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PERSONAL

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EDUCATION

Postdoctoral 10/1984-10/1988	Postdoctoral Fellow University of North Carolina at Chapel Hill Chapel Hill, NC Training: Molecular Immunology
Postdoctoral 9/1983-9/1984	Postdoctoral Fellow University of North Carolina at Chapel Hill Chapel Hill, NC Training: Cellular and Molecular Immunology
Graduate 9/1977-5/1983	Ph.D. Microbiology and Immunology NIH Fellow 1977-1980 University of Alabama at Birmingham Birmingham, Alabama
Undergraduate 9/1973-5/1977	B.A. Major: Biology Smith College Northampton, Mass

PROFESSIONAL EXPERIENCE

5/2004-Present	Facility Director Biospecimen Processing Facility Department of Epidemiology University of North Carolina at Chapel Hill Chapel Hill, North Carolina
11/1991 - 2/2004	<u>Research Immunologist, III</u> Chemistry and Life Sciences, Bioorganic Chemistry. Research Triangle Institute, Research Triangle Park, NC.

Performed and directed molecular immunology research.

- 10/1989 - 8/1991 Research Scientist
Sphinx Pharmaceuticals, Discovery Division.
Durham, NC.
- 11/1988 – 8/1989 Research Associate
Department of Microbiology and Immunology
University of North Carolina at Chapel Hill, Chapel Hill
- 10/1984-10/1988 Postdoctoral Fellow
Mentor: Jenny P.-Y. Ting
Department of Microbiology and Immunology
University of North Carolina at Chapel Hill, Chapel Hill
- 10/1983 - 9/1984 Postdoctoral Fellow
Mentor: Jeffrey A. Frelinger
Department of Microbiology and Immunology
University of North Carolina at Chapel Hill, Chapel Hill
- 6/1893 -9/1983 Research Assistant
Department of Microbiology and Immunology
University of Alabama at Birmingham
Birmingham, AL
- 9/1977 – 5/1983 Graduate Student
Advisor: David E. Briles
Department of Microbiology and Immunology
University of Alabama at Birmingham
Birmingham, AL.

HONORS

- 1977 – 1980 NIH Fellow
University of Alabama at Birmingham
Birmingham, AL.
- 1975 -1977 Dean's List
Smith College
Northampton, Ma.

MEMBERSHIPS

- 2014 – Present International Society for Biological and Environmental
Repositories

BIBLIOGRAPHY

Book Chapters

1. **Basta, PV.** Developmental Neurotoxicity and Postnatal Immune Deficits. In Developmental Immunotoxicology. New York, NY. CRC Press, 2004: 285-301.
2. Briles DE, Claflin LJ, Schroer K, Forman D, **Basta, P**, Lehmeier J. and Benjamin WH. Jr.. The use of hybridoma antibodies to examine antibody mediated anti-microbial activities. In Monoclonal Antibodies and T Cell Hybridomas, Vol. 3, G. Hammerling, U. Hammerling and J. F. Kearney, eds. Elsevier/North-Holland Publishing Company, 1981, pp. 259-268.

