**Edward R. Wilcox curriculum vitae**

Associate Research Professor – Manager DNA Sequencing Center

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**EXPERIENCE**

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| December 2011 | BYU purchases an Illumina GAIIx | I am trained in its use and running as well as the initial data analysis for these runs. |
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| Fall 2011 | Granted continuing faculty status at Brigham Young University | This is the equivalent of tenure at other Universities |
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| Fall 2008 | BYU purchases a 454 Life Sciences Genome Sequencer | I am trained in its use and manage its day-to-day running and maintenance and data analysis |
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| 2005 – present | Associate Research Professor | Brigham Young University: Department of Biology |
|  | Manager DNA Sequencing Center |  |
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| 1998 – 2005 | Staff Scientist | National Institutes of Health (NIH), National Institute on |
|  |  | Deafness and Other Communication Disorders (NIDCD) |
|  |  | Laboratory of Molecular Genetics |
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| 2002 | Our lab purchases 1 ABI 3730 & 1 ABI 3730xl DNA sequencer | I am one of two Staff Scientists trained in their use and these machines became an essential part of my research. |
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| 2001 | Appointed Adjunct Faculty Member | Center of Excellence in Molecular Biology, University of the Punjab, Lahore, Pakistan |
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| 1998 | Our lab purchased the first of five ABI 377 DNA sequencing machines | I am one of two Staff Scientists trained in their use and these machines become an essential part of my research. |
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| 1994 – 1998 | Senior Staff Fellow | Laboratory of Molecular Genetics, NIDCD, NIH |
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| 1993 | Advanced Training | Advanced Linkage Course by Dr. J. Ott |
|  |  | Columbia University |
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| 1992 | Beginning Training | Beginning Linkage Course by Dr. J. Ott |
|  |  | Columbia University |
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| 1990 | Our lab purchased an ABI 373 DNA sequencer | This machine becomes part of my training and research use. |
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| 1989 – 1994 | Senior Staff Fellow | Laboratory of Molecular Biology, NIDCD, NIH |
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| 1984 – 1989 | Staff Scientist | Mycogen Corporation, San Diego, California |
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| 1982 – 1984 | Postdoctoral Fellow | University of California, San Diego |
|  |  | Advisor: Dr. John S. O'Brien |
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| 1978 – 1982 | Ph.D. Biochemistry | University of California, Davis |
|  | & Research Assistant | Advisor: Dr. John R. Whitaker |
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| 1975 – 1977 | B.A. Biological Science | University of California, Davis |
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| 1973-1975 | Missionary Service, Church of | Mexico Hermosillo Mission |
|  | Jesus Christ of Latter Day Saints |  |
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| 1972 – 1973 | Sophomore year | Brigham Young University, Provo Utah |
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| 1971 – 1972 | Freshman year | Interamerican University, San Germán, Puerto Rico |

**Information Relating to my Work**

Fall 2008 – to present:

In December 2011, we purchased a refurbished GAIIx instrument. We are diligently incorporating this into the research efforts of BYU. The advantages to this instrument are; the cost per mega-base of data generated is much cheaper than the 454 FLX+; the amount of data generated is some 100x greater per run. The disadvantages are that we have to run at least 8 samples at a time; the reads are short (on the order of 100bp instead of 750bp). This instrument will broaden our ability to serve the diverse sequencing needs at BYU.

In August 2011, Roche agreed to upgrade our 454 Life Sciences Genome Sequencer FLX to the latest GS FLX+ at no cost to us. We believe this is in part due to the repair history on this instrument (an average of 4 runs per breakdown). After several attempts and subsequent repairs, the upgraded instrument passed target specifications on September 29, 2011. Since the upgrade, we have not had a repair issue and the run read lengths have been better than before (and they were not deficient before the upgrade).

In fall 2008, from a grant to Dr. Joshua Udall, BYU acquired a 454 Life Sciences Genome Sequencer FLX. Since this purchase, my average 57-hour workweek is mostly focused on supporting this technology. There is a large commitment in hours once we receive a sample(s) to run; it takes approximately one week’s labor before the data is ready for use by the investigator. Because of this effort, I was awarded a Distinguished Citizenship Award by the Department of Biology at the end of 2009. To be effective in our use of this instrument, I have undergone the following training. Initial training was with a Roche representative coming to BYU twice for several days each in Nov 2008 and again in Jan 2009, online meetings (Webinars), attendance at the two Roche 454 User Group meetings held in Hartford CT (Sept 2008) and in Providence RI (May 2010), accepting an invitation to visit and work for a week at the Arizona Genomics Institute at the University of Arizona (May 2009), and attending the Roche paired-end training meeting in Indianapolis, June 2009.

Starting in March 2010, with a year’s worth of runs and work experience in second generation DNA sequencing, I started training BYU undergraduate students, on how to prepare samples and perform runs with the 454 machine. They have been successfully trained in running this machine (library construction, emulsion PCR, loading, and running this machine).

At NIDCD, I was one of two investigators responsible for the maintenance and management of the NIDCD DNA sequencing facility. I was also maintaining an oligonucleotide synthesis service from soon after starting work at NIDCD.

In June 2001 I was appointed to an adjunct faculty position at the Center of Excellence in

Molecular Biology (CEMB), University of the Punjab, Lahore, Pakistan

In 1994 while at NIDCD, I became the principal investigator of the Human Subjects Research Protocol entitled: Hereditary Hearing Impairment – gene mapping. I continued to maintain this protocol under two different Laboratory Chiefs up until the time I left NIH employment. From a similar collaboration, the National Eye Institute enrolled many suitable families segregating blindness and others at NIDCD enrolled suitable families segregating stuttering.