



## ***TSC ALERT***

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### **August 2004**

Welcome to the August 2004 edition of *TSC Alert* – an online research newsletter for individuals interested in Tuberous Sclerosis Complex (TSC) research and clinical care. This online newsletter contains information of interest to the TSC research and health care community. Please forward this newsletter to colleagues who are interested in TSC. To be added/deleted to/from the mailing list for *TSC Alert* and/or to submit information for the September 2004 *TSC Alert* contact: [Vicky.Whittemore@tsalliance.org](mailto:Vicky.Whittemore@tsalliance.org)

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### **IMPORTANT DEADLINES:**

**AUGUST 31, 2004:** Deadline for registration to attend International TSC Conference in Cambridge, UK in September 2004. See information below under Conferences.

# GRANT ANNOUNCEMENTS:

## EPILEPSY FOUNDATION FUNDING OPPORTUNITIES

For more information, see: <http://www.efa.org>

The **Research Grants Program** stimulates epilepsy research by providing funding for investigators in the early stages of their careers. Seed grants are awarded to clinical investigators or basic scientists for support of biological or behavioral research which will advance the understanding, treatment, and prevention of epilepsy. Applications from established investigators (Associate Professor level or above) are ineligible.

*Deadline: September 1, 2004*

The **Predoctoral Research Training Fellowship** supports pre-doctoral students with dissertation research related to epilepsy, thus strengthening their interest in establishing epilepsy research as a career direction. Graduate students pursuing a Ph.D. degree in neuroscience, physiology, pharmacology, psychology, biochemistry, genetics, nursing, or pharmacy may apply.

*Deadline: September 1, 2004*

The **Postdoctoral Research Fellowship** develops academic physicians and scientists committed to research related to epilepsy. Applications are considered equally from individuals interested in acquiring experience either in basic laboratory research or in the conduct of human clinical studies. Physicians or PhD neuroscientists who desire postdoctoral research experience are eligible to apply.

*Deadline: September 1, 2004*

The **Partnership for Pediatric Epilepsy Research** is a consortium of organizations and individuals working to support innovative research into pediatric epilepsy, its causes, and potential avenues for new treatments and cures. The consortium is supporting novel, investigator-initiated studies which emphasize pediatric epilepsies, and specifically focus on increasing knowledge of causes and promoting innovative treatment approaches and a cure for epilepsies that begin in infancy and childhood. Both clinical and basic projects are of interest, using a variety of disciplinary approaches. Investigators must hold a relevant advanced degree (M.D. and/or Ph.D.) and have completed all research training. Open to investigators based at corporations as well as academic/university settings, the award may be funded up to \$100,000.

The **Research and Training Fellowships for Clinicians** is a new postdoctoral fellowship program for clinically trained professionals. This fellowship is one-year of supervised study and research. Individuals with an MD or DO who will have completed residency training in neurology, neurosurgery, pediatrics, internal medicine, or psychiatry by the time the fellowship commences may apply. Other clinically trained professionals (i.e. PharmD, Doctor of Nursing) are also eligible to apply. A letter of intent is not required.

*Deadline: November 3, 2004 (Full Proposal)*

The Charles L. Shor Foundation for Epilepsy Research generously supports the **Targeted Research Initiative in Cognition**, which is focused on finding novel approaches to cognitive problems in people with epilepsy. Proposals for both clinical and basic research projects are invited from investigators who hold an advanced degree (M.D. and/or Ph.D.) and have completed all research training. This program is open to investigators at academic/university settings and others in the public and private sectors. The award may be funded up to \$100,000.

The **Behavioral Sciences Post-Doctoral Fellowship** develops excellent behavioral scientists to teach the appropriate psychosocial intervention techniques used in working with people with epilepsy, and contributes to the body of behavioral research in epilepsy. Individuals who will have received their doctoral degrees in a field of the social sciences by the time the Fellowship commences, and desire additional postdoctoral research experience, may apply.

The **Behavioral Sciences Student Fellowship** stimulates individuals to pursue careers in epilepsy in either research or practice settings. Appropriate fields include sociology, social work, psychology, anthropology, nursing, economics, vocational rehabilitation, counseling, political science, and others relevant to epilepsy research or practice. Both graduate and undergraduate students are eligible.

The **Health Sciences Student Fellowship** stimulates individuals to pursue careers in epilepsy in either research or practice settings. Predoctoral training students in the Health Sciences may be accepted at any point in their schooling—following acceptance but before beginning the first year, or in the period immediately following their final year.

#### **LAM FOUNDATION POSTDOCTORAL FELLOWSHIPS**

**Deadline: September 1**

The LAM Foundation is offering postdoctoral 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 Post Doctoral 3 year Fellowship Awards provide a maximum of \$150,000 (\$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, an MD, PhD, or equivalent degree, and perform the work in a laboratory with established expertise in smooth muscle biology or the genetics of tuberous sclerosis. Examples of competitive proposals include those that focus on the genetic regulation of smooth muscle growth or the development of a smooth muscle cell line that is representative of LAM lesion. Mechanistic, hypothesis driven approaches of all types are welcomed. Formalin-fixed LAM tissues, dispersed LAM lung cells, genetic probes and other reagents are available. The deadline for fall applications is **September 1st** and funding begins January 15th of the following year. You may write to The LAM Foundation at 10105 Beacon Hills Drive, Cincinnati, Ohio, 45241 or email lam@one.net. For your convenience, you will find the terms and application form under [Funding for Scientists](#) on the LAM Foundation Web site.



#### **AMERICAN SKIN ASSOCIATION**

**Deadline: October 4, 2004**

Through its national grants and awards program, the ASA has given more than \$3.5 million in recognition and support of research to promising physician/scientists and leading figures in the field, and to research centers at major institutions throughout the country. Its grants program includes:

- \$50,000 Research Scholar Awards
- \$15,000 Research Grants
- \$15,000 Grants for Health Services/Quality of Life/Outcome Studies
- \$7,000 Medical Student Stipends
- Achievement Awards
- Lifetime Achievement Awards

