT-5 signaling and Altered Cytokine Profiles in Patients with Recurrent Respiratory Papillomatosis. *Journal of Immunology*. J Immunol. 2011 Jun 1;186(11):6633-40. Epub 2011 Apr 29. PMID: 21531896. PMCID: PMC3124771
3. Meth MJ, Rosenthal DW, Bonagura VR. Subcutaneous immunoglobulin infusion to treat infants and toddlers with antibody deficiencies. *Ann Allergy Asthma Immunol*. 2010 Aug;105(2):187-8. PubMed PMID: 20674834.
4. Bonagura VR, Hatam LJ, Rosenthal DW, de Voti JA, Lam F, Steinberg BM, Abramson AL. Recurrent respiratory papillomatosis: a complex defect in immune responsiveness to human papillomavirus-6 and -11. *APMIS*. 2010 Jun;118(6-7):455-70. Review. PubMed PMID: 20553528.
5. Bonagura VR, Du Z, Ashouri E, Luo L, Hatam LJ, DeVoti JA, Rosenthal DW, Steinberg BM, Abramson AL, Gjertson DW, Reed EF, Rajalingam R. Activating KIR receptors 3DS1 and 2DS1 protect against developing the severe form of recurrent respiratory papillomatosis. *Human Immunology*. 2010. February; 71(2): 212.
6. Schuval SJ, Gavin Schwarz G, Leonov A, Rosenthal DW. Serious Infection and “Iatrogenic” Immunodeficiency in a Patient treated with Rituximab?[E-letter], *Pediatrics* (March 8, 2009) <http://pediatrics.aappublications.org/cgi/eletters/123/1/e159>
7. DeVoti JA, Rosenthal DW, Wu, R, Abramson, AL, Steinberg, BM, Bonagura, VR. Immune Dysregulation and Tumor-Associated Gene Changes in Recurrent Respiratory Papillomatosis: A Paired Microarray Analysis. *Molecular Medicine*. Sept/Oct 2008: 14 (9-10) 608-617.
8. Bonagura VR, Marchlewski R, Cox A, Rosenthal DW. Biologic IgG level in primary immunodeficiency disease: the IgG level that protects against recurrent infection. *J Allergy Clin Immunol*. 2008 Jul;122(1):210-2. DOI: 10.1016/j.jaci.2008.04.044
9. Brodtman DH, Rosenthal DW, Redner A, Lanzkowsky P, Bonagura VR: Immunodeficiency In Children with Acute Lymphoblastic Leukemia, After Completion of Modern Aggressive Chemotherapeutic Regimens. *J. Pediatrics*. May 2005. 145(5). 654-661.
10. Bonagura VR, Vambutas A, DeVoti JA, Rosenthal DW, Steinberg BM, Abramson AL, Shikowitz MJ, Gjertson DW, Reed EF: HLA Alleles, IFN-g Responses to HPV-11 E6, and Disease Severity in Patients with Recurrent Respiratory Papillomatosis. *Human Immunology*. 2004. 65 (8): 773-782.
11. DeVoti JA, Steinberg BM, Rosenthal DW, Hatam L, Vambutas A, Abramson AL, Shikowitz MJ, Bonagura VR. Failure of Gamma Interferon, but not Interleukin-10 Expression in Response to Human Papillomavirus Type 11 E6 Protein in Respiratory Papillomatosis. *Clinical and Diagnostic Laboratory Immunology*. 2004. 11(3). 538-547.
12. Millington WR, Rosenthal DW, Unal CB, Nyquist-Battie C. Localization of Pro-opiomelanocortin mRNA transcripts and peptide immunoreactivity in rat heart. *Cardiovascular Research* 1999. 43(1):107-116
13. Rosenthal D, Pacheco F, Landuyt J, Barnes C, Portnoy J. Northern blot identification of mRNA containing sequence for protein allergen, Alt a1, in eight strains of *Alternaria alternata*. *Annals of Allergy, Asthma and Immunology*: 1998; 80(6). 471-5
14. Barnes CS., Pacheco F, Landuyt J, Rosenthal D, Hu F, Portnoy J. Production of a recombinant protein from *Alternaria* containing the reported N-terminal of the Alt A1 allergen. *Advances in Experimental and Medical Biology* 1996. 409: 197-203

