JORDAN SMITH*, JAMES WALTERS*, *Dept. of Applied Science and Mathematics, Bluefield State College, Bluefield, WV 24701. Sequencing of an *npc1L1* mutation in larval zebrafish.

How the intestinal absorption of lipids impact dyslipidemias such as obesity and diabetes is currently under debate. NPC1L1 is a critical transport protein in enterocyte cholesterol absorption. To understand the mechanism of intestinal *NPC1L1* uptake within the enterocyte, we are creating a *npc1l1 -/-* (knockout) line in zebrafish. We hypothesize that the *npc1l1 -/-* larval zebrafish will show reduced intestinal cholesterol absorption when challenged to a high fat diet compared to wild type larvae. To do this, we are screening two genomic mutations within the *NPC1L1* sequence. These zebrafish lines were obtained from the Zebrafish International Resource Center. We have amplified the DNA fragments containing the mutation. We will then sequence the DNA fragments at the Marshall Genomics Core. Sequences from point mutations will be compared with wild type sequences. Identified carriers of the mutation will be outcrossed to eliminate background mutations and intercrossed to breed for homozygous carriers. *This work was supported by NIH Grant P20GM103434 to the West Virginia IDeA Network for Biomedical Research Excellence and NIH Grant P20GM103434 awarded to Bluefield State College.*