Refereed Journal Publications

1. Freeman CM, Crudgington S, Stolberg VR, Brown JP, Sonstein J, Alexis NE, Doerschuk CM, **Basta PV**, Carretta EE, Couper DJ, Hastie AT, Kaner RJ, O'Neal WK, Paine Iii R, Rennard SI, Shimbo D, Woodruff PG, Zeidler M, Curtis JL. Design of a multi-center immunophenotyping analysis of peripheral blood, sputum and bronchoalveolar lavage fluid in the Subpopulations and Intermediate Outcome Measures in COPD Study (SPIROMICS). *J Transl Med.* 2015; 13(1)19.
2. Couper D, Lavange LM, Han M, Barr RG, Bleecker E, Hoffman EA, Kanner R, Kleeup E, Martinez FJ, Woodruff PG, Rennard S; for the **SPIROMICS Research Group**. Design of the Subpopulations and Intermediate Outcomes in COPD Study (SPIROMICS). *Thorax.* 2014; 69(5):491-4.
3. O Neal WK, Anderson W, **Basta PV**, Carretta EE, Doerschuk CM, Barr RG, Bleecker ER, Christenson SA, Curtis JL, Han MK, Hansel NN, Kanner RE, Kleeup EC, Martinez FJ, Miller BE, Peters SP, Rennard SI, Scholand MB, Tal-Singer R, Woodruff PG, Couper DJ, Davis SM. Comparison of serum, EDTA plasma and P100 plasma for luminex-based biomarker multiplex assays in patients with chronic obstructive pulmonary disease in the SPIROMICS study. *J Transl Med.* 2014; 12(9):1-9.
4. Olshan AF, Luben TJ, Hanley NM, Perrault SD, Chan RL, Herring AH, **Basta PV**, Demarini DM. Preliminary examination of polymorphisms of GSTM1, GSTT1, and GSTZ1 in relation to semen quality. *Mutat. Res.*,2010; 688 (1-2):41-46.
5. **Basta PV**, Bensen JT, Tse CK, Perou CM., Sullivan PF, Olshan, AF. Genetic Variation in Transaldolase I and risk of Squamous Cell Carcinoma of the Head and Neck Cancer. *Cancer Detection and Prevention* 2008; 32(3):200-208.
6. **Basta PV**, Whitmore SP, Basham KB, Whisnant CC. Microsatellite Genetic Monitoring analysis of FVB Mice. *Comparative Medicine.* 2004; 54(5):524-527.

7. **Basta PV**, Adcock AF, Tallent R, Fleming DN, Seltzman H H, Whisnant, CC, Cook CE. Identification and Characterization of Monoclonal Antibodies reactive with the endogenous cannabinoid, anandamide. *J. of Imm. Methods*, 2004; 285(2):181-95.
8. Navarro HN, **Basta PV**, Seidler FJ, Slotkin TA. Short-term adolescent nicotine exposure in rats elicits immediate and delayed deficits in T-lymphocyte Function: Critical periods, patterns of exposure, dose thresholds. *Nicotine and Tobacco Research* 2003; 5(6):859-868.
9. Navarro HA, **Basta PV**, Seidler, FJ, Slotkin TA. Adolescent Nicotine: Deficits in Immune Function. *Developmental Brain Research*, 2001; 130(2): 253-256.
10. Navarro HA, **Basta PV**, Seidler FJ, Slotkin TA. Neonatal Chlorpyrifos Administration Elicits Deficits in Immune Function in Adulthood: A Neural Effect? *Developmental Brain Research*, 2001; 130(2): 249-252.
11. **Basta PV**, Basham, KB, Ross, WP, Brust, ME, Navarro, HA. Gestational nicotine exposure alone or in combination with ethanol down-modulate offspring immune function. *Int. J. Immunopharm.*, 2000; 22(2):159-169.
12. Basham KB, Whitmore SP, Adcock AF, **Basta PV**. Chronic and Acute Prenatal and Postnatal Ethanol Exposure on Lymphocyte Subsets from Offspring Thymic, Splenic and Intestinal Intra-epithelial Sources. *Alcohol. Clin. Exp. Res.*, 1998; 22(7),:1501-1508.
13. Brown AM, Linhoff MW, Stein B, Wright KL, **Basta PV**, Ting JP. Function of NF- κ B/Rel Binding Sites in the MHC Class II Invariant Chain Promoter is Dependent on Cell-Specific Binding of Different NF- κ B/Rel subunits. *Mol. Cell. Biol.*, 1994; 14(5): 2906-2935 (1994).
14. Fisher GJ, Tavakkol A., Leach K, Burns D, **Basta P**, Loomis C, Griffiths CEM, Cooper KD, Reynolds NJ, Elder JT, Livneh E, Voorhees JJ. Differential Expression of Protein Kinase C Isozymes in Normal and Psoriatic Adult Human Skin: Reduced Expression of Protein Kinase C in Psoriasis. *J. Invest. Dermatol.*, 1993; 101(4):553-559.
15. Aris JP, **Basta PV**, Holmes WB, Ballas L, Moomaw C, Rankl N, Blobel G, Loomis C, Burns, D. Molecular and Biochemical Characterization of a Recombinant Human PKC- δ Family Member. *Biochem. Biophys. Acta.*, 1993; 1174(2): 171-181.
16. **Basta P**, Strickland M., Holmes W, Loomis C, Ballas L, Burns D. Sequence and expression of human protein kinase C-epsilon. *Biochem. Biophys. Acta.*, 1992; 1132(2): 154-160).
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20. **Basta PV**, Moore TL, Yokota S, Ting JP. A β -adrenergic agonist modulates DR α gene transcription via enhanced cAMP levels in a glioblastoma multiforme line. *J. Immunol.*, 1989; 142(8): 2895-2891.
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Selected Presentations and Abstracts

