

# Jay W. Schneider, MD, PhD

Personal:

1408 Kingsmill Court  
 Coppel, TX 75019  
[jay.schneider@utsouthwestern.edu](mailto:jay.schneider@utsouthwestern.edu)  
 (972) 567-1743

Professional:

UT Southwestern Medical Center  
 Dallas, TX  
 (214) 648-4957 (office)  
 (214) 648-5104 (lab)

**Profile**

Cardiovascular physician-scientist with significant research experience focused on applying chemical biology tools to stem/progenitor cell science and heart repair. Expertise includes basic science research, drug discovery & development, general cardiology and ICU clinical care, clinical teaching/lectures, manuscript and grant writing, and public speaking.

**Education**

<b>Year</b>	<b>Degree</b>	<b>Field of Study (Thesis advisor for PhDs)</b>	<b>Institution</b>
1990	PhD	Human Genetics (Edward J. Benz, Jr., MD)	Yale University Graduate School (NIH-MSTP)
1990	MD (Thesis Award)	Medicine	Yale University School of Medicine (NIH-MSTP)
1982	BA (Honors)	Biochemistry & Cell Biology	University of California, San Diego

**Postdoctoral Training**

<b>Year(s)</b>	<b>Titles</b>	<b>Specialty/Discipline (Lab PI for postdoc research)</b>	<b>Institution</b>
2003-2005	Jr. Faculty/ Post-Doctoral Research Sabbatical	Molecular Biology (Eric N. Olson, PhD)	University of Texas, Southwestern Medical Center
1994-1997	Clinical Fellow*	Cardiovascular Disease	Brigham and Women's Hospital, Harvard Medical School
1991-1997	Post-Doctoral Research Fellow*	Cardiovascular Medicine 1. Bernardo Nadal-Ginard, MD, PhD 2. Thomas W. Smith, MD 3. James A. DeCaprio, MD	1. Children's Hospital, Harvard Medical School 2. Brigham and Women's Hospital, Harvard Medical School 3. Dana-Farber Cancer Institute, Harvard Medical School
1991-1994	Resident*	Internal-Medicine	Brigham and Women's Hospital, Harvard Medical School
1990-1991	Intern*	Internal-Medicine	Brigham and Women's Hospital, Harvard Medical School

\*Eugene Braunwald, MD-directed Research-Residency "Hemi-Doc" Program at Brigham and Women's Hospital

### Licensures

Massachusetts Medical License (retired)

Texas Medical License

### Boards and Other Certification

2001 Diplomat, Subspecialty Board of Cardiovascular Disease

1998 Diplomat, American Board of Internal Medicine

### Honors and Awards

<b>Year</b>	<b>Name of Honor/Award</b>	<b>Awarding Organization</b>
2013	Endowed Chair for Cardiac Research	The Dallas Heart Ball
2012	Selected participant, LEAD (Leadership Emerging in Academic Depts.) Program	UT Southwestern Medical Center Office of Faculty Diversity and Development
2011	Invited speaker, President's Research Council	Daniel Podolsky, MD, President, UT Southwestern Medical Center
2010	Thank you letters from President Podolsky and Mary Ellen Weber for giving talks and tours for official legislative guests	Daniel Podolsky, MD, President, UT Southwestern Medical Center Mary Ellen Weber, PhD VP, Government Affairs and Policy
2010	Top Downloaded Online First Article in <i>Circulation Research</i> "A dynamic Notch injury response activates epicardium and contributes to fibrosis repair" (Ref. 15 below)	Roberto Bolli, MD Editor-in-Chief, <i>Circulation Research</i>
2009	Letter of congratulations from UT Chancellor for U01 award	Francisco G. Cigarroa, MD Chancellor, The University of Texas System
1996	Cardiovascular Young Investigator Award	Astra-Merck, Inc.
1992	Finalist, Louis N. Katz Prize for Young Investigators	American Heart Association
1992	Henry Christian Memorial Award for Excellence in Cardiovascular Research	American Federation of Clinical Research
1992	AFCR Trainee Investigator Award	American Federation of Clinical Research
1991	AFCR Trainee Investigator Award	American Federation of Clinical Research
1991	MD/PhD Postdoctoral Fellowship Award	Merck-American Federation of Clinical Research
1989	Peter F. Curran Prize for outstanding medical school thesis	Yale University School of Medicine

**Faculty Academic Appointments**

<b><i>Year(s)</i></b>	<b><i>Academic Title</i></b>	<b><i>Department</i></b>	<b><i>Academic Institution</i></b>
2014-present	Associate Director	Hamon Center for Regenerative Science and Medicine	UT Southwestern Medical Center
2012-present	Associate Professor of Medicine with tenure	Internal Medicine/Cardiology	UT Southwestern Medical Center
2003-2012	Assistant Professor of Medicine	Internal Medicine/Cardiology	UT Southwestern Medical Center
1997-2003	Instructor	Medicine	Brigham and Women's Hospital, Harvard Medical School

**Appointments at Hospitals/Affiliated Institutions**

<b><u>Past</u></b>			
<b><i>Year(s)</i></b>	<b><i>Position Title</i></b>	<b><i>Department/Division</i></b>	<b><i>Institution</i></b>
2002-2003	Director	Coronary Care Unit	VA Boston Healthcare System (West Roxbury)
1997-2003	Staff Physician	Internal-Medicine	Cape Cod Hospital, Hyannis and Falmouth Hospital, Falmouth, MA
1997-2003	Staff Physician	Internal-Medicine	VA Boston Healthcare System (West Roxbury)
1997-2003	Associate Physician	Internal-Medicine	Brigham and Women's Hospital, Harvard Medical School
<b><u>Current</u></b>			
<b><i>Year(s)</i></b>	<b><i>Position Title</i></b>	<b><i>Department/Division</i></b>	<b><i>Institution</i></b>
2003-present	Faculty Physician	Internal Medicine/Cardiology	UT Southwestern Medical Center