Their website is <http://www.americanskin.org/frameset.htm>

**NATIONAL TECHNOLOGY CENTERS FOR NETWORKS AND PATHWAYS (RFA-RM-04-019)**

LETTER OF INTENT RECEIPT DATE: January 18, 2005

APPLICATION RECEIPT DATE: February 22, 2005

<http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-04-019.html>

**MOLECULAR LIBRARIES SCREENING INSTRUMENTATION (RFA-RM-04-020)**

LETTER OF INTENT RECEIPT DATE: September 22, 2004

APPLICATION RECEIPT DATE: October 22, 2004

<http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-04-020.html>

**INNOVATION IN MOLECULAR IMAGING PROBES (RFA-RM-04-021)**

LETTER OF INTENT RECEIPT DATE: September 22, 2004

APPLICATION RECEIPT DATE: October 22, 2004

<http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-04-021.html>

**GUIDANCE FOR SHARING OF DATA AND RESOURCES GENERATED BY THE MOLECULAR LIBRARIES SCREENING CENTERS NETWORK (MLSCN) - ADDENDUM TO RFA RM-04-017 (NOT-RM-04-014)**

<http://grants.nih.gov/grants/guide/notice-files/NOT-RM-04-014.html>

**MULTIDISCIPLINARY CLINICAL RESEARCH CENTERS (RFA-AR-05-001)**

LETTER OF INTENT RECEIPT DATE: January 24, 2005

APPLICATION RECEIPT DATE: February 24, 2005

<http://grants.nih.gov/grants/guide/rfa-files/RFA-AR-05-001.html>

**TISSUE AVAILABILITY:**

If you are interested in obtaining tissue for your research, please contact the Brain and Tissue Bank at 1-800-847-1539 or visit their Web site at: <http://som1.umaryland.edu/braintissuebank>

If you have specific needs for TSC tissue for your research, please contact Vicky Whittemore at [vwhittemore1@comcast.net](mailto:vwhittemore1@comcast.net) or [Vicky.whittemore@tsalliance.org](mailto:Vicky.whittemore@tsalliance.org)

## NEW TSC PUBLICATIONS:

**TSC BASIC SCIENCE HIGHLIGHT:** Harrington LS, Findlay GM, Gray A, Tolkacheva T, Wigfield S, Rebholz H, Barnett J, Leslie NR, Cheng S, Shepherd PR, Gout I, Downes CP, Lamb RF (2004) The TSC1-2 tumor suppressor controls insulin-PI3K signaling via regulation of IRS proteins. *J Cell Biol* 166(2):213-23 Epub Jul 12

Insulin-like growth factors elicit many responses through activation of phosphoinositide 3-OH kinase (PI3K). The tuberous sclerosis complex (TSC1-2) suppresses cell growth by negatively regulating a protein kinase, p70S6K (S6K1), which generally requires PI3K signals for its activation. Here, Harrington and collaborators from The Institute of Cancer Research in London, UK, show that TSC1-2 is required for insulin signaling to PI3K. TSC1-2 maintains insulin signaling to PI3K by restraining the activity of S6K, which when activated inactivates insulin receptor substrate (IRS) function, via repression of IRS-1 gene expression and via direct phosphorylation of IRS-1. Their results argue that the low malignant potential of tumors arising from TSC1-2 dysfunction may be explained by the failure of TSC mutant cells to activate PI3K and its downstream effectors.

**TSC CLINICAL SCIENCE HIGHLIGHT:** Weiner HL (2004) Tuberous sclerosis and multiple tubers: localizing the epileptogenic zone. *Epilepsia* 45 Suppl 4:41-2

Tuberous sclerosis complex (TSC) is associated with medically refractory seizures and developmental delay in children. These epilepsies are often resistant to antiepileptic drugs (AEDs), may be quite severe, and usually have a negative impact on the child's neurological and cognitive development. It is believed that functional outcome is improved if seizures can be controlled at an early age. The surgical treatment of intractable epilepsy in children and adults with TSC has gained significant interest in recent years. Previously published studies have shown a potential benefit from resection of single tubers, with most of the results noted in relatively older children. All of these reports support the idea that if a single primary epileptogenic tuber/region can be identified, then a surgical approach is appropriate. However, most children with TSC have multiple potentially epileptogenic tubers, rendering localization challenging, and they are therefore rejected as possible surgical candidates. Weiner and his colleagues at New York University have utilized a novel surgical approach using invasive intracranial monitoring, which is typically multistaged and bilateral. In this publication they present an illustrative case of a young boy with TSC and medically refractory epilepsy who underwent a staged surgical approach. This multistage surgical approach has been useful in identifying both primary and secondary epileptogenic zones in TSC patients with multiple tubers. Multiple or bilateral seizure foci are not necessarily a contraindication to surgery in selected TSC patients. Long-term follow-up will determine whether this approach has durable effects. Individuals with TSC and their physicians await better methods for identifying the epileptogenic zone, both noninvasive and invasive.

### **TSC PUBLICATIONS**

Alexakis N, Connor S, Ghaneh P, Lombard M, Smart HL, Evans J, Hughes M, Garvey CJ, Vora J, Vinjamuri S, Sutton R, Neoptolemos JP (2004) Hereditary pancreatic endocrine tumours. *Pancreatology* 4(5):417-35 Epub Jul 06

Anisya-Vasanth AV, Satishchandra P, Nagaraja D, Swamy HS, Jayakumar PN (2004) Spectrum of epilepsy in tuberous sclerosis. *Neurol India* 52(2):210-2

<http://www.neurologyindia.com/article.asp?issn=0028-3886;year=2004;volume=52;issue=2;page=210;epage=212;aulast=Anisya-Vasanth>

