

YOUNG SCIENTISTS TAKE NOTE: U.VA. BELONGS TO THE "NEXT WAVE"

The University has subscribed to a new Web site called **Next Wave**, an "electronic meeting place" found at www.nextwave.org created by young scientists for young scientists.

Maintained by the journal *Science* and the American Association for the Advancement of Science, **Next Wave** provides free access to a funding database and a job listing service. Subscribers have additional access to some special features. Users from the virginia.edu domain now have access to information in:

- Job Market News,
- Career Transition,
- Career and Job Hunting Advice,
- Family-Career Issues,
- Women in Science,
- Science's Big Debates.

The site provides a forum where readers can comment on the articles and share personal reactions and career concerns with other young scientists.

Please check it out and send an e-mail to rwm5x@virginia.edu if you find this site useful.



NEWSFLASH—Major Awards in Chemistry



CASSANDRA FRASER, assistant professor in the Chemistry department received the Presidential Early Career Award for Scientists and Engineers last month, one of 20 awarded out of 1600 nominations. In January she received Dupont's Young Investigator Award, and she has achieved a triumphant triple crown with news of the Alfred P. Sloan Research Fellowship this month. Fraser's work is in the field of characterization and applications of metal core macromolecules with possible applications as O₂, pH and other kinds of sensors.

The 1999 Coblentz Award, a major international award for the best molecular spectroscopist under 36 years of age, was presented this year to **BROOKS PATE**. Pate is the youngest recipient ever, and the only person to receive this prestigious award as an assistant professor. Pate also received the Camille and Henry Dreyfus Teacher-Scholar Fellowship last year, and a University Teaching and Technology Initiative Award in 1996.



JAMES MARSHALL, Thomas Jefferson professor of chemistry, has received the 1999 Humboldt Research Award for Senior United States Scientists. He has received several awards from the American Chemical Society. He is currently the senior editor of the *Journal of Organic Chemistry*. Marshall's work has recently focused on total syntheses of two acetogenins and several others differing in stereochemistry and core structure. These studies are guided by feedback from bioassays in cultures of various human tumor cell lines.

NEWS FROM WASHINGTON

Federal Relations update from James Savage

President Clinton's FY 2000 budget proposal to Congress provides a 2.9 percent increase in non-defense research spending, which, accounting for a 2 per cent inflation rate is essentially steady-state funding. The budget for the National Institutes of Health, the largest source of federal research support at U.Va., would rise by 2 percent, and NSF, the second most important source received a 7.8 percent increase. A summary of the science budget may be found at the AAAS Web site: www.aaas.org/spp/dspp/rd/

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Pointers on Obtaining Funding from Foundations

FROM JEFFREY PLANK, Director of Corporate and Foundation Development



Setting your sights on an award from a private foundation is quite different from applying for a federal grant. Without the experience and

contacts of our team of development officers, you might be wasting your time. While most major foundations post their guidelines on their Web sites, this is only an indication of their focus, and not the whole story. Today, professionals who broaden the early focus of their founders run most major foundations. Professional program officers who are alert to federal initiatives put their funds where they will have most impact. They are often less interested in supporting basic science research than applied research, although in the case of the recent W.M. Keck Foundation award, the opposite is true.

The history of Keck Foundation support for research at U.Va. began in the late 1980s when the University made a \$1.165M. Academic Enhancement Program award to Michael Menaker and

Gene Block in Biology and Michael Thorner in the School of Medicine to support the Biodynamics Institute. Subsequently, the Institute became the Center for Biological Timing (CBT) and in 1991 received a \$5 M. National Science Foundation Science and Technology Center award that was to last for eleven years, and eventually brought in more than \$14.5 M in NSF support. Menaker, Block, and Thorner initiated conversations with the Keck Foundation in 1988, but it was not until after NSF announced its support that the Foundation funded a \$300,000 proposal that allowed CBT to recruit an outstanding faculty member from the Rockefeller University and to purchase additional equipment.

In 1994, following this success, the Keck Foundation invited and funded a proposal, this time for \$750,000 from the School of Medicine, to support the application of chemistry professor Don Hunt's work and to establish the W.M. Keck Foundation Center for Biomedical Mass Spectrometry. Most recently, Keck awarded a \$1M. grant to the Center for Cellular Imaging to support development of a new type of high-resolution, high-speed microscope

for visualizing dynamic biological processes in living cells. This Center too was given start-up money through a University-sponsored Academic Enhancement Program grant, and involves a group of College of Arts and Sciences and Medical School faculty members led by David Brautigam. In Brautigam's opinion, Plank's involvement was indispensable at each step of the process of obtaining this award, and especially in the preparation of the initial letter of intent.

Plank refers to this as a qualifying process for the foundation, building confidence and good relationships based on measurable successes. Development officers will work with faculty to develop a letter of inquiry to carefully selected foundations to gauge if they are interested in supporting their research. Some foundations such as the Keck and the Burroughs Wellcome Fund will review only one proposal per institution in each funding cycle, matching the foundation's interests with the proposal submitted. For major initiatives, most foundations expect that the University will express its commitment to a proposed activity by institutional cost sharing. ■

Development officers for each of the schools are:

SCHOOL	CONTACT	E-MAIL	PHONE
Arts and Sciences	Anne Watkins	aw5w@virginia.edu	982-2331
Engineering	Carole Baker	cgb6h@virginia.edu	924-3395
Health Sciences	Tim Redden	ttr2n@virginia.edu	924-8432
Curry School	Maggie Unsworth	meu3x@virginia.edu	924-0848
Law	David Ibbeken	dhi@virginia.edu	924-4688
Architecture	Susan Ketron	smk4v@virginia.edu	924-7717
Commerce	Diana Walker	dw9t@virginia.edu	243-8637
Darden School	Andy Krouse	krousea@virginia.edu	924-4578

Time Either Crawls By or It Flies

Our perception of the passage of time may vary with age, attentional demands of other tasks, and a host of other factors. Peter Mangan, department chair of social and behavioral science at Clinch Valley College of the University of Virginia, with the help of his undergraduate students, is conducting research on the perception of time. Volunteers are asked to estimate either a one minute or three minute time period while counting out the seconds or performing a visual comparison task with high cognitive demands.

So far, he has studied 10–14 year olds, 20–24 year olds, 45–50 year olds, and two groups of 65–75 year olds: retired professionals and retired craft and trade workers. Comparison of the performance of these groups has shown some significant differences.

