



## Ronald W. Davis

Professor of Biochemistry and of Genetics

### Bio

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#### ACADEMIC APPOINTMENTS

- Professor, Biochemistry
- Professor, Genetics
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Cancer Institute

#### HONORS AND AWARDS

- EMBO, European Lectureship (1976)
- Teacher-Scholar Grant, Dreyfus (1976)
- Young Faculty Research Award, Society of the Sigma Xi (1976)
- Award in Microbiology and Immunology, Eli Lilly and Co. (1976)
- Chaired, Nucleic Acid Gordon Conference (1980)
- Recipient of, United States Steel Award (1981)
- Elected to the, National Academy of Sciences-Genetics (1983)
- Distinguished Alumni Award, Eastern Illinois University (1984)
- Louis S. Rosentel Award for, Distinguished Work in Basic Medical Research (1992)
- Biotechnology Research Award, Chiron Corporation (1998)
- Genetics Society of America Award, Genetics Society of America (1998)
- Senior Scholar Award in Global Infectious Disease, Ellison Medical Foundation (2002)
- Herbert A. Sober Award, ASBMB/IUBMB (2004)
- Lifetime Achievement Award, Genetics Society of America (2004)
- Recipient of, Dickson Prize in Medicine, University of Pittsburgh (2005-2004)
- Distinguished Alumni Award, California Institute of Technology (2007)
- Inventor of the Year, SVIPLA (2011)
- Gruber Genetics Prize, Gruber Foundation (2011)
- Warren Alpert Foundation Prize, Warren Alpert Foundation (2013)
- Named among the top 7 of "Today's Greatest Inventors", Atlantic Magazine (2013)

## LINKS

- Genome Technology Center: <http://med.stanford.edu/sgtc/>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

We are using *Saccharomyces cerevisiae* and Human to conduct whole genome analysis projects. The yeast genome sequence has approximately 6,000 genes. We have made a set of haploid and diploid strains (21,000) containing a complete deletion of each gene. In order to facilitate whole genome analysis each deletion is molecularly tagged with a unique 20-mer DNA sequence. This sequence acts as a molecular bar code and makes it easy to identify the presence of each deletion. The mixture of all such tag strains then allows for the analysis of the entire genome with the manipulation of a single culture. During growth under a variety of conditions the loss of a tag indicates the loss of a deletion from the population. The concentration of each tag is determined by PCR amplification of the tags and hybridization to an Affymetrix DNA chip that contains the complement to all of the DNA sequence tags. This approach is being applied to other microorganisms.

We have identified a number of wild isolates of yeast that grow at much higher temperatures than is typical for *Saccharomyces cerevisiae* and are pathogenic and can kill a mouse. Microarrays have been used to map complex genetic traits such as virulence traits in pathogenic *Saccharomyces cerevisiae* using hybridization to detect single nucleotide polymorphisms. We have developed a new technology termed Reciprocal Hemizyosity Scanning that allows the determination of the contribution to the phenotype of all pair wise alleles for the whole genome from 2 independent strains. Using this technology we can map and quantitate all of the alleles in the genome for any complex quantitative trait in a single tube assay. These technologies will allow us to explore allelic contributions in complex mixed culture real environments and to investigate ecology at the genome level.

We are conducting a whole genome analysis (transcriptome and proteome) from blood of Human trauma patients. In this large clinical study we are establishing the standards for clinical genomics. We have developed 2 new technologies, "Molecular Inversion Probes" (MIP) for massive multiplex analysis of SNP and DNA content in Human and, "Mismatch Repair Detection" for discovery of rare Human polymorphisms. Both technologies are being applied to numerous clinical investigations.

### CLINICAL TRIALS

- Effect of Celecoxib on Perioperative Inflammatory Response in Colon Cancer, Not Recruiting

## Teaching

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### COURSES

#### 2017-18

- The Human Genome and Disease: Genetic Diversity and Personalized Medicine: BIO 109B, BIOC 109B (Spr)

#### 2016-17

- The Human Genome and Disease: BIO 109A, BIOC 109A, HUMBIO 158 (Win)
- The Human Genome and Disease: Genetic Diversity and Personalized Medicine: BIO 109B, BIOC 109B (Spr)

#### 2015-16

- The Human Genome and Disease: BIO 109A, BIOC 109A, HUMBIO 158 (Win)
- The Human Genome and Disease: Genetic Diversity and Personalized Medicine: BIO 109B, BIOC 109B (Spr)

### STANFORD ADVISEES

#### Doctoral Dissertation Advisor (AC)

Gergana Vandova

## GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biochemistry (Phd Program)
- Biomedical Informatics (Phd Program)
- Genetics (Phd Program)
- Immunology (Phd Program)

## Publications

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### PUBLICATIONS

- **Autonomous sweat extraction and analysis applied to cystic fibrosis and glucose monitoring using a fully integrated wearable platform** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Emaminejad, S., Gao, W., Wu, E., Davies, Z. A., Nyein, H. Y., Challa, S., Ryan, S. P., Fahad, H. M., Chen, K., Shahpar, Z., Talebi, S., Milla, C., Javey, et al  
2017; 114 (18): 4625-4630
- **Multifunctional, inexpensive, and reusable nanoparticle-printed biochip for cell manipulation and diagnosis.** *Proceedings of the National Academy of Sciences of the United States of America*  
Esfandyarpour, R., DiDonato, M. J., Yang, Y., Durmus, N. G., Harris, J. S., Davis, R. W.  
2017; 114 (8): E1306-E1315
- **A method for high-throughput production of sequence-verified DNA libraries and strain collections.** *Molecular systems biology*  
Smith, J. D., Schlecht, U., Xu, W., Suresh, S., Horecka, J., Proctor, M. J., Aiyar, R. S., Bennett, R. A., Chu, A., Li, Y. F., Roy, K., Davis, R. W., Steinmetz, et al  
2017; 13 (2): 913-?
- **Next-Generation Molecular Testing of Newborn Dried Blood Spots for Cystic Fibrosis.** *journal of molecular diagnostics*  
Lefterova, M. I., Shen, P., Odegaard, J. I., Fung, E., Chiang, T., Peng, G., Davis, R. W., Wang, W., Kharrazi, M., Schrijver, I., Scharfe, C.  
2016; 18 (2): 267-282
- **Integrating Cell Phone Imaging with Magnetic Levitation (i-LEV) for Label-Free Blood Analysis at the Point-of-Living.** *Small*  
Baday, M., Calamak, S., Durmus, N. G., Davis, R. W., Steinmetz, L. M., Demirci, U.  
2016; 12 (9): 1222-1229
- **Nanoelectronic three-dimensional (3D) nanotip sensing array for real-time, sensitive, label-free sequence specific detection of nucleic acids.** *Biomedical microdevices*  
Esfandyarpour, R., Yang, L., Koochak, Z., Harris, J. S., Davis, R. W.  
2016; 18 (1): 7-?
- **Quantitative CRISPR interference screens in yeast identify chemical-genetic interactions and new rules for guide RNA design.** *Genome biology*  
Smith, J. D., Suresh, S., Schlecht, U., Wu, M., Wagih, O., Peltz, G., Davis, R. W., Steinmetz, L. M., Parts, L., St Onge, R. P.  
2016; 17 (1): 45-?
- **A Rapid, High-Quality, Cost-Effective, Comprehensive and Expandable Targeted Next-Generation Sequencing Assay for Inherited Heart Diseases.** *Circulation research*  
Wilson, K. D., Shen, P., Fung, E., Karakikes, I., Zhang, A., Inanloorahatloo, K., Odegaard, J., Sallam, K., Davis, R. W., Lui, G. K., Ashley, E. A., Scharfe, C., Wu, et al  
2015; 117 (7): 603-611
- **Magnetic levitation of single cells.** *Proceedings of the National Academy of Sciences of the United States of America*  
Durmus, N. G., Tekin, H. C., Guven, S., Sridhar, K., Arslan Yildiz, A., Calibasi, G., Ghiran, I., Davis, R. W., Steinmetz, L. M., Demirci, U.  
2015; 112 (28): E3661-8
- **Magnetic levitation of single cells.** *Proceedings of the National Academy of Sciences of the United States of America*  
Durmus, N. G., Tekin, H. C., Guven, S., Sridhar, K., Arslan Yildiz, A., Calibasi, G., Ghiran, I., Davis, R. W., Steinmetz, L. M., Demirci, U.  
2015; 112 (28): E3661-8
- **Multielectrode Sensing for Extraction of Signal From Noise in Impedance Cytometry** *IEEE SENSORS JOURNAL*  
Emaminejad, S., Talebi, S., Davis, R. W., Javanmard, M.  
2015; 15 (5): 2715-2716

