

## Supplement

### eMethods

#### *1. Permitted Concomitant Medications and Therapies.*

The following drugs were permitted for concomitant use if their dosage had not changed for 28 days prior to the screening visit, and their dosage remained unchanged throughout the study:

- Antiepileptics, except for gabapentin and pregabalin
- Antidepressants
- Hypnotics, anxiolytics
- Tramadol
- Neurotropin®
- N-methyl-D-aspartate receptor antagonists (e.g., dextromethorphan, ketamine, memantine)
- Non-steroidal anti-inflammatory drugs (except for external use and for purposes other than CNeP caused by SCI)
- Muscle relaxants
- Topical capsaicin for CNeP caused by SCI
- Local anaesthetics for CNeP caused by SCI (e.g., lidocaine)
- Sodium channel blockers (e.g., mexiletine)
- Centrally acting sympatholytic agents (e.g., clonidine)
- Steroids for CNeP caused by SCI
- Cilostazol, prostaglandin (except for external use and for purposes other than CNeP caused by SCI)
- Baclofen.

The following therapies were permitted for concomitant use if the frequency of use had not changed for 28 days prior to screening, and remained unchanged throughout the study:

- Nerve blocks
- Laser therapy
- Acupuncture
- Spinal cord stimulation
- Surgery that could confound the assessments of CNeP caused by SCI
- Psychological therapies (e.g., psychoeducation, behavioral therapy, cognitive behavioral therapy)
- Rehabilitation (e.g., physical therapy, occupational therapy)
- Other forms of analgesic therapy that could confound the assessments of CNeP caused by SCI.

#### *2. Exclusion criteria.*

Patients who met any of the following criteria were disqualified from entering the study:

- A pain score of 10 on a scale of 0 (no pain) to 10 (worst possible pain) at any time during the observation period

- Other severe pain at screening or randomization, unrelated to CNeP caused by SCI, that could confound the assessment of the study drug
- Neurologic disorder at screening or randomization, unrelated to CNeP caused by SCI, that could confound the assessment of the study drug
- Major psychiatric disorder within 1 year prior to screening
- Secondary gain from SCI-related CNeP (e.g., legal dispute or settlement negotiations) at screening or randomization
- SCI due to suicidal behavior
- Patient who blames a third party of having caused the SCI (i.e., psychiatric influence on CNeP)
- Prior treatment for  $\geq 4$  weeks with pregabalin  $\geq 300$  mg/day for patients with CrCL (calculated using the Cockcroft–Gault equation)  $\geq 60$  mL/min or pregabalin  $\geq 150$  mg/day for patients with CrCL  $30 < 60$  mL/min, with a declared lack of effect
- Prior treatment for  $\geq 4$  weeks with gabapentin  $\geq 1,200$  mg/day for subjects with CrCL  $\geq 60$  mL/min or gabapentin  $\geq 600$  mg/day for subjects with CrCL  $30 < 60$  mL/min, with a declared lack of effect
- Use of mirogabalin, pregabalin, or gabapentin within 28 days prior to screening
- Use of strong opioids for SCI-caused CNeP relief within 3 months prior to screening
- CrCL (calculated using the Cockcroft–Gault equation)  $< 30$  mL/min at screening
- Malignancy other than basal cell carcinoma within 2 years prior to screening
- Clinically significant unstable endocrine (e.g., diabetes mellitus), neurologic, ophthalmologic, hepatobiliary, respiratory, or hematologic illness; or cardiovascular disease (e.g., uncontrolled cardiac arrhythmia or myocardial infarction) at screening or randomization
- Clinically significant findings on electrocardiogram at screening
- History of pernicious anemia, untreated hypothyroidism, or HIV infection
- Pregnancy, potential pregnancy, breast feeding, or unwillingness to practice reliable contraceptive measures during the study and for 4 weeks after study completion
- Known hypersensitivity to mirogabalin, pregabalin, or gabapentin
- Participation in another clinical study, either currently or within 30 days prior to providing informed consent
- Past participation in a clinical study of mirogabalin in which the patient received the study drug
- History of illicit drug or alcohol abuse
- Response of “yes” to any of the questions on the Colombia Suicide Rating Scale at screening or randomization in relation to events occurring within the past 12 months
- At screening, laboratory values exceeding the following limits:
  - Platelets  $< 100,000/\text{mm}^3$
  - Aspartate aminotransferase  $> 2.0 \times \text{ULN}$ 
    - Alanine aminotransferase  $> 2.0 \times \text{ULN}$
    - Alkaline phosphatase  $> 1.5 \times \text{ULN}$
    - Total bilirubin  $> 1.5 \times \text{ULN}$  (except patients with documented Gilbert’s syndrome)

- Otherwise considered an inappropriate subject for the study by the investigator or subinvestigator.