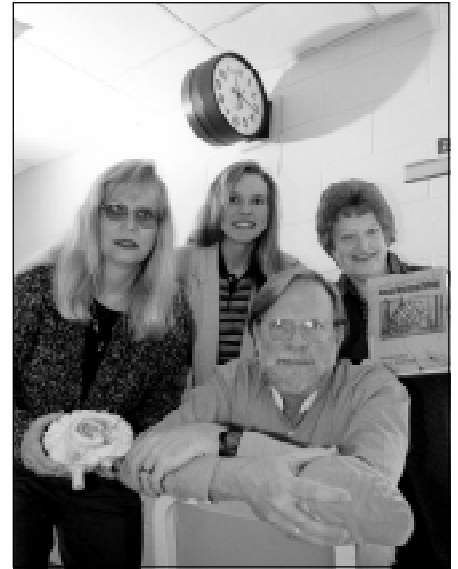
Mangan reports that the older people are, the faster they perceive time going by. For example, during the counting task, the younger subjects counted the seconds more quickly. The youngest group estimated that a minute had passed when only 55 seconds had passed, an eight per cent overestimate. The college students were nearly perfect in their estimations while the older groups of subjects underestimated the amount of time that had passed. The 45–50 year subjects and the non-professional 65–75 year subjects both underestimated the time by approximately nine percent while the older group of professionals underestimated the time by 23 percent. During the visual comparison task where subjects could not concentrate on the passage of time, all groups underestimated the passage of time. Again, college students made the smallest underestimation and the older groups made the largest underestimation.

Mangan believes these results involve the slowing of an internal clocking mechanism thought to be regulated by

dopamine, a neurotransmitter produced by the substantia nigra in the brain. Factors that affect the actions of dopamine have been shown to affect the perception of time. People with Parkinson's disease who have reduced levels of dopamine underestimate time if not medicated, but will have normal time perception if they receive medication. Conversely people with schizophrenia who appear to be hypersensitive to dopamine will overestimate time. During normal aging, there is a continuous reduction in the number of darkly pigmented neurons in the substantia nigra as it gradually produces less dopamine.

Other factors may also be at work in the internal clocking mechanisms that regulate many of our functions. The difference in performance of the two older groups suggests that life experiences can influence how aging affects time perception. An important question is the role that memory systems play in the perception of time, and whether new learning can result in more accurate perceptions.

One of the most rewarding aspects of Mangan's work at Clinch Valley College is its impact on his students and their career choices. Most of the students who have conducted this research have gone on to pursue graduate studies in psychology. Billie Murray, the student who first stimulated this line of research with her questions about aging and time perception during a Sensation and Perception class, has presented papers at professional meetings and is attending graduate school at East Tennessee State University. Kelvin Bolinsky (now enrolled in the clinical psychology master's program at U.Va.), Adam Rutherford, and Christy Wolfe have presented papers at the annual meetings of the Society for Neuroscience and the Southeastern Psychological Association. ■



Pictured, left to right: Lisa Marcum, Martha Carter, Dr. Peter Mangan and Carolyn Fleming at Clinch Valley College of the University of Virginia.

Principal Investigator	Sponsor	Amount	Type	Project Title
ADMINISTRATION				
Weldon Cooper Center for Public Service				
Martin, J.	Va. Dept. of Ed.	\$125,000	New	Web-Based Guide to Occupations in Va.
Financial Aid				
Hubbard, Y.	USDE	\$1,250,000	Cont.	Pell Grant-FY 1999
Student Activities				
Harmon, W.	CPB	\$10,005	Cont.	National Program Production and Acquisition Grant
Student Health				
Peterson, C.	Merck	\$150,038	Supp.	Study of a Pilot Manufacturing Lot of HPV16 Virus
Vice President for Research and Public Service				
Plank, J.	Hirsch Fdn.	\$10,000	Supp.	Preparation and Publication of the Louis Sullivan Photos
COLLEGE OF ARTS AND SCIENCES				
Biology				
Frankfurter, A.	Jeffress	\$20,000	New	The Role of Transcription Factor NRSF
Gittleman, J.	London Zoological Soc	\$7,900	New	Editorship-Animal Conservation
Kanjam, N.	Jeffress	\$20,000	New	Molecular Genetic Analysis of Morphogenesis in Drosophila
Menaker, M.	DHHS/NIMH	\$254,090	Cont.	Circadian Oscillators in Cultured Mammalian Retina
Chemistry				
Cafiso, D.	NSF	\$100,476	Cont.	Molecular Interactions Regulating Cell Signaling
Fraser, C.	Jeffress	\$10,000	Ren.	Synthesis of Metal Core Polyazolines
Hecht, S.	DHHS/NCI	\$196,979	Cont.	Interaction of Bleomycin with RNA and DNA
Hunt, D.	Novartis	\$240,800	New	UVa Institute for Proteomic Research
Pate, B.	Dreyfus Fdn.	\$60,000	New	Implementation of Microwave Cavity Methods
Pu, L.	DHHS/NIGMS	\$103,600	New	Chiral Conjugated Polymer-Based Sensors
English				
Rowell, C.	VFHPP	\$1,500	New	Virginia Direct-Mail Promotion
Environmental Sciences				
Herman, J.	EPA	\$5,470	Supp.	Star Fellowship for S. Johnson
Hornberger, G.	Amer. Geophysical Union	\$7,200	Supp.	Water Resources Research
Keene, W.	Chem. Mfg. Assoc.	\$1,036	Supp.	Reactive Chlorine Emissions Inventory
Graduate Arts and Sciences				
Huskey, R.	Ford Fdn.	\$7,500	Cont.	Ford Fdn. Predoctoral Fellowship for D. Mitchell
Huskey, R.	Ford Fdn.	\$7,500	Cont.	Ford Fdn. Predoctoral Fellowship for L. Pina
Papers of James Madison				
Stagg, J.	NE,	\$25,000	Supp.	Editing the Papers of James Madison
Stagg, J.	NEH	\$2,500	Supp.	Editing the Papers of James Madison
Papers of George Washington				
Chase, P.	Founding Fathers,	\$37,500	Supp.	CD-ROM Edition of the Washington Papers
Chase, P.	NEH	\$1,000	Supp.	Papers of George Washington
Physics				
Gallagher, T.	Air Force	\$100,000	Ren.	Structure and Dynamics of Excited States
Jones, R.	Air Force	\$50,000	Ren.	Time-Dependent Manipulation of Electronic Wave Functions
Psychology				
Brunjes, P.	DHHS/NIDCD	\$118,639	Cont.	Maturation and Plasticity in the Olfactory System
Sociology				
Petterson, S.	DHHS/NIMH	\$103,326	New	Poverty and Psychological Distress
Virginia Graduate Marine Science Consortium				
Rickards, W.	EPA	\$73,947	Supp.	Hampton University Research Capability Enhancement
Rickards, W.	LSU	\$3,423	New	Natural Dermo Resistance and its Role in the Development of Hatcheries
Virginia Institute for Theoretical Astronomy				
Balbus, S.	NASA	\$33,250	Supp.	Magnetohydrodynamics of the Solar Nebula
CURRY SCHOOL OF EDUCATION				
Human Services				
Cornell, D.	Va. Health Dept.	\$28,000	New	Youth Violence Prevention Needs Assessment
Weltman, A.	Mosaic	\$8,200	New	Physiologic Response Trial of Healthtron HES15A