- **A Hybrid Approach of Gene Sets and Single Genes for the Prediction of Survival Risks with Gene Expression Data** *PLOS ONE*  
Seok, J., Davis, R. W., Xiao, W.  
2015; 10 (5)
- **Robust Optimization of Biological Protocols** *TECHNOMETRICS*  
Flaherty, P., Davis, R. W.  
2015; 57 (2): 234-244
- **Tunable control of antibody immobilization using electric field.** *Proceedings of the National Academy of Sciences of the United States of America*  
Emaminejad, S., Javanmard, M., Gupta, C., Chang, S., Davis, R. W., Howe, R. T.  
2015; 112 (7): 1995-1999
- **A Simple Method for Encapsulating Single Cells in Alginate Microspheres Allows for Direct PCR and Whole Genome Amplification** *PLOS ONE*  
Bigdeli, S., Dettloff, R. O., Frank, C. W., Davis, R. W., Crosby, L. D.  
2015; 10 (2)
- **The conserved histone deacetylase Rpd3 and its DNA binding subunit Ume6 control dynamic transcript architecture during mitotic growth and meiotic development** *NUCLEIC ACIDS RESEARCH*  
Lardenois, A., Stuparevic, I., Liu, Y., Law, M. J., Becker, E., Smagulova, F., Waern, K., Guilleux, M., Horecka, J., Chu, A., Kervarrec, C., Strich, R., Snyder, et al  
2015; 43 (1): 115-128
- **RASA: Robust Alternative Splicing Analysis for Human Transcriptome Arrays.** *Scientific reports*  
Seok, J., Xu, W., Davis, R. W., Xiao, W.  
2015; 5: 11917-?
- **A hybrid approach of gene sets and single genes for the prediction of survival risks with gene expression data.** *PloS one*  
Seok, J., Davis, R. W., Xiao, W.  
2015; 10 (5)
- **Surface charge sensing by altering the phase transition in VO<sub>2</sub>** *JOURNAL OF APPLIED PHYSICS*  
Kumar, S., Esfandyarpour, R., Davis, R., Nishi, Y.  
2014; 116 (7)
- **Targeted and highly multiplexed detection of microorganisms by employing an ensemble of molecular probes.** *Applied and environmental microbiology*  
Xu, W., Krishnakumar, S., Miranda, M., Jensen, M. A., Fukushima, M., Palm, C., Fung, E., Davis, R. W., St Onge, R. P., Hyman, R. W.  
2014; 80 (14): 4153-4161
- **Multiplexed actuation using ultra dielectrophoresis for proteomics applications: a comprehensive electrical and electrothermal design methodology.** *Lab on a chip*  
Emaminejad, S., Dutton, R. W., Davis, R. W., Javanmard, M.  
2014; 14 (12): 2105-2114
- **Multiplexed actuation using ultra dielectrophoresis for proteomics applications: a comprehensive electrical and electrothermal design methodology.** *Lab on a chip*  
Emaminejad, S., Dutton, R. W., Davis, R. W., Javanmard, M.  
2014; 14 (12): 2105-2114
- **Single cell mutational analysis of PIK3CA in circulating tumor cells and metastases in breast cancer reveals heterogeneity, discordance, and mutation persistence in cultured disseminated tumor cells from bone marrow** *BMC CANCER*  
Deng, G., Krishnakumar, S., Powell, A. A., Zhang, H., Mindrinos, M. N., Telli, M. L., Davis, R. W., Jeffrey, S. S.  
2014; 14
- **Nanoelectronic impedance detection of target cells.** *Biotechnology and bioengineering*  
Esfandyarpour, R., Javanmard, M., Koochak, Z., Harris, J. S., Davis, R. W.  
2014; 111 (6): 1161-1169
- **IpO: plasmids and methods for simplified, PCR-based DNA transplant in yeast** *YEAST*  
Horecka, J., Chu, A. M., Davis, R. W.  
2014; 31 (5): 185-193