Abbreviations: CNeP = central neuropathic pain; SCI = spinal cord injury; ULN = upper limit of normal.

**eTable 1.** Time-course of Average Daily Pain Scores from Baseline to Day 21.

Placebo				Mirogabalin				
Day	n	Mean ± SD	Change from baseline	n	Mean ± SD	Change from baseline	Difference vs placebo (95% CI)	p value
0	148	6.18 ± 1.40	—	148	6.14 ± 1.34	—	—	—
1	149	6.11 ± 1.52	−0.06 ± 1.01	149	5.92 ± 1.56	−0.26 ± 1.22	−0.20 (−0.45, 0.05)	0.1126
2	149	5.93 ± 1.57	−0.25 ± 1.03	149	5.65 ± 1.55	−0.51 ± 1.29	−0.26 (−0.52, −0.01)	0.0443
3	148	5.86 ± 1.60	−0.32 ± 1.10	149	5.66 ± 1.59	−0.54 ± 1.50	−0.21 (−0.50, 0.07)	0.1433
4	149	5.94 ± 1.48	−0.23 ± 1.04	147	5.56 ± 1.66	−0.61 ± 1.51	−0.38 (−0.66, −0.10)	0.0089
5	149	5.88 ± 1.65	−0.30 ± 1.23	147	5.59 ± 1.58	−0.56 ± 1.36	−0.27 (−0.55, 0.02)	0.0652
6	149	5.93 ± 1.57	−0.24 ± 1.12	148	5.58 ± 1.60	−0.59 ± 1.32	−0.35 (−0.62, −0.08)	0.0108
7	149	5.85 ± 1.66	−0.33 ± 1.24	148	5.47 ± 1.66	−0.68 ± 1.40	−0.36 (−0.65, −0.06)	0.0169
8	148	5.89 ± 1.60	−0.26 ± 1.23	147	5.48 ± 1.65	−0.70 ± 1.56	−0.43 (−0.74, −0.12)	0.0060
9	147	5.80 ± 1.62	−0.35 ± 1.20	145	5.28 ± 1.68	−0.88 ± 1.53	−0.53 (−0.83, −0.22)	0.0008
10	146	5.95 ± 1.48	−0.20 ± 1.16	147	5.33 ± 1.70	−0.84 ± 1.51	−0.63 (−0.93, −0.34)	<0.0001
11	147	5.69 ± 1.61	−0.46 ± 1.23	147	5.27 ± 1.79	−0.91 ± 1.71	−0.45 (−0.77, −0.12)	0.0076
12	146	5.86 ± 1.58	−0.30 ± 1.18	145	5.21 ± 1.78	−0.96 ± 1.65	−0.65 (−0.97, −0.34)	<0.0001
13	147	5.81 ± 1.64	−0.34 ± 1.39	147	5.16 ± 1.73	−1.01 ± 1.63	−0.66 (−0.99, −0.33)	<0.0001
14	145	5.84 ± 1.67	−0.31 ± 1.36	147	5.07 ± 1.74	−1.11 ± 1.59	−0.79 (−1.12, −0.46)	<0.0001
15	142	5.72 ± 1.65	−0.45 ± 1.22	143	5.08 ± 1.73	−1.10 ± 1.67	−0.65 (−0.97, −0.32)	0.0001
16	140	5.81 ± 1.65	−0.34 ± 1.29	142	5.01 ± 1.77	−1.13 ± 1.71	−0.80 (−1.14, −0.46)	<0.0001
17	140	5.74 ± 1.71	−0.42 ± 1.34	144	5.04 ± 1.82	−1.12 ± 1.66	−0.70 (−1.04, −0.35)	<0.0001
18	140	5.78 ± 1.59	−0.39 ± 1.23	144	5.10 ± 1.80	−1.06 ± 1.66	−0.67 (−1.00, −0.34)	<0.0001
19	141	5.65 ± 1.74	−0.50 ± 1.23	143	4.95 ± 1.81	−1.22 ± 1.69	−0.71 (−1.05, −0.37)	<0.0001
20	142	5.68 ± 1.70	−0.50 ± 1.13	144	5.09 ± 1.85	−1.07 ± 1.64	−0.57 (−0.90, −0.25)	0.0006
21	142	5.65 ± 1.74	−0.52 ± 1.36	144	4.95 ± 1.78	−1.21 ± 1.75	−0.69 (−1.04, −0.34)	0.0001

Abbreviation: CI = confidence interval, SD = standard deviation.