Principal Investigator	Sponsor	Amount	Type	Project Title
HEALTH SCIENCES CENTER				
Anesthesiology				
Johns, R.	VHA	\$30,000	New	Fellowship for L. Millatt
Beirne Carter Center				
Engelhard, V.	Receptor Labs	\$2,160	Supp.	Receptor Labs Start-Up Consultation
Ravichandran, K.	Jeffress	\$10,000	Cont.	Functional Specificity of SHIP in T Lymphocyte Signaling
Biochemistry				
Li, R.	Jeffress	\$20,000	New	Mutational Analysis of BRCT Motif in BRCA1
Cell Biology				
Castle, J.	DHHS/NIDCR	\$219,614	Cont.	Membrane Function in Parotid Secretory Mechanisms
Gorbsky, G.	DHHS/NIGMS	\$192,647	Cont.	Chromosome Movement in Prometaphase
Reddi, P.	DHHS/NICHD	\$100,090	New	Transcriptional Regulation During Sperimogenesis
White, J.	DHHS/NIAID	\$264,764	Cont.	Molecular Mechanisms of Viral Membrane Fusion
Dean's Office				
Owens, G.	DHHS/NHLBI	\$41,828	Cont.	Short-Term Training for Minority Students
Sturgill, T.	Howard Hughes	\$41,966	Cont.	HHMI Occupancy Fees
General Clinical Research Center				
Carey, R.	DHHS/NCRR	\$947,557	Supp.	General Clinical Research Center
Weltman, A.	Pfizer	\$78,885	Supp.	Phase I, Double-Blind, Placebo-Controlled Study
Weltman, A.	Pfizer	\$332	Supp.	Phase I, Double-Blind, Placebo-Controlled Study
Health Evaluation Science				
Connors, A.	ADA/Va. Affiliate	\$7,066	New	State Diabetes Control Plan
Connors, A.	HSF	\$34,000	Supp.	Agreement with the Cerner Corp.
Connors, A.	HSF	\$17,000	Supp.	Agreement with the Cerner Corp.
Knaus, W.	Dyncorp	\$30,060	New	Consulting Agreement
Knaus, W.	Dyncorp	\$29,760	Supp.	Consulting Agreement
Knaus, W.	IBM	\$4,750	Supp.	Development of a Guide to Obstetrical Services
Knaus, W.	IBM	\$3,141	Supp.	Development of a Guide to Obstetrical Services
Knaus, W.	IBM	\$1,641	Supp.	Development of a Guide to Obstetrical Services
Internal Medicine				
Barnett, M.	Abbott Labs	\$6,005	Supp.	Double-Blind, Placebo-Controlled, Dose-Ranging Trial
Barnett, M.	PharmaResearch	\$500	New	Randomized, Double-Blind, Controlled, Multiple-Dose Study
Berg, C.	Amgen	\$1,800	New	An Open-Label Trial in Hepatitis C Patients
Bergin, J.	Novartis	\$2,340	Supp.	Multicountry, Randomized, Double-Blind Study
Bickston, S.	Schering Plough	\$4,163	New	Safety, Tolerance and Efficacy of Subcutaneous rHuIL-10
Bolton, W.	Alteon, Inc.	\$2,086	Supp.	Placebo-Controlled Safety and Efficacy Study
Cohen, R.	Glaxo	\$10,000	Supp.	Study of a Fixed Weekly Dose of Vinorelbine
Cohen, R.	Pharmacia	\$32,456	Supp.	A Phase III, Randomized, Controlled, Clinical Trial
Cohen, R.	Theradex	\$1,000	New	Multicenter, Open-Label, Randomized Study
Cohn, S.	DHHS/OFM	\$112,401	Supp.	Fibroblast Growth Factors in Inflammatory Bowel
Cominelli, F.	Centocor	\$400	Supp.	The Incidence of Lymphoma in Patients
Cominelli, F.	Glaxo	\$5,870	Supp.	A Twelve-Week, Randomized, Double-Blind Study
Cominelli, F.	Glaxo	\$3,075	Supp.	A Twelve-Week, Randomized, Double-Blind Study
Cominelli, F.	Tap Holdings	\$3,450	Supp.	Study of the Safety and Efficiency of TAK-603/A
Dent, J.	Nycomed	\$39,064	Supp.	PBI003/Emergency Room Diagnosis
Dimarco, J.	Medtronic	\$250	New	Model 6944 Lead Clinical Study
Dimarco, J.	Serc	\$1,525	Supp.	Atrial Fibrillation Follow-Up Investigation
Donowitz, G.	Pfizer	\$18,251	Supp.	Randomized, Open-Label, Comparative, Multicenter Study
Donowitz, G.	Pharmacia	\$1,698	Supp.	Linezolid vs. Clarithromycin for Treatment
Donowitz, G.	Pharm. Res. Assoc.	\$7,500	Supp.	Randomized, Multicenter, Double-Blind Study
Enelo, R.	Covance	\$14,200	Supp.	Efficacy of Avonex in Treatment of Idiopathic Fibrosis
Farr, B.	Va. Health Dept.	\$866	Supp.	Enhanced Pediatric HIV/AIDS Surveillance
Haines, D.	EP Technologies	\$4,500	Supp.	Constellation Multi-Electrode Mapping Catheter Study
Hayden, F.	Glaxo	\$19,635	Supp.	The Safety and Efficacy of Zanamivir
Hayden, F.	Glaxo	\$19,040	Supp.	The Safety and Efficacy of Zanamivir
Hayden, F.	Viropharma	\$31,938	Supp.	Double-Blind, Placebo-Controlled Exploration Study
Hewlett, E.	DHHS/NIAID	\$317,201	Cont.	Bordetella Cyclase-Structure and Biological Activities
Johns, D.	Merck	\$3,150	Supp.	Losartan vs. Patients with High Blood Pressure
Johns, D.	Merck	\$121	Supp.	Losartan vs. Patients with High Blood Pressure
Johns, D.	Merck	\$3,150	Supp.	Losartan vs. Patients with High Blood Pressure
Koenig, S.	Glaxo	\$1,215	Supp.	Randomized, Double-Blind, Multicenter Comparison Study
Peck, R.	Janssen	\$1,940	Supp.	Phase II Trial of KW2189
Peck, R.	Pharm. Res. Assoc.	\$1,925	New	Independent Review Panel
Peck, R.	Sanofi	\$12,000	New	A Phase II, Randomized, Multicenter Comparison
Peck, R.	Sanofi	\$12,000	New	Multi-Center Study Evaluating the Addition of Oxalplatin

