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Daniel Yee* (dyee@fsmail.bradley.edu), 925 N. Rebecca Pl., Peoria, IL 61606. *On the structure of Connected Hopf Algebras containing a Semisimple Lie Algebra.* Preliminary report.

In a Hopf Algebra H , the vector space of primitive elements $P(H)$ is naturally a Lie subalgebra of the Lie algebra associated to H . Since a nontrivial connected Hopf algebra implies $P(H) \neq 0$, we study the case where $P(H)$ is a finite dimensional semisimple Lie algebra and how it effects the structure of the connected Hopf algebra H . We also compare results with the case when $P(H)$ is a solvable Lie algebra. (Received September 19, 2017)