RAPPER II: Introduction

- International, Multi-Center, Single-arm, Observational registry
- Safety and usability; patient-reported acceptability; and quality of life
- REX robot: Transfer, Walk, Upper Limb and Trunk Exercises
- One treatment; de novo volunteers
- Spinal Cord Injury (SCI): C4 to L5 levels
- Principal Investigator: Nick Birch FRCS (Orth)

ClinicalTrials.gov Reg No: NCT02417532
Independent CRO: GDCI, Florida, USA
Stopped by investigators at 56 patients: primary end point achieved

Neurological Levels (n=56)

Primary and Secondary End Points

REX Safety & Usability (n=56)

- Transfer Success 56 (100%)
- Mean Transfer Time 6:51 min
- Completion of all Exercises 52 (93%)
- Minor Adverse Event 4
- Serious Adverse Events 0

Preliminary View of Secondary End-points

One treatment only: two or seven day follow-up

- 36 participants enrolled for Quality of Life questionnaires*
- Cohort of responders:
  - 15 (42%) reported improved sleep
  - 11 (31%) reported improved sleep + less spasticity
  - 8 (23%) reported improved sleep + less “Pain woke me up”
- Further investigation under way

* 1 lost to follow-up
REX: User Experience Questionnaire Results

- Q1. I found it easy to transfer into the REX
- Q2. I felt confident in REX
- Q3. I felt very safe in REX
- Q4. I felt very stable in REX
- Q5. REX was easy to control
- Q6. I found REX very comfortable
- Q7. I enjoyed my experience in REX
- Q8. I would like to use REX on a weekly basis
- Q9. I would recommend REX to a friend
- Q10. I felt a sense of wellness after using REX
- Q11. REX exceeded my expectation
- Q12. The size of REX did not bother me
- Q13. The sound of REX did not bother me
- Q14. The speed of REX was suitable for me
- Q15. I can see the benefits of using REX regularly
- Q16. I would like to see REX more accessible to those who need it

REX: Results for Paraplegics and Tetraplegics

<table>
<thead>
<tr>
<th></th>
<th>Paraplegics n=38</th>
<th>Quadriplegics n=18</th>
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</thead>
<tbody>
<tr>
<td>Mean time to transfer</td>
<td>6.20 minutes</td>
<td>7.55 minutes</td>
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<tr>
<td>Mean time to Up and Go</td>
<td>5.20 minutes</td>
<td>5.10 minutes</td>
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<td>Pct completion of both exercises</td>
<td>95%</td>
<td>94%</td>
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REX: Summary

- Analysis of the results of the RAPPER II trial has shown that REX is a safe and stable Powered Exercise Equipment, requiring a very limited amount of user training
- The trial has shown that it is feasible for people with SCI to carry out a functional exercise program in the REX
- There was no difference between the ability of patients with tetraplegia and paraplegia to achieve the functional goals
- The User Experience was generally positive especially across the domains of safety, comfort, stability and ease of control
- A substantial cohort of participants reported a positive effect on Quality of Life parameters
- The results of RAPPER II justify further investigation of this technology both in terms of a dose-response relationship and in people with diverse neurological conditions such as stroke and MS.