Principal Investigator	Sponsor	Amount	Type	Project Title
Peura, D.	Astra-Merck	\$4,690	Supp.	A Multi-Center, Randomized, Double-Blind Study
Peura, D.	IBRD Rostrum	\$7,954	Supp.	Effects of EM574M6QID10MGITD
Rembold, C.	Jeffress	\$20,000	New	Engineering Apoaequorin to Measure Sarcoplasmic Reticulation
Sarembock, I.	Genentech	\$3,900	Supp.	Phase II, Double-Blind, Placebo-Controlled Study
Sarembock, I.	Searle	\$8,200	Supp.	Opus-Timi 16: Phase III
Scheld, W.	Amgen	\$300	Supp.	Double-Blind, Randomized, Placebo-Controlled Study
Vance, M.	Novartis	\$6,500	Supp.	An Open-Label Trial of Sandostatin Lar
Vance, M.	Sensus	\$250	Supp.	Six-Week, Double-Blind, Placebo-Controlled Dose Study
Institute of Law, Psychiatry and Public Policy				
Bonnie, R.	Va. Dept. of Criminal Justice	\$126,511	New	DCJS Community Service Project
Medical Education				
Fang, W.	VCU	\$60,573	New	Evaluation of Tap 21: Does it Make a Difference?
Microbiology				
Christman, M.	Human Frontier Services	\$54,980	New	Multiple Roles of SMC Proteins
McDuffie, M.	DHHS/NIDDK	\$192,913	Cont.	Genetic Control of Diabetes in NOD Mice
Parsons, S.	DHHS/NCI	\$197,569	Cont.	Neuroendocrine Cell Signaling in Prostate Cancer
Pearson-White, S.	DHHS/NICHD	\$152,273	New	SNO Gene Function in Growth and Development
Weber, M.	DHHS/NIGMS	\$220,342	Cont.	P42/MAP Kinase-Structure, Function and Regulation
Neurology				
Bertram, E.	DHHS/NINDS	\$319,534	Ren.	Mechanisms of Epileptogenesis
Johnston, K.	Rush-Presbyterian	\$4,490	Supp.	African American Antiplatelet Stroke Prevention
Juel, V.	Myelos	\$6,520	New	Agreement for an Investigational Study
Wooten, G.	U. of Rochester	\$4,120	Supp.	Upjohn Clinical Trial
Neuroscience				
Condron, B.	DHHS/NINDS	\$98,050	Cont.	Regulating the Fate of Serotonergic Neurons
Scrabble, H.	Jeffress	\$20,000	New	Molecular Basis of Hippocampal Learning
Steward, O.	Brigham & Womens Hosp.	\$46,564	Supp.	Neuronal Development Under the Conditions in Space Flight
Obstetrics and Gynecology				
Pinkerton, J.	Wyeth Labs	\$27,978	Supp.	Prospective, Double-Blind, Randomized Study
Pinkerton, J.	Wyeth Labs	\$6,227	Supp.	Prospective, Double-Blind, Randomized Study
Pinkerton, J.	Ostex	\$1,000	New	Study of the Use of NTX as an Aid in Hormone Replacement
Pinkerton, J.	Wyeth Labs	\$500	Supp.	Prospective Double-Blind, Randomized Study
Orthopaedics				
Wang, G.	Haemacure	\$7,280	Supp.	A Single-Blind, Randomized, Parallel-Group Study
Wang, G.	Haemacure	\$2,919	New	A Single-Blind, Randomized, Parallel-Group Study
Otolaryngology				
Corwin, J.	DHHS/NIDCD	\$606,048	Cont.	Growth and Regeneration in the Inner Ear
Winther, B.	Hoffmann-LaRoche	\$20,000	New	Frequency and Timing of Otologic Abnormalities
Winther, B.	Va. Med. Studies	\$9,625	Supp.	Acute Sinusitis Study (Oral Gatifloxacin)
Pathology				
Hazen, K.	DHHS/NIAID	\$168,062	Cont.	Molecular Characterization of C Albicans Hydrophobicity
Somlyo, A.	DHHS/NHLBI	\$1,759,737	Cont.	Signal Transduction in Smooth Muscle
Pediatrics				
Balian, G.	Long Island Jewish Med. Ctr.	\$12,000	Supp.	Bone Ingrowth from Marrow Cells
Camerini, V.	Crohn's & Colitis Fdn.	\$69,000	Cont.	Antigen Sensitization and Pathogenesis of Intestinal Inflammation
De Alarcon, P.	TJU	\$34,953	Cont.	Prevention of Complications of Hemophilia
De Alarcon, P.	Various	\$160	Supp.	Clinical Studies
Gaston, B.	ALA	\$24,660	Ren.	S-Nitrosothiol Metabolism in Airway Epithelium
Malik, R.	Jeffress	\$20,000	New	Study of Cytoskeletal Changes Mediated by Ceramide
Norwood, V.	AHA	\$36,300	New	AT-1A Deficient Mice-Sodium Control of Growth
Norwood, V.	Long Island Jewish Med. Ctr.	\$920	Supp.	A Multi-Center Trial of Synsorb PK in Ecoli
Waldron, P.	Va. Health Dept.	\$15,832	New	Comprehensive Sickle Cell Services
Pharmacology				
Sando, J.	DHHS/NIGMS	\$247,309	Cont.	Structure and Activation of Protein Kinase C Isozymes
Physical Medicine				
Dibenedetto, M.	VATS	\$39,806	New	Virginia Assistive Technology System-Central Region
Physiology				
Bykhovskaia, M.	Jeffress	\$20,000	New	Mechanisms Underlying the Time-Course of Transmitter Release
Bykhovskaia, M.	NSF	\$49,478	New	Comprehensive Software for Quantal Analysis and Simulations
Derewenda, Z.	DHHS/NINDS	\$264,786	Cont.	Mechanisms of Lipid-Mediated Signal Transduction
Duling, B.	Amer. Phys. Soc.	\$35,500	Cont.	Postdoctoral Fellowship for S. Kumer
Duling, B.	DHHS/NHLBI	\$263,642	Cont.	Intercellular Communication in Microvessels
Worden, M.	NSF	\$47,431	New	Assessing Physiological Roles

