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*Oriented skein relation and a biological application.* Preliminary report.

My work focuses on properties of the *skein relation* in knot theory and applying them to the interactions of DNA with two types of proteins: *topoisomerases* and *site-specific recombinase*. Using the skein relation, along with knot Floer homology, I have created a table of knot triples that can be used to model the triple: DNA substrate, products resulting from topoisomerase action and products resulting from recombinase action. (Received September 22, 2011)