**Other Professional Experience**

<b><i>Year(s)</i></b>	<b><i>Position Title</i></b>	<b><i>Institution</i></b>
2009-present	<b>Administrative Director/Lead PI</b> , UT Southwestern NIH/NHLBI-U01 Progenitor Cell Biology Consortium Group <a href="http://www.progenitorcells.org/">http://www.progenitorcells.org/</a>	UT Southwestern Medical Center
2009-present	<b>Administrative Director/Lead PI</b> , UT Southwestern AHA-DeHaan Cardiac Myogenesis Research Center	UT Southwestern Medical Center
2011-present	<b>Administrative Director/Lead PI</b> , Cancer Prevention and Research In Texas, Multi-Investigator Award	UT Southwestern Medical Center
2011-present	<b>Senior Consultant/Lead Scientist/Stockholder</b> , Lone Star Heart, Inc. ( <a href="http://www.lonestarheartinc.com/">http://www.lonestarheartinc.com/</a> )	UT Southwestern Medical Center – BioCenter
2010-present	<b>Medical Advisory Counsel</b> , Texans for Stem Cell Research ( <a href="http://www.txstemcell.org/">http://www.txstemcell.org/</a> )	Austin, TX

### Major Administrative/Leadership Positions

<b>Year(s)</b>	<b>Position Title</b>	<b>Institution</b>
2012	<b>Organizer/Host</b> for 2012 NIH/NHLBI Progenitor Cell Biology 4 <sup>th</sup> Annual Meeting	UT Southwestern Medical Center
2010	<b>Organizer</b> , American Heart Association-Jon Holden DeHaan Cardiac Myogenesis Research Centers 1 <sup>st</sup> Annual Scientific Retreat, Dallas	UT Southwestern Medical Center
2010	<b>Co-Director</b> , Abcam Conference: "Birth, Life and Death of the Cardiac Myocyte"	ABCAM/UT Southwestern Medical Center
2010	<b>Chair</b> , Presidential-appointed committee, San Yatsen University-UT Southwestern Post-doctoral Research Exchange Program	San Yatsen University, Guangzhou, Southern China & UT Southwestern Medical Center
2004	<b>Director</b> , UT Southwestern Cardiovascular Symposium: "Chemical Genetics and Cardiovascular Drug Discovery"	UT Southwestern Medical Center
2003-present	<b>Organizer</b> , monthly Cardiovascular Research Conference	UT Southwestern Medical Center
1997-2003	<b>Director</b> , Cape Cod Hospital-BWH cardiology moonlighting service	Brigham and Women's Hospital
1997-2003	<b>Organizer</b> , Cardiology Grant Rounds, West Roxbury VA Medical Center	West Roxbury VA Medical Center

### Committee Service

<b>Year(s)</b>	<b>Name of Committee</b>	<b>Institution/Organization</b>
<b><u>UT Southwestern</u></b>		
2009-present	Presidential Dignitary Committee <b>Role:</b> Lead presenter for communicating the impact of UTSW's research to state and federal dignitaries, which has been critical to garnering both supporters and funding support for UTSW	UT Southwestern Medical Center, President's Office (Dan Podolsky MD) and Office of Government Affairs and Policy (Mary Ellen Weber, PhD)
<b><u>State/Regional</u></b>		
2011-present	<b>Member</b> , Texas Medical Board Stem Cell Stakeholder's Committee (Linda Gage-White, MD, PhD, Medical Director, TMB) <b>Role:</b> Participate in TMB policy/rule-making group to amend Texas Administrative Code regarding clinical applications of stem cell therapy	Texas Medical Board, Austin, TX
<b><u>National/International</u></b>		
2010-present	Member, NIH/NHLBI Progenitor Cell Biology Consortium Steering Committee <b>Role:</b> Participate in NIH/NHLBI PCBC administrative/organizational decisions	National Institutes of Health

### Grant Review Activities

<b>Year(s)</b>	<b>Name of Review Committee</b>	<b>Organization</b>
2009-present	Medical Research Council, Great Britain (ad hoc)	Medical Research Council, U.K.
2009-present	NIH Challenge Grant Reviewer (ad hoc)	National Institutes of Health
2009-present	New York State Stem Cell Grant Reviewer	NYSTEM
2009-present	American Heart Association Cardiac Development Study Section	American Heart Association
2009-present	Ontario Research Fund-Global Leadership Round in Genomics and Life Sciences (ad hoc)	Ontario Research Fund, Canada

### Editorial Activities

<b>Year(s)</b>	<b>Journal Name</b>
<b><u>Ad Hoc Reviewer</u></b>	
2003-present	Journal of Investigative Medicine
2003-present	Circulation Research
2003-present	Nature Chemical Biology
2003-present	Proceedings National Academy of Sciences, USA
2010-present	Stem Cells and Development
2010-present	Cytotherapy
2010-present	Journal of Medicinal Chemistry
2011-present	Cell Biochemistry and Function
2010-present	Texas Heart Institute Journal
2010-present	Journal of Cellular Biochemistry
2012-present	ACS-Chemical Biology and ACS-Chemical Neuroscience

