REVIEWS

King of the Mountains: Tibetan and Sherpa Physiological Adaptations for Life at High Altitude
Edward T. Gilbert-Kawai, James S. Milledge, Michael P. W. Grocott, and Daniel S. Martin
This review seeks to provide a comprehensive summary of the scientific literature encompassing Tibetan and Sherpa physiological adaptations to a high-altitude residence.

The Genetic Basis of Chronic Mountain Sickness
Roy Ronen, Dan Zhou, Vineet Bafna, and Gabriel G. Haddad
This review highlights several recent studies dealing with the genetic underpinnings of high-altitude adaptation (or maladaptation).

Organ-Specific Physiological Responses to Acute Physical Exercise and Long-Term Training in Humans
Ilkka Heinonen, Kari K. Kallikoski, Jarna C. Hannukainen, Dirk J. Duncker, Pirjo Nuutila, and Juhani Knuuti
This review integrates current information on physiological responses to acute exercise and to long-term physical training in major metabolically active human organs.

Exercise, Neurotrophins, and Axon Regeneration in the PNS
Arthur W. English, Jennifer C. Wilhelm, and Patricia J. Ward
This review considers three aspects of the cellular basis for the efficacy of exercise as a therapy that might advance its translational potential.

Making Microvascular Networks Work: Angiogenesis, Remodeling, and Pruning
Axel R. Pries and Timothy W. Secomb
A set of biological responses to local hemodynamic and metabolic stimuli is capable of generating well organized and efficient microvascular network structures.

The Sarcoplasmic Reticulum and the Evolution of the Vertebrate Heart
Holly A. Shiel and Gina L. J. Galli
This review discusses how sarcoplasmic reticulum recruitment relates to the structural organization of the cardiomyocyte to provide new insight into the evolution of cardiac design and function in vertebrates.