PUBLISHED ABSTRACTS

1. Jongco AM, DeVoti JA, Sarnataro K, Diaz JM, Rosenthal DW, Bonagura VR. Investigating the Role of MicroRNAs (MIRs) in the Dysregulated immune response Underlying Recurrent Respiratory

- Papillomatosis (RRP) caused by Low Risk Human Papillomaviruses (LR HPV). 2012 CIS Annual Meeting: Primary Immune Deficiency Disease North American Conference May 17 - 20, 2012 (Annual Meeting Abstract Submission).
2. Helfner L, Jongco A, Schuval SJ, Rosenthal DW. Successful Repeated Desensitization to High Dose Methotrexate. *Annals of All Asth Imm*. 107:5(Supplement 1): A76. Presented at the Am Coll All Asthma Imm, Nov 5, 2011. Boston, MA.
 3. Katz L, Sporter RJ, Cavuto MA, Bonagura VR, DeVoti JA, Rosenthal DW. Variability of Commercially Available Sesame Skin Prick Test Reagents. *Journal of Allergy and Clinical Immunology*. 127 (2), Supplement: AB185. DOI: 10.1016/j.jaci.2010.12.734 Presented at the Am Acad All Asthma Imm. Mar 2011.
 4. Kuryan J, Jhaveri KD, Wang X, Colter C, Rosenthal DW. Immune Complex Variant C1Q Nephropathy in a Patient with Congenital HIV. *Annals of All Asth Imm*, 105 (5:Supplement 1): A72. Presented at the Am Coll All Asthma Imm, Nov 13, 2010. Phoenix, AZ.
 5. James EA, Devoti JA, Rosenthal DW, Hatam LJ, Steinberg BM, Abramson A, Bonagura VR. Human Papillomavirus 6/11-Specific T-cells Binding Class II Tetramer-E2/E6 Complexes elicit reduced IFN- γ . 26th Annual International Papillomavirus Conference, Montreal, Canada. 112
 6. Rosenthal DW, Devoti JA, Steinberg BM, Abramson A, Bonagura VR. Alteration of Plasma TH2-chemokines in Patients with Recurrent Respiratory Papillomatosis (RRP) treated with Celecoxib. 26th Annual International Papillomavirus Conference, Montreal, Canada. 149
 7. Devoti JA, Rosenthal DW, Diaz J, Abramson A, Bonagura VR. Select Micro-RNA's (miRNA's) are Upregulated in HPV-6 and -11 Induced Recurrent Respiratory Papillomatosis (RRP). 26th Annual International Papillomavirus Conference, Montreal, Canada. 150.
 8. Bonagura VR, Hatam LJ, DeVoti JA, Rosenthal DW, Steinberg BM. Defective Natural Killer (NK) Cell Function In Patients With Recurrent Respiratory Papillomatosis (RRP) infected with HPV-6/11. 26th Annual International Papillomavirus Conference, Montreal, Canada. 184
 9. Bonagura VR, Du Z, Luo L, Gjertson D, Hatam LJ, DeVoti JA, Rosenthal DW, Reed E, Rajalingman R. KIR3DS1, KIR2DS1, and KIR2DS5 protect against the development of severe recurrent respiratory papillomatosis (RRP) in HPV-6/11-infected patients. 26th Annual International Papillomavirus Conference, Montreal, Canada. Oral Presentation. July 6, 2010