### Lectures

<b>Year(s)</b>	<b>Title</b>	<b>Location</b>
<b><u>International</u></b>		
2011	<b><u>Meeting title:</u></b> European Society of Cardiology/ Heart Failure Association Annual Meeting <b><u>Talk title:</u></b> Update from the Industry: the UTSW-Lone Star Heart repair program	Gothenburg, Sweden
2011	<b><u>Meeting title:</u></b> Heidelberg Cardiology Conference <b><u>Talk title:</u></b> Chemical regulation of cardiac regeneration	Heidelberg University School of Medicine, Germany
2011	<b><u>Meeting title:</u></b> Cardiovascular Drug Discovery: The Emerging Role of Chemical Genetics and High Throughput Biology <b><u>Talk title:</u></b> Chemically reprogramming a native progenitor heart-repair module	Imperial College's British Heart Foundation Centre of Research Excellence, London, England
2009	<b><u>Meeting title:</u></b> Advances in Heart Development: From Molecules to Cures <b><u>Talk title:</u></b> Targeting a progenitor cell niche to enhance	<i>Fondation des Treilles, Tourtour, South of France</i>

	cardiac regeneration	
<b><u>National</u></b>		
2013	<b><u>Meeting title:</u></b> Medicine Grand Rounds <b><u>Talk title:</u></b> The future of regenerative medicine, today	UT Southwestern Medical Center, Dallas, TX
2012	<b><u>Meeting title:</u></b> Cardiovascular Research Seminar <b><u>Talk title:</u></b> A new pharmacology for heart repair: from small-molecules to cardio-regenerative drugs	Mayo Clinic, Rochester, MN
2012	<b><u>Meeting title:</u></b> Dallas Woman's Club <b><u>Talk title:</u></b> Molecules & Music of the Heart (with Eric Olson)	Dallas Woman's Club, Highland Park, TX
2012	<b><u>Meeting title:</u></b> 2 <sup>nd</sup> Annual International Conference on Cancer and the Heart <b><u>Talk title:</u></b> Chemical biology approaches to chemotherapy cardiotoxicity – fighting fire with fire	U.T. MD Anderson Cancer Center, Houston, TX
2012	<b><u>Meeting title:</u></b> American Heart Association Scientific Sessions: Future Directions of Stem Cells in Cardiovascular Disease <b><u>Talk title:</u></b> From Small-Molecules to Cardio-regenerative drugs for Heart Repair	Convention Center, Los Angeles, CA
2012	<b><u>Meeting title:</u></b> American Heart Association Scientific Sessions: New Opportunities in Drug Discovery for Heart Disease <b><u>Talk title:</u></b> Cell-based high throughput screens to identify activators of a biological process	Convention Center, Los Angeles, CA
2011	<b><u>Meeting title:</u></b> Vanderbilt University, Cardiovascular Research Seminar Series <b><u>Talk title:</u></b> New small-molecule probes to new targets in ischemic heart disease	Vanderbilt University Medical School, Nashville, TN
2011	<b><u>Meeting title:</u></b> Vanderbilt University, Cardiovascular Grand Rounds <b><u>Talk title:</u></b> Fixing a hole: perspectives on cardio-regenerative therapies	Vanderbilt University Medical School, Nashville, TN
2011	<b><u>Meeting title:</u></b> Cardiomyocyte Regeneration & Protection <b><u>Talk title:</u></b> From cardiogenic small-molecules...to cardio-regenerative drugs	Abcam Conference, La Jolla, CA
2011	<b><u>Meeting title:</u></b> Texans for Stem Cell Research <b><u>Talk title:</u></b> Stem cells and the heart: promise, perils and unsolved problems	Antone's, Austin, TX
2011	<b><u>Meeting title:</u></b> 2 <sup>nd</sup> Annual Symposium on Stem Cell Research; Learn for Life Education Series <b><u>Talk title:</u></b> Drugs that regulate stem cell function	UT Austin AT&T Conference Center, Austin, TX
2011	<b><u>Meeting title:</u></b> President's Research Council <b><u>Talk title:</u></b> Hidden secrets of the heart: using chemistry to harness the power of native stem cells	President's Research Council, UT Southwestern Medical Center
2009	<b><u>Meeting title:</u></b> University of Pennsylvania School of Medicine, Cardiovascular Grand Rounds <b><u>Talk title:</u></b> Small-molecule targeting a native progenitor pool to enhance heart repair	University of Pennsylvania, Philadelphia, PN

2009-present	<b><u>Meeting title:</u></b> Annual Scientific Meetings of the American Heart Association-Jon Holden DeHaan Cardiac Myogenesis Research Centers <b><u>Talk title:</u></b> Research Progress Updates	Chicago, Philadelphia, Orlando, Los Angeles
2009-present	<b><u>Meeting title:</u></b> Annual Scientific Meetings of the NIH/NHLBI Progenitor Cell Biology Consortium <b><u>Talk title:</u></b> Research Progress Updates	Washington, DC, Philadelphia, Boston, Dallas
2008	<b><u>Meeting title:</u></b> 15 <sup>th</sup> Annual Weinstein Cardiovascular Development Conference <b><u>Talk title:</u></b> Enhancing epicardial stem cell repair mechanisms with synthetic small-molecules	Texas A&M System Health Science Center, Houston, TX
2008	<b><u>Meeting title:</u></b> Internal-Medicine Grand Rounds <b><u>Talk title:</u></b> Newts, niches and new drugs: the next frontier for regenerative medicine	UT Southwestern Medical Center
2003-present	<b><u>Recurring academic talks at UT Southwestern:</u></b> 1. Cardiovascular Research Conference 2. Cardiology Grand Rounds	UT Southwestern Medical Center

### **Technological & Scientific Innovations**

<b><i>Innovation</i></b>
PATENT <b>UTSD.P2499US.P1</b> : PROVISIONAL APPLICATION FOR UNITED STATES LETTERS PATENT for ISOXAZOLE TREATMENTS FOR DIABETES by Melanie Cobb, Elhadji Dioum and Jay Schneider ( <i>provisional, licensed by UT Southwestern to Lone Star Heart, Inc., UT Southwestern BioCenter</i> )
PATENT <b>UTSD: 1991US</b> , STEM CELL DIFFERENTIATING AGENTS AND USES THEREOF by Eric Olson, Jay Schneider et al. ( <i>licensed by UT Southwestern to Lone Star Heart, Inc., UT Southwestern BioCenter</i> )
PATENT <b>UTSD: 1845US</b> , CHEMICAL INDUCERS OF NEUROGENESIS by Jay Schneider et al. ( <i>licensed by UT Southwestern to Lone Star Heart, Inc., UT Southwestern BioCenter</i> )