1. **Basta PV**, DeJong, H, Lopez A B, Optimized method for DNA extraction from saliva and other non-blood sources. *Molecular Medicine Tri-Conference*, San Francisco, CA, February 9-14, 2014 .
2. **Basta P V**, Dominguez R, Heidt P, Castellanos L, Morgan D R. Long-term storage of Puregene® blood cell lysates and DNA extraction processing in a developing nation setting. (talk and poster) *CHI Biorepository Conference*, December 2012.
3. Bobashev GV, Whisnant CC, Riggs M., Yu F, **Basta PV**, Talley DL, Clayton A. Accounting for Missing Value Patterns in the Analysis of Protein Differential Expression Using 2D Gel Technology. *JSM Proceedings* 2003.

4. Murtha AP, Yonish B, Swamy GK, Smith TS, **Basta PV**, Whisnant CC, Bundy JL, Stephenson JL Jr, Talley DL, Heine RP. Serum Proteomic Analysis in Preterm Premature Rupture of Membrane Patients with and without Chorioamnionitis. To be presented at the 2003 annual meeting of the Infectious Diseases Society for Obstetrics and Gynecology to be held in Hyannis, Mass., August 7-9, 2003.
5. Taylor J, **Basta, P**, Lessler J, Talley D, Whisnant, C. Statistical Methods of 2-D gel based Proteomic Analyses. Presented at the American Statistical Association Joint Statistical Meetings, New York, NY, August 2002.
6. **Basta PV**, Talley DL, Whisnant CC. Proteomic Analysis of Developmental Immunotoxicity of Nicotine in Rodents: Accessory Cell Function. *Developmental Toxicology in the 21st Century: Multidisciplinary Approaches Using Model Organisms and Genomics*, NIEHS RTP, NC. 2002.
7. Navarro H, Basham K., Adcock A, Ross W, Brust M, **Basta P** Prenatal Nicotine Causes Long-Term Immunosuppression in Rat Offspring. Meeting of the College on Problems of Drug Dependence 1998.
8. **Basta P**, Basham K, Adcock A, Ross W, Brust M, Navarro H. Splenocyte Proliferation and Beta-Adrenoceptor Binding after Single or Combined Gestational Exposure with Ethanol and Nicotine. Research Society on Alcoholism Annual Meeting, June 20-25, 1998.
9. Basham KB, Whitmore SP, Adcock AF, **Basta PV**. Chronic and Acute Prenatal and Postnatal Ethanol Exposure o Lymphocyte Subsets from Offspring Thymic, Splenic, and Intestinal Intraepithelial Sources. Research Society on Alcoholism Annual Meeting, June 1997.
10. Whisnant CC, Cook CE, **Basta PV**, Miller DB, Allen DA, Talley DL. Antibodies to Transition State Analogs: Catalytic or Non-catalytic? Presented at North Carolina Symposium on Molecular Modeling: Integration of Theory and Experiment, Research Triangle Park, NC, October 21-23, 1993.
11. Cook, CE, Whisnant CC, Miller DB, Allen DA, **Basta PV**. Monoclonal Antibodies as Catalysts for Cyanide Removal. Presented at U.S. Army Medical Research and Development Command 1993 Medical Defense Bioscience Review, Baltimore, MD, May 10-13, 1993.
12. **Basta PV**, Whisnant CC, Allen DA, Cook CE. Application of the Immuno-PCR Antigen Detection System to a Hapten-Protein Conjugate. AAI annual meeting 1992.