 10. Sporter R, Meyer E, Rosenthal DW. Highly Active Anti-Retroviral Treatment (HAART) Medication Adherence in Adolescents with Perinatally-Acquired HIV Infection *J Allergy Clinical Immunology*.2010. 125(2): AB78. Presented at the Am Acad Allergy Asthma Immunology 2010, New Orleans, LA.
 11. Rosenthal DW, Devoti JA, Bonagura VR, T_H2-like Chemokine Predominance in Recurrent Respiratory Papillomatosis (RPR) Does Not Originate from Peripheral Blood Mononuclear Cells (PBMC) *J Allergy Clinical Immunology*.2010. 125(2): AB144. DOI: 10.1016/j.jaci.2009.12.563 Presented at the Am Acad Allergy Asthma Immunology 2010, New Orleans, LA.
 12. James E, DeVoti JA, Rosenthal DW, Hatam LJ, Steinberg BM, Abramson A, Kwok WW, Bonagura VR. Human Papillomavirus (HPV)-Specific T-cells Recognizing Dominant E2/E6 Epitopes Elicit Reduced IFN- γ in Patients with Recurrent Respiratory Papillomatosis (RRP) *J Allergy Clinical Immunology*.2010. 125(2): AB77. DOI: 10.1016/j.jaci.2009.12.303 Presented at the Am Acad Allergy Asthma Immunology 2010, New Orleans, LA
 13. Leonov A, Rosenthal DW, Bonagura VR., Decreased Marginal Zone B-cell (MZB) Expression in Common Variable Immunodeficiency (CVID) Does Not Predict Deficient IgM Isohemagglutinin (IgMIH) Production. *J Allergy Clinical Immunology*.2010. 125(2): AB13. DOI: 10.1016/j.jaci.2009.12.080 Presented at the Am Acad Allergy Asthma Immunology 2010, New Orleans, LA.
 14. Diaz J, Devoti JA, Rosenthal DW, Bonagura VR , Select Micro-RNAs (miRs) Are Upregulated in Human Papillomavirus (HPV) 6 and 11-Induced Recurrent Respiratory Papillomatosis (RRP) *J Allergy Clinical Immunology*.2010. 125(2): AB76. DOI: 10.1016/j.jaci.2009.12.298 Presented at the Am Acad Allergy Asthma Immunology 2010, New Orleans, LA.
 15. Bonagura VR, Hatam LH, Rosenthal DW, Devoti JA, Steinberg BM, Abramson A, Defective NK Cytolysis in Recurrent Respiratory Papillomatosis (RRP) *J Allergy Clinical Immunology*.2010. 125(2): AB76. DOI: 10.1016/j.jaci.2009.12.299 Presented at the Am Acad Allergy Asthma Immunology 2010, New Orleans, LA.
 16. Mithani S, Farzan S; Rosenthal DW, Kaplan B, An Atypical Clinical Presentation and a Novel Gene Mutation in a Patient with Hyper-IgE Syndrome. *Annals of Allergy, Asthma & Immunology* 2009 103(5), A101. Presented at the American College of All Imm, 2009,