### **Community Service**

<b>Year(s)</b>	<b>Role</b>	<b>Organization</b>
2005-present	Lead guitarist	<b><i>Transactivators</i></b>
<p><b><i>Transactivators</i></b> is an UTSW volunteer faculty/student/staff rock-'n'-roll band, started by Eric Olson and myself. We serve the UTSW community by playing for free at UTSW events, including Graduate Student Organization and Post-Doctoral Association parties, departmental Christmas parties and other special events. In addition, <b><i>Transactivators</i></b> has played at several international scientific conferences and special events, in Houston, San Francisco and Albuquerque and the Outer Banks. We are musical ambassadors for UTSW Medical Center. See story and photograph <a href="http://circres.ahajournals.org/content/106/4/621.full">http://circres.ahajournals.org/content/106/4/621.full</a> and photo albums <a href="http://www4.utsouthwestern.edu/olsonlab/Transactivators.html">http://www4.utsouthwestern.edu/olsonlab/Transactivators.html</a>.</p>		

## Bibliography

### **Peer-Reviewed Publications**

#### Original Research Articles

1.	<b>Schneider, J.W.</b> , Mercer, R.W., Caplan, M., Emanuel, J.R., Sweadner, K.J., Benz, E.J., Jr. and Levenson, R. 1985. Molecular cloning of Na,K-ATPase $\alpha$ -subunit cDNA. <i>Proc. Natl. Acad. Sci. USA</i> <b>82</b> , 6357-6361. ( <a href="http://www.pnas.org/content/82/18/6357.short">http://www.pnas.org/content/82/18/6357.short</a> )
2.	Emanuel, J.R., Garetz, S., <b>Schneider, J.</b> , Ash, J.F., Benz, E.J., Jr. and Levenson, R. 1986. Amplification of DNA sequences coding for the Na,K-ATPase $\alpha$ -subunit in ouabain-resistant C+ cells. <i>Mol. Cell. Biol.</i> <b>6</b> , 2476-2481. ( <a href="http://mcb.asm.org/content/6/7/2476.long">http://mcb.asm.org/content/6/7/2476.long</a> )
3.	Mercer, R.W., <b>Schneider, J.W.</b> , Savitz, A., Emanuel, J., Benz, E.J., Jr. and Levenson, R. 1986. Rat brain Na,K-ATPase $\beta$ -chain gene: primary structure, tissue-specific expression and amplification in ouabain-resistant HeLa C+ cells. <i>Mol. Cell. Biol.</i> <b>6</b> , 3884-3890. ( <a href="http://mcb.asm.org/content/6/11/3884.long">http://mcb.asm.org/content/6/11/3884.long</a> )
4.	High, K.A., Stolle, C.A., <b>Schneider, J.W.</b> , Hu, W. and Benz, E.J., Jr. 1987. C-myc gene inactivation during induced maturation of HL-60 cells: transcriptional repression and loss of a specific DNase I hypersensitive site. <i>J. Clin. Invest.</i> <b>79</b> , 93-99. ( <a href="http://www.jci.org/articles/view/112814">http://www.jci.org/articles/view/112814</a> )
5.	<b>Schneider, J.W.</b> , Mercer, R.W., Gilmore-Hebert, M., Utset, M.F., Lai, C., Greene, A. and Benz, E.J., Jr. 1988. Tissue specificity, localization in brain and cell-free translation of mRNA encoding the A3 isoform of Na <sup>+</sup> ,K <sup>+</sup> -ATPase. <i>Proc. Natl. Acad. Sci. USA</i> <b>85</b> , 284-288. ( <a href="http://www.pnas.org/content/85/1/284.long">http://www.pnas.org/content/85/1/284.long</a> )
6.	Gu, W., <b>Schneider, J.W.</b> , Condorelli, G., Kaushal, S., Mahdavi, V. and Nadal-Ginard, B. 1993. Interaction of myogenic factors and the retinoblastoma protein mediates muscle cell commitment and differentiation. <i>Cell</i> <b>72</b> , 309-324. ( <a href="http://www.sciencedirect.com/science/article/pii/009286749390110C">http://www.sciencedirect.com/science/article/pii/009286749390110C</a> )
7.	<b>Schneider, J.W.</b> , Gu, W., Zhu, L., Mahdavi, V. and Nadal-Ginard, B. 1994. Reversal of terminal differentiation mediated by p107 in Rb <sup>-/-</sup> muscle cells. <i>Science</i> <b>264</b> , 1467- 1471. ( <a href="http://www.sciencemag.org/content/264/5164/1467.abstract">http://www.sciencemag.org/content/264/5164/1467.abstract</a> )
8.	Kaushal, S., <b>Schneider, J.W.</b> , Nadal-Ginard, B. and Mahdavi, V. 1994. Activation of the myogenic lineage by MEF2A, a factor that induces and cooperates with MyoD. <i>Science</i> <b>266</b> , 1236-1240. ( <a href="http://www.sciencemag.org/content/266/5188/1236.abstract">http://www.sciencemag.org/content/266/5188/1236.abstract</a> )
9.	<b>Schneider, J.W.</b> , Chang, A.Y., and Rocco, T.P. 2001. Cardiotoxicity risk in signal transduction therapeutics: erbB2 antibodies and the heart. <i>Sem. in Oncology</i> <b>28</b> , 18-26. ( <a href="http://www.seminoncol.org/article/S0093-7754(01)90278-7/abstract">http://www.seminoncol.org/article/S0093-7754(01)90278-7/abstract</a> )
10.	<b>Schneider, J.W.</b> , Chang, A.Y., and Garratt, A. 2002. Trastuzumab cardiotoxicity: speculations regarding pathophysiology and targets for further study. <i>Sem. in Oncology</i> <b>29</b> , 22-28. ( <a href="http://www.seminoncol.org/article/S0093-7754(02)70123-1/abstract">http://www.seminoncol.org/article/S0093-7754(02)70123-1/abstract</a> )
11.	Chang, A.Y., and <b>Schneider, J.W.</b> 2003. Inpatient evaluation and management of acute decompensated heart failure. Diagnostic approach; treatment options; risk factor reduction; role of specialist. <i>Journal of Clinical Outcomes Management</i> <b>10</b> , 231-239.
12.	Barth, A.S., Kizana, E., Ruckdeschel-Smith, R., Terrovitis, J., Dong, P., Leppo, M.K., Zhang, Y., Miake, J., Olson, E.N., <b>Schneider, J.W.</b> , Abraham, M.R., Marban, E. 2008. Lentiviral vectors bearing the cardiac promoter of the Na <sup>+</sup> -Ca <sup>2+</sup> exchanger report cardiogenic differentiation in stem cells. <i>Molecular Therapy</i> <b>16</b> , 957-964. ( <a href="http://www.ncbi.nlm.nih.gov/pubmed/18388932">http://www.ncbi.nlm.nih.gov/pubmed/18388932</a> )

