

# Neurologic Rehabilitation and Neural Repair Program\*

Bruce Dobkin, MD, Program Director

S. T. Carmichael, MD, PhD

Steve Cramer, MD

Michael Su, MD

Jason Hinman, MD, PhD

Ahmet Arac, MD, PhD

Fellows

\* The faculty have over 550 PubMed publications, have written over 100 book chapters and 10 books, and have directed or participated in over 100 phase 3 clinical trials.

## Primary Clinical and Teaching Services

*Inpatient service* at the California Rehabilitation Institute (Cal Rehab) in nearby Century City. This is a 140-bed subacute stroke, TBI, SCI and general neurology and other medical disease free-standing facility. Attendings are based in our department and the Cedars-Sinai PM&R (physiatry) faculty.

Two- and 4-week elective clinical rotations at Cal Rehab with Dr. Michael Su and a fellow or clinical research with Dr. Steven Cramer whose lab is there.

We provide inpatient Reagan-UCLA Westwood consultations primarily for neurology, neurosurgery, geriatrics, medicine, and orthopedics regarding prognostic and rehabilitation issues.

*Outpatient service* in the Neurology Clinic in Westwood. Attendings include Drs. Bruce Dobkin and Ahmet Arac and a fellow in a Thursday afternoon weekly clinic that emphasizes strategies to manage loss of motor control, language, mobility, and specific cognitive abilities, as well as their functional consequences.

# Bruce Dobkin, MD

Teaching and clinical: Neurorehab clinic

Research:

- \* Phase 2 and 3 clinical trials, trial designs, pilot studies
- \* Maraviroc controlled trial: Compare placebo to CCR5 blockade to enhance recovery by mechanisms of regeneration, learning, and drug plus training-induced plasticity.
- \* Remote tele-rehabilitation: Test a more rigorous clinical trial design for neural repair studies that optimizes training and practice, using home-based tele-rehabilitation, virtual reality, and behavioral management.
- \* 3-D kinematics: With Dr. Arac, test new monitoring and outcome kinematic measurements during real-life tasks that may offer more sensitive measures of motor changes than traditional clinical scales.

## S. Thomas (Tom) Carmichael, M.D., Ph.D.

### Teaching:

Teach neurology residents and fellows when attending on inpatient service

Teach graduate students and post-doctoral fellows in research lab

### Clinical Care:

Attends on inpatient general neurology service

Infrequent outpatient clinic

### Research:

Studies the molecular and cellular mechanisms of neural repair after stroke, using mouse models. Several findings have made their way into clinical trials.

# Michael Su, MD

Associate Medical Director, California Rehabilitation Institute  
CRI Director of the Stroke Rehabilitation Program

## Teaching:

Residents and fellows at CRI in stroke / neurorehabilitation, neurocritical care.

## Clinical:

Inpatient service at Cal Rehabilitation

## Research:

Clinical trials

# Jason Hinman, MD, PhD

## Teaching:

Residents and stroke fellows

## Clinical:

Acute and subacute stroke in clinic and Stroke Service.

## Research:

Microvascular disease mechanisms and repair in stroke and neurodegenerative disease.

White matter vascular lesion mechanisms and repair.