Thesis

9/1977-5/1983 PhD Thesis: Characterization of a unique subset of Antibody, J606-GAC, which comprises a significant portion of the mouse antibody repertoire

Publications Acknowledging/Usage of BSP Facility Processed Samples

Published

1. Harmon QE, Engel SM, Wu MC, Moran TM, Lu J, Stuebe AM, Avery CL, Olshan AF. Polymorphisms in Inflammatory Genes are Associated with Term Small for Gestational Age and Preeclampsia. *Am. J. Reprod. Immuol.* 2014;71(5):472-484.
2. Feng Y, Stram DO, Rhie SK, Millikan RC, Ambrosone CB, John EM, Bernstein L, Zheng W, Olshan AF, Hu JJ, Ziegler RG, Nyante S, Bandera EV, Ingles SA, Press MF, Deming SL, Rodriguez-Gil JL, Palmer JR, Olopade OI, Huo D, Adebamowo, CA, Oqundiran T, Chen GK, Stram A, Park K, Rand KA, Chanock SJ, Le Marchand L, Kolonel LN, Conti DV, Easton D, Henderson BE, Haiman CA. A Comprehensive Examination of Breast Cancer Risk Loci in African American women. *Hum. Mol. Genet.* 2014; 23(16):1-9.

3. Richardson AS, North KE, Graff M, Young KM, Mohlke KL, Lange LA, Lange EM, Harris KM, Gordon-Larsen P. Moderate to vigorous physical activity interactions with genetic variants and body mass index in a large US ethnically diverse cohort. *Pediatr Obes*. 2014; 9(2):35-46.
4. O'Brien KM, Cole SR, Engel LS, Bensen JT, Poole C, Herring AH, Millikan RC. Breast Cancer Subtypes and Previously Established Genetic Risk Factors: A Bayesian Approach. *Cancer Epidemiol Biomarkers Prev*. 2014; 23(1):84-97.
5. O'Brien KM, Cole SR, Poole C, Bensen JT, Herring AH, Engel LS, Millikan RC. Replication of breast cancer susceptibility loci in whites and African Americans using a Bayesian approach. 2014; 179(3):382-394.
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14. Hakenewerth AM, Millikan RC, Rusyn I, Herring AH, Weissler MC, Funkhouser WK, North KE, Barnholtz-Sloan JS, Olshan AF. Effects of polymorphisms in alcohol metabolism and oxidative stress genes on survival from head and neck cancer. *Cancer Epidemiol*. 2013; 37(4):479-91.

