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Jason Paul Smith

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EDUCATION

M.S., Marine Biology, College of Charleston (*In Progress*) — 2010 - Present
Thesis: *Effects of Irradiance Levels on the Expression of Ice-Binding Proteins in the Sea-Ice Diatom, Fragilariopsis cylindrus*
Advisor: Dr. Michael G. Janech

Post Bacc Studies Non-Degree, North Carolina State University — 2008 - 2009
Intro to C++, Intro to Java, Programming Concepts in C++

B.S., Biology, *Summa Cum Laude*, North Carolina State University — 2004

TECHNICAL SKILLS

Applications:	Sequencher, BeadStudio, SDS, Biomek FX software, MEGA, MS Office applications
Programming Languages:	C++, BASH, R
Operating Systems:	UNIX, Linux, Windows
Lab Equipment:	Illumina GAIIe, Illumina HiSeq 2000, Illumina BeadXpress, Illumina Cluster Station, Illumina cBot, Biomek FX, Tecan, Covaris LE220, Agilent 2100 Bioanalyzer, Nanodrop 2000, ABI 7500, ABI 3730, Multisizer 3 Coulter Counter, Spectrophotometer, Fluorescent Microscope
Lab Techniques:	Quantitative PCR, Sequencing library preparation and analysis, Microarray preparation and analysis, TaqMan genotyping, DNA/RNA/Protein extraction, Gel electrophoresis, Aseptic technique

TEACHING EXPERIENCE

Teaching Assistant –Molecular Biology Lab, College of Charleston — 08/2012 – Present
Rita Liddy Hollings Science Center, Charleston, SC

- Leads upper level undergraduates in performing individual research projects.
- Instructs students on proper laboratory techniques and methodology.
- Maintains and prepares reagents and laboratory space for students.
- Grades in-class assignments and quizzes.

Teaching Assistant –Evolution, Form, and Function of Organisms Lab, College of Charleston — 08/2011 – 12/2011
Lightsey Center, Charleston, SC

- Instructed biology and non-biology majors and led students in weekly lab activities/experiments.
- Designed and graded weekly assignments and quizzes.

ACADEMIC AND RESEARCH EXPERIENCE

Bioinformatician I, Institute for Genome Sciences and Policy — 09/2009 – 09/2010
Duke University Medical Center, Durham, NC

- Implemented the Illumina Genome Analyzer pipeline (a Linux based command driven sequence analysis software package) and analyzed human whole genome and exome data.
- Programmed and implemented Bash shell-scripts and C++ for human and mouse sequence analysis.

- Oversaw operation and maintenance of thirteen Illumina Genome Analyzer II instruments and two Illumina HiSeq 2000 instruments, while supervising four employees.

Research Technician II, Institute for Genome Sciences and Policy 10/2005 – 09/2009
Duke University Medical Center, Durham, NC

- Designed, adapted and implemented protocols for sequencing, genotyping and expression studies.
- Performed and analyzed PCR, Sanger sequencing, TaqMan, Illumina Goldengate/BeadXpress, and Illumina Infinium assays.
- Managed laboratory employees and interactions with other labs.

HONORS/ORGANIZATIONS/AWARDS

Marine Genomics Award	2010 – 2012
Completed College Honors Program	2004
Phi Beta Kappa	2004
Phi Kappa Phi	2003
Gamma Beta Phi	2003
National Society of Collegiate Scholars	2002
Dean's List, North Carolina State University	2000 – 2004

PROFESSIONAL MEMBERSHIPS

Association for the Sciences of Limnology and Oceanography	2012 – Present

PUBLICATIONS

Pelak K, Shianna KV, Ge D, Maia JM, Zhu M, **Smith JP**, Cirulli ET, Fellay J, Dickson SP, Gumbs CE, Heinzen EL, Need AC, Ruzzo EK, Singh A, Campbell CR, Hong LK, Lornsen KA, McKenzie AM, Sobreira NL, Hoover-Fong JE, Milner JD, Ottman R, Haynes BF, Goedert JJ, Goldstein DB. The characterization of twenty sequenced human genomes. PLoS Genet. 2010 Sep 9;6(9).

