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Lisa Carbone, Elizabeth Jurisich* (jurisiche@cofc.edu) and **Scott Murray**. *A Lie group analog for the monster Lie algebra*. Preliminary report.

Let \mathfrak{m} be the monster Lie algebra. We construct a group $G(\mathfrak{m})$ associated to \mathfrak{m} via generators and relations. The generators used in this construction are chosen to correspond to a specific decomposition $\mathfrak{m} = \mathfrak{u}^- \oplus \mathfrak{gl}_2 \oplus \mathfrak{u}^+$ where \mathfrak{u}^\pm are free subalgebras. Furthermore we investigate constructing a pro-unipotent group of automorphisms of a completion of \mathfrak{m} . (Received September 21, 2021)