



TSC ALERT

Edited by Vicky Holets Whittemore, Ph.D. & Cheryl Dunigan, Ph.D.

April 7, 2003

Welcome to the April edition of *TSC Alert* – an online research newsletter for individuals interested in Tuberous Sclerosis Complex (TSC) research. This online newsletter contains information of interest to the TSC research community. Please forward this newsletter to colleagues who are interested in TSC research.

To be added to the mailing list for *TSC Alert* and/or to submit information for the May 2003 TSC Alert contact: Vicky.Whittemore@tsalliance.org

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GRANT ANNOUNCEMENTS:

Tuberous Sclerosis Research Program in the Congressionally Directed Medical Research Program, Department of Defense

The Fiscal year 2003 (FY03) Defense Appropriations Act provides \$2 million to the Department of Defense Tuberous Sclerosis Complex Research Program to support innovative research toward a better understanding of the role and function of proteins by the TSC1 and TSC2 tumor suppressor genes. The Idea Development Award mechanism is offered in FY03.

[TSRP Funding Opportunities](#) | [Synopsis of TSRP Award Mechanisms](#) | [TSRP Press Release](#)

Peer Reviewed Medical Research Program Congressionally Directed Medical Research Program, Department of Defense

The Department of Defense was appropriated \$50 million for this program. It is open to all researchers, and TSC researchers are encouraged to apply if they have applications that would fall under any of the following topic areas.

Deadline for Letter of Intent: By February 28, 2003, but no later than April 3, 2003

Proposal Submission/Approval Deadline: 5:00 p.m. Eastern time April 17, 2003

For more information: https://cdmrp.org/programAnnouncements.cfm?pa_id=14

The EJLB Foundation: Scholar Research Programme

The EJLB Foundation awards each year up to seven (7) grants for research projects in all areas of neuroscience that pertain directly or indirectly to schizophrenia and mental illness. Specific areas of support in the past have included: developmental neurobiology, synaptic mechanisms, systems and cognitive neuroscience, and clinical studies on the genetics and physiopathologic aspects of neurological and psychiatric disorders.

Eligibility for such grants is restricted to young scientists who are pursuing an independent research career and have given evidence of having significant potential. It is also a requirement that these scientists (i) have earned an MD and/or a PhD degree; (ii) have completed their post-graduate training; and (iii) have been admitted after June 15, 1998 as faculty members of a leading university, or an affiliated non-profit research center, in Canada or elsewhere in the world.

Each grant is of CAN\$300,000, is disbursed over three (3) years and is non-renewable.

The deadline for receipt of letters of intent is May 1, 2003.

Full details regarding this program and required letter of intent forms may be obtained from:

The EJLB Foundation

1350 Sherbrooke Street West, Suite 1050

Montreal QC H3G 1J1

Canada

FAX: (514)843-4080

E-mail: general@ejlb.qc.ca

Website: www.ejlb.qc.ca

The LAM Foundation

The LAM Foundation is offering post doctoral fellowships for the study of the cellular and molecular basis of the abnormal smooth muscle proliferation that occurs in the disease Lymphangiomyomatosis (LAM). The LAM Foundation Post Doctoral Fellowship Awards provide a maximum of \$50,000 per year renewable for up to two additional years. Pilot Project Awards of up to \$25,000 are also available for the initiation of innovative research projects. Candidates must have at least two years of experience, a PhD, MD or equivalent degree, and perform the work in a laboratory with established expertise in smooth muscle biology, genetics of tuberous sclerosis or other LAM-related areas. Mechanistic, hypothesis driven approaches of all types are welcomed. Formalin-fixed LAM tissues, dispersed LAM lung cells, genetic probes and other reagents are available. Clinical research proposals that have the potential to improve the diagnosis, treatment or quality of life for LAM patients are also welcomed. Application deadline is September 1st and funding begins January 15th of the following year. For additional information, contact:

The LAM Foundation

Sue Byrnes, Director

10105 Beacon Hills Drive, Cincinnati, OH 45241

Telephone: 513-777-6889
FAX: 513-777-4109
E-mail: lam@one.net
Web site: <http://lam.uc.edu>