- Bissler JJ, Kingswood JC (2004) Renal angiomyolipomata. *Kidney Int* 66(3):924-34
- Brugarolas J, Kaelin WG Jr (2004) Dysregulation of HIF and VEGF is a unifying feature of the familial hamartoma syndromes. *Cancer Cell* 6(1):7-10
- Cho NH, Shim HS, Choi YD, Kim DS (2004) Estrogen receptor is significantly associated with the epithelioid variants of renal angiomyolipoma: a clinicopathological and immunohistochemical study of 67 cases. *Pathol Int* 54(7):510-5
- Chou PC, Chang YJ (2004) Prognostic factors for mental retardation in patients with tuberous sclerosis complex. *Acta Neurol Taiwan* 13(1):10-3
- Chu NS (2004) Mental retardation in tuberous sclerosis complex: better data better prediction. *Acta Neurol Taiwan* 13(1):1-2
- Cil AP, Haberal A, Hucumenoglu S, Kovalak EE, Gunes M (2004) Angiomyolipoma of the uterus associated with tuberous sclerosis: case report and review of the literature. *Gynecol Oncol* 94(2):593-6
- Conry JA (2004) Pharmacologic treatment of the catastrophic epilepsies. *Epilepsia* 45 Suppl 5:12-6
- Crino PB (2003) Knockout of a Tuberous Sclerosis Gene Highlights Role of Glia in Epileptogenesis. *Epilepsy Curr* 3(4):139-141  
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?tool=pubmed&pubmedid=15309059>
- Crino PB (2004) Malformations of cortical development: molecular pathogenesis and experimental strategies. *Adv Exp Med Biol* 548:175-91
- Darai E, Bazot M, Barranger E, Detchev R, Cortez A (2004) Epithelioid angiomyolipoma of the uterus: a case report. *J Reprod Med* 49(7):578-81
- Gao P, Huang R, Cai BQ, Liu HR (2004) [Clinical analysis of lymphangiomyomatosis.] *Zhongguo Yi Xue Ke Xue Yuan Xue Bao* 26(3):306-9 [Article in Chinese]
- Harrington LS, Findlay GM, Gray A, Tolkacheva T, Wigfield S, Rebholz H, Barnett J, Leslie NR, Cheng S, Shepherd PR, Gout I, Downes CP, Lamb RF (2004) The TSC1-2 tumor suppressor controls insulin-PI3K signaling via regulation of IRS proteins. *J Cell Biol* 166(2):213-23 Epub Jul 12
- Heywood G, Smyrk TC, Donohue JH (2004) Primary angiomyolipoma of the pancreas. *Pancreas* 28(4):443-5
- Higuchi T, Abe M, Okada K, Nakajima Y, Ohnishi Y, Hagi C, Fukuda N, Kuno T, Takahashi S, Saito S, Nagura Y, Matsumoto K (2004) The salvage of graft occlusion in a maintenance hemodialysis patient with tuberous sclerosis by percutaneous transluminal angioplasty using intravascular ultrasound: case report. *Therap Apher Dial* 8(2):164-7
- Hu Y, Liao JX, Huan TS, Xiao Z, Lu X, Chen L, Li B [Clinical diagnosis of tuberous sclerosis complex in 5 children without calcified nodule on brain CT.] *Zhonghua Er Ke Za Zhi* 42(6):466-7 [Article in Chinese]

- Humphrey A, Williams J, Pinto E, Bolton PF (2004) A prospective longitudinal study of early cognitive development in tuberous sclerosis - a clinic based study. *Eur Child Adolesc Psychiatry* 13(3):159-65
- Jones KA, Jiang X, Yamamoto Y, Yeung RS (2004) Tuberin is a component of lipid rafts and mediates caveolin-1 localization: role of TSC2 in post-Golgi transport. *Exp Cell Res* 295(2):512-24
- Kane Y (2004) The "bumps" on my face. *J Am Acad Dermatol* 51(1 Suppl):S11-2
- Kimball SR, Jefferson LS (2004) Molecular mechanisms through which amino acids mediate signaling through the mammalian target of rapamycin. *Curr Opin Clin Nutr Metab Care* 7(1):39-44
- Kumar R, Singh V (2004) Subependymal giant cell astrocytoma: a report of five cases. *Neurosurg Rev* Aug 12 [Epub ahead of print]
- Mencia-Gutierrez E, Gutierrez-Diaz E, Ricoy JR, Sanes-Madrado N (2004) [Eyelid and cutaneous lesions as the sole indicators of tuberous sclerosis.] *Arch Soc Esp Oftalmol* 79(8):401-4 [Article in Spanish]
- Nagashima Y, Inayama Y, Kato Y, Sakai N, Kanno H, Aoki I, Yao M (2004) Pathological and molecular biological aspects of the renal epithelial neoplasms, up-to-date. *Pathol Int* 54(6):377-86
- O'Callaghan FJ, Harris T, Joinson C, Bolton P, Noakes M, Presdee D, Renowden S, Shiell A, Martyn CN, Osborne JP (2004) The relation of infantile spasms, tubers, and intelligence in tuberous sclerosis complex. *Arch Dis Child* 89(6):530-3
- Redinova M, Barakova D, Sach J, Kuchynka P (2004) Intraocular astrocytoma without phacomatosis. *Eur J Ophthalmol* 14(4):350-4
- Rose VM (2004) Neurocutaneous syndromes. *Mo Med* 101(2):112-6
- Ruiz-Villaverde R, Blasco-Melguizo J, Hernandez-Jurado I, Naranjo-Sintes R, Gutierrez Salmeron MT (2004) Bilateral and Multiple Periungual Fibromas as an Oligosymptomatic Form of Tuberous Sclerosis. *Dermatology* 209(2):160-161
- Sarnat HB, Flores-Sarnat L (2004) Integrative classification of morphology and molecular genetics in central nervous system malformations. *Am J Med Genet* 126A(4):386-92
- Sato T, Seyama K, Kumasaka T, Fujii H, Setoguchi Y, Shirai T, Tomino Y, Hino O, Fukuchi Y (2004) A patient with TSC1 germline mutation whose clinical phenotype was limited to lymphangioliomyomatosis. *J Intern Med* 256(2):166-73
- Schwartzkroin PA, Roper SN, Wenzel HJ (2004) Cortical dysplasia and epilepsy: animal models. *Adv Exp Med Biol* 548:145-74
- Shaw RJ, Bardeesy N, Manning BD, Lopez L, Kosmatka M, DePinho RA, Cantley LC (2004) The LKB1 tumor suppressor negatively regulates mTOR signaling. *Cancer Cell* 6(1):91-9

Shields WD (2004) Surgical Treatment of Refractory Epilepsy. *Curr Treat Options Neurol* 6(5):349-356

Suryavanshi NM, Kashyape SS, Kashyape P, Phalke V (2004) Tuberos sclerosis complex. *Indian J Pediatr* 71(7):659 <http://www.ijppediatricsindia.org/article.asp?issn=0019-5456;year=2004;volume=71;issue=7;spage=659;epage=659;aulast=Suryavanshi>

Telfeian AE, Judkins A, Younkin D, Pollock AN, Crino P (2004) Subependymal giant cell astrocytoma with cranial and spinal metastases in a patient with tuberous sclerosis. Case report. *J Neurosurg Spine* 100(5):498-500

Weiner HL (2004) Tuberos sclerosis and multiple tubers: localizing the epileptogenic zone. *Epilepsia* 45 Suppl 4:41-2

### **TSC-RELATED PUBLICATIONS**

Bhayani SB, Allaf ME, Link RE, Rao P, Varkarakis JM, Jarrett TW, Kavoussi LR (2004) Laparoscopic partial nephrectomy in patients with neoplasia in a solitary kidney. *Urology* 64(1):35-7

