Relativistic heavy ion collider provides a unique venue to produce a new kind of matter, so-called the quark gluon plasma. Head-on collisions of heavy ions moving at nearly the speed of light simulate the conditions of a plasma of the smallest components of matter — the quarks and gluons. Abundant antinucleons can be produced after cooling down of the quark-gluon plasma that has the excellent capability of conducting the hunt of antimatter nuclei and studying interaction between antiprotons. In this talk, I will review recent Chinese collaboration efforts on the RHIC-STAR and the achievement on the discovery of antimatter hypernucleus, anti-helium4 as well as the measurement on antiproton-antiproton interaction by relativistic heavy-ion collisions.

References