- **A functional screen for copper homeostasis genes identifies a pharmacologically tractable cellular system** *BMC GENOMICS*  
Schlecht, U., Suresh, S., Xu, W., Aparicio, A. M., Chu, A., Proctor, M. J., Davis, R. W., Scharfe, C., St Onge, R. P.  
2014; 15
- **Scan statistics analysis for detection of introns in time-course tiling array data** *STATISTICAL APPLICATIONS IN GENETICS AND MOLECULAR BIOLOGY*  
Reiner-Benaim, A., Davis, R. W., Juneau, K.  
2014; 13 (2): 173-190
- **The 50:50 method for PCR-based seamless genome editing in yeast** *YEAST*  
Horecka, J., Davis, R. W.  
2014; 31 (3): 103-112
- **Depletion of cells and abundant proteins from biological samples by enhanced dielectrophoresis** *17th International Conference on Solid-State Sensors, Actuators and Microsystems*  
Javanmard, M., Emaminejad, S., Gupta, C., Provine, J., Davis, R. W., Howe, R. T.  
ELSEVIER SCIENCE SA.2014: 918-924
- **Digital microfluidic assay for protein detection.** *Proceedings of the National Academy of Sciences of the United States of America*  
Mok, J., Mindrinos, M. N., Davis, R. W., Javanmard, M.  
2014; 111 (6): 2110-2115
- **Next generation 1536-well oligonucleotide synthesizer with on-the-fly dispense.** *Journal of biotechnology*  
Jensen, M., Roberts, L., Johnson, A., Fukushima, M., Davis, R.  
2014; 171: 76-81
- **Molecular indexing enables quantitative targeted RNA sequencing and reveals poor efficiencies in standard library preparations** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Fu, G. K., Xu, W., Wilhelmy, J., Mindrinos, M. N., Davis, R. W., Xiao, W., Fodor, S. P.  
2014; 111 (5): 1891-1896
- **Diversity of the Vaginal Microbiome Correlates With Preterm Birth** *REPRODUCTIVE SCIENCES*  
Hyman, R. W., Fukushima, M., Jiang, H., Fung, E., Rand, L., Johnson, B., Vo, K. C., Caughey, A. B., Hilton, J. F., Davis, R. W., Giudice, L. C.  
2014; 21 (1): 32-40
- **Surface-Enhanced Raman Scattering (SERS) for Detection of Phenylketonuria for Newborn Screening** *Conference on Nanoscale Imaging, Sensing, and Actuation for Biomedical Applications XI*  
Javanmard, M., Davis, R. W.  
SPIE-INT SOC OPTICAL ENGINEERING.2014
- **Label-free Electronic Detection of Target Cells** *Conference on Microfluidics, BioMEMS, and Medical Microsystems XII*  
Esfandyarpour, R., Javanmard, M., Harris, J., Davis, R. W.  
SPIE-INT SOC OPTICAL ENGINEERING.2014
- **Computational identification and analysis of orphan assembly-line polyketide synthases** *JOURNAL OF ANTIBIOTICS*  
O'Brien, R. V., Davis, R. W., Khosla, C., Hillenmeyer, M. E.  
2014; 67 (1): 89-97
- **PRINCIPAL TREND ANALYSIS FOR TIME-COURSE DATA WITH APPLICATIONS IN GENOMIC MEDICINE** *ANNALS OF APPLIED STATISTICS*  
Zhang, Y., Davis, R.  
2013; 7 (4): 2205-2228
- **Simulation and fabrication of a new novel 3D injectable biosensor for high throughput genomics and proteomics in a lab-on-a-chip device.** *Nanotechnology*  
Esfandyarpour, R., Esfandyarpour, H., Harris, J. S., Davis, R. W.  
2013; 24 (46): 465301-?
- **Simulation and fabrication of a new novel 3D injectable biosensor for high throughput genomics and proteomics in a lab-on-a-chip device.** *Nanotechnology*  
Esfandyarpour, R., Esfandyarpour, H., Harris, J. S., Davis, R. W.  
2013; 24 (46): 465301-?
- **The Sequencing Bead Array (SBA), a Next-Generation Digital Suspension Array** *PLOS ONE*

- Akhras, M. S., Pettersson, E., Diamond, L., Unemo, M., Okamoto, J., Davis, R. W., Pourmand, N.  
2013; 8 (10)
- **Direct oligonucleotide synthesis onto super-paramagnetic beads.** *Journal of biotechnology*  
Jensen, M. A., Akhras, M. S., Fukushima, M., Pourmand, N., Davis, R. W.  
2013; 167 (4): 448-453
  - **Label-free electronic probing of nucleic acids and proteins at the nanoscale using the nanoneedle biosensor** *BIOMICROFLUIDICS*  
Esfandyarpour, R., Javanmard, M., Koochak, Z., Esfandyarpour, H., Harris, J. S., Davis, R. W.  
2013; 7 (4)
  - **Determination of Burn Patient Outcome by Large-Scale Quantitative Discovery Proteomics** *CRITICAL CARE MEDICINE*  
Finnerty, C. C., Jeschke, M. G., Qian, W., Kaushal, A., Xiao, W., Liu, T., Gritsenko, M. A., Moore, R. J., Camp, D. G., Moldawer, L. L., Elson, C., Schoenfeld, D., Gamelli, et al  
2013; 41 (6): 1421-1434
  - **Multiplex target capture with double-stranded DNA probes** *GENOME MEDICINE*  
Shen, P., Wang, W., Chi, A., Fan, Y., Davis, R. W., Scharfe, C.  
2013; 5
  - **HIGH THROUGHPUT HIGH FIDELITY HLA TYPING WITH DEEP SEQUENCING** *27th Annual EFI European Immunogenetics and Histocompatibility Conference*  
Mindros, M., Wang, C., Krishnakumar, S., Barsakis, K., Miranda, M., Babrzadeh, F., Suresh, S., Kuehn, R. T., Davis, M. M., Davis, R., Fernandez-Vina, M. A.  
WILEY-BLACKWELL.2013: 344-44
  - **Coded Corrugated Microfluidic Sidewalls for Code Division Multiplexing** *IEEE SENSORS JOURNAL*  
Javanmard, M., Davis, R. W.  
2013; 13 (5): 1399-1400
  - **Rare variant detection using family-based sequencing analysis** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Peng, G., Fan, Y., Palculict, T. B., Shen, P., Ruteshouser, E. C., Chi, A., Davis, R. W., Huff, V., Scharfe, C., Wang, W.  
2013; 110 (10): 3985-3990
  - **Genomic responses in mouse models poorly mimic human inflammatory diseases** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Seok, J., Warren, H. S., Cuenca, A. G., Mindrinos, M. N., Baker, H. V., Xu, W., Richards, D. R., McDonald-Smith, G. P., Gao, H., Hennessy, L., Finnerty, C. C., Lopez, C. M., Honari, et al  
2013; 110 (9): 3507-3512
  - **Microneedle biosensor: A method for direct label-free real time protein detection** *SENSORS AND ACTUATORS B-CHEMICAL*  
Esfandyarpour, R., Esfandyarpour, H., Javanmard, M., Harris, J. S., Davis, R. W.  
2013; 177: 848-855
  - **Classification of patients from time-course gene expression** *BIOSTATISTICS*  
Zhang, Y., Tibshirani, R., Davis, R.  
2013; 14 (1): 87-98
  - **Ultra Dielectrophoresis Using Atomic Layer Deposited Films: Electrothermal Analysis** *9th International Symposium on Atomic Layer Deposition Applications held during the 224th Meeting of the Electrochemical-Society (ECS)*  
Emaminejad, S., Javanmard, M., DUTTON, R. W., Davis, R. W.  
ELECTROCHEMICAL SOC INC.2013: 67-72
  - **Smart Surface for Elution of Protein-Protein Bound Particles: Nanonewton Dielectrophoretic Forces Using Atomic Layer Deposited Oxides** *ANALYTICAL CHEMISTRY*  
Emaminejad, S., Javanmard, M., Dutton, R. W., Davis, R. W.  
2012; 84 (24): 10793-10801
  - **Identification of drug targets by chemogenomic and metabolomic profiling in yeast** *PHARMACOGENETICS AND GENOMICS*  
Wu, M., Zheng, M., Zhang, W., Suresh, S., Schlecht, U., Fitch, W. L., Aronova, S., Baumann, S., Davis, R., St Onge, R., Dill, D. L., Peltz, G.  
2012; 22 (12): 877-886