13.	<p>Sadek, H., Hannack, B., Choe, E., Wang, J., Latif, S., Garry, M.G., Garry, D.J., Longgood, J., Frantz, D.E., Olson, E.N., Hsieh, J., <b>Schneider, J.W.</b> 2008. Cardiogenic small molecules that enhance myocardial repair by stem cells. <i>Proc. Natl. Acad. Sci. USA</i> <b>105</b>, 6063-6068. (<a href="http://www.ncbi.nlm.nih.gov/pubmed/18420817">http://www.ncbi.nlm.nih.gov/pubmed/18420817</a>)</p> <p>See Nature Reviews Drug Discovery Research Highlight about this paper: <b>“Stem cells: boosting myocardial repair,”</b> by Bethan Hughes, Nature Reviews Drug Discovery Research Highlight, 7, 478 (June 2008), DOI: 10.1038/nrd2600 (<a href="http://www.nature.com/nrd/journal/v7/n6/full/nrd2600.html">http://www.nature.com/nrd/journal/v7/n6/full/nrd2600.html</a>)</p> <p>ACS Chemical Biology Spotlight Article, <b>“Taking screening to heart,”</b> by Eva J. Gordon, PhD, ACS Chemical Biology Research Spotlight, ACS Chem. Biol., 2008, 3 (6), pp 322–327, (June 2008), DOI: 10.1021/cb8001182 (<a href="http://pubs.acs.org/action/doSearch?action=search&amp;searchText=taking+screening+to+heart&amp;qSearchArea=searchText&amp;type=within&amp;publication=40025955">http://pubs.acs.org/action/doSearch?action=search&amp;searchText=taking+screening+to+heart&amp;qSearchArea=searchText&amp;type=within&amp;publication=40025955</a>)</p> <p>Southwestern Medicine Magazine story called, <b>“Getting to the root of stem cells”</b> Southwestern Medicine Magazine 2006 Annual Review, (<a href="http://www.utsouthwestern.edu/utsw/cda/dept37351/files/353308.html">http://www.utsouthwestern.edu/utsw/cda/dept37351/files/353308.html</a>)</p> <p>UT Southwestern Center Times article entitled <b>“Molecule prompts stem cells to help repair heart damage in animal model,”</b> UT Southwestern Center Times (<a href="http://www.utsouthwestern.edu/utsw/cda/dept353744/files/456145.html">http://www.utsouthwestern.edu/utsw/cda/dept353744/files/456145.html</a>).</p> <p>Moreover, this publication attracted international attention with an interview by Klaus Herbst, science correspondent for <b>SWR2</b>, the German equivalent of NPR (National Public Radio) (<a href="http://www.youtube.com/watch?v=Ou8chccjrGI">http://www.youtube.com/watch?v=Ou8chccjrGI</a>).</p>
14.	<p><b>Schneider, J.W.</b>, Gao, Z., Li, S., Farooqi, M., Tang, T.-S., Bezprozvanny, I., Frantz, D.E., Hsieh, J. 2008. Small-molecule activation of neuronal fate. <i>Nature Chemical Biology</i> <b>4</b>, 408-410. (<a href="http://www.nature.com/nchembio/journal/v4/n7/abs/nchembio.95.html">http://www.nature.com/nchembio/journal/v4/n7/abs/nchembio.95.html</a>)</p> <p><b>* Schneider and Hsieh, 1<sup>st</sup> and last authors, made equal contributions to this paper</b></p> <p>See UT Southwestern Center Times article entitled <b>“Researchers create molecule that nudges nerve stem cells to mature,”</b> (<a href="http://www.utsouthwestern.edu/utsw/cda/dept353744/files/468005.html">http://www.utsouthwestern.edu/utsw/cda/dept353744/files/468005.html</a>) by Aline McKenzie.</p> <p>Southwestern Medicine Magazine article, <b>“Chemical attraction,”</b> Southwestern Medicine Magazine 2008 Annual Review (<a href="http://www.utsouthwestern.edu/utsw/cda/dept37351/files/537207.html">http://www.utsouthwestern.edu/utsw/cda/dept37351/files/537207.html</a>)</p>
15.	<p>Zhang, L., Li, P., Hsu, T., <b>Schneider, J.</b>, Bachoo, R., Hsieh, J. 2011. Small-molecule blocks malignant astrocyte proliferation and induces neuronal gene expression. <i>Differentiation</i> 81(4): 233-42. <a href="http://www.ncbi.nlm.nih.gov/pubmed/21419563">http://www.ncbi.nlm.nih.gov/pubmed/21419563</a></p>