Bikopoulos G, Ceddia RB, Sweeney G, Hilliker AJ (2004) Insulin reduces apoptosis and increases DNA synthesis and cell size via distinct signalling pathways in *Drosophila* Kc cells. *Cell Prolif* 37(4):307-16

Campbell M, Allen WE, Sawyer C, Vanhaesebroeck B, Trimble ER (2004) Glucose-Potentiated Chemotaxis in Human Vascular Smooth Muscle Is Dependent on Cross-Talk Between the PI3K and MAPK Signaling Pathways. *Circ Res.* 2004 Jul 22; Epub 2004 Jul 08

Coscaron Blanco E, Gomez Gonzalez JL, Blanco Perez P, Canizo Alvarez A, Benito Gonzalez F, Flores Corral T (2004) [Cervicothoracic angiomyolipoma: an unusual tumor in a site with difficult surgical approach.] *Acta Otorrinolaringol Esp* 55(3):148-51 [Article in Spanish]

D'Antuono M, Louvel J, Kohling R, Mattia D, Bernasconi A, Olivier A, Turak B, Devaux A, Pumain R, Avoli M (2004) GABAA receptor-dependent synchronization leads to ictogenesis in the human dysplastic cortex. *Brain* 127(Pt 7):1626-40; Epub 2004 Jun 02

De Bruecker Y, Ballaux F, Allewaert S, Vanbeckevoort D, Bielen D, Roskams T, Aerts R, Roex L, Simoens M A solitary hepatic lesion: MRI-pathological correlation of an hepatic angiomyolipoma (2004:4b). *Eur Radiol* 14(7):1324-6; Epub 2004 Jun 08

Dos D Sarbassov, Ali SM, Kim DH, Guertin DA, Latek RR, Erdjument-Bromage H, Tempst P, Sabatini DM (2004) Rictor, a Novel Binding Partner of mTOR, Defines a Rapamycin-Insensitive and Raptor-Independent Pathway that Regulates the Cytoskeleton. *Curr Biol* 14(14):1296-302

Foster DA (2004) Targeting mTOR-mediated survival signals in anticancer therapeutic strategies. *Expert Rev Anticancer Ther* 4(4):691-701

Gomez Garcia I, Sanz Mayayo E, Allona Almagro A, Ruiz Rubio JL, Garcia-Cosio Piqueras M, Rodriguez Patron R, Burgos Revilla FJ, Garcia Ortells D, Escudero Barrilero A (2004) [Extrarenal retroperitoneal angiomyolipoma: bibliography review and report of a new case] *Arch Esp Urol* 57(4):434-7 [Article in Spanish]

Goyal M, Bangert BA, Lewin JS, Cohen ML, Robinson S (2004) High-resolution MRI Enhances Identification of Lesions Amenable to Surgical Therapy in Children with Intractable Epilepsy.

Epilepsia 45(8):954-9

Hashizume K, Tsuda H, Hodozuka A, Tanaka T (2004) Clinical and experimental studies of epilepsy associated with focal cortical dysplasia. *Psychiatry Clin Neurosci* 58(3):S26-9

Hetet JF, Rigaud J, Blancho G, Renaudin K, Bouchot O, Karam G (2004) [Renal transplantation after excision of an angiomyolipoma on living donor kidney] *Prog Urol* 14(2):205-6 [Article in French]

Hou L, Klann E (2004) Activation of the phosphoinositide 3-kinase-Akt-mammalian target of rapamycin signaling pathway is required for metabotropic glutamate receptor-dependent long-term depression. *J Neurosci* 24(28):6352-61

Iinuma M, Tsuchiya N, Satoh S, Ohyama C, Kato T, Sato K, Habuchi T (2004) [Retroperitoneoscopic partial nephrectomy by using microwave tissue coagulation] *Hinyokika Kyo* 50(5):299-303 [Article in Japanese]

Ikitimur HD, Toker F, Demir T, Bozkurt AK, Yildirim N (2004) [Videothoracoscopic lung biopsy in the diagnosis of interstitial lung disease] *Tuberk Toraks* 52(2):164-70 [Article in Turkish]

Inagaki T, Bhayani SB, Allaf ME, Ong AM, Rha KH, Petresior D, Patriciu A, Varkarakis IM, Jarrett TW, Stoianovici D, Kavoussi LR (2004) Tumor capacitance: electrical measurements of renal neoplasia. *J Urol* 172(2):454-7

Kubinski DJ, Clark PE, Assimos DG, Hall MC (2004) Utility of frozen section analysis of resection margins during partial nephrectomy. *Urology* 64(1):31-4

Kumasaka T, Seyama K, Mitani K, Sato T, Souma S, Kondo T, Hayashi S, Minami M, Uekusa T, Fukuchi Y, Suda K (2004) Lymphangiogenesis in Lymphangioliomyomatosis: Its Implication in the Progression of Lymphangioliomyomatosis. *Am J Surg Pathol* 28(8):1007-1016

Lee MC, Shim JJ, Kim JH, Kim MK, Woo YJ, Chung WK, Suh JJ, Nam SC, Lee JS, Kim YS, Kim JH, Kim HI (2004) Upregulation of glutamate receptors in rat cerebral cortex with neuronal migration disorders. *J Korean Med Sci* 19(3):419-25

Marszalek M, Ponholzer A, Brossner C, Wachter J, Maier U, Madersbacher S (2004) Elective open nephron-sparing surgery for renal masses: single-center experience with 129 consecutive patients. *Urology* 64(1):38-42

Murakami M, Ichisaka T, Maeda M, Oshiro N, Hara K, Edenhofer F, Kiyama H, Yonezawa K, Yamanaka S (2004) mTOR Is Essential for Growth and Proliferation in Early Mouse Embryos and Embryonic Stem Cells. *Mol Cell Biol* 24(15):6710-8

Otsuki T (2004) Neuroimaging and presurgical evaluation of symptomatic epilepsies. *Psychiatry Clin Neurosci* 58(3):S13-5

Peters O, Redecker C, Hagemann G, Bruehl C, Luhmann HJ, Witte OW (2004) Impaired Synaptic Plasticity in the Surround of Perinatally Acquired Dysplasia in Rat Cerebral Cortex. *Cereb Cortex*. 2004 Jul 6; Epub 2004 Apr 27

Qiu Q, Yang M, Tsang BK, Gruslin A (2004) Both mitogen-activated protein kinase and phosphatidylinositol 3-kinase signalling are required in epidermal growth factor-induced human

trophoblast migration. Mol Hum Reprod 2004 Jul 2 [Epub ahead of print]

