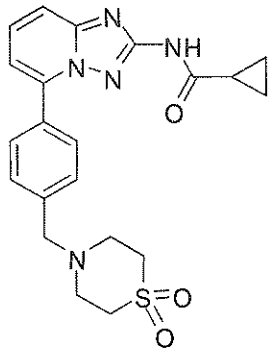
autoimmune diseases, proliferative diseases, transplantation rejection, diseases involving impairment of cartilage turnover, congenital cartilage malformations, and/or diseases associated with hypersecretion of IL6. In a specific aspect the compound is an inhibitor of JAK1 and JAK2. The present invention also provides methods for the production of this compound, a pharmaceutical composition comprising this compound and methods for treating inflammatory conditions, autoimmune diseases, proliferative diseases, transplantation rejection, diseases involving impairment of cartilage turnover, congenital cartilage malformations, and/or diseases associated with hypersecretion of IL6 by administering the compound of the invention.

[0016] Accordingly, in a first aspect of the invention, a compound of the invention is provided having a formula (I):



or a pharmaceutically acceptable salt thereof.

[0017] The compound of the invention is a novel inhibitor of JAK that appears to exhibit a dramatically improved *in vivo* potency as compared to structurally similar compounds. In a particular embodiment the compound of the invention is an inhibitor of JAK1 and JAK2. In particular it appears to exhibit this increase in potency at lower *in vivo* exposure levels compared to structurally similar compounds. The use of a compound with these improvements is expected to result in a lower dosage requirement (and therefore an improved dosing schedule).

[0018] In a further aspect, the present invention provides a pharmaceutical composition comprising a pharmaceutically acceptable carrier and a pharmaceutically effective amount of a compound as defined herein. Also disclosed are pharmaceutical compositions comprising the compound of the invention, and a pharmaceutical carrier, excipient or diluent. Moreover, the compound of the invention, useful in the pharmaceutical compositions and treatment methods disclosed herein, is pharmaceutically acceptable as prepared and used. In this aspect of the invention, the pharmaceutical composition may additionally comprise further active ingredients suitable for use in combination with the compound of the invention.

[0019] In a further aspect of the invention, this invention provides the use of a compound as defined herein in the manufacture of a medicament. Also disclosed is a method of treating a mammal susceptible to or afflicted with a condition from among those listed herein, and particularly, such condition as may be associated with aberrant JAK activity, *e.g.* inflammatory conditions, autoimmune diseases, proliferative diseases, transplantation rejection, diseases involving impairment of cartilage turnover, congenital cartilage malformations, and diseases associated with hypersecretion of IL6, which method comprises administering an effective amount of the pharmaceutical composition or

compound of the invention as described herein. In a specific embodiment the condition is associated with aberrant JAK1 and JAK2 activity.

[0020] Also disclosed is the compound of the invention for use in the treatment or prevention of a condition selected from those listed herein, particularly such conditions as may be associated with aberrant JAK activity, *e.g.* inflammatory conditions, autoimmune diseases, proliferative diseases, transplantation rejection, diseases involving impairment of cartilage turnover, congenital cartilage malformations, and diseases associated with hypersecretion of IL6.

[0021] In yet another example, this disclosure provides a method for treating a mammal susceptible to or afflicted with a condition that is causally related to abnormal JAK activity as described herein, and comprises administering an effective condition-treating or condition-preventing amount of the pharmaceutical composition or the compound of the invention described herein. In a specific example the condition is causally related to abnormal JAK1 and JAK2 activity.

[0022] In a further example, the present disclosure provides the compound of the invention for use in the treatment or prevention of a condition that is causally related to abnormal JAK activity.

[0023] In additional examples, this disclosure provides methods for synthesizing the compound of the invention, with representative synthetic protocols and pathways disclosed later on herein.

[0024] Accordingly, it is a principal object of this disclosure to provide a novel compound, which can modify the activity of JAK and thus prevent or treat any maladies that may be causally related thereto. In a specific aspect the compound of the invention modulates the activity of JAK1 and JAK2.

[0025] It is further an object of this disclosure to provide a compound that can treat or alleviate maladies or symptoms of same, such as inflammatory conditions, autoimmune diseases, proliferative diseases, transplantation rejection, diseases involving impairment of cartilage turnover, congenital cartilage malformations, and diseases associated with hypersecretion of IL6, that may be causally related to the activity of JAK, in particular JAK1 and JAK2.

[0026] A still further object of this disclosure is to provide a pharmaceutical composition that may be used in the treatment or prevention of a variety of disease states, including the diseases associated with JAK activity such as inflammatory conditions, autoimmune diseases, proliferative diseases, transplantation rejection, diseases involving impairment of cartilage turnover, congenital cartilage malformations, and diseases associated with hypersecretion of IL6. In a specific embodiment the disease is associated with JAK1 and JAK2 activity.

[0027] Other objects and advantages will become apparent to those skilled in the art from a consideration of the ensuing detailed description.