



US 20090149783A1

(19) **United States**

(12) **Patent Application Publication**  
Nef et al.

(10) **Pub. No.: US 2009/0149783 A1**

(43) **Pub. Date: Jun. 11, 2009**

(54) **SYSTEM AND METHOD FOR A COOPERATIVE ARM THERAPY AND CORRESPONDING ROTATION MODULE**

(30) **Foreign Application Priority Data**

Nov. 30, 2004 (EP) ..... 04028310.3

(75) Inventors: **Tobias Nef, Zuckenriet (CH); Robert Riener, Wangen (CH); Daniel Wegmann, Watt (CH); Gery Colombo, Uster (CH)**

**Publication Classification**

(51) **Int. Cl.**  
*A61H 1/02* (2006.01)  
*A63B 21/00* (2006.01)

Correspondence Address:  
**LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK**  
600 SOUTH AVENUE WEST  
WESTFIELD, NJ 07090 (US)

(52) **U.S. Cl.** ..... 601/5; 601/33

(57) **ABSTRACT**

(73) Assignees: **Eidgenossische Technische Hochschule Zurich, Zurich (CH); Universitat zurich, Zurich (CH)**

A system for arm therapy of a user comprises a device for determining the position of the user, a first drive, an upper arm rotation module, an upper arm cuff, at least one hinge movably connecting the upper arm cuff and the first drive, a second drive, and a rotation drive provided on the upper arm rotation module itself. The upper arm cuff is connected to the arm of the user and has a substantially hollow-cylindrical shape when it is closed. The first drive and the second drive are adapted to place the upper arm rotation module in a defined spatial position, and the rotation drive is adapted to turn the upper arm cuff about its main axis relative to the outer part of the upper arm rotation module.

(21) Appl. No.: **11/792,035**

(22) PCT Filed: **Apr. 28, 2005**

(86) PCT No.: **PCT/CH2005/000236**

§ 371 (c)(1),  
(2), (4) Date: **Jul. 21, 2008**