NIH ANNOUNCEMENTS:

Rare Diseases Clinical Research Network

RELEASE DATE: February 27, 2003 (see addendum [NOT-RR-03-005](#)), A: RR-03-008

LETTER OF INTENT RECEIPT DATE: April 1, 2003

APPLICATION RECEIPT DATE: April 29, 2003

The National Center for Research Resources (NCRR) the Office of Rare Diseases, National Institutes of Health (ORD, NIH), the National Institute of Neurological Disorders and Stroke (NINDS), the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), and the National Institute of Child Health and Human Development (NICHD) invite applications for Rare Diseases Clinical Research Centers (RDCRCs) and a Data and Technology Coordinating Center (DTCC), which together will form the Rare Diseases Clinical Research Network. For complete RFA, see: <http://grants1.nih.gov/grants/guide/rfa-files/RFA-RR-03-008.html>

NINDS Translational Research Programs

In order to promote the development of new treatments, the National Institute of Neurological Disorders and Stroke (NINDS) recently announced a comprehensive Translational Research Program. At the heart of this program is a collection of new funding mechanisms specifically tailored to the process of translational research (defined as research that translates discoveries about disease mechanisms into clinical interventions). The program is aimed at investigators seeking to apply their research findings to the treatment of neurological disease. For more information, see: <http://grants.nih.gov/grants/guide/pa-files/PAR-02-139.html> or contact Dr. Robert (Bob) Finkelstein at: finkelsr@ninds.nih.gov

NINDS Administrative Supplements for the Sharing and Distribution of Mouse Genetic Models

The National Institute of Neurological Disorders and Stroke (NINDS) announces an administrative supplement program designed to support and encourage the timely sharing of mouse genetic models (or other rodent genetic lines) included within the scope of currently funded NINDS research projects. The sharing of data, biomaterials and other unique research resources such as genetically modified mouse strains is an essential element in the rapid progress that has been made in the genetic analysis of neurological disorders and complex behavioral traits. <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-02-035.html>

NIH Collaborative Neurological Sciences (CNS) Award

The purpose of the Collaborative Neurological Sciences (CNS) Award is to encourage collaborative research investigations among scientists at minority institutions and grantees from leading research laboratories that have NIH or equivalent grant support to conduct neuroscience research.

<http://grants1.nih.gov/grants/guide/pa-files/PAR-02-130.html>

Competing Continuation Awards of SBIR/STTR Phase II Grants for Device Assessment or Preclinical Studies (PA-03-085)

National Institute of Child Health and Human Development

<http://grants.nih.gov/grants/guide/pa-files/PA-03-085.html>

From Intervention Development to Services: Exploratory Research Grants (R34)

(PAR-03-078)

National Institute of Mental Health

<http://grants.nih.gov/grants/guide/pa-files/PAR-03-078.html>

NEW TSC PUBLICATIONS:

[Starting with the April 2003 TSC Alert, the following search terms will be used: tuberous sclerosis, tuberous sclerosis complex, tsc, tsc1, tsc2, tuberin, hamartin, TOR, rapamycin, angiofibroma, angiomyolipoma, rhabdomyoma, lymphangioleiomyomatosis, and lymphangiomyomatosis. If there are other search terms that should be included, please contact Vicky Whittemore.]

Apicelli AJ, Uhlmann EJ, Baldwin RL, Ding H, Nagy A, Guha A, Gutmann DH (2003) Role of the Rap1 GTPase in astrocyte growth regulation. *Glia* 42(3):225-34

Bernards A (2003) GAPs galore! A survey of putative Ras superfamily GTPase activating proteins in man and Drosophila. *Biochim Biophys Acta* 1603(2):47-82

Bittmann I, Rolf B, Amann G, Lohrs U (2003) Recurrence of lymphangioleiomyomatosis after single lung transplantation: new insights into pathogenesis. *Hum Pathol* 34(1):95-8

Brazil DP, Park J, Hemmings BA (2002) PKB binding proteins. Getting in on the Akt. *Cell* 111(3):293-303

Das BB, Sharma J (2003) Cardiac rhabdomyoma and tuberous sclerosis: prenatal diagnosis and follow-up. *Indian J Pediatr* 70(1):87-9