16.	Russell, J.R., Goetsch, S.C., Gaiano, N.R., Hill, J.A., Olson, E.N., <b>Schneider, J.W.</b> 2011. A dynamic Notch injury response activates epicardium and contributes to fibrosis-repair. <i>Circulation Research</i> <b>108</b> : 51-59. ( <a href="http://www.ncbi.nlm.nih.gov/pubmed/21106942">http://www.ncbi.nlm.nih.gov/pubmed/21106942</a> )  <b>See editorial about this manuscript:</b> Rentschler, S. and Epstein, J.A. Kicking the epicardium up a notch. <i>Circulation Research</i> <b>108</b> : 6-8. ( <a href="http://www.ncbi.nlm.nih.gov/pubmed/21212389">http://www.ncbi.nlm.nih.gov/pubmed/21212389</a> )  This story also prompted a Dallas Channel CBS11 KTVT news story/interview called “ <b>Stem Cell Hope</b> ” ( <a href="http://www.youtube.com/watch?v=ZqptGkqf7vo">http://www.youtube.com/watch?v=ZqptGkqf7vo</a> ). This story was nationally syndicated on the major networks.
17.	Khakoo, A.Y., Liu, P.P., Force, T., Lopez-Berestein, G., Jones, L.W., <b>Schneider, J.</b> , Hill, J. 2011. Cardiotoxicity due to cancer therapy. <i>Texas Heart Institute Journal</i> <b>38</b> :253-256. ( <a href="http://www.ncbi.nlm.nih.gov/pubmed/21720463">http://www.ncbi.nlm.nih.gov/pubmed/21720463</a> )
18.	Dioum, E.M., Osborne, J.K., Goetsch, S., Russell, J., <b>Schneider, J.W.</b> , Cobb, M.H. 2011. A small molecule differentiation inducer increases insulin production by pancreatic $\beta$ cells. <i>Proc. Natl. Acad. Sci. USA</i> ( <a href="http://www.ncbi.nlm.nih.gov/pubmed/22143803">http://www.ncbi.nlm.nih.gov/pubmed/22143803</a> ) <b>* Schneider and Cobb are co-senior/corresponding authors on this manuscript</b>
19.	Russell, J.L., Goetsch, S.C., Aguilar, H.R., Frantz, D.E., <b>Schneider, J.W.</b> Targeting native adult heart progenitors with cardiogenic small molecules. 2012. <i>ACS-Chemical Biology</i> <b>15</b> : 1067-1076. <a href="http://www.ncbi.nlm.nih.gov/pubmed/22413910">http://www.ncbi.nlm.nih.gov/pubmed/22413910</a>
20.	Russell, J.L., Goetsch, S.C., Aguilar, H.R., Coe, H., Luo, X., Liu, N., van Rooij, E., Frantz, D.E., <b>Schneider, J.W.</b> Regulated expression of pH sensing G protein-coupled receptor-68 identified through chemical biology defines a new drug target for ischemic heart disease. 2012. <i>ACS-Chemical Biology</i> <b>15</b> :1077-1083. <a href="http://www.ncbi.nlm.nih.gov/pubmed/22462679">http://www.ncbi.nlm.nih.gov/pubmed/22462679</a>
21.	<b>Schneider, J.W.</b> , Goetsch, S.C., Leng, X., Ludwig, S.M., Russell, J.L., Yang, C.-P., Zhang, Q.J. Coupling hippocampal neurogenesis to brain pH through proneurogenic small molecules that regulate proton sensing G protein-coupled receptors. 2012. <i>ACS Chemical Neuroscience</i> <b>18</b> : 557-568. <a href="http://www.ncbi.nlm.nih.gov/pubmed/22860225">http://www.ncbi.nlm.nih.gov/pubmed/22860225</a>
22.	Kato, M., Han, T., Xie, S., Shi, K., Du, X., Wu, L., Mirzaei, H., Pei, <b>Schneider, J.W.</b> , Chen, S., Li, L., Tycko, R., Eisenberg, D., McKnight, S.L. Cell-free formation of RNA granules: protein components utilize low complexity sequences to phase-transition from soluble to hydrogel-like state. 2012. <i>Cell</i> <b>149</b> : 753-767. <a href="http://www.ncbi.nlm.nih.gov/pubmed/22579281">http://www.ncbi.nlm.nih.gov/pubmed/22579281</a>
23.	Hsieh, J., <b>Schneider, J.W.</b> Neural stem cells, excited. 2013. <i>Science</i> <b>339</b> :1534-1535. <a href="http://www.ncbi.nlm.nih.gov/pubmed/23539589">http://www.ncbi.nlm.nih.gov/pubmed/23539589</a>

### **Reviews, Chapters, Monographs and Editorials**

1.	Benz, E.J., Jr., High, K.A., Lomax, K., Stolle, C.A., Rado, T.A., <b>Schneider, J.W.</b> and Mercer, R.W. 1987. Studies of gene expression during granulocyte maturation. In: <i>Tumor Cell Differentiation</i> . Aarbakke, P., Chiang, P.K. and Koeffler, H.P. (eds.). The Humana Press, New York. pp. 79-104.
2.	Levenson, R., Emanuel, J.R., Garetz, S. and <b>Schneider, J. W.</b> 1987. The molecular biology of the Na,K-ATPase and other genes involved in the ouabain-resistant phenotype. In: <i>Molecular Neurobiology: Recombinant DNA Approaches</i> . Patrick, J. and Heinemann, S. (eds.). Plenum Press, New York. pp. 1-20.
3.	<b>Schneider, J.W.</b> , Mercer, R.W., Emanuel, J., Levenson, R. and Benz, E.J., Jr. 1987. Expression of genes for the $\alpha$ and $\beta$ subunits of the Na,K-ATPase in normal and drug resistant cells. <i>Blood Cells</i> <b>13</b> , 299-307.