Principal Investigator	Sponsor	Amount	Type	Project Title
Psychiatry				
Clayton, A.	Eli Lilly	\$4,270	Supp.	Fluoxetine vs. Placebo in Panic Disorder
Cohen, B.	SmithKline	\$25	New	Randomized, Double-Blind, Placebo-Controlled Dosage Study
Holroyd, S.	DHHS/NIMH	\$126,445	Cont.	Visual Hallucinations in Alzheimers Disease
Leslie, C.	Pfizer	\$1,250	New	A 260-Week, Open-Extension Study
Radiation Oncology				
Larner, J.	DHHS/NCI	\$105,700	Cont.	Radiation-Induced Chromatin Changes
Rich, T.	RTOG	\$1,000	Supp.	Radiation Therapy Oncology Group Protocols
Radiology				
de Lange, E.	Advanced Magnetics	\$35,000	Supp.	Clinical Study of Feridex IV
Lipper, M.	Sensus Drug	\$9,000	Supp.	Open-Label Extension Study of B2036-PEG
Surgery				
Kron, I.	DHHS/NHLBI	\$30,160	New	Postdoctoral Fellowship for J. Gangemi
Spotnitz, W.	Omrix	\$6,075	Supp.	Various Trials
Virginia Neurological Institute				
Downs, J.	Intel	\$2,458	Supp.	Advancement of Human-Computer Interaction
Kassell, N.	Mayo Clinic	\$150,388	Cont.	International Study of Unruptured Aneurysms
SCHOOL OF ARCHITECTURE				
Boeschstein, W.	Va. Dept. of Rail & Pub. Trans.	\$50,000	Supp.	Community Transit Strategies
McDonough, W.	NOAA	\$96,494	Supp.	IPA-C. Kurrus
SCHOOL OF ENGINEERING AND APPLIED SCIENCE				
Biomedical Engineering				
Adams, J.	USDE	\$126,110	Cont.	Technology and Vascular Engineering
Lawrence, M.	AHA	\$75,000	New	Leukocyte and Platelet Nucleation of Thrombus Formation
Lee, J.	Whitaker Fdn.	\$24,500	Cont.	Whitaker Fdn. Graduate Fellowship for K. Morgan
Price, R.	AHA	\$65,000	Cont.	Hemodynamic Stress and Molecular Signaling
Chemical Engineering				
Cara, G.	BIO-RAD Inc.	\$36,100	New	Characterization of Chromatography Media for Protein Separations
Ford, R.	Jeffress	\$19,573	New	Interaction of Motile Bacteria with Surfaces Investigated with TIRAF
Gainer, J.	Merck	\$7,000	Supp.	Fellowship
Gainer, J.	ONR	\$125,000	Supp.	Increasing Oxygen Consumption and Survival
Hillier, A.	Jeffress	\$10,000	Cont.	Constructing Biomimetic Interfaces through Self-Assembl
Civil Engineering and Applied Mechanics				
Culver, T.	VEE	\$66,194	New	Total Maximum Daily Load Development
Demetsky, M.	GMU	\$100,000	New	ITS Implementation Center
Demetsky, M.	Penn State	\$60,000	Supp.	University Transportation Centers Program
Noor, A.	NASA	\$16,313	Supp.	Effect of Discontinuities and Uncertainties
Computer Science				
French, J.	Navy	\$182,036	Supp.	Personalized Information Environments
Electrical Engineering				
Aylor, J.	CIT	\$79,986	New	Virtual Analog Systems Design Environment
Aylor, J.	SCRA	\$18,000	Supp.	VHDL 200X
Crowe, T.	NASA	\$193,000	Supp.	Superconductor Semiconductor Research
Globus, T.	CIT	\$18,000	New	An Indoor Air Quality Monitor and HVAC Controller
Globus, T.	Va. Technologies	\$33,000	New	An Indoor Air Quality Monitor and HVAC Controller
Johnson, B.	CIT	\$60,330	New	Prototype Design of a Remote Sensor System
Reed, M.	Breed Tech.	\$125,746	New	Microfabricated Safety Restraint Sensors
Towe, E.	DARPA	\$138,170	Cont.	IPA Assignment Agreement
Materials Science				
Baragiola, R	NASA	\$23,333	Supp.	Alterations of Planetary Materials by Photon and Particle Irradiation
Farmer, B.	Moldyn, Inc.	\$17,444	Supp.	Multigranular Molecular Dynamics Simulation
Farmer, B.	Moldyn, Inc.	\$5,620	Supp.	Multigranular Molecular Dynamics Simulation
Hull, R	Sandia Labs	\$25,994	Cont.	Microstructural Characterization
Jesser, W.	Ben Gurion	\$37,000	Cont.	Phase Equilibria of Nanoparticles
Johnson, R	NASA	\$81,207	Supp.	Ion Collision Processes: Plasma Interactions
Johnson, R	NASA	\$39,999	Supp.	Charged Particle-Induced Alterations of Surfaces
Shiflet, G.	Air Force	\$67,000	Supp.	Science and Technology of Aluminum-Rich Metallic Glasses
Taylor S.	Air Force	\$220,000	Ren.	The Role of Coating and Substrate Heterogeneities

Principal Investigator	Sponsor	Amount	Type	Project Title
Mechanical, Aerospace and Nuclear Engineering				
Allaire, P.	Medquest	\$200,000	Supp.	Artificial Heart Pump Development
Barrett, L.	Mobil	\$63,342	New	Stability and Forced Response Analysis and Measurement
Chelliah, H.	NASA	\$26,295	Supp.	Heterogenous Combustion of Porous Solid Fuel Particles
Flack, R.	GM	\$87,656	New	Laser Velocimetry Measurements in an Automotive Torque Converter
Laufer, G.	Aurora Flight Systems	\$35,000	New	Differential Absorption of Lidar Measurements
Maslen, E.	Barron Associates	\$37,109	New	Dynamical Position Estimation in Self-Sensing Bearings
McDaniel, J.	NASA	\$20,000	New	Reaction Control System Flowfield Measurements
Systems Engineering				
Beling, P.	CIT	\$22,000	New	Collateral Evaluation Scoring System
Brown, D.	CIT	\$37,500	New	Data Fusion for Tactical Air Defense
Brown, D.	Va. Dept. of Crim. Justice	\$95,000	New	The Center for Criminal Justice Information Technology
Lambert, J.	Va. Trans. Res.	\$10,000	Supp.	A Tool to Aid the Comparison of Improvement Projects of VDOT
Scherer, W.	VDOT	\$60,000	New	Intelligent Transportation Systems Design

JANUARY 1999

ADMINISTRATION

Weldon Cooper Center for Public Service

Thomas, J.	Various	\$8,850	Supp.	Short-Term Public Service Projects
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COLLEGE OF ARTS & SCIENCES

Biology

Timko, M.	Int. Inst. of Trop. Agriculture	\$108,000	Cont.	Map-Based Cloning of Cowpea Rsg Genes
Timko, M.	Philip Morris	\$208,074	Cont.	Temporal & Spatial Gene Expression in Tobacco

Center for Survey Research

Guterbock, T.	Va. DMV	\$50,000	New	1998 DMV Customer Satisfaction Survey
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Chemistry

Hecht, S.	DHHS/NCI	\$254,142	Cont.	Elaboration of Modified Proteins Using Misacylated Trnas
Hecht, S.	DHHS/NCI	\$194,605	Cont.	Synthesis of Bleomycin Group Antibiotics & Analogues
Hunt, D.	Novartis	\$240,800	New	UVa Institute for Proteomic Research
Marshall, J.	DHHS/NIGMS	\$198,430	Cont.	Synthesis of Annonaceous Acetogenins & Analogues
McGarvey, G.	DHHS/NIGMS	\$165,324	New	Chemical Access to Cancer-Relevant Carbohydrates
Pu, L.	NSF	\$63,300	Cont.	Propeller Polymers

Environmental Sciences

Albertson, J.	Nat. Inst. for Global Environ.Change	\$52,318	New	Spatial Variability of CO2 Uptake by Forests
Howard, A.	NASA	\$60,100	Supp.	Erosional Process on Mars
Justice, C.	NASA	\$78,182	New	Safari 2000: A Southern African Regional Science Initiative
Justice, C.	U. of Md.	\$315,000	Supp.	Support for the Modis Surface Reflectance
Moody, J.	NOAA	\$46,913	New	Temperature-Altered Water Vapor Imagery
Shugart, H.	NASA	\$245,076	New	Land-Surface Characterization of African Savannas
Swap, R.	NASA	\$79,237	New	Collaborative Participation of South African Airborne Validation