- **A Peripheral Blood Diagnostic Test for Acute Rejection in Renal Transplantation** *AMERICAN JOURNAL OF TRANSPLANTATION*  
Li, L., Khatri, P., Sigdel, T. K., Tran, T., Ying, L., Vitalone, M. J., Chen, A., Hsieh, S., Dai, H., Zhang, M., Naesens, M., Zarkhin, V., Sansanwal, et al  
2012; 12 (10): 2710-2718
- **Microfluidic Platform for Electrical Monitoring of Enzyme Activity** *IEEE SENSORS JOURNAL*  
Javanmard, M., Davis, R. W.  
2012; 12 (9): 2733-2734
- **Cationic Amphiphilic Drugs Are Potent Inhibitors of Yeast Sporulation** *PLOS ONE*  
Schlecht, U., St Onge, R. P., Walther, T., Francois, J., Davis, R. W.  
2012; 7 (8)
- **Improvement in cell capture throughput using parallel bioactivated microfluidic channels** *BIOMEDICAL MICRODEVICES*  
Javanmard, M., Babrzadeh, F., Nyren, P., Davis, R. W.  
2012; 14 (4): 625-629
- **Control of DNA Capture by Nanofluidic Transistors** *ACS NANO*  
Paik, K., Liu, Y., Tabard-Cossa, V., Waugh, M. J., Huber, D. E., Provine, J., Howe, R. T., Dutton, R. W., Davis, R. W.  
2012; 6 (8): 6767-6775
- **Multiplex assay for condition-dependent changes in protein-protein interactions** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Schlecht, U., Miranda, M., Suresh, S., Davis, R. W., St Onge, R. P.  
2012; 109 (23): 9213-9218
- **Coding SNPs as intrinsic markers for sample tracking in large-scale transcriptome studies** *BIOTECHNIQUES*  
Xu, W., Gao, H., Seok, J., Wilhelmy, J., Mindrinos, M. N., Davis, R. W., Xiao, W.  
2012; 52 (6): 386-388
- **HIGH THROUGHPUT, HIGH FIDELITY HLA GENOTYPING WITH ULTRA DEEP SEQUENCING** *Joint 16th International HLA and Immunogenetics Workshop/26th European Federation for Immunogenetics Conference/23rd British-Society-of-Histocompatibility-and-Immunogenetics Conference*  
Krishnakumar, S., Wang, C., Wilhelmy, J., Babrzadeh, F., Su, L., Levinson, D., Fernandez-Vina, M., Davis, R., Davis, M., Mindrinos, M. N.  
WILEY-BLACKWELL.2012: 426-26
- **Whole-genome sequencing of the efficient industrial fuel-ethanol fermentative *Saccharomyces cerevisiae* strain CAT-1** *MOLECULAR GENETICS AND GENOMICS*  
Babrzadeh, F., Jalili, R., Wang, C., Shokralla, S., Pierce, S., Robinson-Mosher, A., Nyren, P., Shafer, R. W., Basso, L. C., de Amorim, H. V., de Oliveira, A. J., Davis, R. W., Ronaghi, et al  
2012; 287 (6): 485-494
- **High-throughput, high-fidelity HLA genotyping with deep sequencing** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Wang, C., Krishnakumar, S., Wilhelmy, J., Babrzadeh, F., Stepanyan, L., Su, L. F., Levinson, D., Fernandez-Vina, M. A., Davis, R. W., Davis, M. M., Mindrinos, M.  
2012; 109 (22): 8676-8681
- **Single Cell Profiling of Circulating Tumor Cells: Transcriptional Heterogeneity and Diversity from Breast Cancer Cell Lines** *PLOS ONE*  
Powell, A. A., Talasaz, A. H., Zhang, H., Coram, M. A., Reddy, A., Deng, G., Telli, M. L., Advani, R. H., Carlson, R. W., Mollick, J. A., Sheth, S., Kurian, A. W., Ford, et al  
2012; 7 (5)
- **JETTA: junction and exon toolkits for transcriptome analysis** *BIOINFORMATICS*  
Seok, J., Xu, W., Gao, H., Davis, R. W., Xiao, W.  
2012; 28 (9): 1274-1275
- **Benchmarking Outcomes in the Critically Injured Trauma Patient and the Effect of Implementing Standard Operating Procedures** *ANNALS OF SURGERY*  
Cuschieri, J., Johnson, J. L., Sperry, J., West, M. A., Moore, E. E., Minei, J. P., Bankey, P. E., Nathens, A. B., Cuenca, A. G., Efron, P. A., Hennessy, L., Xiao, W., Mindrinos, et al  
2012; 255 (5): 993-999

- **A Rapid, Cost-Effective Method of Assembly and Purification of Synthetic DNA Probes > 100 bp** *PLOS ONE*  
Jensen, M. A., Jauregui, L., Davis, R. W.  
2012; 7 (4)
- **Molecular probe technology detects bacteria without culture** *BMC MICROBIOLOGY*  
Hyman, R. W., St Onge, R. P., Kim, H., Tamaresis, J. S., Miranda, M., Aparicio, A. M., Fukushima, M., Pourmand, N., Giudice, L. C., Davis, R. W.  
2012; 12
- **Use of Negative Dielectrophoresis for Selective Elution of Protein-Bound Particles** *ANALYTICAL CHEMISTRY*  
Javanmard, M., Emaminejad, S., Dutton, R. W., Davis, R. W.  
2012; 84 (3): 1432-1438
- **The dynamics of the vaginal microbiome during infertility therapy with in vitro fertilization-embryo transfer** *JOURNAL OF ASSISTED REPRODUCTION AND GENETICS*  
Hyman, R. W., Herndon, C. N., Jiang, H., Palm, C., Fukushima, M., Bernstein, D., Vo, K. C., Zelenko, Z., Davis, R. W., Giudice, L. C.  
2012; 29 (2): 105-115
- **Knowledge-Based Reconstruction of mRNA Transcripts with Short Sequencing Reads for Transcriptome Research** *PLOS ONE*  
Seok, J., Xu, W., Jiang, H., Davis, R. W., Xiao, W.  
2012; 7 (2)
- **Microfluidic diagnostic tool for the developing world: contactless impedance flow cytometry** *LAB ON A CHIP*  
Emaminejad, S., Javanmard, M., Dutton, R. W., Davis, R. W.  
2012; 12 (21): 4499-4507
- **Electrochemical quantum tunneling for electronic detection and characterization of biological toxins** *Conference on Micro- and Nanotechnology Sensors, Systems, and Applications IV*  
Gupta, C., Walker, R. M., Gharpuray, R., Shulaker, M. M., Zhang, Z., Javanmard, M., Davis, R. W., Murmann, B., Howe, R. T.  
SPIE-INT SOC OPTICAL ENGINEERING.2012
- **The Human OligoGenome Resource: a database of oligonucleotide capture probes for resequencing target regions across the human genome** *NUCLEIC ACIDS RESEARCH*  
Newburger, D. E., Natsoulis, G., Grimes, S., Bell, J. M., Davis, R. W., Batzoglou, S., Ji, H. P.  
2012; 40 (D1): D1137-D1143
- **The Human OligoGenome Resource: a database of oligonucleotide capture probes for resequencing target regions across the human genome.** *Nucleic acids research*  
Newburger, D. E., Natsoulis, G., Grimes, S., Bell, J. M., Davis, R. W., Batzoglou, S., Ji, H. P.  
2012; 40 (Database issue): D1137-43
- **High-throughput VDJ sequencing for quantification of minimal residual disease in chronic lymphocytic leukemia and immune reconstitution assessment** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Logan, A. C., Gao, H., Wang, C., Sahaf, B., Jones, C. D., Marshall, E. L., Buno, I., Armstrong, R., Fire, A. Z., Weinberg, K. I., Mindrinos, M., Zehnder, J. L., Boyd, et al  
2011; 108 (52): 21194-21199
- **A genomic storm in critically injured humans** *JOURNAL OF EXPERIMENTAL MEDICINE*  
Xiao, W., Mindrinos, M. N., Seok, J., Cuschieri, J., Cuenca, A. G., Gao, H., Hayden, D. L., Hennessy, L., Moore, E. E., Minei, J. P., Bankey, P. E., Johnson, J. L., Sperry, et al  
2011; 208 (13): 2581-2590
- **Evidence-Based Annotation of Gene Function in *Shewanella oneidensis* MR-1 Using Genome-Wide Fitness Profiling across 121 Conditions** *PLOS GENETICS*  
Deutschbauer, A., Price, M. N., Wetmore, K. M., Shao, W., Baumohl, J. K., Xu, Z., Michelle Nguyen, M., Tamse, R., Davis, R. W., Arkin, A. P.  
2011; 7 (11)
- **A microfluidic platform for electrical detection of DNA hybridization** *15th Transducers Conference*  
Javanmard, M., Davis, R. W.  
ELSEVIER SCIENCE SA.2011: 22-27
- **Distinctive Responsiveness to Stromal Signaling Accompanies Histologic Grade Programming of Cancer Cells** *PLOS ONE*