# Steven C. Cramer, MD

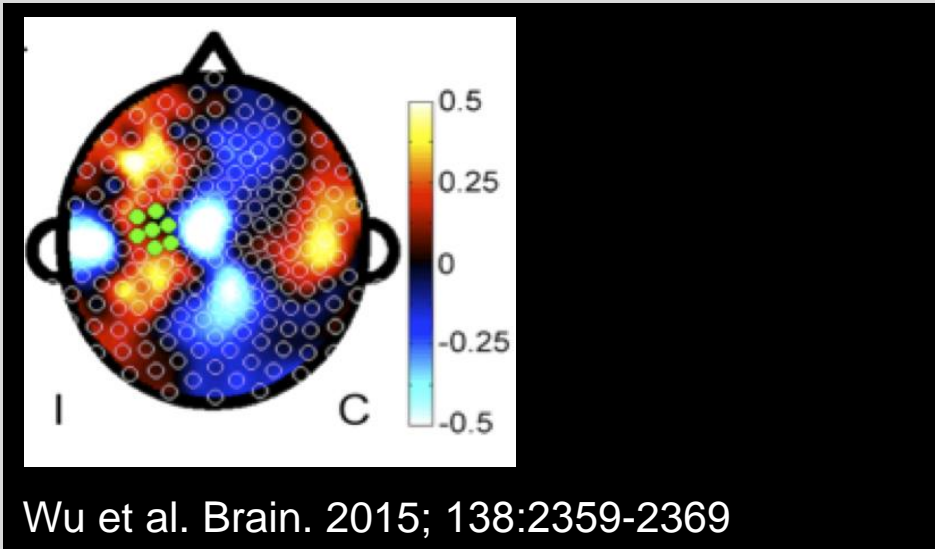
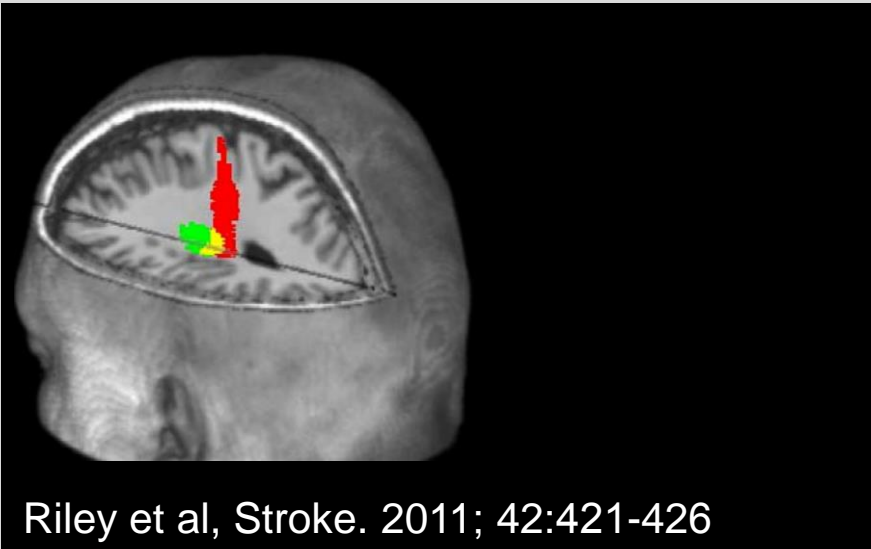
- Research focuses on recovery and neural repair after stroke.
- Emphasis on clinical trials of restorative therapies and on biomarkers that predict which patients are likely to respond to therapy.

JAMA Neurology | Original Investigation

## Efficacy of Home-Based Telerehabilitation vs In-Clinic Therapy for Adults After Stroke A Randomized Clinical Trial

Steven C. Cramer, MD; Lucy Dodakian, MA, OTR/L; Vu Le, MS; Jill See, MPT; Renee Augsburg, OTR/L; Alison McKenzie, DPT, PhD; Robert J. Zhou, BA; Nina L. Chiu, BS; Jutta Heckhausen, PhD; Jessica M. Cassidy, DPT, PhD; Walt Scacchi, PhD; Megan Therese Smith, PhD; A. M. Barrett, MD; Jayme Knutson, PhD; Dylan Edwards, PhD, PT; David Putrino, PhD, PT; Kunal Agrawal, MD; Kenneth Ngo, MD; Elliot J. Roth, MD; David L. Tirschwell, MD; Michelle L. Woodbury, PhD, OTR/L; Ross Zafonte, DO; Wenle Zhao, PhD; Judith Spilker, BSN, RN; Steven L. Wolf, PT, PhD; Joseph P. Broderick, MD; Scott Janis, PhD; for the National Institutes of Health StrokeNet Telerehab Investigators

Cramer et al. JAMA Neurology. 2019; 76:1079-1087



## Ahmet Arac, MD, PhD

### Teaching:

Neurorehab fellows, students and residents in outpatient clinic and courses.

### Clinical:

Neurorehab clinic

### Research:

Applications of machine learning and deep behavior to automated kinematics and neural recordings.

Simultaneously examines neurons with silicon probes at multiple CNS levels in the motor network during reach-and-grasp behavior.