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19. Chen F, Chen GK, Stram DO, Millikan RC, Ambrosone CB, John EM, Bernstein L, Zheng W, Palmer JR, Hu JJ, Rebbeck TR, Ziegler RG, Nyante S, Bandera EV, Ingles SA, Press MF, Ruiz-Narvaez EA, Deming SL, Rodriguez-Gil JL, Demichele A, Chanock SJ, Blot W, Signorello L, Cai Q, Li G, Long J, Huo D, Zheng Y, Cox NJ, Olopade OI, Ogundiran TO, Adebamowo C, Nathanson KL, Domchek SM, Simon MS, Hennis A, Nemesure B, Wu SY, Leske MC, Ambs S, Hutter CM, Young A, Kooperberg C, Peters U, Rhie SK, Wan P, Sheng X, Pooler LC, Van Den Berg DJ, Le Marchand L, Kolonel LN, Henderson BE, Haiman CA. A genome-wide association study of breast cancer in women of African ancestry. *Hum Genet.* 2013; 132(1):39-48.
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21. Graff M, North KE, Mohlke KL, Lange LA, Luo J, Harris KM, Young KL, Richardson AS, Lange EM, Gordon-Larsen P. Estimation of genetic effects on BMI during adolescence in an ethnically diverse cohort: The National Longitudinal Study of Adolescent Health. *Nutr Diabetes.* 2012; 2:e47.
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Fletcher O, Flesch-Janys D, Gaudet MM;GENICA Consortium, Gerty SM, Rodriguez-Gil JL, Giles GG, van Gils CH, Godwin AK, Graham N, Greco D, Hall P, Hankinson SE, Hartmann A, Hein R, Heinz J, Hoover RN, Hopper JL, Hu JJ, Huntsman S, Ingles SA, Irwanto A, Isaacs C, Jacobs KB, John EM,Justenhoven C, Kaaks R, Kolonel LN, Coetzee GA, Lathrop M, Le Marchand L, Lee AM, Lee IM, Lesnick T, Lichtner P, Liu J, Lund E, Makalic E, Martin NG, McLean CA, Meijers-Heijboer H, Meindl A, Miron P, Monroe KR, Montgomery GW, Müller-Myhsok B, Nickels S, Nyante SJ, Olsword C, Overvad K, Palli D, Park DJ, Palmer JR, Pathak H, Peto J, Pharoah P, Rahman N, Rivadeneira F, Schmidt DF, Schmutzler RK, Slager S, Southey MC, Stevens KN, Sinn HP, Press MF, Ross E, Riboli E, Ridker PM, Schumacher FR, Severi G, Dos Santos Silva I, Stone J, Sund M, Tapper WJ, Thun MJ, Travis RC, Turnbull C, Uitterlinden AG, Waisfisz Q, Wang X, Wang Z, Weaver J, Schulz-Wendtland R, Wilkens LR, Van Den Berg D, Zheng W, Ziegler RG, Ziv E, Nevanlinna H, Easton DF, Hunter DJ, Henderson BE, Chanock SJ, Garcia-Closas M, Kraft P, Haiman CA, Vachon CM. A meta-analysis of genome-wide association studies of breast cancer identifies two novel susceptibility loci at 6q14 and 20q11. *Hum Mol Genet.* 2012; 21(24):5373-84.

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25. Hakenewerth AM, Millikan RC, Rusyn I, Herring AH, North KE, Barnholtz-Sloan JS, Funkhouser WF, Weissler MC, Olshan AF. Joint effects of alcohol consumption and polymorphisms in alcohol and oxidative stress metabolism genes on risk of head and neck cancer. *Cancer Epidemiol Biomarkers Prev.* 2011; 20(11):2438-49.

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2. Steck SE, Arab L, Zhang H, Bensen JT, Adams JS, Fontham ETH, Johnson CS, Mohler JL, Smith GE, Su LJ, Trump DL, Woloszynska-Read A. Association between plasma 25-hydroxyvitamin D, ancestry and aggressive prostate cancer among African Americans and European Americans in the North Carolina-Louisiana Prostate Cancer Project (PCaP). *Clinical Cancer Research*. (29 pages, submitted 2014)

TEACHING RECORD

Lectures

1. Guest Lectures:
 - a. EPID 690 – Integrating Biomarkers in Population-Based Research
 - i. 2007-2009 and 2011-2012 taught one-two session
 - ii. Instructors: Olshan/Engel
 - b. EPID 745 – Molecular Techniques for Public Health Research
 - i. 2006-2008
 - ii. Instructor: Stamm
 - c. NCRP seminar series
 - i. 5/16/14 Lecture title: Proper Specimen Collection & Processing
2. Project Initiation Training/Retraining :
 - a. SPIROMICS 2009 and 2013

Student Training

Graduate:

1. Kaitlin Kelly-Reif : Supported as a GSA for 1 year in the BSP Facility
2. Humberto Parada: Supervised as a volunteer for 1 year in the BSP Facility
3. Nicholas Taylor: Research Assistant for half a year.