Papers of James Madison

Stagg, J.	NEH	\$180	Supp.	Editing the Papers of James Madison
Stagg, J.	NHPRC	\$139,200	Ren..	Editing the Papers of James Madison

Papers of George Washington

Chase, P.	NEH	\$37,500	Supp.	Papers of George Washington
Chase, P.	NEH	\$22,850	Supp.	Papers of George Washington

Physics

Deaver, B.	Army	\$238,700	Supp.	SMM Wave/Device Development & Signature Analysis
McCarthy, J.	DoE	\$602,000	Ren.	Electron Interactions with Nuclei

Psychology

Brunjes, P.	DHHS/NIDCD	\$138,345	Cont.	Early Olfactory Development
Foster, T.	NSF	\$5,000	Supp.	Mechanisms for Endogenous Changes in Synaptic Strength

CLINCH VALLEY COLLEGE

Ewing, S.	Va. Health Dept.	\$197,000	New	GMEC Host Site
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CONTINUING EDUCATION

Orshek, C.	Sam Houston U.	\$100,000	New	Law Enforcement Technology Dissemination Project
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Principal Investigator	Sponsor	Amount	Type	Project Title
CURRY SCHOOL OF EDUCATION				
Curriculum, Instruction & Special Education				
Invernizzi, M.	Va. DoE	\$96,990	Supp.	Diagnostic Assessment for Early Intervention
Mason, C.	VPI	\$21,000	New	Va. Educational Technology Alliance
Policy Studies				
Turner, S.	Spencer Fdn.	\$32,950	New	Teacher Training: Institutional Adaptions
HEALTH SCIENCES CENTER				
Anesthesiology				
Lynch, C.	DHHS/NIGMS	\$74,278	Supp.	Calcium Current Depression by Volatile Anesthetics
Palmer, L.	AHA	\$65,000	Cont.	Hypoxic Regulation of Nitric Oxide Synthase
Beirne Carter Center				
Braciale, T.	DHHS/NHLBI	\$231,597	Ren.	T Cell Function in Pulmonary Viral Infection & Injury
Engelhard, V.	Receptor Labs	\$2,160	Supp.	Receptor Labs Start-Up Consultation
Ravichandran, K.	DHHS/NIGMS	\$214,115	Cont.	Signaling via SHC & the Inositol Phosphatase
Biomedical Engineering				
Kim, Y.	MDA	\$45,373	Cont.	Lamber-Eaton Syndrome: Autoimmunity & P-Type
Cardiovascular Research Center				
Duling, B.	Baxter	\$44,900	New	Hemoglobin Permeation Endothelial Cell Glycocalyx
Cell Biology				
Desimone, D.	ACS	\$96,000	New	Postdoctoral Fellowship for L. Davidson
Herr, J.	DHHS/FIC	\$197,662	Cont.	Translational Contraceptive Research for Indian Postdocs
Hinton, B.	Schering	\$128,924	Cont.	Epididymal-Specific Transcription Factors
White, J.	DHHS/NIGMS	\$269,314	Cont.	Adams Adhesion Fusion & Signaling Activities
White, J.	Trimeris	\$45,738	New	Trimeris Research Agreement
Center for Mind & Human Interaction				
Volkan, V.	Hewlett Fdn.	\$60,000	Cont.	Organizational Support
Dean's Office				
Carey, R.	R.W. Johnson Fdn.	\$563,991	Cont.	Va. Generalist Physician Initiative
Mohrmann, M.	Natl. Inst. for Health Care Res.	\$5,000	New	John Templeton Spirituality & Medicine Award
Woode, M.	R.W. Johnson Fdn.	\$300,000	Ren.	Minority Medical Education Program
Health Evaluation Science				
Cohn, W.	Va. Health Dept.	\$13,000	New	Evaluation Services for a Va. Diabetes Control Project
Connors, A.	VCU	\$10,000	New	Va. Abstinence Education Initiative
Einbinder, J.	DHHS/NLM	\$34,046	Cont.	Fellowship for J. Schubart
Knaus, W.	Dyncorp	\$35,225	Supp.	Consulting Agreement
Knaus, W.	Dyncorp	\$563	Supp.	Consulting Agreement
Knaus, W.	IBM	\$2,000	Supp.	Development of a Guide to Obstetrical Services
Knaus, W.	IBM	\$1,875	Supp.	Development of a Guide to Obstetrical Services
Knaus, W.	Schneck	\$20,000	Supp.	Consulting Agreement
Knaus, W.	Va. Health Info.	\$5,000	Supp.	Consulting Agreement
Internal Medicine				
Barnett, M.	Autoimmune	\$13,632	Supp.	A Phase II, Double-Blind, Placebo-Controlled Study
Bergin, J.	Duke	\$5,250	Supp.	SCD-HEFT-Sudden Cardiac Death in Heart Failure
Bergin, J.	Duke	\$2,250	Supp.	SCD-HEFT-Sudden Cardiac Death in Heart Failure
Bergin, J.	Rouche Bioscience	\$658	Supp.	Double-Blind Randomized, Placebo-Controlled Dose Study
Bolton, W.	Alteon, Inc.	\$7,003	Supp.	Placebo-Controlled Safety & Efficacy Study
Bolton, W.	Biolink Corp.	\$10,195	Supp.	A Prospective Trial of the Biolink Dialock Access
Bolton, W.	Horchst Marion	\$15,938	New	Safety & Efficacy of Intravenous HMR4396
Bolton, W.	Merck	\$3,969	Supp.	Double-Blind Randomized, Placebo-Controlled Study
Bolton, W.	Merck	\$2,670	Supp.	Double-Blind Randomized, Placebo-Controlled Study
Cohen, R.	ImClone Systems	\$2,372	Supp.	IMCL CP02-9709-Phase IB/IIA Pharmacokinetics
Cohen, R.	Theradex	\$4,239	Supp.	Multicenter, Open-Label Randomized Study
Cohn, S.	Barnes-Jewish	\$13,992	New	Mediators of Inflammation in IBD
Gaylinn, B.	DHHS/NIDDK	\$196,527	Cont.	Growth Hormone Releasing Factor Receptor
Haines, D.	EP Technologies	\$4,600	Supp.	Constellation Multi-Electrode Mapping Catheter
Haines, D.	EP Technologies	\$2,400	Supp.	Constellation Multi-Electrode Mapping Catheter
Hayden, F.	Roche Products	\$55,902	Supp.	Study of the Pharmacokinetics of Neuraminidase
Hayden, F.	Roche Products	\$27,951	Supp.	Study of the Pharmacokinetics of Neuraminidase
Hayden, F.	Viropharma	\$69,700	Supp.	Double-Blind, Randomized, Placebo-Controlled Trial
Hayden, F.	Viropharm,	\$1,700	Supp.	Double-Blind, Randomized, Placebo-Controlled Trial

