**Biological Activity: Crocetin and TSC**

Transcrocetinate sodium belongs to a group of compounds known as oxygen diffusion-enhancing compounds.\(^1\) It can increases the movement of oxygen from red blood cells into hypoxic tissues.\(^2\)

Many studies, carried out in animal models and in clinical trials in humans, indicated that transcrocetinate sodium might prove beneficial in the treatment of a variety of conditions associated with hypoxia and ischemia (a lack of oxygen reaching the tissues, usually due to a disruption in the circulatory system), including cancer, myocardial infarction (heart attack), and stroke.\(^1-5\)

In a clinical trial transcrocetinate sodium has shown promise of effectiveness in restoring tissue oxygen levels and improving the ability to walk of patients with peripheral artery disease (PAD)\(^4\) in which reduced delivery of oxygen-rich blood to tissues can cause severe leg pain and impair mobility. The drug has also been under investigation in a clinical trial sponsored by drug developer *Diffusion Pharmaceuticals Inc.* for potential use as a radiosensitizer, increasing the susceptibility of hypoxic cancer cells to radiation therapy, in patients with glioblastoma.\(^5\)

**References**

2. US patent 8,206,751, Gainer J, "New Class of Therapeutics that Enhance Small Molecule Diffusion", issued 2009-04-30