17. Sharif NA, Rosenthal DW, Schuval, S. Undetectable HIV Infection in a 12 year old Perinatally-Infected Child. *Annals of Allergy, Asthma & Immunology* 2009 103(5), A101. Presented at the American College of All Imm, 2009,
18. Siegel SA, Rosenthal DW, Bonagura VR. Biologic IgG Level (BIgGL): One Size Does Not Fit All. *J Allergy Clinical Immunology*.2009. 123(2): S12. DOI: 10.1016/j.jaci.2008.12.057 Presented at the Am Acad Allergy Asthma Immunology 2009, Washington DC.
19. Alexis A, Safier B, Rosenthal DW, Cavuoto MA. Sesame Food Allergy and Sensitization in Children: A Growing Concern in the USA. *J Allergy Clinical Immunology*.2009. 123(2): S32. Presented at the Am Acad Allergy Asthma Immunology 2009, Washington DC.
20. Meth MJ, Serota M, Rosenthal DW, Santiago MT, Cavuoto MA. High Frequency of CF Transmembrane Conductance Regulator (CFTR) Mutations in a Population with Persistent Asthma and/or Chronic Rhinosinusitis. *J Allergy Clinical Immunology*.2009. 123(2): S159. Presented at the Am Acad Allergy Asthma Immunology 2009, Washington DC.
21. Bonagura VR Du Z, Luo L, Gjertson D, Hatam LJ, Devoti JA, Rosenthal DW, Reed E, Rajalingam R. KIR3DS1, KIR2DS1, and KIR2DS5 Protect Against the Development of Severe Recurrent Respiratory Papillomatosis (RRP) in HPV-6/11-Infected Patients. *J Allergy Clinical Immunology*.2009. 123(2): S165. DOI: 10.1016/j.jaci.2008.12.620 Presented at the Am Acad Allergy Asthma Immunology 2009, Washington DC.
22. Siegel, S, Schuval SJ, Rosenthal DW, Neurosyphilis as a presentation of HIV infection in an adolescent. *Annals of Allergy, Asthma & Immunology* 2009; 102(1):A95. Presented at the American College of All Imm, 2008, Seattle, WA.
23. Rosenthal DW, Devoti, JA, Schmidtmayerova H, Steinberg, BM, Bonagura VR. Human Papillomavirus causes a TH2-like Chemokine Predominance in Recurrent Respiratory Papillomatosis (RRP). *J Allergy Clinical Immunology*.2008. 121(2): S15. DOI: 10.1016/j.jaci.2007.12.062 Presented at the Am Acad Allergy Asthma Immunology 2008, Philadelphia, PA.
24. Bonagura VR, James E, DeVoti JA, Rosenthal DW, Hatam LJ, Steinberg BM, Abramson A, Kwok WW. Class II MHC Tetramer Guided Epitope Mapping (TGEM) of E6/E2-Specific T-Cells in Patients with Recurrent Respiratory Papillomatosis (RRP): Developing a Therapeutic Vaccine. *J Allergy Clinical Immunology*.2008. 121(2): S166. DOI: 10.1016/j.jaci.2007.12.613 Presented at the Am Acad Allergy Asthma Immunology 2008, Philadelphia, PA.
25. Hatam LJ, Rosenthal DW, DeVoti JA, Lam F, Abramson A, Steinberg BM, Bonagura VR. CD4+Foxp3+CD127+low T-Regulatory Cells are Increased in HPV Infected Papillomas in Patients with Recurrent Respiratory Papillomatosis (RRP). *J Allergy Clinical Immunology* 2008. 121(2): S211. DOI: 10.1016/j.jaci.2007.12.789 Presented at the Am Acad Allergy Asthma Immunology 2008, Philadelphia, PA.
26. Siegel, S., Katz, LA., Rosenthal, DW. Perinatally infected HIV(PIHIV) patients fail to mount sustained anti-Hepatitis B surface antibody titers(HBsAb) after vaccination. *J Allergy Clinical Immunology*. .2008. 121(2): S229. Presented at the Am Acad Allergy Asthma Immunology 2008, Philadelphia, PA.
27. Rosenthal DW, Schmidtmayerova H, Steinberg, BM, Bonagura, VR. Recurrent Respiratory Papillomatosis (RRP): A Type 2 T-cell Disease. 24th International Papillomavirus Conference and Clinical Workshop, Beijing, China, 2007.
28. Hatam L, Rosenthal DW, DeVoti JA, Lam F, Abramson A, Steinberg BM, Bonagura VR. CD4+Foxp3+CD127+low T-regulatory cells are increased in HPV infected Papillomas in patients with Recurrent Respiratory Papillomatosis (RRP) 24th International Papillomavirus Conference and Clinical Workshop, Beijing, China, 2007.
29. Bonagura VR, James E, DeVoti JA, Rosenthal DW, Hatam L, Abramson A, Steinberg BM, Kwok WW. Class II MHC Tetramer Guided Epitope Mapping (TGEM) Of E6/E2-Specific T-cells in Patients with Recurrent Respiratory Papillomatosis (RRP): developing a therapeutic vaccine. 24th International Papillomavirus Conference and Clinical Workshop, Beijing, China, 2007.
30. Devoti, JA, Rosenthal DW, Wu R, Abramson A, Steinberg, BM, Bonagura VR. Chemokine Mediated Immune Evasion by Human Papillomavirus (HPV) in Recurrent Respiratory Papillomatosis (RRP). 24th International Papillomavirus Conference and Clinical Workshop, Beijing, China, 2007.
31. Silverman, SP, Rosenthal, DW, Ponda, P, Bonagura VR. Hypo-IgM Syndrome: A Secretion Defect? *J Allergy Clinical Immunology*.2007, 119 (1) S14. DOI: 10.1016/j.jaci.2006.11.072 . Presented at the Am Acad Allergy Asthma Immunology 2007, San Diego, CA.
32. Rosenthal, DW, Colter, C, Maroldo, L, Coakley, E, Schuval SJ. Multidrug-Resistant (MDR) HIV