Principal Investigator	Sponsor	Amount	Type	Project Title
Koenig, S.	Atlantic Clin. Res.	\$4,384	Supp.	Safety & Efficacy of Saratrodast in Patients
Mandell, G.	Pfizer	\$135,759	Supp.	Uptake Transport & Delivery of Trovafloxacin
Mandell, G.	Various	\$20,000	New	Industry/Various
McNamara C.	AHA	\$54,232	New	Id3 Regulation of Smooth Muscle Proliferation
Obrig, T.	DHHS/OFM	\$51,812	Supp.	Shiga-Like Toxin-Endothelial Cell Interaction
Peura, D.	Tap Holdings	\$621	Supp.	A Study to Evaluate Lansoprazole 30MG or 15MG
Platts-Mills, T.	DHHS/NIAID	\$222,130	Cont.	Trichophyton & Aspergillus: Immunology & Lung Disease
Powers, E.	Eclipse Surgical	\$50,000	Supp.	Study of the Safety & Effectiveness of Percutaneous
Roche, J.	Crohn & Colitis Fdn.	\$90,465	New	Preservation of Intestinal Epithelial Function
Sarembock, I.	Dade Behring	\$33,688	New	Prognostic Implications of CK-MB & Troponin-I
Sarembock, I.	Genentech	\$13,900	Supp.	A Phase II, Double-Blind, Placebo-Controlled Study
Scheld, W.	Merck	\$36,471	Supp.	Industry/Various
Smith, A.	ALA	\$25,000	New	Asthma Immunotherapy
Thorner, M.	DHHS/NIDDK	\$350,670	Cont.	Reversal of Decline of GH Secretion
Truwit, J.	Acute Therapeutics	\$12,879	Supp.	Safety & Efficacy of Surfaxin
Vance, M.	Novartis	\$12,575	Supp.	An Open-Label Trial of Sandostatin LAR
Vance, M.	Sensus	\$146	Supp.	A Six-Week, Double-Blind, Placebo-Controlled Dose Study
Wei, K.	DHHS/NHLBI	\$126,630	New	Echocardiographic Assessment of Microvascular Perfusion
Worthington, M.	DHHS/NIDDK	\$121,230	Cont.	Function of NUP475 in the Gastrointestinal Tract
Yamshchikov, V.	WHO	\$14,978	New	Defective JE Viruses with Abortive Replication as Candidate Vaccines
Markey Center for Cell Signaling				
Brautigan, D.	Brown U.	\$4,000	Supp.	Phosphatase Enzyme Preparation
Macara, I.	DHHS/NCI	\$282,267	Cont.	Oncogenesis/Control-Phosphoinostide Cycle/Kinase
Microbiology				
Hammarskjold, M.	DHHS/NIAID	\$230,629	Cont.	Regulation of HIV RNA Processing & Transport
McDuffie, M.	ADA	\$49,999	Cont.	Genetic Control of Diabetes in NOD Mice
Parsons, J.	CapCure	\$100,000	Supp.	Adhesion Signaling: Focal Adhesion Kinase
Parsons, S.	CTR	\$86,528	Cont.	Interactions Between c-Src & HER Family Members
Parsons, S.	DHHS/NCI	\$244,188	Cont.	c-Src & EGF Receptor in Breast Cancer Development
Parsons, S.	DHHS/NCI	\$209,015	Cont.	Src Family Kinases & Mitogenesis
Semmes, O.	ACS	\$375,000	New	Molecular Characterization of HTLV-1 Tax-Induced Chromosomal Damage
Weber, M.	CapCure	\$100,000	Cont.	Survival Signaling by Androgen & EFT
Neurology				
Phillips, L.	Genentech	\$4,330	Supp.	Phase III Safety & Efficacy Study
Quigg, M.	Clintrials	\$672	Supp.	Long-Term, Open-Label, Multicenter Study
Swerdlow, R.	DHHS/NIA	\$100,656	Cont.	Pathophysiology in Neurodegeneration
Swerdlow, R.	Soc. for PSP	\$17,000	New	Mitochondria in Progressive Supranuclear Palsy
Wooten, G.	APDA	\$45,000	Supp.	Advanced Center for Parkinson's Research
Wooten, G.	APDA	\$23,750	Cont.	Advanced Center for Parkinson's Research
Wooten, G.	APDA	\$6,250	Cont.	Information & Referral Center
Neuroscience				
Lee, K.	DHHS/NHLBI	\$42,732	Supp.	Mechanisms of Cerebral Microvascular Control
Steward, O.	Oregon	\$73,766	New	Dendritic Transport
Obstetrics & Gynecology				
Pinkerton, J.	Eli Lilly	\$1,930	Supp.	A Randomized, Parallel Treatment Study
Taylor, P.	AltraRex U.S. Corp.	\$7,000	Supp.	A Double-Blind, Placebo-Controlled Trial
Taylor, P.	AltraRex U.S. Corp.	\$2,125	New	A Randomized, Double-Blind, Placebo-Controlled Study
Ophthalmology				
Prum, B.	Pharmacia	\$7,058	Supp.	96T1PG005-Latanoprost-Timolol Fixed Combination
Orthopaedics				
Damiano, D.	Medtronic	\$17,000	New	Changes in the Muscle Performance Motor Function
Wang, G.	Zimmer	\$37,500	Supp.	Fellowship & Training Support
Pathology				
Felder, R.	Organin Teknika	\$43,000	Supp.	MDA Robotic Interface
Lou, Y.	DHHS/NICHD	\$147,351	New	Antibody Directs T Cell-Mediated Autoimmunity
Pediatrics				
Everett, A.	DHHS/NHLBI	\$45,268	Cont.	Fellowship for B. Taylor
Gaston, B.	DHHS/NHLBI	\$191,204	New	S-Nitrosothiol Breakdown by Airway Epithelial Cells
Malik, R.	DHHS/NCI	\$87,480	Cont.	Integrin Mediated Signaling
Matherne, G.	AHA	\$75,000	Cont.	Ontogeny & Regulation of Myocardial A1 Receptors
Tufro, A.	DHHS/NIDDK	\$121,230	Cont.	VEGF & Nephrovascular Development
Pharmacology				
Larner, J.	Insmed	\$101,304	New	Structure of Inositol Glycan Mediator
Rastinejad, F.	DHHS/NIGMS	\$183,422	Cont.	Nuclear Receptor Interactions on DNA Direct Repeats