- Luciani, M. g., Seok, J., Sayeed, A., Champion, S., Goodson, W. H., Jeffrey, S. S., Xiao, W., Mindrinos, M., Davis, R. W., Dairkee, S. H.  
2011; 6 (5)
- **High-quality DNA sequence capture of 524 disease candidate genes** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Shen, P., Wang, W., Krishnakumar, S., Palm, C., Chi, A., Enns, G. M., Davis, R. W., Speed, T. P., Mindrinos, M. N., Scharfe, C.  
2011; 108 (16): 6549-6554
  - **Human transcriptome array for high-throughput clinical studies** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Xu, W., Seok, J., Mindrinos, M. N., Schweitzer, A. C., Jiang, H., Wilhelmy, J., Clark, T. A., Kapur, K., Xing, Y., Faham, M., Storey, J. D., Moldawer, L. L., Maier, et al  
2011; 108 (9): 3707-3712
  - **Execution of the meiotic noncoding RNA expression program and the onset of gametogenesis in yeast require the conserved exosome subunit Rrp6** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Lardenois, A., Liu, Y., Walther, T., Chalmel, F., Evrard, B., Granovskaia, M., Chu, A., Davis, R. W., Steinmetz, L. M., Primig, M.  
2011; 108 (3): 1058-1063
  - **The automated cell: compound and environment screening system (ACCESS) for chemogenomic screening.** *Methods in molecular biology (Clifton, N.J.)*  
Proctor, M., Urbanus, M. L., Fung, E. L., Jaramillo, D. F., Davis, R. W., Nislow, C., Giaever, G.  
2011; 759: 239-269
  - **Experimental Demonstration and Analysis of DNA Passage in Nanopore-based Nanofluidic Transistors** *IEEE International Electron Devices Meeting (IEDM)*  
Paik, K., Liu, Y., Tabard-Cossa, V., Huber, D. E., Provine, J., Howe, R. T., Davis, R. W., Dutton, R. W.  
IEEE.2011
  - **Identification of rare DNA variants in mitochondrial disorders with improved array-based sequencing** *NUCLEIC ACIDS RESEARCH*  
Wang, W., Shen, P., Thiyagarajan, S., Lin, S., Palm, C., Horvath, R., Klopstock, T., Cutler, D., Pique, L., Schrijver, I., Davis, R. W., Mindrinos, M., Speed, et al  
2011; 39 (1): 44-58
  - **A molecular inversion probe assay for detecting alternative splicing** *BMC GENOMICS*  
Lin, S., Wang, W., Palm, C., Davis, R. W., Juneau, K.  
2010; 11
  - **Gas-phase cleavage and dephosphorylation of universal linker-bound oligodeoxynucleotides.** *Nucleosides, nucleotides & nucleic acids*  
Jensen, M. A., Anderson, K. M., Davis, R. W.  
2010; 29 (11): 867-878
  - **Microfluidic force spectroscopy for characterization of biomolecular interactions with piconewton resolution** *APPLIED PHYSICS LETTERS*  
Javanmard, M., Babrzadeh, F., Davis, R. W.  
2010; 97 (17)
  - **Gene Annotation and Drug Target Discovery in *Candida albicans* with a Tagged Transposon Mutant Collection** *PLOS PATHOGENS*  
Oh, J., Fung, E., Schlecht, U., Davis, R. W., Giaever, G., St Onge, R. P., Deutschbauer, A., Nislow, C.  
2010; 6 (10)
  - **Plasma Proteome Response to Severe Burn Injury Revealed by O-18-Labeled "Universal" Reference-Based Quantitative Proteomics** *JOURNAL OF PROTEOME RESEARCH*  
Qian, W., Petritis, B. O., Kaushal, A., Finnerty, C. C., Jeschke, M. G., Monroe, M. E., Moore, R. J., Schepmoes, A. A., Xiao, W., Moldawer, L. L., Davis, R. W., Tompkins, R. G., Herndon, et al  
2010; 9 (9): 4779-4789
  - **Clinical microfluidics for neutrophil genomics and proteomics** *NATURE MEDICINE*  
Kotz, K. T., Xiao, W., Miller-Graziano, C., Qian, W., Russom, A., Warner, E. A., Moldawer, L. L., De, A., Bankey, P. E., Petritis, B. O., Camp, D. G., Rosenbach, A. E., Goverman, et al  
2010; 16 (9): 1042-U142
  - **A universal TagModule collection for parallel genetic analysis of microorganisms** *NUCLEIC ACIDS RESEARCH*  
Oh, J., Fung, E., Price, M. N., Dehal, P. S., Davis, R. W., Giaever, G., Nislow, C., Arkin, A. P., Deutschbauer, A.