- Transmission to a Third Generation Offspring. *J Allergy Clinical Immunology*.2007, 119 (1) . Presented at the Am Acad Allergy Asthma Immunology 2007, San Diego, CA.
33. Rosenthal DW, DeCelie-Germana J, Bonagura VR. Evaluation of Atypical Cystic Fibrosis (CF) in Chronic Sinusitis Patients: A Case Report. Presented at the Am College Allergy Asthma Immunology 2006, Philadelphia, PA
 34. Rosenthal DW, DeVoti JA, Wu R., Schmidtmayerova, Steinberg BM, Bonagura VR. Increased Type 2 Chemokine Expression in Recurrent Respiratory Papillomatosis (RRP). 23rd International Papillomavirus Conference, Prague, Czech Republic, Sept 3-7, 2006
 35. Bonagura VR, DeVoti JA, Rosenthal DW, Hatam L, Steinberg BM, Kwok B. Class II MHC Tetramer Identification of HPV-6, E6-specific T-cells.). 23rd International Papillomavirus Conference, Prague, Czech Republic, Sept 3-7, 2006
 36. Rosenthal DW, DeVoti JA, Wu R., Schmidtmayerova, Steinberg BM, Bonagura VR. Recurrent Respiratory Papillomatosis (RRP): Increased T_H2-like Chemokine Expression. *J Allergy Clinical Immunology*. 2006;117 (2): S104. DOI: 10.1016/j.jaci.2005.12.417 Presented at AAAAI 2006.
 37. Ponda, P, Rosenthal DW, Kaplan, B, LoGalbo, P, Schuval, SJ, Torgerson, TR, Ochs, HD, Bonagura, VR: A Case of Immune Dysregulation, Polyendocrinopathy, Enteropathy, X-linked (IPEX) Syndrome without serological evidence of autoimmunity. *J Allergy Clinical Immunology*. 2006; 117 (2): S289. DOI: 10.1016/j.jaci.2005.12.1090 Presented at AAAAI 2006.
 38. Marchlewski R, Rosenthal DW, Bonagura, VR. A Case of Hyper IgM Syndrome with an Intronic Point Mutation at Intervening Sequence 2, Position 16 in Activation-Induced Cytidine Deaminase (*AID*) Gene. *J Allergy Clinical Immunology*. 2006; 117 (2): S283. DOI: 10.1016/j.jaci.2005.12.1169 Presented at AAAAI 2006.
 39. Rosenthal DW, Colter C, Schuval S. Transmission of Multidrug-resistant HIV to a Third Generation. #P206. Presented at the Am College Allergy Asthma Immunology 2005, Anaheim, CA.
 40. Bonagura V, Rosenthal D, Schmidtmayerova H, Steinberg B. Recurrent Respiratory Papillomatosis (RRP): Enriched T_H2-like Chemokine 18 (CCL18) Plasma Expression and Disease Severity. Presented, 22th International Papillomavirus Conference. Vancouver, British Columbia, 2005.
 41. Rosenthal DW, Schmidtmayerova H, Steinberg BM, et al. Recurrent Respiratory Papillomatosis (RRP): Disease Severity Associates with Enhanced TH2-like Dendritic Cell Chemokine (DC-CK1) Plasma Expression. *J Allergy Clinical Immunology*. 2005;115(2):S81. DOI: 10.1016/j.jaci.2004.12.336 Presented at AAAAI 2005
 42. Hadjiev B, Devoti JA, Rosenthal DW, Vambutas A, Steinberg BM, Bonagura VR. Recurrent Respiratory Papillomatosis (RRP) T_H2-like T-Cell Polarization Induced by Human Papillomavirus (HPV)-11, Early Protein-6 (E6). *J Allergy Clinical Immunology*. 2005;115(2):S135. DOI: 10.1016/j.jaci.2004.12.552 Presented at AAAAI 2005
 43. Rosenthal DW, Devoti JA, Steinberg BM, Bonagura VR, HPV-6 Up-Regulates Cyclooxygenase-2 in Recurrent Respiratory Papillomatosis (RRP). *J of Allergy and Clinical Immunology* 2004, 113 (2). S213. DOI: 10.1016/j.jaci.2004.01.207 Presented Amer. Acad. Allergy Asthma Immunol 2004.
 44. Hu F; Rosenthal D, Barnes C, Landuyt J, Pacheco F, Portnoy J. A 15 kD protein containing sequence for an Alt a1 epitope.). *J of Allergy and Clinical Immunology* 1997, 99 (1S2). S1586. Presented at the Amer. Acad. Allergy Asthma Immunol 1997.
 45. Rosenthal DW, Manning AB, Resch GE, Millington WR, Manalo MJ. Localization of α -N-acetyl- β -endorphin immunoreactivity and pro-opiomelanocortin mRNA in cardiovascular nuclei of rat and human brain. *Society of Neuroscience* 1996; 22(2):1308.
 46. Manalo MJ, Manning AB, Rosenthal DW, Fibuch EE, Handler MS, Millington WR. Localization of Opioid and Non-Opioid β -Endorphin Peptides and Pro-opiomelanocortin mRNA in Cardioregulatory Nuclei of Rat and Human Brain. *Midwest Anesthesiology Residents Conference* 96. Apr 1996.
 47. Barnes CS, Pacheco F, Landuyt J, Rosenthal D, Hu F, Portnoy J. Production of a recombinant protein from *Alternaria* containing the reported N-Terminal of the Alt A1 Allergen. *New Horizons in Allergy Immunotherapy* ed. Schon A, Hayglass K, Kraft D. Plenum Press. New York and London. 1996.
 48. Hu F, Pacheco F, Landuyt J, Rosenthal D, Barnes C, Portnoy J. IgE Binding to a Synthetic Recombinant Peptide Containing the N-Terminal AA Sequence of Alt A1. *J Allergy Clinical Immunology*. 1995; 95 (1):166. Presented Amer. Acad. Allergy Asthma Immunol 1995.

