BIOGRAPHICAL SKETCH	
NAME Ricardo E. Dolmetsch	POSITION TITLE Assistant Professor of Neurobiology Stanford University

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Brown University	Sc.B.	1990	Neuroscience
Stanford University	Ph.D.	1997	Neuroscience
Harvard University	(post-doc)	1997-2002	Neuroscience

A. Positions and Honors.

Positions and Employment

1988 Computer Programmer, Tropical Disease Research, World Health Organization, Geneva, Switzerlan
1989 Research Assistant, Foundation for the Study of Retrovirus Related Myelopathies, Cali, Colombia
1989-90 Research Assistant, Department of Clinical Neurology, Brown University, Providence RI
1990 Lecturer, Department of Computer Science, Universidad del Valle, Cali, Colombia
1991-97 Graduate Student and Teaching Assistant, Stanford University
1992, 1993 Teaching Assistant, Cold Spring Harbor Laboratory, Long Island NY
1997-02 Postdoctoral Fellow, Harvard Medical School, Boston MA
2003-05 Assistant Professor of Molecular Pharmacology, Stanford School of Medicine, Stanford CA
2005- Assistant Professor of Neurobiology, Stanford School of Medicine, Stanford CA

Honors

1993-95 American Heart Association Predoctoral Fellowship
1998-2001 Helen Hay Whitney Postdoctoral Fellow
1999-2001 McKnight Technological Innovations in Neuroscience Award
2001-2005 Burroughs Wellcome Fund Career Award in the Biomedical Sciences
2004-2009 National Institutes of Health RO1 NS48564-01
2004-2007 Searle Scholar
2004-2007 McKnight Scholar
2004 Klingenstein Scholar
2005-2006 Stanford University Faculty Fellow
2006-2009 Terman Scholar
2007 Society for Neuroscience and National Institute of Neurological Disease and Stroke Axelrod Lecture
2007 Society For Neuroscience Young Investigator Award
2008 National Institutes of Health Director's Pioneer Award

Professional Memberships

Society for Neuroscience, Biophysical Society, Society of General Physiologists

B. Selected publications

1. J.F. Krey, R. Rasmusen and R.E. Dolmetsch. An autism-associated mutation in $Ca_V1.2$ causes dendrite retraction by ectopic activation of RhoA ***In Revision***
2. N.Gomez-Ospina, G. Panagiotakos, A. Budzillo, A. Narichania and R. Dolmetsch. An independent promoter and transcriptional start site in the *CaV1.2* gene generates CCAT ***In Preparation***
3. C.Y. Park, P.J. Hoover, F. Mullins, P. Bachhawat, E.D. Covington S. Raunser,T. Walz, C.K. Garcia, R.E. Dolmetsch and R.S. Lewis (Co-corresponding authors) STIM1 Clusters and Activates CRAC channels via Direct Binding of a Cytosolic Domain to Orai1 ***Cell, In Press***
4. F. Tsuruta, E.M. Green, M. Rouset and R.E. Dolmetsch. PIKfyve regulates CaV1.2 degradation and prevents excitotoxic cell death ***In Revision***

5. O. Barreto-Chang and R. Dolmetsch, A voltage-dependent conformational change in the L-type calcium channel is required to activate CREB and promote neuronal survival. ***In Preparation***
6. C. Eroglu, M.W. Susman, N.J. Allen, C. Chakrabort, A.D. Huberman, E.M. Green, D. Annis, Z.D. Luo, A. Rosenthal, J.T. Lawle, R.E. Dolmetsch, D.F. Mosher and B.A. Barres. Neuronal Thrombospondin Receptor Responsible for Synaptogenesis is the Gabapentin Receptor L-type Calcium Channel Subunit $\alpha 2\delta 1$ ***In Revision Cell***
7. E. Green and R.E. Dolmetsch. **Nature Chemical Biology** 3:369-70 (2007), Calcium channels light up
8. E. Green, C. Barret G. Bultynck, S.M. Shamah and R.E. Dolmetsch. **Neuron** 55:615-22 (2007)**,** The tumor suppressor eIF3e mediates calcium-dependent internalization of the L-type calcium channel CaV1.2
9. J.F. Krey and R.E. Dolmetsch. **Current Opinion in Neurobiology**. 17:1-8 (2007) Molecular mechanisms of autism: a possible role for Ca^{2+} signaling.
10. J. Brenner and R.E. Dolmetsch. **Plos One***.* 2:e802 (2007) TrpC3 Specifically Regulates Hypertrophy-Associated Gene Expression without Affecting Myocyte Contraction or Cell Size.
11. N. Gomez-Ospina, F. Tsuruta, O. Barreto-Chang, L. Hu and R.E. Dolmetsch. **Cell** 127:591-606 (2006) The C terminus of the L-type voltage-gated calcium channel $Ca_V1.2$ encodes a transcription factor
12. J. Brenner, N Gomez-Ospina and R.E. Dolmetsch. Temporal and spatial regulation of calcium-dependent transcription. In: ***Calcium a matter of life and death.*** J. Krebs ed. Elsevier (2006)
13. C.Y. Park and R.E. Dolmetsch. **Science.** 314:64-5 (2006) Cell signaling. The double life of a transcription factor takes it outside the nucleus. .
14. R.E. Dolmetsch, N. Gomez, E. M. Green and E. A. Nigh. Imaging gene expression in living cell and tissues. In: ***Imaging Living Cells: A Laboratory Manual***. A. Konnerth, and R. Yuste, eds. Cold Spring Harbor Laboratory Press (2004).
15. R. E. Dolmetsch **Science STKE** January 15*,* (2003) Excitation transcription coupling: Signaling from ion channels to the nucleus.
16. J.M. Spotts*, R.E. Dolmetsch* and M.E. Greenberg. **Proceedings of the National Academy of Science** 99:15142-7(2002*)* Time-lapse imaging of a Dynamic Phosphorylation-Dependent Protein-Protein Interaction in Mammalian Cells (*Both of these authors contributed equally to this work)
17. J.M. Kornhauser, C.W. Cowan, A.J. Shaywitz, R.E. Dolmetsch, E.C. Griffith, L.S. Hu, C. Haddad, Z. Xia, M.E. Greenberg. **Neuron**. 34:221-33 (2002) CREB transcriptional activity in neurons is regulated by multiple, calcium-specific phosphorylation events.
18. R.E. Dolmetsch, U. Pajvani, K. Fife, J. Spotts and M.E. Greenberg. **Science (Research Article)** 294:333-339 (2001). Signaling to the Nucleus by an L-type Calcium Channel-Calmodulin Complex via the MAP kinase pathway.
19. S. Feske, J. Giltnane, R. E. Dolmetsch, L.M. Staudt and A. Rao. **Nature Immunology** 2:316-24. (2001) Gene regulation mediated by calcium signals in T lymphocytes.
20. A. E. West, W.G. Chen, M.B. Dalva, R. E. Dolmetsch, J.M. Kornhauser, A.J. Shaywitz, M.A. Takasu, X. Tao, and M. E. Greenberg. **Proceedings of the National Academy of Sciences USA** 98:11024–11031 (2001) Calcium regulation of neuronal gene expression.
21. R.E. Dolmetsch and P. Negelescu. Controlling cytoplasmic calcium and measuring calcium-dependent gene expression in intact cells. In: ***Calcium Signaling: A Practical Approach***, Alexei Tepikin ed. Oxford University Press (2001)
22. R.E. Dolmetsch and R.S. Lewis. Generation of controlled calcium oscillations in non-excitable cells. In: ***Imaging Living Cells: A Laboratory Manual***. A. Konnerth, F.Lanni, and R. Yuste, eds. Cold Spring Harbor Laboratory Press (1999).
23. J.I. Healy, R.E. Dolmetsch, R.S. Lewis, C.C. Goodnow, **Novartis Foundation Symposium** 215:137-145 (1998). Quantitative and qualitative control of antigen receptor signaling in tolerant B cells.