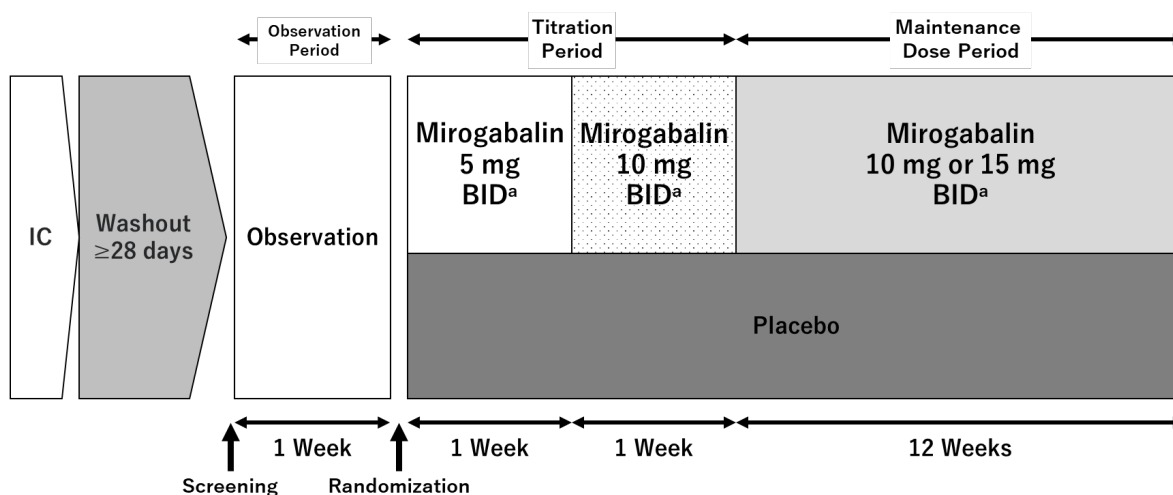
**eTable 2.** All Serious TEAEs.

<b>SOC PT</b>	<b>Mirogabalin (n = 151)</b>	<b>Placebo (n = 148)</b>	<b>Total (N = 299)</b>
Patients with at $\geq$ 1 serious TEAE	9 (6.0)	7 (4.7)	16 (5.4)
Cellulitis	2 (1.3)	0 (0.0)	2 (0.7)
Pneumonia	1 (0.7)	1 (0.7)	2 (0.7)
Appendicitis	1 (0.7)	0 (0.0)	1 (0.3)
Wound infection	0 (0.0)	1 (0.7)	1 (0.3)
Dehydration	1 (0.7)	1 (0.7)	2 (0.7)
Altered state of consciousness	1 (0.7)	0 (0.0)	1 (0.3)
Syncope	1 (0.7)	0 (0.0)	1 (0.3)
Nausea	0 (0.0)	1 (0.7)	1 (0.3)
Ranula	0 (0.0)	1 (0.7)	1 (0.3)
Decubitus ulcer	0 (0.0)	1 (0.7)	1 (0.3)
Cardiac death	1 (0.7)	0 (0.0)	1 (0.3)
Fibula fracture	0 (0.0)	1 (0.7)	1 (0.3)
Inflammation of wound	0 (0.0)	1 (0.7)	1 (0.3)
Spinal cord injury cervical	1 (0.7)	0 (0.0)	1 (0.3)
Tibia fracture	0 (0.0)	1 (0.7)	1 (0.3)

Data are n (%).

Coded by the Medical Dictionary for Regulatory Activities (MedDRA), version 23.0.

Abbreviations: PT = Preferred Term, SOC = System Organ Class, TEAE = treatment-emergent adverse event.



<sup>a</sup>Patients with CrCL of 30–<60 mL/min at screening received mirogabalin at 50% of the normal dose.  
Abbreviations: BID = twice daily; CrCL = creatinine clearance; IC = informed consent.

### eFigure 1. Study Design

<sup>a</sup>Patients with CrCL of 30–<60 mL/min at screening received mirogabalin at 50% of the normal dose.

Abbreviations: BID = twice daily; CrCL = creatinine clearance; IC = informed consent.

**Additional Supplemental Files**

- Study Protocol
- Statistical Analysis Plan
- CONSORT Checklist