De Pauw RA, Boelaert JR, Haenebalcke CW, Matthys EG, Schurgers MS, De Vriese AS (2003) Renal angiomyolipoma in association with pulmonary lymphangioleiomyomatosis. *Am J Kidney Dis* 41(4):877-83

Fackler I, DeClue JE, Rust H, Vu PA, Kutzner H, Rutten A, Kaddu S, Sander CA, Volkenandt M, Johnson MW, Vinters HV, Wienecke R (2003) Loss of expression of tuberin and hamartin in tuberous sclerosis complex-associated but not in sporadic angiofibromas. *J Cutan Pathol* 30(3):174-177

Flores-Delgado G, Anderson KD, Warburton D (2003) Nongenomic estrogen action regulates tyrosine phosphatase activity and tuberin stability. *Mol Cell Endocrinol* 199(1-2):143-51

Goncharova EA, Goncharov DA, Eszterhas A, Hunter DS, Glassberg MK, Yeung RS, Walker CL, Noonan D, Kwiatkowski DJ, Chou MM, Panettieri RA Jr, Krymskaya VP (2002) Tuberin regulates p70 S6 kinase activation and ribosomal protein S6 phosphorylation. A role for the TSC2 tumor suppressor gene in pulmonary lymphangioleiomyomatosis (LAM). *J Biol Chem* 277(34):30958-67

Habib SL, Phan MN, Patel SK, Li D, Monks TJ, Lau SS (2003) Reduced constitutive 8-oxoguanine-DNA glycosylase expression and impaired induction following oxidative DNA damage in the tuberin deficient Eker rat. *Carcinogenesis* 24(3):573-582

Hancock E, Osborne J (2002) Lymphangioliomyomatosis: a review of the literature. *Respir Med* 96(1):1-6

Hancock E, Tomkins S, Sampson J, Osborne J (2002) Lymphangioliomyomatosis and tuberous sclerosis. *Respir Med* 96(1):7-13

Hockenbery DM (2003) Nailing Down a Link between Tuberin and Renal Cysts. *Am J Pathol* 162(2):369-71

Johnson SR, Clelland CA, Ronan J, Tattersfield AE, Knox AJ (2002) The TSC-2 product tuberin is expressed in lymphangioliomyomatosis and angiomyolipoma. *Histopathology* 40(5):458-63

Joinson C, O'Callaghan FJ, Osborne JP, Martyn C, Harris T, Bolton PF (2003) Learning disability and epilepsy in an epidemiological sample of individuals with tuberous sclerosis complex. *Psychol Med* 33(2):335-44

Juhasz C, Chugani DC, Muzik O, Shah A, Asano E, Mangner TJ, Chakraborty PK, Sood S, Chugani HT (2003) Alpha-methyl-L-tryptophan PET detects epileptogenic cortex in children with intractable epilepsy. *Neurology* 60(6):960-968

Kandt RS (2002) Tuberous sclerosis complex and neurofibromatosis type 1: the two most common neurocutaneous diseases. *Neurol Clin* 20(4):941-64

Koyama M, Johkoh T, Honda O, Tsubamoto M, Kozuka T, Tomiyama N, Hamada S, Nakamura H, Akira M, Ichikado K, Fujimoto K, Rikimaru T, Tateishi U, Muller NL (2003) Chronic cystic lung disease: diagnostic accuracy of high-resolution CT in 92 patients. *AJR Am J Roentgenol* 180(3):827-35

Lau N, Uhlmann EJ, Von Lintig FC, Nagy A, Boss GR, Gutmann DH, Guha A (2003) Rap1 activity is elevated in malignant astrocytomas independent of tuberous sclerosis complex-2 gene expression. *Int J Oncol* 22(1):195-200

Lopez E, Escovich L, Vigna A (2003) Tuberous sclerosis: Presentation of a clinical case with oral manifestations. *Med Oral* 8(2):122-8

Mak BC, Takemaru K, Kenerson HL, Moon RT, Yeung RS (2003) The tuberin-hamartin complex negatively regulates Beta -catenin signaling activity. *J Biol Chem* 278(8):5947-51