Romano F, Franciosi C, Bovo G, Cesana GC, Isella G, Colombo G, Uggeri F (2004) Case report of a hepatic angiomyolipoma. Tumori 90(1):139-43

Sansal I, Sellers WR (2004) The Biology and Clinical Relevance of the PTEN Tumor Suppressor Pathway. J Clin Oncol 22(14):2954-63

Senderowicz AM (2004) Assays for cyclin-dependent kinase inhibitors. Methods Mol Biol 285:69-78

Tseng CA, Pan YS, Su YC, Wu DC, Jan CM, Wang WM (2004) Extrarenal retroperitoneal angiomyolipoma: case report and review of the literature. Abdom Imaging 2004 Jun 8 [Epub ahead of print]

Wang J, Weiss LM, Hu B, Chu P, Zuppan C, Felix D, Rausei-Mills V, Chase DR (2004) Usefulness of immunohistochemistry in delineating renal spindle cell tumours. A retrospective study of 31 cases. Histopathology 44(5):462-71

Yigit T, Yigit C, Gulec B, Ozcan A, Kozak O, Mesut P (2004) [Acute abdomen due to spontaneous renal angiomyolipoma rupture] Prog Urol 14(2):207-9 [Article in French]

Zhang B, Wang H, Zhang SZ, Zhou Y, Zhang J, Yuan JL, Qin RL, Chen BQ, Huan Y, Kang FX (2004) [Clinical investigation of renal angiomyolipoma] Zhonghua Wai Ke Za Zhi 42(8):482-5 [Article in Chinese]

## **CONFERENCES:**

For a complete listing of conferences, visit the TS Alliance website at:  
<http://216.33.101.121/Research/upcoming%20conferences.asp>

### **September 16-18, 2004**

#### **TSC International Research Conference 2004**

#### **TSC Genes - Function and Dysfunction - From Molecular Biology to Therapeutic Advances**

Organized by the Tuberous Sclerosis Association of Great Britain

Queens' College, University of Cambridge, Cambridge UK

**Deadline for registration is August 31, 2004!!**

See Tuberous Sclerosis Association Web site for additional information and forms at:

<http://www.tuberous-sclerosis.org/research/conference/index.shtml>

### **September 21, 2004**

#### **The National Arthritis and Musculoskeletal and Skin Diseases Advisory Council Meeting**

As soon as the agenda is available, a link will appear at this url:

<http://www.niams.nih.gov/an/committees/futuremeet.htm>

**September 27-29, 2004**

**Faces of a Healthy Future: National Conference to End Health Disparities**

Keynote Speaker: John Ruffin, Ph.D., Associate Director for Research on Minority Health, Office of the Director, NIH

The Adams Mark Hotel, Winston-Salem, NC

<http://www.fhfconference.com/index.htm>

**November 6-7, 2004**

**New England Regional TSC Conference**

Holiday Inn, Boston Logan, Boston, MA

Sponsored and organized by the NE Community Alliance of the Tuberous Sclerosis Alliance

For more information, contact Jeffrey Hargreaves at [Jeffrey.hargreaves@verizon.net](mailto:Jeffrey.hargreaves@verizon.net)

**February 19-20, 2005**

**West Coast Regional TSC Conference**

Mission Inn, Riverside, CA

Sponsored and organized by the Community Alliance of the Tuberous Sclerosis Alliance

For more information, contact April Cooper at [ACoope@ardenrealty.com](mailto:ACoope@ardenrealty.com)

**Save the date!**

**April 8-10, 2005**

**CNS Manifestations of TSC**

**LAMposium**

**Rare Lung Disease Consortium Conference**

Hyatt Downtown, Cincinnati, OH

Sponsored and organized by the Tuberous Sclerosis Alliance, LAM Foundation, and Rare Lung Disease Consortium

More information coming soon!

**Save the date! May 4-5, 2006**

**TSC International Research Conference 2006**

Berlin, Germany

More information coming soon!

## **NEWS:**

**\$3.2 Million Approved for TSC Research in the TSC Research Program**. The Defense Appropriations Bill was recently signed into law, including \$3.2 million for the TSC Research Program (TSCRP) within the Congressionally Directed Medical Research Program (CDMRP) that is run by the Department of Defense. While this is only a small increase from the amount of funds the TSCRP received last year, it is an increase in a year when there have not been many increases.

To all of you who visited your representative's offices, called or wrote to support the TS Alliance's request for these funds, thank you so much. All of the representatives who joined Rep. Sue Kelly's group letter to the appropriations committee deserve our particular thanks. As I am sure you all know by now, Rep. Kelly has been a great champion to the TSC cause by sponsoring her

letter asking for \$10 million for TSC research. Rep. Jerry Lewis, who is the Chairman of the Defense Appropriations subcommittee, has also be a great champion for the TS Alliance, as well as Sen. Arlen Specter in the Senate.

## **NIH ANNOUNCEMENTS:**

**The Secretary's Advisory Committee on Genetics, Health, and Society Hearing on Genetic Discrimination, October 18, 2004** The issue of genetic discrimination is a high priority for the Secretary's Advisory Committee on Genetics, Health, and Society (SACGHS). In an effort to raise awareness about the problem, the Committee is seeking public comments from individuals who:

- Have experienced genetic discrimination in health insurance or in employment.
- Fear the potential impact of genetic discrimination on either health insurance or employment.
- Have paid out-of-pocket for services to exclude genetic information from medical records.
- Are health care providers and have had patients experience genetic discrimination; express concern about genetic discrimination; or taken steps to avoid genetic discrimination (for example, not undergoing genetic testing or keeping the results out of a medical record).

SACGHS will be holding a hearing on October 18, 2004 to gather information from members of the public about the scope and nature of genetic discrimination. The Committee is particularly interested in learning about cases of genetic discrimination that are based on predictive genetic information, pre-symptomatic genetic disease, or carrier status.

In October 2003, the Senate unanimously passed the Genetic Information Nondiscrimination Act, and advocates are pressing for action in the House of Representatives. In July 2004, the House Subcommittee on Employer-Employee Relations of the Committee on Education and the Workforce held a hearing on the issue of genetic discrimination. In spite of broad bipartisan support for the legislation, there is opposition and it appears to be preventing further progress in the House. The fear of genetic discrimination and its adverse consequences is well-documented and regarded by many as sufficient justification for Federal legislation. However, opponents argue that there is insufficient evidence that genetic discrimination is occurring and thus legislation is not warranted at this time. SACGHS hopes that the information gathered during the hearing will help address the concerns of the bill's opponents.