Principal Investigator	Sponsor	Amount	Type	Project Title
Physiology				
Gong, M.	AHA	\$65,000	Cont.	Signal Transduction & Vascular Smooth Muscle
Shao, Z.	AHA	\$54,893	New	Structure of a Cardiac Potassium Channel
Wiener, M.	NASA	\$175,000	New	Membrane Protein Crystallization Screens
Plastic Surgery				
Rodehaver, G.	Saduc	\$12,031	Supp.	Evaluation of Saduc/Cogent's Antiadhesion Agents
Psychiatry				
Clayton, A.	Eli Lilly	\$5,563	Supp.	Fluoxetine vs. Placebo in Panic Disorder
Clayton, A.	Eli Lilly	\$3,414	Supp.	Weekly Enteric-Coated Fluoxetine
Clayton, A.	Glaxo Wellcome	\$32,920	New	Multicenter, Double-Blind, Placebo-Controlled Comparison Study
Cox, D.	Lifescan Inc.	\$20,000	Supp.	Use of the Memory Meter to Predict Severe Hypoglycemia
Holroyd, S.	Pfizer	\$3,869	Supp.	An Eight-Week, Multicenter, Parallel-Group Study
Leslie, C.	PPD Pharmaceuticals	\$2,800	New	Quetiapine (Seroguel) Experience
Radiation Oncology				
Rich, T.	RTOG	\$3,844	Supp.	Radiation Therapy Oncology Group Protocols
Matsumoto, A.	Cordis	\$400	New	Study to Evaluate the Safety & Efficacy of the ASPIRE2 Renal Stent
Parekh, J.	VPI	\$13,348	New	Effects of Conjugated Fatty Acids on Body Composition
Surgery				
Kron, I.	IBEX Technologies	\$1,200	New	Comparison of Neutralase with Protamine
Pruett, T.	Abbott Labs	\$19,320	New	A Pharmacokinetic & Safety Open-Label Study
Sawyer, R.	Surgical Infection Soc.	\$20,000	New	The Role of Prokaryotic CPG DNA Motifs
Spotnitz, W.	Canyon Communications	\$21,250	Supp.	Various Trials
Spotnitz, W.	Canyon Communications	\$21,250	Supp.	Various Trials
Spotnitz, W.	Clintrials Res.	\$5,520	Supp.	Various Trials
Spotnitz, W.	U.S. Surgical Corp.	\$21,250	Supp.	Various Trials
Spotnitz, W.	Various	\$4,300	Supp.	Various Trials
Spotnitz, W.	Various	\$2,201	Supp.	Various Trials
Urology				
Gardner, T.	CapCure	\$100,000	Cont.	Adenoviral Osteocalcin Promoter(OC)-Mediated Thymidine Kinase Gene
Chung, L.	CapCure	\$100,000	Cont.	Gene Therapy Strategy to Enhance Targeting
Chung, L.	DHHS/NCI	\$161,501	Cont.	Stromal Factors in Prostate Growth & Cancer Progression
Gillenwater, J.	Vivus	\$1,350	Supp.	Long-Term Evaluation of the Safety & Efficacy of Alprosta
Steers, W.	Pfizer	\$10,000	Supp.	Impotence Study
Virginia Neurological Institute				
Alves, W.	Cocensys	\$1,900,000	Supp.	NTC Research Projects
SCHOOL OF ENGINEERING & APPLIED SCIENCE				
Civil Engineering & Applied Mechanics				
Noor, A.	NASA	\$500,000	Supp.	Center for Advanced Computational Technology
Computer Science				
Davidson, J.	NSF	\$167,000	Cont.	Development of an HIL/LIL Framework
Materials Science				
Baragiola, R.	NASA	\$51,000	Supp.	Gas Evolution from Icy Surfaces
Hull, R.	Navy	\$263,086	Supp.	Development of Nonoscale Print-Head Technology
Scully, J.	TRW	\$154,594	Cont.	Localized Corrosion Initiation & Transition
Mechanical, Aerospace & Nuclear Engineering				
Crandall, J.	INS	\$20,000	Supp.	Escape Systems Program Support
McDaniel, J.	NASA	\$100,000	New	Dual-Mode Combustion
SCHOOL OF NURSING				
Glick, D.	Va. Health Care	\$6,571	Supp.	Greene County Schools Clinic



HAL NOAKES' WORDS ON THE IDEAL WEB PAGE

Hal was cited recently in *Science* for his excellent work on the Center for Biological

Timing Web site. (www.cbt.virginia.edu/)

■ Use the medium appropriately. The Web is immediate, cool, non-linear and multi-media. Restructure your message to communicate using these strengths. Nobody wants to read a novel on a computer screen or page through a scanned repair manual looking for needed information. Consistent, thoughtful design gives your site an identity.

■ Avoid highly textured backgrounds. Make sure that your text contrasts well with the background color. Use the darkest and lightest colors you have to ensure that your words can be read on all monitors. I like to use either black or near-black on very light colors or white text on dark backgrounds. If you use fonts other than the resident set on both PCs and Macs.

■ Anything that moves or flashes continuously detracts from your message. If you want a flag for your page, loop your animated GIF once or twice and then stop it.

■ Size your page template to about 600 wide by 440 pixels high. This will enable

everyone to see your entire page at once without scrolling horizontally or vertically. Only 10 percent of Web site visitors scroll to see stuff that is not immediately visible. Scrolling is acceptable for text deeper in your site, but your main pages should be entirely visible.

■ Do not place links to other Web sites on your main page. Your visitors just arrived, so why send them away?

■ Counters that show how many "hits" you have had are of questionable value. If you are a commercial site you may want to show potential advertisers how active your site is, but otherwise why bother? You can set up invisible counters for your own information if these are useful to you.

■ White space is an important part of your design. Look at the page by squinting your eyes so that the subject matter of the text and pictures is blurred and you can see the patterns made by the white space. Is it very fragmented in small chunks or does it flow through the page? Use the white space as a setting to emphasize things you wish to seem important.

■ Use tables to organize the space on your page and lock in the relationship of the various elements so that the screen will look much the same in all browsers.

Frames can be an unnecessary, annoying complication and they can be confusing to the user.

■ Every subordinate page on your site should have a link back to the main page.

Scrolling pages should have a hyperlink at both the top and bottom so that your viewer does not have to scroll all the way back to the top. Your viewer may have arrived by way of a search and landed in the middle of your site. You want your viewer to be able to get to your main page and see what you are really about. A consistent menu bar that you put on every page is a good idea. It is also easier to implement than making one up each time. Just copy and paste the appropriate html.

■ Site maps that allow you to go anywhere on the site directly from any page within it are a user-friendly feature.

■ In general the sum of the elements on a Web page should not be more than 50 kilobytes. If you use more than that only the most dedicated viewer will access it. I highly recommend Macromedia Fireworks (educational price \$99 at Cavalier Computer) as an indispensable tool for creating graphics or optimizing existing graphics, creating animations and rollover menus. Macromedia Dreamweaver Web page editor is also quite easy to use, extremely powerful and a good tool for large sites. (Cavalier Computers \$99.00). You can get shareware applications to do these things, but if you are at all serious about Web site creation it is a waste of your time to learn how to use an inferior tool.

For more help, check out the ITC Web site at: www.itc.virginia.edu/ ■

researchnews

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