2010; 38 (14)

- **DMSO and Betaine Greatly Improve Amplification of GC-Rich Constructs in De Novo Synthesis** *PLOS ONE*  
Jensen, M. A., Fukushima, M., Davis, R. W.  
2010; 5 (6)
- **Analysis of factorial time-course microarrays with application to a clinical study of burn injury.** *Proceedings of the National Academy of Sciences of the United States of America*  
Zhou, B., Xu, W., Herndon, D., Tompkins, R., Davis, R., Xiao, W., Wong, W. H., Toner, M., Warren, H. S., Schoenfeld, D. A., Rahme, L., McDonald-Smith, G. P., Hayden, et al  
2010; 107 (22): 9923-9928
- **Analysis of factorial time-course microarrays with application to a clinical study of burn injury** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Zhou, B., Xu, W., Herndon, D., Tompkins, R., Davis, R., Xiao, W., Wong, W. H.  
2010; 107 (22): 9923-9928
- **Multiplex Identification of Microbes** *APPLIED AND ENVIRONMENTAL MICROBIOLOGY*  
Hyman, R. W., St Onge, R. P., Allen, E. A., Miranda, M., Aparicio, A. M., Fukushima, M., Davis, R. W.  
2010; 76 (12): 3904-3910
- **Sensitive giant magnetoresistive-based immunoassay for multiplex mycotoxin detection** *BIOSENSORS & BIOELECTRONICS*  
Mak, A. C., Osterfeld, S. J., Yu, H., Wang, S. X., Davis, R. W., Jejelowo, O. A., Pourmand, N.  
2010; 25 (7): 1635-1639
- **High throughput sequencing reveals a complex pattern of dynamic interrelationships among human T cell subsets** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Wang, C., Sanders, C. M., Yang, Q., Schroeder, H. W., Wang, E., Babrzadeh, F., Gharizadeh, B., Myers, R. M., Hudson, J. R., Davis, R. W., Han, J.  
2010; 107 (4): 1518-1523
- **Predicting Patient Survival from Longitudinal Gene Expression** *STATISTICAL APPLICATIONS IN GENETICS AND MOLECULAR BIOLOGY*  
Zhang, Y., Tibshirani, R. J., Davis, R. W.  
2010; 9 (1)
- **GAS-PHASE CLEAVAGE AND DEPHOSPHORYLATION OF UNIVERSAL LINKER-BOUND OLIGODEOXYNUCLEOTIDES** *NUCLEOSIDES NUCLEOTIDES & NUCLEIC ACIDS*  
Jensen, M. A., Anderson, K. M., Davis, R. W.  
2010; 29 (11-12): 867-878
- **Method Systematic analysis of genome-wide fitness data in yeast reveals novel gene function and drug action** *GENOME BIOLOGY*  
Hillenmeyer, M. E., Ericson, E., Davis, R. W., Nislow, C., Koller, D., Giaever, G.  
2010; 11 (3)
- **Knowledge-based analysis of microarrays for the discovery of transcriptional regulation relationships** *8th Asia Pacific Bioinformatics Conference*  
Seok, J., Kaushal, A., Davis, R. W., Xiao, W.  
BIOMED CENTRAL LTD.2010
- **A direct comparison of the KB™ Basecaller and phred for identifying the bases from DNA sequencing using chain termination chemistry.** *BMC research notes*  
Hyman, R. W., Jiang, H., Fukushima, M., Davis, R. W.  
2010; 3: 257-?
- **Electrical detection of proteins and DNA using bioactivated microfluidic channels: Theoretical and experimental considerations** *JOURNAL OF VACUUM SCIENCE & TECHNOLOGY B*  
Javanmard, M., Esfandyarpour, H., Pease, F., Davis, R. W.  
2009; 27 (6): 3099-3103
- **Sequential Use of Transcriptional Profiling, Expression Quantitative Trait Mapping, and Gene Association Implicates MMP20 in Human Kidney Aging** *PLOS GENETICS*  
Wheeler, H. E., Metter, E. J., Tanaka, T., Absher, D., Higgins, J., Zahn, J. M., Wilhelmy, J., Davis, R. W., Singleton, A., Myers, R. M., Ferrucci, L., Kim, S. K.  
2009; 5 (10)

- **Alternative Splicing of PTC7 in *Saccharomyces cerevisiae* Determines Protein Localization** *GENETICS*  
Juneau, K., Nislow, C., Davis, R. W.  
2009; 183 (1): 185-194
- **A Microfluidic Platform for Characterization of Protein-Protein Interactions** *IEEE SENSORS JOURNAL*  
Javanmard, M., Talasaz, A. H., Nemat-Gorgani, M., Huber, D. E., Pease, F., Ronaghi, M., Davis, R. W.  
2009; 9 (8): 883-891
- **Molecular inversion probes reveal patterns of 9p21 deletion and copy number aberrations in childhood leukemia** *CANCER GENETICS AND CYTOGENETICS*  
Schiffman, J. D., Wang, Y., McPherson, L. A., Welch, K., Zhang, N., Davis, R., Lacayo, N. J., Dahl, G. V., Faham, M., Ford, J. M., Ji, H. P.  
2009; 193 (1): 9-18
- **A dynamic network of transcription in LPS-treated human subjects** *BMC SYSTEMS BIOLOGY*  
Seok, J., Xiao, W., Moldawer, L. L., Davis, R. W., Covert, M. W.  
2009; 3
- **A Genome-Wide Screen for Regulators of TORC1 in Response to Amino Acid Starvation Reveals a Conserved Npr2/3 Complex** *PLOS GENETICS*  
Neklesa, T. K., Davis, R. W.  
2009; 5 (6)
- **Electrical detection of protein biomarkers using bioactivated microfluidic channels** *LAB ON A CHIP*  
Javanmard, M., Talasaz, A. H., Nemat-Gorgani, M., Pease, F., Ronaghi, M., Davis, R. W.  
2009; 9 (10): 1429-1434
- **Meiotic recombination generates rich diversity in NK cell receptor genes, alleles, and haplotypes** *GENOME RESEARCH*  
Norman, P. J., Abi-Rached, L., Gendzekhadze, K., Hammond, J. A., Moesta, A. K., Sharma, D., Graef, T., McQueen, K. L., Guethlein, L. A., Carrington, C. V., Chandanayingyong, D., Chang, Y., Crespi, et al  
2009; 19 (5): 757-769
- **High-throughput, high-accuracy array-based resequencing** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Zheng, J., Moorhead, M., Weng, L., Siddiqui, F., Carlton, V. E., Ireland, J. S., Lee, L., Peterson, J., Wilkins, J., Lin, S., Kan, Z., Seshagiri, S., Davis, et al  
2009; 106 (16): 6712-6717
- **Mapping Gene Associations in Human Mitochondria using Clinical Disease Phenotypes** *PLOS COMPUTATIONAL BIOLOGY*  
Scharfe, C., Lu, H. H., Neuenburg, J. K., Allen, E. A., Li, G., Klopstock, T., Cowan, T. M., Enns, G. M., Davis, R. W.  
2009; 5 (4)
- **Label-free biosensing with functionalized nanopipette probes** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Umehara, S., Karhanek, M., Davis, R. W., Pourmand, N.  
2009; 106 (12): 4611-4616
- **Isolating highly enriched populations of circulating epithelial cells and other rare cells from blood using a magnetic sweeper device** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Talasaz, A. H., Powell, A. A., Huber, D. E., Berbee, J. G., Roh, K., Yu, W., Xiao, W., Davis, M. M., Pease, R. F., Mindrinos, M. N., Jeffrey, S. S., Davis, R. W.  
2009; 106 (10): 3970-3975
- **Whole Genome Survey of Coding SNPs Reveals a Reproducible Pathway Determinant of Parkinson Disease** *HUMAN MUTATION*  
Srinivasan, B. S., Doostzadeh, J., Absalan, F., Mohandessi, S., Jalili, R., Bigdeli, S., Wang, J., Mahadevan, J., Lee, C. L., Davis, R. W., Langston, J. W., Ronaghi, M.  
2009; 30 (2): 228-238
- **Large-Scale Multiplexed Quantitative Discovery Proteomics Enabled by the Use of an O-18-Labeled "Universal" Reference Sample** *JOURNAL OF PROTEOME RESEARCH*  
Qian, W., Liu, T., Petyuk, V. A., Gritsenko, M. A., Petritis, B. O., Polpitiya, A. D., Kaushal, A., Xiao, W., Finnerty, C. C., Jeschke, M. G., Jaitly, N., Monroe, M. E., Moore, et al  
2009; 8 (1): 290-299

