



Figure S1. Protein homology modeling of maize *pCAT* and rice *PMT1* against sorghum *HCT1*. Stereo image of the crystal structure model for the sorghum *HCT1* (blue with white labels) with bound catalytic products *pCA*-shikimate (magenta) and CoA (dark purple) with best-fit protein homology models of maize *pCAT* (green) and rice *PMT1* (orange) putative active site residues are presented. Panels represent composite models turned counterclockwise in 45-degree increments (total of 180 degrees) around a vertical axis running the length of the page.