Applied research aimed at better understanding the training process and/or underlying aspects of sport performance can be invaluable to coaches and sport scientists. Competitive athletes can respond differently than untrained or recreationally trained individuals to the same training stimuli. Additionally, the physiological makeup of more advanced athletes has been shown to favor certain “profiles” (e.g., anthropometrics, muscle fiber type) depending on the sport. This general area of research is often challenging for many reasons, e.g., small sample sizes, lack of true control group, well past initial adaptation period. This Special Issue will welcome research on trained athletes and can include cross-sectional research (e.g., relationships), longitudinal studies (e.g., training studies), and review articles. Of particular interest is research conducted in an ecologically valid manner and for studies that involve a training intervention and detailed reporting of the training prescription.