

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

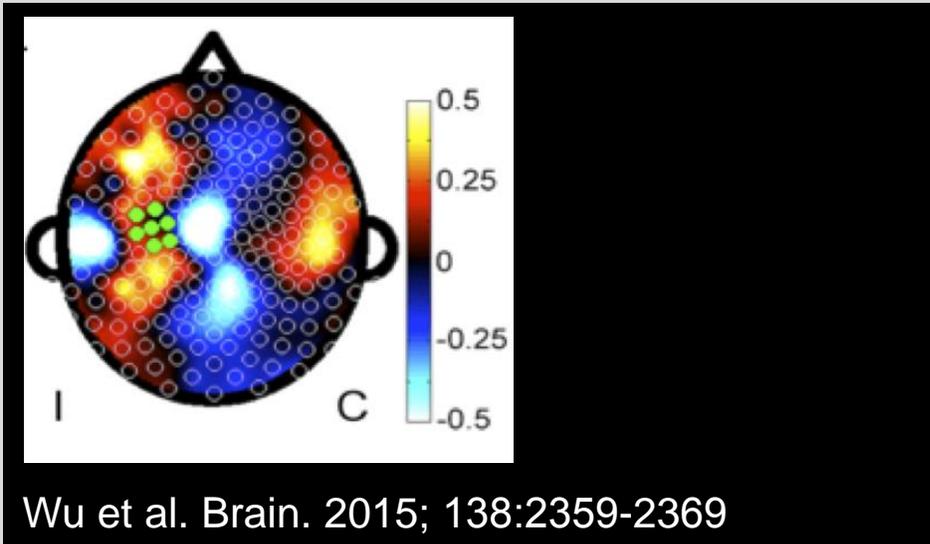
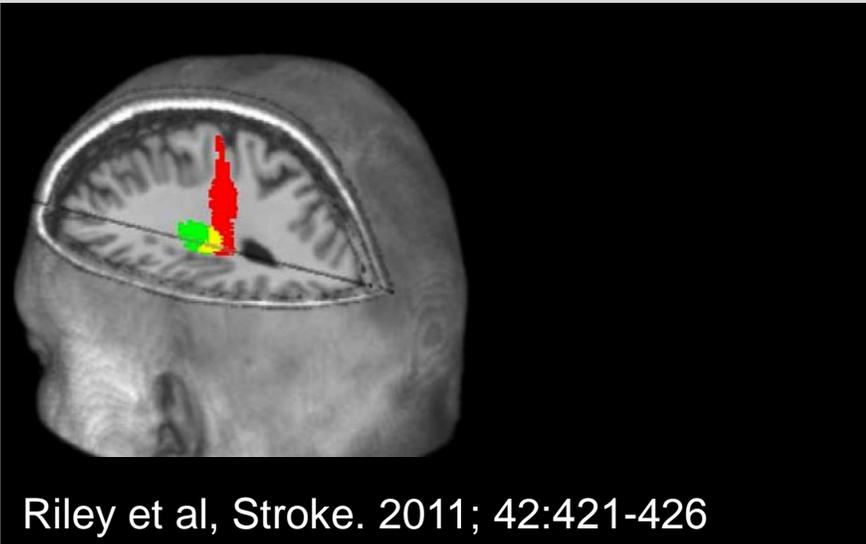
- Research focuses on recovery and neural repair after stroke.
- Emphasis on clinical trials of restorative therapies and on biomarkers that predict which patients are likely to respond to therapy.

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.