Undergraduate:

1. Alex Webb: Supervised independent study project

Grants

Current

P30-CA16086
NIH/NCI

Earp (PI)

Dates: 12/01/10-11/30/15

Cancer Center Core Support Grant

This grant supports infrastructure for the UNC Lineberger Cancer Center and its mission of carrying out research activities in the following areas: basic laboratory; clinical; and prevention, control and population-based. **Role: Core-Director**

Not Assigned

Basta (PI)

Dates: 07/01/11-09/29/15

Basta

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8/5/15

Research Triangle Institute

DNA Repository for the NIAAA National Epidemiologic Survey on Alcohol and Related Conditions-III (NESARC-III)

The purpose of the project is to continue and expand the data and biospecimen collection of patients with genetically triggered TAAs. The ultimate goal is to reduce cardiovascular complications, which represent the primary cause of morbidity and premature death in persons with genetically triggered thoracic aortic aneurysms.

Role: Principal Investigator

Non-Sponsored Support

Recharge Center Olshan (PI)

Dates: 2/158/2006 - present

Non-Sponsored-Internal UNC fee for service funds

Biospecimen Processing Facility Recharge Center

The major objective of the UNC BSP is to support and enhance translational, clinical, population, and basic science research at UNC and beyond. This goal is achieved by providing the research community with a centralized, quality controlled and quality assured facility for the processing, storage and disbursement of human biospecimens.

Role: Core-Director

UCRF Folt (Chair)

Dates: 2014

Non-Sponsored-Internal UNC funds

Clinical Genomics

The UCRF's mission is to ensure that future generations of North Carolinians will develop cancer less often and live longer and better when they do. Research creates new knowledge, turns that knowledge into innovative treatment, screening, and prevention, and then assures delivery of innovations across the state – that research is the key unlocking the doors to a new and better future. The UCRF is helping make that research possible.

Role: Core-Director

Completed

P30 ES010126

Swenberg (PI)

Dates: 02/01/00 – 03/31/15

NIH/NIEHS

UNC-CH Center for Environmental Health and Susceptibility

This application proposes to establish a center under the NIEHS Environmental Health Center Grants (P30) Program in the School of Public Health, UNC-CH. The focus will be in the area of environmental epidemiology and toxicology.

Role: Facility-Director

UNC NC TraCS \$10K award

May 2010

The Importance of the Pentose Phosphate Pathway in Cancer: Association of a Transaldolase1Tri-allelic SNP with Head and Neck Cancer.

The goal of this research was to research the importance of the pentose phosphate pathway in head and neck cancer through the analysis of the association of a tri-allelic mutation in the Transaldolase I gene in this pathway.

Role: Co-PI

Service

Department, School, University, State

Member of NC TraCS CTSA Translational Advancements Resource Committee	2013-Present
Member of Health Registry and Survivorship Cohort advisory Board	2013-Present
Member of Lineberger Data Warehouse and Biorepository (LDBR) Data Sharing Committee	2012-Present
Member NC TraCS Biobanking committee	2011-2013
Core Facility Director Center for Environmental Health	2006-Present
Core Facility Director Lineberger Cancer Center	2005-Present

National

Scientific Reviewer for the New Jersey Commission on Cancer Research	2009
Ad-hoc member of ALTX-1 Grant review Committee	2000
Member of several NIDA program project site visits	2000
Reviewer for Inflammation Research	2000
Committee member United States Army Medical Research and Material Command Breast Cancer Research Program review	1995-1996