4.	<b>Schneider, J.W.</b> , Mercer, R.W., Benz, E.J., Jr. and Levenson, R. 1988. Molecular cloning of Na <sup>+</sup> , K <sup>+</sup> -ATPase $\alpha$ subunit gene using antibody probes. In: Methods in Enzymology, Vol. 156, Biomembranes, Part P, ATP-Driven Pumps and Related Transport: The Na,K-Pump. Fleischer, S. and Fleischer, B. (eds.). Academic Press, Inc., New York. pp. 379-392.
5.	Gilmore-Hebert, M., Mercer, R.W., <b>Schneider, J.W.</b> and Benz, E.J., Jr. 1988. <i>In vitro</i> expression of the $\alpha$ and $\beta$ subunits of the Na,K-ATPase. In: Progress in Clinical and Biological Research. Vol. 268, The Na <sup>+</sup> ,K <sup>+</sup> -pump, Part B: Cellular Aspects. Skou, J.C., Nørby, J.G., Maunsbach, A.B. and Esmann, M. (eds.). Alan R. Liss, Inc. New York. pp. 71-76.
6.	Mercer, R.W., <b>Schneider, J.W.</b> and Benz, E.J., Jr. 1988. Molecular cloning and characterization of the $\alpha$ -subunit isoforms of the Na,K-ATPase. <i>Ibid.</i> pp. 119-126.
7.	<b>Schneider, J.W.</b> and Utset, M.F. 1989. Detection of mRNA in frozen tissue sections by <i>in situ</i> hybridization with RNA probes. In: Methods in Hematology, Vol. 20: Molecular Genetics. Benz, E.J., Jr. (ed.). Churchill Livingstone, Inc., New York. pp. 139-147.
8.	<b>Schneider, J.W.</b> and Utset, M.F. 1989. Detection of mRNA in frozen tissue sections by <i>in situ</i> hybridization with RNA probes. In: Methods in Hematology, Vol. 20: Molecular Genetics. Benz, E.J., Jr. (ed.). Churchill Livingstone, Inc., New York. pp. 139-147.
9.	<b>Schneider, J.W.</b> , Kaushal, S., Gu, W., Tam, S., Wang, J., Mahdavi, V. and Nadal-Ginard, B. Retinoblastoma pocket proteins and the terminally differentiated state in muscle cells. 1995. In: Developmental Mechanisms of Heart Disease. Clarck, E.B., Markwald, R.R., and Takao, A. (eds.) Futura, Inc., New York. pp. 29-41.
10.	Hsieh, J., <b>Schneider, J.W.</b> Genetics and epigenetics in adult neurogenesis. 2008. In: Adult Neurogenesis. Gage, F.H., Kempermann, G., Song, H. (eds.). Cold Spring Harbor Laboratory Press, New York. pp. 321-339.
11.	<b>Schneider, J.W.</b> , Mercola, M. Chemical Genetics of Cardiac Regeneration. In: Muscle: Fundamental Biology and Mechanisms of Disease. Hill, J.A., Olson, E.N., Kitsis, R. (eds.) Elsevier, San Diego. 2012

**Special category: chapters, papers in active preparation**

1.	Invited chapter, <b>Annual Review of Pharmacology and Toxicology</b> , (ed.) Nina Goldschlager Perry, 2014, with Dr. Eric Olson, "Molecules for making muscle."
2.	Invited review, <b>Circulation Research</b> , (ed.) Jonathan Schultz, 2014, "Chemistry of Cardiogenesis."
3.	Invited review, special edition <b>ACS Chemical Biology</b> , (ed.) Jitesh Soares, 2014, "Chemical regulation of neural cell fate and adult neurogenesis."
4.	Invited chapter in book, <b>Molecular Genetics of Dysregulated pH Homeostasis</b> , Springer Science+Business Media, (ed.) Jen-Tsan Ashley Chi (Duke), 2014, "The role and therapeutic potential of G protein-coupled receptor-68 in pH sensing."
5.	Primary manuscript in preparation: "Myocardial regeneration: dynamic regulation of the Algisyl-myocardial microenvironment in mice," Goetsch et al. (Schneider lab).
6.	Primary manuscript in preparation: "Isoxazole: a pleiotropic small-molecule regulator of cardiovascular biology and heart repair," Schneider et al. (Schneider lab).