Mayer K (2003) Application of the protein truncation test (PTT) for the detection of tuberculosis sclerosis complex type 1 and 2 (TSC1 and TSC2) mutations. *Methods Mol Biol* 217:329-44

McCormack F, Brody A, Meyer C, Leonard J, Chuck G, Dabora S, Sethuraman G, Colby TV, Kwiatkowski DJ, Franz DN (2002) Pulmonary cysts consistent with lymphangioliomyomatosis are common in women with tuberous sclerosis: genetic and radiographic analysis. *Chest* 121(3 Suppl):61S

McDorman KS, Wolf DC (2002) Use of the spontaneous Tsc2 knockout (Eker) rat model of hereditary renal cell carcinoma for the study of renal carcinogens. *Toxicol Pathol* 30(6):675-80

Moch H (2002) [Histologic classification of renal epithelial neoplasms.] *Verh Dtsch Ges Pathol* 86:40-8 [Article in German]

Noonan DJ, Lou D, Griffith N, Vanaman TC (2002) A calmodulin binding site in the tuberous sclerosis 2 gene product is essential for regulation of transcription events and is altered by mutations linked to tuberous sclerosis and lymphangioleiomyomatosis. *Arch Biochem Biophys* 398(1):132-40

Oberstein EM, Fleming LE, Gomez-Marin O, Glassberg MK (2003) Pulmonary lymphangioleiomyomatosis (LAM): Examining oral contraceptive pills and the onset of disease. *J Womens Health (Larchmt)* 12(1):81-85

Pacheco-Rodriguez G, Kristof AS, Stevens LA, Zhang Y, Crooks D, Moss J (2002) Giles F. Filley Lecture. Genetics and gene expression in lymphangioleiomyomatosis. *Chest* 121(3 Suppl):56S-60S

Plas DR, Thompson CB (2003) Akt activation promotes degradation of tuberin and FOXO3a via the proteasome. *J Biol Chem* Jan 6; [epub ahead of print]

Proud CG (2002) Regulation of mammalian translation factors by nutrients. *Eur J Biochem* 269(22):5338-49

Sato T, Seyama K, Fujii H, Maruyama H, Setoguchi Y, Iwakami S, Fukuchi Y, Hino O (2002) Mutation analysis of the TSC1 and TSC2 genes in Japanese patients with pulmonary lymphangioleiomyomatosis. *J Hum Genet* 47(1):20-8

Siegel C (2003) Renal angiomyolipoma: relationships between tumor size, aneurysm formation, and rupture. *J Urol* 169(4):1598-9

Sener RN (2003) The glycine peak in brain diseases. *Comput Med Imaging Graph* 27(4):297-305

Shumway SD, Li Y, Xiong Y (2003) 14-3-3beta binds to and negatively regulates the tuberous sclerosis complex 2 (TSC2) tumor suppressor gene product, tuberin. *J Biol Chem* 278(4):2089-92

Simckes AM, Swanson SK, White RA (2002) Chromosomal localization of three vacuolar-H⁺-ATPase 16 kDa subunit (ATP6V0C) genes in the murine genome. *Cytogenet Genome Res* 97(1-2):111-5

Sinclair DB, Aronyk K, Snyder T, McKean J, Wheatley M, Bhargava R, Hoskinson M, Hao C, Colmers W (2003) Pediatric temporal lobectomy for epilepsy. *Pediatr Neurosurg* 38(4):195-205

Smulders YM, Eussen BH, Verhoef S, Wouters CH (2003) Large deletion causing the TSC2-PKD1 contiguous gene syndrome without infantile polycystic disease. *J Med Genet* 40(2):E17

Suh JM, Song JH, Kim DW, Kim H, Chung HK, Hwang JH, Kim JM, Hwang ES, Chung J, Han JH, Cho BY, Ro HK, Shong M (2003) Regulation of the PI3K, Akt/PKB, FRAP/mTOR, and S6K1 signaling pathways by thyroid stimulating hormone and stimulating-type TSH receptor antibodies in the thyroid gland. *J Biol Chem* 2003 Mar 30; [epub ahead of print]