24. R.E. Dolmetsch, K. Xu, and R.S. Lewis. **Nature** 392:933-36 (1998). Calcium oscillations increase the efficiency and specificity of gene expression.
25. S. Bergling, R.E. Dolmetsch, R.S. Lewis, and J. Keizer. **Cell Calcium** 23:251-59 (1998). A fluorometric method for estimating the calcium content of internal stores.
26. R.E. Dolmetsch, R.S. Lewis, C.C. Goodnow, and J.I. Healy. **Nature** 386:855-58 (1997). Differential activation of transcription factors by calcium response amplitude and duration.
27. J.I. Healy, R.E. Dolmetsch, L.A. Timmerman, J.G. Cyster, M.L. Thomas, G.R. Crabtree, R.S. Lewis, and C.C. Goodnow. **Immunity** 6:419-28 (1997). Different nuclear signals are activated by the B cell receptor during positive versus negative signaling.
28. C.M. Fanger, A. Zweifach, R.E. Dolmetsch, M. Hoth, and R.S. Lewis. **Cellular Physiology and Biochemistry** 7:203-18 (1997). Function follows form: The role of store-operated calcium channels in T cell activation.
29. R.S. Lewis, R.E. Dolmetsch, and A. Zweifach. Positive and negative regulation of depletion-activated calcium channels by calcium. In: ***Organellar Ion Channels and Transporters***, Society of General Physiologists Series, v. 51. D.E. Clapham and B.E. Erlich, eds. Rockefeller University (1996).
30. R.E. Dolmetsch and R.S. Lewis. **Journal of General Physiology** 103:365-88. (1994). Signaling between intracellular calcium stores and depletion-activated calcium channels generates calcium oscillations in T lymphocytes.

C. Other Support

DOLMETSCH, R.E.

ACTIVE

RO1 NS48564-01 (Dolmetsch) * 2/01/04-2/01/09 30%
NINDS $215,000
Calcium Signaling in Neurons
The main goal of this project is to investigate the mechanisms that link L-type calcium channels to transcription and survival in cerebellar granule cells.
Aim1. Determine the structural features of L-type calcium channels that are necessary to activate transcriptional pathways
Aim2. Characterize the interaction between the L-type calcium channels and the adaptor protein JIP-1.
Aim3. Determine which features of L-type calcium channels are necessary to promote the survival of neurons.

Terman Scholar Award (Dolmetsch) * 7/01/06-7/01/09 10%
Stanford University $75,000
Aim1. Discovery of new ion channel blockers using a degenerate library of toxin molecules
Aim2. Characterization of ion channel trafficking using Total Internal Reflection Microscopy

BioX (Dolmetsch, Melosh)* 7/01/07-7/01/09 10%
Stanford University $75,000
Aim1. Development of nanowell arrays
Aim2. Testing of nanowell arrays in neuronal cultures

Simons Foundation (Dolmetsch, Tsien, Deisseroth, Rasmusen) 9/01/08-7/01/11 5%
Timothy Syndrome and Autism $60,000

National Institutes of Health Director's Pioneer Award 10/01/08-10/01/13
Using induced pluripotent stem cells to study autism $500,000

Fidelity Foundation 12/01/08-1/11/10
Voltage-dependent signaling in CaV1.2 channels promotes neuronal survival $140,000