Ocrelizumab for the treatment of relapsing-remitting multiple sclerosis.

Abstract:
Despite recent advances in pharmacological management, multiple sclerosis (MS), an autoimmune disease of the central nervous system, remains a leading cause of disability. In relapsing-remitting (RR)MS, neurologists most commonly utilize immunomodulatory or immunosuppressive agents to benefit their patients. With the introduction of humanized monoclonal antibodies (mAbs) ablation of distinct immune populations has become possible. Depletion of B cells by anti-CD20 mAbs has repeatedly proven to be a very rapid and effective means to diminish disease activity in RRMS. We discuss the biological rationale, development, and recent clinical study results of the second generation anti-CD20 mAb ocrelizumab. Expert commentary: The topline results of two phase-III randomized clinical trials demonstrate superiority of ocrelizumab over interferon beta in RRMS patients with regards to clinical and paraclinical outcome parameters. The short term adverse events profile appears favorable. However, long-term effects of repeated B cell depletion are currently unknown.