SACGHS was established to serve as a forum for deliberation on the ethical, legal and social issues at the intersection of genetics, health and society and to advise the Secretary of Health and Human Services about these issues. For more information about the Committee and its meetings, as well as copies of the Committee's correspondence with the Secretary on this issue, please visit <http://www4.od.nih.gov/oba/SACGHS.HTM>

Please send your written comments to SACGHS by **September 17, 2004** in care of Amanda Sarata at [sarataa@od.nih.gov](mailto:sarataa@od.nih.gov) or by fax to 301-496-9839.

Amanda Sarata, M.S., M.P.H., Secretary's Advisory Committee on Genetics, Health, and Society, 6705 Rockledge Drive, Suite 750, Bethesda, MD 20892, 301-496-7009 (ph), 301-496-9839 (fax)

**Combination Treatment Most Effective in Adolescents with Depression**

<http://www.nimh.nih.gov/press/prtads.cfm>

**SCHIZOPHRENIA GENE VARIANT LINKED TO RISK TRAITS**

<http://www.nimh.nih.gov/press/prschizgene.cfm>

**BRAIN'S REWARD CIRCUITRY REVEALED IN PROCRASTINATING PRIMATES**

<http://www.nimh.nih.gov/press/prworkaholicmonkey.cfm>

**DEPRESSION TRACED TO OVERACTIVE BRAIN CIRCUIT**

<http://www.nimh.nih.gov/press/prtdcircuit.cfm>

**NIMH ANNOUNCES NEW STRATEGIC PLAN AND PRIORITIES** With input from its many stakeholders, NIMH has been reviewing its portfolio, setting priorities for the future, and reorganizing its extramural programs. These efforts are being conducted to help us better exploit recent scientific advances and to sharpen our focus on cross-disciplinary collaboration and translational research as a means of reducing the burden of mental and behavioral disorders through research. Please visit their Strategic Plans and Priorities page at <http://www.nimh.nih.gov/strategic/strategicplanmenu.cfm> for more information.

**IBIDS DATABASE CELEBRATES FIVE YEARS WITH A NEW LOOK AND NEW FEATURES: NIH Office of Dietary Supplements Launches Improved International Bibliographic Information on Dietary Supplements (IBIDS) Database** The NIH Office of Dietary Supplements (ODS) and the U.S. Department of Agriculture (USDA) Food and Nutrition Information Center (FNIC) at the National Agricultural Library are delighted to announce the "launch" of the new, improved, Web-accessible International Bibliographic Information on Dietary Supplements (IBIDS) Database.

The IBIDS database is available to the public free of charge through a Web interface on the ODS homepage. It was designed to be user-friendly so individuals with all levels of expertise may use it easily. It currently contains over 730,000 citations on the topic of dietary supplements. Citations are available from 1986 to the present and abstracts are included where permission has been granted from the publisher.

So what is new about IBIDS?

- A NEW LOOK: The Web site has been redesigned to include images and other new features. Available abstracts are visible in the search result sets and records are easy to discern from one another due to the creative use of background color.
- RECORDS: 30,000 new records have been added to the database; totaling almost three quarters of a million records.
- IMAGES: Images of botanicals and the chemical structures of amino acids, vitamins, and minerals will appear in conjunction with search set results when an image is available for the term entered or selected.

- THE TOP FIVE: The five search terms entered most frequently by IBIDS users are tallied and made available at the click of a virtual button from the main page.
- HIGHLIGHTS/NOTABLE CITATIONS: Articles that have been cited in the Office of Dietary Supplements' "Annual Bibliography of Significant Advances in Dietary Supplement Research" publications are marked with a yellow star.
- ADDITIONAL DELIVERY OPTIONS: Receive selected records via email in plain text form or formatted for use in the Endnote program.
- QUERY TERMS HIGHLIGHTED IN RESULTS: Result sets show the query terms highlighted in red text within the citations and abstracts.

This year also marks the fifth anniversary of the IBIDS Database. IBIDS was launched in January 1999 as a result of the Dietary Supplement and Health Education Act (DSHEA) 1994, whereby Congress mandated that the ODS create a tool to assist both scientists and the public in locating credible, scientific literature on dietary supplements.

Keeping with their commitment to work together with other federal agencies, the ODS initiated an interagency cooperative agreement in 1998 with the Food and Nutrition Information Center (FNIC), National Agriculture Library (NAL), Agricultural Research Service, U.S. Department of Agriculture to develop and maintain the IBIDS database.

Over time, a sophisticated search strategy was developed and revised to adequately extract appropriate citations from four major bibliographic databases: biomedical-related articles from MEDLINE, botanical and agricultural science material from AGRICOLA, worldwide agricultural literature from AGRIS, and selected nutrition journals from CAB Abstracts and CAB Health. Overall, a list of over 3,300 journals exists with links to their Web sites for access to articles.

IBIDS is utilized around the world by researchers, consumers, health professionals and the media and is the central location for research-based journal articles and citations on a variety of dietary supplements, including vitamins, minerals and botanicals. Users have typically commended the site on its ease of use, ability to email citations and abstracts, amount and quality of information, and uniqueness of site as a source of information on dietary supplements and alternative medicine. Dr. Paul Coates, Director of ODS noted that "ODS and FNIC want to make IBIDS as useful as possible to its audience. We hope that the new version of this database will be even more valuable to its many visitors."

Plans for the next five years include: adding records from additional databases to increase the number of articles and variety of journals, creating and including keywords to assist users in searching health outcomes/biological effects, expanding Consumer IBIDS to include more consumer-oriented material, and linking more records to journal content.

You can access IBIDS at: [http://dietary-supplements.info.nih.gov/Health\\_Information/IBIDS.aspx](http://dietary-supplements.info.nih.gov/Health_Information/IBIDS.aspx)

The Office of Dietary Supplements was established at NIH in 1995 as a result of the Dietary Supplement and Health Education Act passed by Congress in 1994. The mission of ODS is to strengthen knowledge and understanding of dietary supplements by evaluating scientific information, stimulating and supporting research, disseminating research results, and educating the public to foster an enhanced quality of life and health for the U.S. population. For additional information about ODS, please visit <http://ods.od.nih.gov>

The Office of the Director is a component of the National Institutes of Health, U.S. Department of Health and Human Services.

**DOG GENOME ASSEMBLED: Canine Genome Now Available to Research Community Worldwide** The first draft of the dog genome sequence has been deposited into free public databases for use by biomedical and veterinary researchers around the globe, the National Human Genome Research Institute (NHGRI), one of the National Institutes of Health (NIH), announced today.

