Research program – Manpreet K. Singh, MD, MS, Robert H. Putnam Endowed Chair in Bipolar Research and Treatment**,** University of California, Davis School of Medicine
Director, UC Davis Translational Mood Disorders Research Program and Impact Lab

Dr. Singh is the Robert H. Putnam Endowed Chair in Bipolar Research and Treatment at University of California Davis. She completed her combined residency training in Pediatrics, Psychiatry, and Child and Adolescent Psychiatry at Cincinnati Children's Hospital Medical Center, when she also completed a Master of Science in Clinical Research Design and Statistical Analysis. After postdoctoral training at Stanford's Center for Interdisciplinary Brain Sciences Research, she joined Stanford University's professoriate, where she conducted family studies integrating neuroimaging, cognitive, genetic, behavioral, and peripheral biomarker data characterizing risk for and resilience from developing bipolar and other mood disorders. Dr. Singh's work at UC Davis has a three-fold mission: **1) to investigate the origins and pathways** for developing major mood disorders and in processes that protect and preserve function after disorder onset; **2) to recruit, train, and sustain** the next generation of basic, translational, and clinical researchers in psychiatry; and **3) to evolve clinical care** in ways that lead to better outcomes. Taking a translational medicine approach, Dr. Singh's research aims to address unmet clinical needs through bridging fundamentals in basic science to clinical practice.

Publications: Some publications are listed below and in the bibliography linked here:

1. Characterizing Endophenotypes in Youth at High Risk for Mood Disorders.

a. **Singh MK**, Kelley RG*, Howe M, Reiss AL, Gotlib IH, Chang KD. Reward Processing in Healthy Offspring of Parents with Bipolar Disorder. *JAMA Psychiatry* 2014 Oct 1;71(10):1148-56.
c. Fischer AS*, Holt-Gosselin B, Hagan KE*, Fleming SL, Gotlib IH, **Singh MK**, Intrinsic connectivity and family dynamics: Striato-limbic markers of risk and resilience among youth at familial risk for mood disorders. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging.* 2022 Mar 8.
d. Nimarko AF*, Gorelik AJ*, Carta KE*, Gorelik MG*, **Singh MK**, Neural Correlates of Reward Processing Distinguish Healthy Youth at Familial Risk for Bipolar Disorder from Youth at Familial Risk for Major Depressive Disorder. *Transl Psychiatry*. 2022 Jan 24;12(1):31.

2. **Novel Analyses for Multimodal Longitudinal Imaging, Network Modeling, and Research Synthesis.**

a. **Singh MK**, Kesler S, Husseini H*, Kelley R*, Amatya D*, Hamilton J, Chen M*, Gotlib I. Anomalous Gray Matter Structural Networks in Major Depressive Disorder. *Biological Psychiatry*. 2013;74(10):777-85.
b. Pan N*, Qin K, Patino LR, Tallman MJ*, Lei D, Lu L*, Li Wenbin, Blom TJ, Bruns KM*, Welge JA, Strawn JR, Gong Q, Sweeney JA, DelBello MP, **Singh MK**. Aberrant Brain Network Topology in Youth with a Familial Risk for Bipolar Disorder: A Task-based fMRI Connectome Study. *J Child Psychology and Psychiatry.* 2024 Aug;65(8):1072-1086. doi: 10.1111/jcpp.13946.
c. **Singh MK**, Gorelk AJ*, Stave C, Gotlib IH, Genetics, epigenetics, and neurobiology of childhood-onset depression: An Umbrella Review. *Molecular Psychiatry*. 2023 Dec 15. doi: 10.1038/s41380-023-02347-x.
d. Gorelik A*, Gorelik M*, Ridout KK*, Nimarko A*, Peisch V*, Kuramkote S*, Low M*, Nrusimha A*, Pan T*, Singh S*, **Singh MK**, Evaluating Efficiency and Accuracy of Deep-Learning Based Approaches on Study Selection in Systematic Reviews. *Nature Mental Health.* 2023; http://dx.doi.org/10.1038/s44220-023-00109-w.

3. **Impulsivity, Aberrant Reward Processing, Insulin Resistance, and Drug Use Risk in Youth.**

a. **Singh MK**, Chang KD, Kelley R*, Cui X, Sherdell L*, Howe ME, Chang KD, Gotlib IH, Reiss AL. Reward Processing in Adolescents with Bipolar I Disorder. *J am Acad Child Adolesc Psychiatry.* 2013;52(1):68-83.
b. **Singh MK**, Rasgon NL et al. (2018). Brain and Behavioral Correlates of Insulin Resistance in Youth with Depression and Obesity. *Hormones and Behavior.* pii: S0018-506X(17)30501-9.
c. Fischer A, Tapert S, Louie DL, Schatzberg AL, **Singh MK**, Cannabis and the Developing Adolescent Brain. *Curr Treat Options Psychiatry*. 2020 Jun;7(2):144-161. doi: 10.1007/s40501-020-00202-2.

4. **Neural Response to Early Interventions.**

a. **Singh MK**, Nimarko A*, Garrett A, Gorelik A*, Roybal D*, Walshaw P, Chang KD, Miklowitz D, Changes in Intrinsic Brain Connectivity in Family-Focused Therapy versus Standard Psychoeducation Among Youth at High Risk for Bipolar Disorder. *J Am Academy of Child Adolesc Psychiatry*. 2021 Apr;60(4):458-469.
b. Honeycutt DC*, DelBello MP, Strawn JR, Ramsey LB, Patino LR, Hinman K*, Welge, J, Miklowitz DJ, Jo B, Blom TJ, Bruns KM*, Skotch SKH, Starace N*, Tallman MJ*, **Singh MK**, A Double-Blind Randomized Trial to Investigate Mechanisms of Antidepressant-Related Dysfunctional Arousal in Depressed or Anxious Youth at Familial Risk for Bipolar Disorder. *Journal of Personalized Medicine, Special Issue on Pharmacogenetics of Treating Anxiety and Depression.* 2022, 12, 1006.