[0005] Data is emerging on the use of romiplostim in children with chronic immune thrombocytopenia. Treatment of children with chronic immune thrombocytopenia is often guided by data from adult studies, pilot studies in children, and expert opinion. There have been three large randomized controlled studies in children with ITP that have demonstrated that treatment with TPO receptor agonists was associated with greater efficacy compared to placebo with no surprising or unexpected adverse events. However, data on long-term effects of treatments in children with ITP are lacking.

[0006] Romiplostim can induce platelet responses in approximately 80–90% of patients with ITP (Bussel et al, 2009; Kuter et al, 2010), but long-term treatment may be required to maintain platelet responses. Long-term treatment, however, may be associated with compliance issues and substantial costs (Ghanima et al, 2012).

[0007] Emerging data suggest that certain patients, many of whom had relapsed or refractory disease, may achieve lasting remission after discontinuation of romiplostim (Vlachaki et al, 2011; Ghadaki et al, 2013; Thachil et al, 2013; Mahevas et al, 2014; Provan et al, 2014; Tarantino et al. 2016, Tarantino et al, ASH 2017, abstract 14 as at: https://ash.confex.com/ash/2017/webprogram/Paper100126.html). Newland et al., 2016, conducted a systematic prospective evaluation of remission with romiplostim but ultimately concluded that no statistically significant predictors of remission were found when examining other demographic or baseline characteristics; however, higher mean platelet count during the first two months of treatment was associated with remission. The field would benefit from discovery of predictors of remission and methods of treatment exploiting such predictors.

SUMMARY

[0007a] In one aspect, the present disclosure refers to a use of romiplostim in the manufacture of a medicament for treating idiopathic thrombocytopenia purpura (ITP) in a patient having ITP, wherein the use comprises that: (a) the medicament is to be administered weekly to the patient; (b) the weekly dose of the medicament is to be increased until a platelet count of at least about 50 to 200 x 10^9/L is reached; (c) the weekly dose of the medicament is to be decreased if the platelet count remains $\geq$ 200 x 10^9/L for two consecutive weeks; (d) administration of the medicament is to be discontinued if (i) the platelet count has remained $\geq$ 200 x 10^9/L for two consecutive weeks when the weekly dose is 1 μg/kg or (ii) the platelet count is $\geq$ 400 x 10^9/L; and (e) if a platelet count $\geq$ 200 x 10^9/L is reached within the first 4 to 12 weeks of treatment, maintaining a treatment-free period of at least about 24 weeks during which the patient receives none of the medicament.

[0008] In the study underlying this specification, a platelet count $\geq$ 200 x 10^9/L is reached within the first 4 to 12 weeks of treatment is found to be a predictor of remission, which is defined in the study as a treatment-free period of at least 24 weeks during which the patient receives no romiplostim or other ITP medication. Accordingly, this disclosure relates to a method of treating ITP in a patient having ITP, which comprises (a) administering romiplostim weekly to the patient; (b) increasing the weekly dose until a platelet count of at least about 50 to 200 x 10^9/L is reached; (c) decreasing the weekly dose of romiplostim if the platelet count remains $\geq$ 200 x 10^9/L for two consecutive weeks; (d) discontinuing romiplostim if the platelet count has remained $\geq$ 200 x 10^9/L for two consecutive weeks when the weekly dose is 1 μg/kg or the

platelet count is $\geq$ 400 x 10^9/L; and (e) if a platelet count $\geq$ 200 x 10^9/L is reached within the first 4 to 12 weeks of treatment, maintaining a treatment-free period of at least about 24 weeks during which the patient receives no romiplostim.

[0009] The disclosure also concerns a method as described above that comprises administering an initial dose of 1 μg/kg of romiplostim to the patient.

[0010] The disclosure further concerns a method as described above that comprises maintaining the weekly dose so long as the platelet count is within about 50 to 200 x 10^9/L.

[0011] The disclosure further concerns a method as described above wherein the platelet count is $\geq$ 200 x 10^9/L in the first four weeks of treatment.

[0012] The disclosure further concerns a method as described above wherein the increase in the dose of romiplostim is in increments of 1 μg/kg weekly.

[0013] The disclosure further concerns a method as described above wherein the dose in step c is decreased in increments of 1 μg/kg.

[0014] The disclosure further concerns a method as described above wherein the patient's platelet count remains $\geq$ 50 x 10^9/L during the treatment-free period.

[0015] The disclosure further concerns a method as described above wherein the patient receives no ITP medications during the treatment-free period.

BRIEF DESCRIPTION OF THE FIGURES

[0016] Figure 1 shows a study flow chart. Of the 21 patients shown who entered the first extension of the study, one withdrew consent before treatment. Of the 66 patients who rolled into the second extension, one withdrew consent before treatment.

[0017] Figure 2 shows the disposition of the patients who entered the study. Of the three patients who discontinued romiplostim per the protocol, two had remission and one had platelet counts <30×10^9/L despite 10 weeks on 10 μg/kg. The 37 patients who completed romiplostim treatment received the drug until the study ended in January 2017, 12 months after the last patient enrolled.

[0018] Figure 3A shows the romiplostim dose over time. The median (Q1, Q3) dose appears on the y-axis with the number of weeks in the study on the x-axis. Figure 3B shows the platelet counts over time. The median (Q1, Q3) platelet count appears on the y-axis with the number of weeks in the study on the x-axis.

What is claimed is:

1. Use of romiplostim in the manufacture of a medicament for treating idiopathic thrombocytopenia purpura (ITP) in a patient having ITP, wherein the use comprises that:
    a. the medicament is to be administered weekly to the patient;
    b. the weekly dose of the medicament is to be increased until a platelet count of at least about 50 to 200 x 10^9/L is reached;
    c. the weekly dose of the medicament is to be decreased if the platelet count remains $\geq$ 200 x 10^9/L for two consecutive weeks;
    d. administration of the medicament is to be discontinued if (i) the platelet count has remained $\geq$ 200 x 10^9/L for two consecutive weeks when the weekly dose is 1 μg/kg or (ii) the platelet count is $\geq$ 400 x 10^9/L; and
    e. if a platelet count $\geq$ 200 x 10^9/L is reached within the first 4 to 12 weeks of treatment, maintaining a treatment-free period of at least about 24 weeks during which the patient receives none of the medicament.
2. The use of claim 1, which comprises that an initial dose of 1 μg/kg of the medicament is to be administered to the patient.
3. The use of claim 1, which comprises that the weekly dose is to be maintained so long as the platelet count is within about 50 to 200 x 10^9/L.
4. The use of claim 1, wherein the platelet count is $\geq$ 200 x 10^9/L in the first four weeks of treatment.
5. The use of claim 1, wherein the platelet count is $\geq$ 200 x 10^9/L in the first eight weeks of treatment.
6. The use of claim 1, wherein the increase in the dose of the medicament is in increments of 1 μg/kg weekly.
7. The use of claim 1, wherein the dose in step c is to be decreased in increments of 1 μg/kg.
8. The use of claim 1, wherein the patient's platelet count remains $\geq$ 50 x 10^9/L during the treatment-free period.
9. The use of claim 1, wherein the patient receives no ITP medications during the treatment-free period.