A team led by Kerstin Lindblad-Toh, Ph.D., of the Broad Institute of MIT and Harvard, Cambridge, Mass., and Agencourt Bioscience Corp., Beverly, Mass., successfully assembled the genome of the domestic dog (*Canis familiaris*). The breed of dog sequenced was the boxer, which was chosen after analyses of 60 dog breeds found it was one of the breeds with the least amount of variation in its genome and therefore likely to provide the most reliable reference genome sequence.

The initial assembly is based on seven-fold coverage of the dog genome. Researchers can access the sequence data through the following public databases: GenBank <http://www.ncbi.nih.gov/Genbank> at NIH's National Center for Biotechnology Information (NCBI); EMBL Bank (<http://www.ebi.ac.uk/embl/index.html>) at the European Molecular Biology Laboratory's Nucleotide Sequence Database; and the DNA Data Bank of Japan <http://www.ddbj.nig.ac.jp>. The data can also be viewed through the UCSC Genome Browser <http://www.genome.ucsc.edu/> at the University of California at Santa Cruz and the Ensembl Genome Browser <http://www.ensembl.org> at the Wellcome Trust Sanger Institute in Cambridge, England. Viewing capabilities also will be available in August at NCBI's Map Viewer <http://www.ncbi.nlm.nih.gov/mapview/>

The NHGRI-supported researchers are currently comparing the dog and human genome sequences and plan to publish results of their analysis in the next several months.

The dog genome is similar in size to the genomes of humans and other mammals, containing approximately 2.5 billion DNA base pairs. Due to a long history of selective breeding, many types of dogs are prone to genetic diseases that are difficult to study in humans, such as cancer, heart disease, deafness, blindness and autoimmune disorders. In addition, the dog is an important model for the genetics of behavior and is used extensively in pharmaceutical research.

To best characterize disease in dogs, it is important to have a sufficient number of markers in the genome. Therefore, in addition to the boxer, nine other dog breeds, four wolves and a coyote were sampled to generate markers that can be used in disease studies in any dog breed. A preliminary set of about 600,000 single nucleotide polymorphisms (SNPs), which amounts to a SNP roughly every 5,000 DNA base pairs, is currently being aligned to the released assembly. The reads used to identify the SNPs are publicly available in NCBI's Trace Archive <http://www.ncbi.nlm.nih.gov/Traces/trace.cgi> and the SNPs will be available shortly at the Single Nucleotide Polymorphism database, dbSNP <http://www.ncbi.nlm.nih.gov/SNP/>

Sequencing of the dog genome began in June 2003. NHGRI provided about \$30 million in funding for the project to the Broad Institute, which is part of NHGRI's Large-Scale Sequencing Research Network.

To learn more about the rapidly expanding field of comparative genomic analysis, go to: <http://www.genome.gov/10005835>. To read the white paper that outlines the scientific rationale and strategy for sequencing the dog genome, go to: <http://www.genome.gov/Pages/Research/Sequencing/SeqProposals/CanineSEQedited.pdf>

A high-resolution photo of Tasha, the boxer whose DNA was sequenced, is available at: <http://www.genome.gov/11007323>

NHGRI is one of 27 institutes and centers at NIH, an agency of the Department of Health and Human Services. The NHGRI Division of Extramural Research supports grants for research and for training and career development at sites nationwide. Information about NHGRI can be found at: <http://www.genome.gov>

**NEW DATABASE FOCUSES ON GENETIC POLICY AND LAWS NHGRI Launches Free Web-based Resource For Finding Federal, State Laws Related to Genetic Issues**

The National Human Genome Research Institute (NHGRI), part of the National Institutes of Health (NIH), unveiled a new Web-based resource that will enable researchers, health professionals and the general public to more easily locate information on laws and policies related to a wide array of genetic issues.

The NHGRI Policy and Legislation Database is located on NHGRI's Web site at <http://www.genome.gov/LegislativeDatabase>

The free, searchable database currently focuses on the following subject areas: genetic testing and counseling; insurance and employment discrimination, newborn screening; privacy of genetic information and confidentiality; informed consent; and commercialization and patenting.

"This is a tremendous resource for anyone interested in learning more about the laws, regulations and policies pertaining to genetics and genomics. It will serve as a valuable tool for all Americans, from academic researchers seeking to patent genetic technologies to average citizens trying to determine what protections exist in their states against genetic discrimination," said NHGRI Director Francis S. Collins, M.D., Ph.D.

The resource features a convenient, interactive map of the United States that enables users to view state legislation and laws for any of the 50 states and the District of Columbia by simply clicking on that jurisdiction. Users also can search the database by keyword, content type, topic and/or source, and can also sort the information by date or citation.

The database, which will be updated on a regular basis, contains links to full-text copies of federal and state laws/statutes; federal legislative materials; and federal administrative and executive materials, including regulations, institutional policies and executive orders. Abstracts are also provided that summarize the government materials in lay language.

The new database is managed by NHGRI's Office of Policy, Communications, and Education (OPCE), which develops policy related to the societal implications of human genome research. "This database fills a long-standing need in the genetic policy arena. It is literally a one-stop shop for anyone with an interest in this rapidly developing field," said OPCE Director Alan E. Guttmacher, M.D. "We think it will be of interest to a broad array of users, including legislators and policymakers at the local, state and federal levels."

In addition to federal and state laws, the database includes materials from these current and former federal agencies and advisory panels: Department of Health and Human Services (HHS), the Department of Health, Education and Welfare, the Equal Employment Opportunity Commission, the U.S. Patent and Trademark Office, the Secretary's Advisory Committee on Genetics, Health and Society and the President's Council on Bioethics.

This fall, NHGRI plans to add more categories of content to the database, primarily in the areas of foreign statutes and laws, foreign policy, treaty and international agreements, and policy material from international organizations.

## **SCIENTISTS ESTABLISH DATABASE OF GENES ASSOCIATED WITH CANCER DRUG RESISTANCE**

Scientists at the National Cancer Institute (NCI), a part of the National Institutes of Health, have created a database of information about a group of genes associated with multidrug resistance in cancerous tumors. The research, published in the August 22, 2004, issue of "Cancer Cell"\*, details the gene expression of a 48-member family of proteins called ABC transporters. The NCI scientists identified associations between expression of individual ABC transporters in cancer cells and resistance to specific drugs.

Though ABC transporters are primarily associated with drug resistance, the researchers report an association between some of these proteins and an increase in effectiveness of some cancer drugs. Their database should serve as a starting point for research into novel therapies designed to either evade or exploit the action of ABC transporters.