49. Rosenthal D, Crenshaw R, Esch R, Pacheco F, Landuyt J, Hu F, Barnes C, Portnoy J. Northern Blotting Studies on Alt A1 mRNA and 5.8S rRNA in Nine Strains of Alternaria. *J Allergy Clinical Immunology* 1995;95 (1): 166. Presented Amer. Acad. Allergy Asthma Immunol 1995.
50. Portnoy J, Pacheco F, Rosenthal D, Landuyt J, Barnes C. Partial Amino Acid Sequence for the 31kD Allergen Alt a1. *J Allergy Clinical Immunology* 1994;93(1):189. Presented Amer. Acad. Allergy Asthma Immunol 1994.
51. Pacheco F, Rosenthal D, Portnoy J, Landuyt J, Barnes C. Production of a fusion protein containing recombinant alt a1, a major Alternaria allergen. *J Allergy Clinical Immunology* 1994;93(1):208. Presented Amer. Acad. Allergy Asthma Immunol 1994.
52. Barnes C, Rosenthal D, Pacheco F, Landuyt J, Portnoy J. Studies on the mRNA of Alternaria allergen Alt a1 by Polymerase Chain Reaction. *J Allergy Clinical Immunology* 1994;93(1):207. Presented Amer. Acad. Allergy Asthma Immunol 1994.
53. Rosenthal D, Crenshaw R, Esch R, Pacheco F, Landuyt J, Barnes C, Portnoy J., Northern Blot Identification of Alt A1 Messenger-RNA in 8 Strains of Alternaria. *Allergy Clinical Immunology* 1994;93(1):232. Presented Amer. Acad. Allergy Asthma Immunol 1994.
54. Rosenthal D, Portnoy J, Horner S, Pacheco F, Landuyt J, Barnes C. Production of recombinant Alternaria allergens. *J Allergy Clinical Immunology* 1993;91:279. Presented Amer. Acad. Allergy Asthma Immunol 1993.
55. Portnoy J, Rosenthal D, Horner S, Pacheco F, Landuyt J, Barnes C. Polymerase chain reaction (PCR) detection of DNA for the Alternaria allergen Alt a1. *J Allergy Clinical Immunology* 1993;91:188. Presented Amer. Acad. Allergy Asthma Immunol 1993.
56. Barnes C, Rosenthal D, Pacheco F, Landuyt J, Portnoy J. Structural Determination of a human IgE recognized protein from Alternaria alternata. *FASEB Journal* 1993;7(7):A1281.

DATABASE ENTRIES

Alternaria alternata Alt a1 mRNA, complete cds. Genbank Accession AAU62097, 506 bp mRNA.

Alternaria alternata Alt a1, Protein Accession 1421808. 135 aa protein.

REFERENCES AVAILABLE UPON REQUEST

As of November 2011