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Title of Symposium: Linking Measures of Neuroplasticity and Function

Description of submitted symposium (please limit to 2000 characters): An emerging concept that requires considerable discussion now that neuroplasticity is well entrenched within our lexicon resides in the relationship between measures indicative of functionally relevant plastic changes within the nervous system and the appropriateness of their applicability to the human condition. Several measures have been derived from animal studies with induced CNS lesions (most notably stroke) and applied with insufficient thought as to their relevance. Other measures speak to either statistically significant change or minimally important clinical differences without much further consideration about the value added to relevant changes in impairment, activity or participation (using the ICF model). The time has come to discuss the importance of discovery of procedurally induced functional neuroplasticity and the extent to which such change is appropriately and favorably impacting the rehabilitation process. Prospective presenters will be challenged to generate guidelines for reporting/categorizing outcomes and their implications in an effort to specify the value derived from studies that enhance neuroplasticity while minimizing the possibility of overstatement. An invaluable byproduct of this effort would be the opportunity to create a multidisciplinary perspective on the importance and implementation of measures of plasticity that can be both instructional for scientists, clinicians, consumers and policy makers as well as serve as a foundation amenable to modification driven by future discoveries and collaborations. An intriguing notion might be to document these presentations (audio record or digitize) for a special contribution to Neurorehabilitation and Neural Repair,

Length of time required for symposium?: 90 minutes

Additional Presenters (Limited to 4 additional presenters, list full name and email address) Please

Note: Any Non-member speakers must receive prior approval from the Program Chair.: Amongst potential contributors/presenters: Moderator: Steve Wolf Basic Science Perspective: Jeff Kleim Theresa Jones Randy Nudo Tom Carmichael Sean Savitz Applied Science Perspective: Steve Cramer Alex Dromerick Carolee Winstein John Krakauer

What is the role of each presenter?: Two basic science and two applied science experts from the list above: Each would offer their perspective on the "linkage: (12 minutes and 3 minutes of questions). The entire panel then would recommend elements contributing to potential "guidelines" to inform clinicians about criteria for defining acceptable outcomes and identifying/categorizing what those outcomes might be (20 minutes, followed by audience Q and A.

Objective 1: Appreciate the basic scientist's perspective on measures of neuroplasticity and how they may impact function and how they complement or may be contrary to those endorsed by applied scientists and vice versa.

Objective 2: Recognize both the importance and complexity of defining measures indicative of functionally relevant neuroplasticity that can be appreciated by clinicians, consumers and policy makers.

Objective 3: Identify outcome measures indicative of functionally relevant neuroplasticity as well as criteria to support their acceptance/recognition.