- **Hyperspectral Image Correlation for Monitoring Membrane Protein Dynamics in Living Cells** *Conference on Three-Dimensional and Multidimensional Microscopy - Image Acquisition and Processing XVI*  
Davis, R. W., Carson, B., Jones, H. D., Sinclair, M. B.  
SPIE-INT SOC OPTICAL ENGINEERING.2009
- **THE DIVERSITY OF NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY** *NATO Advanced Study Institute on Biophysics and the Challenges of Emerging Threats*  
Liu, C. W., Alekseyev, V. Y., Allwardt, J. R., Bankovich, A. J., Cade-Menun, B. J., Davis, R. W., Du, L., Garcia, K. C., Herschlag, D., Khosla, C., Kraut, D. A., Li, Q., Null, et al  
SPRINGER.2009: 65–81
- **HIGH THROUGHPUT DNA SEQUENCING, APPLICATIONS AND DISEASE INVESTIGATION** *6th International Forum on Post-Genome Technologies*  
Gharizadeh, B., Wang Chunlin, C. L., Babrzadeh, F., Wang Elijah, E. J., Han Jian, J., Davis, R. W.  
SOUTHEAST UNIV PRESS.2009: 27–27
- **Genome-wide transcriptome analysis of 150 cell samples** *INTEGRATIVE BIOLOGY*  
Irimia, D., Mindrinos, M., Russom, A., Xiao, W., Wilhelmy, J., Wang, S., Heath, J. D., Kurn, N., Tompkins, R. G., Davis, R. W., Toner, M.  
2009; 1 (1): 99-107
- **Chemogenomic approaches to elucidation of gene function and genetic pathways.** *Methods in molecular biology (Clifton, N.J.)*  
Pierce, S. E., Davis, R. W., Nislow, C., Giaever, G.  
2009; 548: 115-143
- **Multiplex protein assays based on real-time magnetic nanotag sensing** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Osterfeld, S. J., Yu, H., Gaster, R. S., Caramuta, S., Xu, L., Han, S., Hall, D. A., Wilson, R. J., Sun, S., White, R. L., Davis, R. W., Pourmand, N., Wang, et al  
2008; 105 (52): 20637-20640
- **Superoxide anions regulate TORC1 and its ability to bind Fpr1:rapamycin complex** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Ronald, T. K., Davis, W.  
2008; 105 (39): 15166-15171
- **An integrated platform of genomic assays reveals small-molecule bioactivities** *NATURE CHEMICAL BIOLOGY*  
Hoon, S., Smith, A. M., Wallace, I. M., Suresh, S., Miranda, M., Fung, E., Proctor, M., Shokat, K. M., Zhang, C., Davis, R. W., Giaever, G., StOnge, R. P., Nislow, et al  
2008; 4 (8): 498-506
- **High-Resolution, In Vivo Magnetic Resonance Imaging of Drosophila at 18.8 Tesla** *PLOS ONE*  
Null, B., Liu, C. W., Hedehus, M., Conolly, S., Davis, R. W.  
2008; 3 (7)
- **High Throughput Automated Allele Frequency Estimation by Pyrosequencing** *PLOS ONE*  
Doostzadeh, J., Shokralla, S., Absalan, F., Jalili, R., Mohandessi, S., Langston, J. W., Davis, R. W., Ronaghi, M., Gharizadeh, B.  
2008; 3 (7)
- **A comprehensive assay for targeted multiplex amplification of human DNA sequences** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Krishnakumar, S., Zheng, J., Wilhelmy, J., Faham, M., Mindrinos, M., Davis, R.  
2008; 105 (27): 9296-9301
- **Pervasive and Persistent Redundancy among Duplicated Genes in Yeast** *PLOS GENETICS*  
Dean, E. J., Davis, J. C., Davis, R. W., Petrov, D. A.  
2008; 4 (7)
- **Conformational flexibility of a model protein upon immobilization on self-assembled monolayers** *BIOTECHNOLOGY AND BIOENGINEERING*  
Bigdeli, S., Talasaz, A. H., Stahl, P., Persson, H. H., Ronaghi, M., Davis, R. W., Nemat-Gorgani, M.  
2008; 100 (1): 19-27
- **Interference of globin genes with rejection biomarker discovery** *8th American Transplant Congress*  
Li, L., Ying, L., Naesens, M., Xiao, W., Sigdel, T., Hsieh, S., Martin, J., Chen, R., Liu, K., Mindrinos, M., Davis, R., Sarwal, M.

