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Daniel Bump* (bump@math.stanford.edu). *Quantum Groups and Whittaker Functions.*

Tokuyama's formula is a deformation of the Weyl character formula (for type A). It generalizes to formulas for p-adic Whittaker functions. On the other hand, some well-known cases of Yang-Baxter equation, which is a tool for proving similar formulas, follow from the fact that the Hopf algebra $U_q(\mathfrak{sl}_2)$ is "quasitriangular." Brubaker, Bump and Friedberg gave a proof of Tokuyama's formula using a more general form of the Yang-Baxter equation (also found by Korepin) in the special case where $q = \sqrt{-1}$. This strongly suggests that $U_q(\mathfrak{sl}_2)$ (or its dual Hopf algebra) can be enlarged when $q = \sqrt{-1}$. Such an enlargement was constructed by Valentin Buciumas in his dissertation. We will report on these and related matters. (Received September 09, 2014)