Thomas G (2002) The S6 kinase signaling pathway in the control of development and growth. *Biol Res* 35(2):305-13

Tsubaki K, Tomioka T, Arita H, Hanaoka K (2003) [Anesthetic management of a patient with lymphangioleiomyomatosis who developed respiratory failure post-operatively]. *Masui* 52(1):49-51 [Article in Japanese]

Walz G (2002) [Delineating common pathways of cystogenesis.] Verh Dtsch Ges Pathol 86:138-44 [Article in German]

Whitehead LC, Gosling V (2003) Parent's perceptions of interactions with health professionals in the pathway to gaining a diagnosis of tuberous sclerosis (TS) and beyond. Res Dev Disabil 24(2):109-19

Yanai H, Matsuura H, Sonobe H, Shiozaki S, Kawabata K (2003) Perivascular epithelioid cell tumor of the jejunum. Pathol Res Pract 199(1):47-50

Yano S (2002) Exacerbation of pulmonary lymphangiomyomatosis by exogenous oestrogen used for infertility treatment. Thorax 57(12):1085-6

Yasuda S, Yamada M, Ibuka T, Satake S, Yamazaki K, Watanabe Y, Fukutomi Y, Shimizu M, Iwata H, Sasaoka I (2002) Pulmonary lymphangiomyomatosis]. Nippon Naika Gakkai Zasshi 91(11):3292-4 [Article in Japanese]

Zhang R, Zhang JJ, He ZG, Cheng SJ, Gao YN (2003) [Research advances on bladder cancer associated genes]. Ai Zheng 22(1):104-7 [Article in Chinese]

Zhe X, Yang Y, Jakkaraju S, Schuger L (2003) Tissue inhibitor of metalloproteinase-3 downregulation in lymphangiomyomatosis: potential consequence of abnormal serum response factor expression. Am J Respir Cell Mol Biol 28(4):504-11

TSC TISSUE AVAILABILITY:

The following tissues from individuals with TSC have been received (or will be received in the near future) by the Maryland Brain and Tissue Bank: SEGA, renal tumor, tuber, brain (from autopsy). Please contact the Brain and Tissue Bank if you are interested in obtaining any of this tissue for your research. You may contact them by phone at: 1-800-847-1539 or via e-mail at btbumab@umaryland.edu. Additional information can be found on their website at: <http://som1.umaryland.edu/BTBank/main.html>

The TS Alliance would appreciate feedback on your interaction(s) with the Brain and Tissue Bank and in navigating their website. Please provide this feedback to Vicky Whittemore at Vicky.Whittemore@tsalliance.org

LEGISLATIVE UPDATE:

On March 20 and 21, 2003, more than 30 representatives of the Tuberous Sclerosis Alliance visited their Senators and Representatives on Capital Hill on behalf of their constituents and families with TSC. In town for a Tuberous Sclerosis Alliance Board of Directors meeting and training session for the Chairs of the Community Alliances, the goals of the Congressional visits were to educate their Congressmen and staffs about tuberous sclerosis, and to request that they support the TS Alliance's request for an increase in the DOD budget to \$10 million for the Tuberous Sclerosis Complex Research Program in the Congressionally Directed Medical Research Program, and to request specific language for the Office of the Director of the National Institutes of Health calling for increased cooperation and collaboration across the many institutes at NIH that have a stake in TSC research, as well as to increase their research support.

NEWS:

Secretary Thompson Announces The Creation of a Bi-Lingual Helpline: "Su Familia" **Toll-free service connects Hispanic families with community health services and information**

HHS Secretary Tommy G. Thompson today announced the creation of the "Su Familia" National Hispanic Family Health Helpline (866-783-2645 /866-SU-FAMILIA). Su Familia will help Hispanic families get basic health information to help them prevent and manage chronic conditions, and refer them to local health providers and federally supported programs including the State Children's Health Insurance Program (SCHIP). Su Familia is supported by HHS' Health Resources and Services Administration and HHS' Office of Minority Health, and was developed and is operated by the National Alliance for Hispanic Health. The toll-free helpline is open Monday through Friday, 9 a.m. to 6 p.m. Eastern Time.

