Recently there have been many reports about exotic states called X, Y and Z in charm and bottom hadrons. It is suggested that they have complex structures different from normal quark-antiquark states, and many researchers both in experiments and theories are interested in their properties. In this presentation, we will discuss the general properties of such exotic hadrons with a single heavy quark in view of "heavy quark spin symmetry". Furthermore we analyze concretely the structures of hadronic molecules and exotic nuclei with a heavy quark in terms of the heavy hadron effective theories, and make some predictions about unknown states of heavy hadrons.

なお、今回のセミナーは、第35回「原子核ハドロン物理セミナー」を兼ねております。セミナー内容はhttp://silver.j-parc.jp/hadron/hadron_seminar/index.htmlでご覧になれます。