## Grant Support

### Ongoing Research Support

1.	<p><b>Grantor:</b> NIH/NHLBI Progenitor Cell Biology Consortium 5U01-HL100401-04 <b>Title of Project:</b> Microenvironmental control of progenitors in organ dysfunction and repair. <b>Role:</b> Contact Principal Investigator</p> <p>Dr. Schneider has primary responsibility for all communications between the NIH/NHLBI PCBC and the UT Southwestern Hub, which includes Drs. Olson and Hill, as well as a consortium subcontracts with Dr. William Pu at Harvard Medical School and Dr. Michelle Tallquist-Seidel at University of Hawaii. The UT Southwestern Hub is partnered (in one of 9 national U01 PCBC Hubs) with Drs. David Scadden, Amy Wagers and Carla Kim at Massachusetts General Hospital, Harvard Stem Cell Institute and Harvard Medical School. Dr. Schneider has primary responsibility for team communications and preparing annual progress reports. He is also a member of the PCBC Steering Committee.</p> <p><b>Annual amount (direct costs) and date:</b> \$225,000 (05/01/11-04/30/12) <b>Note:</b> As of 2013, Dr. Schneider has ~\$125,000 (directs) of dedicated accessible U01 carryover funds. <b>Total amount of award (direct costs) and dates:</b> \$900,000 over 7 years (09/30/09-06/30/16). <b>Total amount of award to Schneider/Olson/Hill/Tallquist-Seidel and Pu labs:</b> \$7.1 M over 7 years.</p>
2.	<p><b>Grantor:</b> Lone Star Heart, Inc., Sponsored Research Agreement/Contract <b>Title of Project:</b> Isoxazole drug development <b>Role:</b> Principal Investigator</p> <p>The goal of this project is to advance the 3,5-disubstituted isoxazole stem cell-modulator small-molecule towards pre-clinical studies and clinical trials.</p> <p><b>Annual amount (direct costs) and date:</b> \$224,786 (01/01/11-12/31/12) <b>Synthetic organic chemistry contract with UT San Antonio:</b> \$144,500 (02/21/2011-02/20/2012) <b>Total amount of award (direct costs) and dates:</b> \$369,286; open, yearly award (01/01/11-open)</p>
3.	<p><b>Grantor:</b> Cancer Prevention and Research Institute of Texas – Multi-Investigator Research Award <b>Title of Project:</b> Cardiotoxicity of chemotherapy: novel mechanisms and therapeutic strategies. <b>Role:</b> Principal Investigator (Administrative Core) and Principal Investigator (Project #4 – The coronary microvasculature as a target for cardioprotection for cancer-therapy induced heart failure.</p> <p>This is a team project grant designed to tackle the serious problem of cancer chemotherapy cardiotoxicity. The team is comprised of Drs. Schneider, Hill and Olson at UT Southwestern Medical Center and Dr. Edward Yeh at MD Anderson Cancer Center in Houston. Dr. Schneider has primary responsibility for communications within network and preparing annual progress reports.</p> <p><b>Annual amount (direct costs) and date:</b> Project #4 \$285,741 (07/01/11-6/30/12) Administrative Core \$62,260 (07/01/11-6/30/12) <b>Total amount of award (direct costs) and dates:</b> \$1.43M over five years (07/01/11-6/30/16). <b>Total amount of award to Schneider/Hill/Olson and Yeh labs:</b> \$ 6.5M over five years (07/01/11-6/30/16).</p>
4.	<p><b>Endowment:</b> Dallas Heart Ball Chair in Cardiac Research (total value of endowment \$819,610), yielding approximately \$37,660 per year in discretionary funds for Dr. Schneider's research program at UT Southwestern Medical Center.</p>

### Completed Research Support

1.	<p><b>Grantor:</b> American Heart Association-Jon Holden DeHaan Cardiac Myogenesis Research Center Award</p> <p><b>Title of Projects:</b> Project #1: MicroRNA mediators of stem cell fates and cardiac repair. Project #2: Chemical regulation of cardiac regeneration and repair.</p> <p><b>Role:</b> Co-Principal Investigator, Projects #1 (with E. Olson) and #2 (with J. Hill).</p> <p><b>Annual amount (direct costs) and date:</b> \$155,500 (04/01/11-03/31/12)</p> <p><b>Total amount of award (direct costs) and dates:</b> \$622,000 over 4 years (05/01/09-03/31/13). Total award to UTSW Schneider/Olson/Hill Labs, Administrative and Cardiac Histology/Physiology Core Labs: \$2M over four years.</p>
2.	<p><b>Grantor:</b> Veterans Administration, Career Development Award (1998-2001).</p> <p><b>Title of project:</b> The signal for reversible myofibril disassembly in mitotic myocardial cells</p> <p><b>Role:</b> Principal Investigator</p> <p><b>Co-mentors:</b> Drs. Wilson Colucci (Boston Medical Center) and James DeCaprio (Dana- Farber Cancer Institute).</p>
3.	<p><b>Grantor:</b> Veterans Administration, Merit Review Award (1998-2001).</p> <p><b>Title of project:</b> Mitotic phosphoproteins in myocardial cells.</p> <p><b>Role:</b> Principal Investigator</p>
4.	<p><b>Grantor:</b> NIH/NCI 1 R21 CA93271-01 (PAR-01-003 Innovative toxicology models for drug evaluation) (2001-2003)</p> <p><b>Title of project:</b> Anti-cancer drug testing in cultured and xenograft human myocardium.</p> <p><b>Role:</b> Principal Investigator</p>
5.	<p><b>Grantor:</b> American Cancer Society Institutional Research Grant, UT Southwestern Simmons Cancer Center (2004-2005)</p> <p><b>Title of project:</b> Mechanism of Herceptin/Omnitarg cardiotoxicity in human ES cells.</p> <p><b>Role:</b> Principal Investigator</p>
6.	<p><b>Grantor:</b> Haberecht-Wildhare Idea Award/UT Southwestern Medical Center Dean's High Impact/High Risk Grant and (2003-2004) and Renewal (2004-05).</p> <p><b>Title of project:</b> Small-molecules that regulate stem cell fate.</p> <p><b>Role:</b> Principal Investigator</p>
7.	<p><b>Grantor:</b> UTSW Donald W. Reynolds Foundation, Drs. Hobbs &amp; Olson (Co-PIs) (2007– 2009)</p> <p><b>Title of project:</b> Small molecular modulators of cardiac hypertrophy and failure: target ID and translation to drug discovery.</p> <p><b>Role:</b> Co-Investigator</p>
8.	<p><b>Grantor:</b> NIH/NHLBI 1R03HL096261-01, Schneider (PI) (2008)</p> <p><b>Title of project:</b> Establishing a UT Southwestern-Progenitor Cell Biology Consortium Group</p> <p><b>Role:</b> Principal Investigator</p>