When $Gl_n$ acts with the natural action on the $k$-fold tensor product of an $n$-dimensional representation, the centralizer algebra is the symmetric group algebra on $k$-letters. In this case the Schur functions are the characters of the irreducible $Gl_n$ representations. Analogously, if we consider the symmetric group on $n$ letters acting on the $k$-fold tensor product of the permutation representation, then the partition algebra is the centralizer algebra of this action. We consider the basis of the symmetric functions which are the characters of the $S_n$ representations. We show that the combinatorics of the change of basis coefficients describe the decomposition of $Gl_n$ modules into $S_n$ modules and the structure coefficients are the Kronecker coefficients.

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