ABC transport proteins are embedded in the cell membrane and regulate traffic of many molecules, including hormones, lipids, and drugs, in and out of the cell. Because they transport toxic materials out of cells, many of these 48 proteins confer resistance to cancer drugs in humans. The study's lead authors were Jean-Philippe Annereau, Ph.D., and Gergely Szakács, M.D., Ph.D., both visiting fellows at NCI's Center for Cancer Research (CCR). Szakács said, "Multidrug resistance is a major barrier to effective cancer chemotherapy, and even low levels of resistance can have a significant impact on the efficacy of chemotherapy."

Though these proteins have major implications for the treatment of cancer, previous studies had characterized only 17 of them using much less sensitive techniques. Szakács and Annereau studied the ABC transporters in a group of cancer cell lines called the NCI-60 cells, which includes leukemias, melanomas, and ovarian, breast, prostate, lung, renal, and colon cancers.

They used the real-time polymerase chain reaction to detect and quantify the expression of ABC transporter genes as messenger RNA in these cells. With help from collaborators in the laboratory of John Weinstein, M.D., Ph.D., also in CCR, the researchers found statistical correlations between tests of the cell lines' sensitivity to cancer drugs and these cells' expression of ABC transporters. Further tests, such as measuring changes in cell growth to evaluate the cells' response to the drugs, supported the statistical correlations.

Analysis of 68,592 ABC gene and drug relationships yielded 131 strongly inverse-correlated pairs - that is, in these 131 cases, cells' ABC gene expression was strongly correlated with decreased sensitivity to the drug. Michael Gottesman, M.D., one of the paper's senior authors and chief of the Laboratory of Cell Biology in CCR, said, "These results indicate that some of the ABC transporters whose function remains unknown can influence the response of cells to cancer treatment."

Gottesman, Szakács, and colleagues hope this data will be used to find commonalities in compounds transported by MDR1, one of the ABC proteins most strongly associated with multidrug resistance. With this information, they could begin developing a drug to undermine MDR1's ability to transport drugs out of the cell.

Expression of some ABC transporters, most notably MDR1, caused an increase in cancer cells' sensitivity to some drugs. This increase was unexpected, as MDR1 is perhaps the best-known multidrug resistance protein. The researchers advocate further research in order to discover even more compounds that interact in this way with MDR1 and other ABC transporters. For more information about cancer, please go to <http://cancer.gov>

\*Szakács G and Gottesman MM. "Predicting drug sensitivity and resistance: Profiling ABC transporter genes in cancer cells. Cancer Cell 22 August 2004

**THOMPSON LAUNCHES "DECADE OF HEALTH INFORMATION TECHNOLOGY" Strategic Report Outlines Steps to Implement Widespread Adoption of Electronic Health Records and New Nationwide Interoperable Health Information Network**

HHS Secretary Tommy G. Thompson released the first outline of a 10-year plan to transform the delivery of health care by building a new health information infrastructure, including electronic health records and a new network to link health records nationwide. At the same time, he announced a number of new action steps to help advance health information technology immediately

"America needs to move much faster to adopt information technology in our health care system," Secretary Thompson said as he released the action report ordered by President Bush. "Electronic health information will provide a quantum leap in patient power, doctor power, and effective health care. We can't wait any longer."

The plan, prepared by the new National Coordinator for Health Information Technology, David J. Brailer, M.D., Ph.D., lays out the broad steps needed to achieve always-current, always-available electronic health records (EHR) for Americans. EHR systems would also enable physicians and other health professionals to electronically tap into a wealth of treatment information as they care for patients. The report was released in Washington, D.C., at a Secretarial Summit on Health Information Technology bringing together the nation's technology and health leaders.

"Health information technology can improve quality of care and reduce medical errors, even as it lowers administrative costs," Secretary Thompson said. "It has the potential to produce savings of 10 percent of our total annual spending on health care, even as it improves care for patients and provides new support for health care professionals." At the same time, security and privacy of electronic medical records would be improved over protections of paper-based records, Secretary Thompson said. And health information technology also offers much greater access and control of health records by consumers themselves.

Secretary Thompson announced he would appoint a special Leadership Panel to assess total costs and benefits of health information technology and report to him by fall. He also announced efforts underway to develop private sector certification for health information technology products. And he said HHS will begin reviewing the feasibility of a private sector consortium to plan and develop a new nationwide network for health information.

In addition, Secretary Thompson announced Medicare plans to create an Internet portal allowing beneficiaries to access their personal Medicare information. And he said Medicare will accelerate regulations for e-prescribing of drugs in order to quickly disseminate common standards. He also announced new grants to help develop information exchanges in nine communities, adding that \$50 million more in seed funding will be provided to five states this fall, with plans doubling the investment in 2005.

President Bush in April called for electronic health records for most Americans within 10 years. In an executive order, he created the new Office of the National Coordinator for Health Information Technology, and in May, David J. Brailer, M.D., Ph.D., was appointed to the new position.

"President Bush has identified health information technology as one of the most important technology areas for America's future," Dr. Brailer said. "This report lays down a foundation for achieving this national priority and moves us from a period of discussion into a period of rapid action."

The Decade of Health Information Technology report has been published and is available online the HHS Web site at <http://www.hhs.gov>

## **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>

### **April 2003 TSC Alert**

<http://www.tsalliance.org/Research/TSC%20Alert040103.asp>

### **May 2003 TSC Alert**

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

### **June 2003 TSC Alert**

<http://www.tsalliance.org/Research/TSC%20Alert060103.asp>

### **July 2003 TSC Alert**

<http://www.tsalliance.org/Research/TSC%20Alert72703.asp>

### **August 2003 TSC Alert**

<http://www.tsalliance.org/Research/TSC080103.asp>

### **September 2003 TSC Alert**

<http://www.tsalliance.org/Research/TSC%20Alert091503.asp>

### **October 2003 TSC Alert - Coming soon!**

### **November 2003 TSC Alert**

<http://www.tsalliance.org/Research/TSC%20Alert112403.asp>

### **December 2003 TSC Alert**

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

### **January 2004 TSC Alert**

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

### **February/March 2004 TSC Alert**

<http://www.tsalliance.org/Research/TSC%20Alert020104.asp>

**April 2004 TSC Alert**

<http://www.tsalliance.org/Research/TSC%20Alert040104.asp>

**May 2004 TSC Alert**

<http://www.tsalliance.org/Research/TSC%20Alert050104.asp>

**June/July 2004 TSC Alert**

<http://www.tsalliance.org/June%202004%20TSC%20Alert.doc>