HHS Awards \$16 Million to 31 Health Centers to Expand Access to Comprehensive Health Care Services for the Uninsured

HHS Secretary Tommy G. Thompson announced 31 new grants totaling \$16 million to help communities across America create comprehensive health care centers that will provide health services to an estimated 254,000 people, including many without health insurance. The grants continue President Bush's five-year Health Centers Initiative, which will add 1,200 new and expanded health center sites and increase the number of people served annually from about 10 million to 16 million by 2006. More information about the President's initiatives to help the uninsured is available at <http://www.hhs.gov/news/press/2003pres/20030211.html>

The list of new grant recipients is available at:

<http://www.hhs.gov/news/press/2003pres/20030324.html>

Federal Government Announces First Federal eGOV Health Information Exchange Standards

The Departments of Health and Human Services (HHS), Defense (DoD) and Veterans Affairs (VA) today announced the first set of uniform standards for the electronic exchange of clinical health information to be adopted across the federal government. For more information on each of the President's eGov Initiatives, please visit <http://www.egov.gov>

UPCOMING CONFERENCES:

**Indicates new conferences added since March 2003 TSC Alert

April 13 - 15, 2003

Glutamate and Disorders of Cognition and Motivation

A New York Academy of Sciences Conference

Omni New Haven Hotel at Yale, New Haven, CT

<http://www.nyas.org>

April 14-15, 2003

From Double Helix to Human Sequence- and Beyond

Natcher Conference Center, NIH

Bethesda, MD

Registration Site: <http://www.genome.gov/About/April2003/Scientific/>

April 15, 2003

Bringing the Genome to You

Half-Day Public Symposium

Baird Auditorium- National Museum of Natural History Washington, DC

Registration Site: <http://www.genome.gov/About/April2003/Public/>

For more information about other events in the Celebration of the Genome, please visit:

<http://www.genome.gov/About/April2003/>

**April 16, 2003

Genetic Variation and Gene-Environment Interaction in Human Health and Disease

Masur Auditorium, Clinical Center (Building 10) NIH, Bethesda, MD

Sponsored by the National Institute of Environmental Health Sciences, in cooperation with the National Human Genome Research Institute and the National Institute on Alcohol Abuse and Alcoholism, National Institutes of Health

For more information and to register for this symposium go to:

<http://www-apps.niehs.nih.gov/odconfer/gxe/home.htm> or contact David Brown, NIEHS, (919) 541-5111; brown4@niehs.nih.gov

April 30 – May 4, 2003

International Investigative Dermatology 2003

Fontainebleau Hilton, Miami Beach, FL

<http://www.sidnet.org>

**May 6-8, 2003

**Integrity & Accountability in Clinical Research
2nd Annual Clinical Research Conference**

Sponsored by the National Patient Safety Foundation Colleagues
Renaissance Washington DC Hotel

For full program please go to: www.saferesearch.org

May 14 – 18, 2003

Protein Phosphorylation & Cell Signaling

Cold Spring Harbor Laboratory 2003 Meeting

Cold Spring Harbor, NY

<http://meetings.cshl.org/2003/2003tyro.htm>

**May 18-21, 2003

Developmental Neurogenomics: Growing Connections from the Genome to Behavior

Vanderbilt University, Nashville, TN

Deadline for submission of poster abstracts: April 15, 2003

<http://medschool.mc.vanderbilt.edu/Neurogenomics/index.php>

June 1 – August 8, 2003

**NIH-NSF Summer Institute
Bioinformatics and Computational Biology**

Iowa State University (SIBCB), Ames, IA

<http://www.bioinformatics.iastate.edu/BBSI/>

June 1 - 6, 2003

Mechanisms of Cell Signaling

Gordon Research Conference

Hong Kong University of Science and Technology, Hong Kong, China

<http://www.grc.uri.edu/programs/2003/mechcell.htm>

June 8 - 13, 2003

Molecular Cell Biology

Gordon Research Conference

Tilton School, Tilton, NH

<http://www.grc.uri.edu/programs/2003/molclbio.htm>

**June 11-12, 2003

Inaugural Meeting of the Secretary's Advisory Committee on Genetics, Health, and Society

Wyndham Hotel, Washington, DC

An agenda will be posted online at <http://www4.od.nih.gov/oba/sacghs/sacghsmtg.htm> approximately two weeks prior to the meeting.

