CLAIMS

1. Use of an inhibitor of FGFR3 signaling, an NPR-B agonist or an NPR-C agonist in the manufacture of a medicament for improving muscle function in a subject suffering from a disease or condition in which muscle function is impaired.

2. The use according to claim 1, wherein the inhibitor of FGFR3 signaling is an FGFR3 antagonist or an NPR-B agonist.

3. The use according to claim 1 or 2, wherein the NPR-B agonist is or comprises a C-type natriuretic peptide (CNP).

4. The use according to any one of claims 1 to 3, wherein the NPR-C agonist is or comprises a C-type natriuretic peptide (CNP).

5. The use according to any one of claims 1 to 4, wherein the NPR-B agonist or NPR-C agonist is to be administered as a CNP conjugate or a pharmaceutically acceptable salt thereof.

6. The use according to any one of claims 1 to 5, wherein the NPR-B agonist or NPR-C agonist is a prodrug of CNP.

7. The use according to claim 5 or 6, wherein the CNP conjugate or prodrug of CNP is a compound of formula (IIf '), formula (IIf), compound (1), or a pharmaceutically acceptable salt thereof.

8. The use according to any one of claims 5 to 7, wherein said medicament is for administration by a method comprising administration of successive doses of a therapeutically effective amount of the CNP conjugate and/or prodrug of CNP to the subject, wherein the sustained exposure of free CNP in the blood plasma of the patient between successive doses of the therapeutically effective amount of the CNP conjugate and/or prodrug of CNP is at least about 1 pmol/L.

9. The use according to claim 8, wherein the method comprises administration of successive doses of a therapeutically effective amount of the CNP conjugate and/or prodrug of CNP to the subject, wherein the sustained exposure of free CNP in the blood plasma of the patient between successive doses of the therapeutically effective amount of the CNP conjugate and/or prodrug of CNP is at least about 9 pmol/L.

10. The use according to claim 8 or 9, wherein the therapeutically effective amount of the CNP conjugate and/or prodrug are to be administered daily or weekly.

11. The use according to any one of claims 3 to 7, wherein said medicament is for administration by a method comprising administration of an infusion, such as a i.v. or s.c. infusion, of the CNP to the subject, wherein said infusion results in a sustained exposure of free CNP in the blood plasma of the patient over a period of at least 1 hour of at least 1pmol/L.

12. The use according to any one of claims 1 to 11, wherein the NPR-B agonist is or comprises vosoritide (SEQ ID NO:30).

13. The use according to claim 2, wherein the FGFR3 antagonist is an FGFR3 tyrosine kinase inhibitor.

14. The use according to claim 13, wherein the FGFR3 tyrosine kinase inhibitor is selected from the group consisting of infigratinib, pemigatinib, futibatinib, erdafitinib and TYRA-300.

15. The use according to any one of the claims 1 to 14, wherein the subject is a human subject.

16. The use according to claim 15, wherein the subject is less than 18 years of age.

17. The use according to claim 15, wherein the subject is at least 18 years of age.

18. The use according to any one of claims 1 to 17, wherein the subject has closed bone epiphysis.

19. The use according to any one of claims 1 to 18, wherein the improvement in muscle function is one or more of:
a) increased skeletal muscle strength,
b) increased skeletal muscle tone,
c) increased skeletal muscle stamina,
d) increased skeletal muscle mass,
e) decreased skeletal muscle fatigue,
f) increased cardiovascular endurance,
g) increased cardiovascular fitness,
h) decreased exercise intolerance,
i) increased exercise capacity,
j) decreased exercise induced fatigue, and
k) decreased hypotonia.

20. The use according to any one of claims 1 to 19, wherein administration of the medicament gives rise to increased skeletal muscle mass and/or muscle/fat ratio, in the subject.

21. The use according to any one of claims 1 to 20, wherein said subject has hypotonia.

22. The use according to any one of claims 1 to 21, wherein administration of the medicament gives rise to:

a. treatment or prevention of musculo-skeletal pain in the subject; and/or
b. an improvement in posture or a reduction in an abnormal curvature of the spine; and/or
c. an improvement in kyphosis, lordosis, spinal stenosis or scoliosis; and/or
d. an improvement in sleep apnea, obstructive sleep apnea, or otitis media; and/or

e. a reduction in obesity.

23. The use according to any one of claims 1 to 22, wherein the subject has a chondrodysplasia disease, such as a disease selected from the group consisting of achondroplasia, hypochondroplasia, and thanatophoric dysplasia.

24. The use according to any one of claims 1 to 23, wherein the subject has a RASopathy selected from the group consisting of neurofibromatosis type 1 (NF1), Noonan syndrome, Noonan syndrome with multiple lentigines, capillary malformation-arteriovenous malformation syndrome, Costello syndrome, cardio-facio-cutaneous syndrome, and Legius syndrome.

25. The use according to any one of claims 1 to 24, wherein the subject has neuromuscular or a neurodegenerative disease.

26. The use according to claim 25, wherein the neurodegenerative disease is selected from the group consisting of Parkinson's Disease, Alzheimer's Disease, Multiple Sclerosis, Amyotrophic lateral sclerosis (ALS), ataxias such as Friedreich's ataxia (FRDA), and Huntington's disease (HD).

27. The use according to claim 25 or 26, wherein said disease or condition associated with an impairment in neuromuscular function is a disease or condition in which mitochondrial dysfunction is present.

28. The use according to any one of claims 25 to 27, wherein said treatment gives rise to a reduction in decline of muscle function.

29. The use according to any one of claims 1 to 28, wherein the medicament is for administration in a method further comprising the administration of a growth hormone or prodrug thereof.