Sobreira NL, Cirulli ET, Avramopoulos D, Wohler E, Oswald GL, Stevens EL, Ge D, Shianna KV**, Smith JP**, Maia JM, Gumbs CE, Pevsner J, Thomas G, Valle D, Hoover-Fong JE, Goldstein DB. Whole-genome sequencing of a single proband together with linkage analysis identifies a Mendelian disease gene. PLoS Genet. 2010 Jun 17;6(6):e1000991.

Heinzen EL, Radtke RA, Urban TJ, Cavalleri GL, Depondt C, Need AC, Walley NM, Nicoletti P, Ge D, Catarino CB, Duncan JS, Kasperaviciūte D, Tate SK, Caboclo LO, Sander JW, Clayton L, Linney KN, Shianna KV, Gumbs CE, **Smith J**, Cronin KD, Maia JM, Doherty CP, Pandolfo M, Leppert D, Middleton LT, Gibson RA, Johnson MR, Matthews PM, Hosford D, Kälviäinen R, Eriksson K, Kantanen AM, Dorn T, Hansen J, Krämer G, Steinhoff BJ, Wieser HG, Zumsteg D, Ortega M, Wood NW, Huxley-Jones J, Mikati M, Gallentine WB, Husain AM, Buckley PG, Stallings RL, Podgoreanu MV, Delanty N, Sisodiya SM, Goldstein DB. Rare deletions at 16p13.11 predispose to a diverse spectrum of sporadic epilepsy syndromes. Am J Hum Genet. 2010 May 14;86(5):707-18.

Cirulli ET, Singh A, Shianna KV, Ge D, **Smith JP**, Maia JM, Heinzen EL, Goedert JJ, Goldstein DB; Center for HIV/AIDS Vaccine Immunology (CHAVI). Screening the human exome: a comparison of whole genome and whole transcriptome sequencing. Genome Biol. 2010;11(5):R57.

Fellay J, Ge D, Shianna KV, Colombo S, Ledergerber B, Cirulli ET, Urban TJ, Zhang K, Gumbs CE, **Smith JP**, Castagna A, Cozzi-Lepri A, De Luca A, Easterbrook P, Günthard HF, Mallal S, Mussini C, Dalmau J, Martinez-Picado J, Miro JM, Obel N, Wolinsky SM, Martinson JJ, Detels R, Margolick JB, Jacobson LP,

Descombes P, Antonarakis SE, Beckmann JS, O'Brien SJ, Letvin NL, McMichael AJ, Haynes BF, Carrington M, Feng S, Telenti A, Goldstein DB; NIAID Center for HIV/AIDS Vaccine Immunology (CHAVI). Common genetic variation and the control of HIV-1 in humans. PLoS Genet. 2009 Dec;5(12):e1000791.

Fuhrman LE, Goel AK, **Smith J**, Shianna KV, Aballay A. Nucleolar proteins suppress Caenorhabditis elegans innate immunity by inhibiting p53/CEP-1. PLoS Genet. 2009 Sep;5(9):e1000657.

Fellay J, Shianna KV, Ge D, Colombo S, Ledergerber B, Weale M, Zhang K, Gumbs C, Castagna A, Cossarizza A, Cozzi-Lepri A, De Luca A, Easterbrook P, Francioli P, Mallal S, Martinez-Picado J, Miro JM, Obel N, **Smith JP**, Wyniger J, Descombes P, Antonarakis SE, Letvin NL, McMichael AJ, Haynes BF, Telenti A, Goldstein DB. A whole-genome association study of major determinants for host control of HIV-1. Science. 2007 Aug 17;317(5840):944-7.