To pre-register: <https://www.tech-res-intl.com/secure/sacghs/registration.asp>

or call Abbe Smith of Technical Resources International at 301-897-7423.

June 12, 2003

NIH Research: Recent Progress and Future Promise of Human Embryonic Stem Cells

National Institutes of Health, Bethesda, MD

< [TITLE="http://stemcelltaskforce.nih.gov/symposium.htm"](http://stemcelltaskforce.nih.gov/symposium.htm)

[TARGET=" blank">http://stemcelltaskforce.nih.gov/symposium.htm](http://stemcelltaskforce.nih.gov/symposium.htm)>.

June 22 - 27, 2003

Proteins

Gordon Research Conference

Holderness School, Plymouth, NH

<http://www.grc.uri.edu/programs/2003/proteins.htm>

June 23-24, 2003

BECON 2003 Symposium "Catalyzing Team Science"

Natcher Conference Center, NIH, Bethesda, MD

<http://www.becon.nih.gov/symposium2003.htm>

June 29 - July 4, 2003

Excitatory Amino Acids & Brain Function

Gordon Research Conference

Mount Holyoke College, South Hadley, MA

<http://www.grc.uri.edu/programs/2003/excit.htm>

July 3 - 8, 2003

Meeting on Signal Transduction

Special FEBS 2003 Meeting

Brussels, Belgium

<http://www.febs-signal.be/>

July 6 – 11, 2003

XIX International Congress of Genetics: Genomes – The Linkage to Life

Melbourne, Australia

<http://www.geneticscongress2003.com/newsletter/newsletter-05.htm>

July 6 - 11, 2003

Molecular & Genetic Basis of Cell Proliferation

Gordon Research Conference

Colby-Sawyer College, New London, NH

<http://www.grc.uri.edu/programs/2003/cellprol.htm>

July 20 - 25, 2003

Computer Aided Drug Design

Gordon Research Conference

Tilton School, Tilton, NH

<http://www.grc.uri.edu/programs/2003/cadd.htm>

August 3 - 8, 2003

Human Genetics and Genomics

Gordon Research Conference

Colby College, Waterville, ME

<http://www.grc.uri.edu/programs/2003/humangen.htm>

August 10 - 15, 2003

Angiogenesis & Microcirculation

Gordon Research Conference

Salve Regina University, Newport, RI

<http://www.grc.uri.edu/programs/2003/angmicro.htm>

**October 1-4, 2003

Child Neurology Society Meeting

Includes a one-day symposium on Tuberous Sclerosis Complex

Miami Beach, FL

http://www.childneurologysociety.org/events/evt_001.asp

October 1 – 5, 2003

Neurobiology of *Drosophila*

Cold Spring Harbor Laboratory 2003 Meeting

Cold Spring Harbor, NY

Abstracts due: July 9, 2003

<http://meetings.cshl.org/2003/2003dros.htm>

**October 31 – November 5, 2003

**American Academy of Pediatrics
National Conference and Exhibition**

New Orleans, LA

Abstract Submission Deadlines:

Monday, April 14, 2003 (print submission)

Friday, April 18, 2003 (online submission)

<http://www.aap.org/profed/cfa.htm>

**November 8-12, 2003

Society for Neuroscience

New Orleans, LA

Abstract Submission Deadlines:

May 5, 2003 (print submission)

May 19, 2003 (online submission)

<http://apu.sfn.org/ACSplash.cfm>

ARCHIVED ISSUES OF TSC ALERT:

December 2002 TSC Alert

<http://www.tsalliance.org/research/tsc%20alert.asp>

January 2003 TSC Alert

<http://www.tsalliance.org/Research/TSC%20Alert012203.asp>

February 2003 TSC Alert

<http://www.tsalliance.org/Research/TSC%20Alert021003.asp>

March 2003 TSC Alert

<http://www.tsalliance.org/Research/TSC%20Alert030403.asp>