WILEY-BLACKWELL.2008: 636–636

- **Microfluidic leukocyte isolation for gene expression analysis in critically ill hospitalized patients** *CLINICAL CHEMISTRY*  
Russom, A., Sethu, P., Irimia, D., Mindrinos, M. N., Calvan, S. E., Garcia, I., Finnerty, C., Tannahill, C., Abouhamze, A., Wilhelmy, J., Lopez, M. C., Baker, H. V., Herndon, et al  
2008; 54 (5): 891-900
- **The chemical genomic portrait of yeast: Uncovering a phenotype for all genes** *SCIENCE*  
Hillenmeyer, M. E., Fung, E., Wildenhain, J., Pierce, S. E., Hoon, S., Lee, W., Proctor, M., St Onge, R. P., Tyers, M., Koller, D., Altman, R. B., Davis, R. W., Nislow, et al  
2008; 320 (5874): 362-365
- **Structural optimization for heat detection of DNA thermosequencing platform using finite element analysis** *BIOMICROFLUIDICS*  
Esfandyarpour, H., Zheng, B., Fabian, R., Pease, W., Davis, R. W.  
2008; 2 (2)
- **Bisphenol A induces a profile of tumor aggressiveness in high-risk cells from breast cancer patients** *CANCER RESEARCH*  
Dairkee, S. H., Seok, J., Champion, S., Sayeed, A., Mindrinos, M., Xiao, W., Davis, R. W., Goodson, W. H.  
2008; 68 (7): 2076-2080
- **Multiplexed proximity ligation assays to profile putative plasma biomarkers relevant to pancreatic and ovarian cancer** *CLINICAL CHEMISTRY*  
Fredriksson, S., Horecka, J., Brustugun, O. T., Schlingemann, J., Koong, A. C., Tibshirani, R., Davis, R. W.  
2008; 54 (3): 582-589
- **Picocalorimetric method for DNA sequencing** *JOURNAL OF VACUUM SCIENCE & TECHNOLOGY B*  
Esfandyarpour, H., Fabian, R., Pease, W., Davis, R. W.  
2008; 26 (2): 661-665
- **A system for multiplexed direct electrical detection of DNA synthesis** *SENSORS AND ACTUATORS B-CHEMICAL*  
Anderson, E. P., Daniels, J. S., Yu, H., Karhanek, M., Lee, T. H., Davis, R. W., Pourmand, N.  
2008; 129 (1): 79-86
- **Interference of globin genes with biomarker discovery for allograft rejection in peripheral blood samples** *PHYSIOLOGICAL GENOMICS*  
Li, L., Ying, L., Naesens, M., Xiao, W., Sigdel, T., Hsieh, S., Martin, J., Chen, R., Liu, K., Mindrinos, M., Davis, R., Sarwal, M.  
2008; 32 (2): 190-197
- **High-throughput creation of a whole-genome collection of yeast knockout strains.** *Methods in molecular biology (Clifton, N.J.)*  
Chu, A. M., Davis, R. W.  
2008; 416: 205-220
- **Real time simulation of heat detection in DNA Thermosequencing** *3rd IEEE Sensors Applications Symposium*  
Esfandyarpour, H., Zheng, B., Pease, R. F., Davis, R. W.  
IEEE.2008: 89–94
- **STRUCTURAL OPTIMIZATION OF MICROFLUIDIC GATE CONTROLLED MAGNETIC BEAD SYSTEM FOR DNA SEQUENCING-BY-SYNTHESIS** *6th International Conference on Nanochannels, Microchannels and Minichannels*  
Esfandyarpour, H., Davis, R. W.  
AMER SOC MECHANICAL ENGINEERS.2008: 1629–1634
- **Accurate measurement of cellular autofluorescence is critical for Imaging of host-pathogen interactions** *Conference on Imaging, Manipulation and Analysis of Biomolecules, Cells, and Tissues VI*  
Timlin, J. A., Noek, R. M., Kaiser, J. N., Sinclair, M. B., Jones, H. D., Davis, R. W., Lane, T. W.  
SPIE-INT SOC OPTICAL ENGINEERING.2008
- **Label-free electrical detection of antigens based on micro-channel gating** *3rd IEEE Sensors Applications Symposium*  
Javanmard, M., Nemat-Gorgani, M., Talasaz, A. H., Pease, F., Ronaghi, M., Davis, R. W.  
IEEE.2008: 8–12
- **Direct electrical detection of target cells on a microfluidic biochip** *Conference on Microfluidics, BioMEMS, and Medical Microsystems VI*  
Javanmard, M., Talasaz, A. H., Nemat-Gorgani, M., Pease, F., Ronaghi, M., Davis, R. W.  
SPIE-INT SOC OPTICAL ENGINEERING.2008

- **Involvement of Skeletal Muscle Gene Regulatory Network in Susceptibility to Wound Infection Following Trauma** *PLOS ONE*  
Apidianakis, Y., Mindrinos, M. N., Xiao, W., Tegos, G. P., Papisov, M. I., Hamblin, M. R., Davis, R. W., Tompkins, R. G., Rahme, L. G.  
2007; 2 (12)
- **A novel catechol-based universal support for oligonucleotide synthesis** *JOURNAL OF ORGANIC CHEMISTRY*  
Anderson, K. M., Jaquinod, L., Jensen, M. A., Ngo, N., Davis, R. W.  
2007; 72 (26): 9875-9880
- **MagSweeper: an automated system for high efficiency and specificity capture of live circulating tumor cells** *30th Annual San Antonio Breast Cancer Symposium*  
Powell, A. A., Talasaz, A. A., Mindrinos, M., Carlson, R., Pease, F. W., Davis, R. W., Jeffrey, S. S.  
SPRINGER.2007: S24-S24
- **Gene-specific delineation of copy number aberrations in follicular lymphoma with molecular inversion probes** *49th Annual Meeting of the American-Society-of-Hematology*  
Ji, H. P., Welch, K. M., Wang, Y., Faham, M., Akasaka, T., Czerwinski, D., Davis, R. W., Levy, R.  
AMER SOC HEMATOLOGY.2007: 766A-767A
- **Diverse cellular functions of the Hsp90 molecular chaperone uncovered using systems approaches** *CELL*  
McClellan, A. J., Xia, Y., Deutschbauer, A. M., Davis, R. W., Gerstein, M., Frydman, J.  
2007; 131 (1): 121-135
- **Targeted cell detection based on microchannel gating** *BIOMICROFLUIDICS*  
Javanmard, M., Talasaz, A. H., Nemat-Gorgani, M., Pease, F., Ronaghi, M., Davis, R. W.  
2007; 1 (4)
- **A high-resolution atlas of nucleosome occupancy in yeast** *NATURE GENETICS*  
Lee, W., Tillo, D., Bray, N., Morse, R. H., Davis, R. W., Hughes, T. R., Nislow, C.  
2007; 39 (10): 1235-1244
- **Connector Inversion Probe Technology: A Powerful One-Primer Multiplex DNA Amplification System for Numerous Scientific Applications** *PLOS ONE*  
Akhras, M. S., Unemo, M., Thiagarajan, S., Nyren, P., Davis, R. W., Fire, A. Z., Pourmand, N.  
2007; 2 (9)
- **Unusual selection on the KIR3DL1/S1 natural killer cell receptor in Africans** *NATURE GENETICS*  
Norman, P. J., Abi-Rached, L., Gendzekhadze, K., Korbel, D., Gleimer, M., Rowley, D., Bruno, D., Carrington, C. V., Chandanayingyong, D., Chang, Y., Crespi, C., Saruhan-Direskeneli, G., Fraser, et al  
2007; 39 (9): 1092-1099
- **Multigene amplification and massively parallel sequencing for cancer mutation discovery** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Dahl, F., Stenberg, J., Fredriksson, S., Welch, K., Zhang, M., Nilsson, M., Bicknell, D., Bodmer, W. F., Davis, R. W., Ji, H.  
2007; 104 (22): 9387-9392
- **Branch migration displacement assay with automated heuristic analysis for discrete DNA length measurement using DNA microarrays** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Pourmand, N., Caramuta, S., Villablanca, A., Mori, S., Karhanek, M., Wang, S. X., Davis, R. W.  
2007; 104 (15): 6146-6151
- **Multiplex amplification of all coding sequences within 10 cancer genes by Gene-Collector** *NUCLEIC ACIDS RESEARCH*  
Fredriksson, S., Baner, J., Dahl, F., Chu, A., Ji, H., Welch, K., Davis, R. W.  
2007; 35 (7)
- **Multiplexed protein detection by proximity ligation for cancer biomarker validation** *NATURE METHODS*  
Fredriksson, S., Dixon, W., Ji, H., Koong, A. C., Mindrinos, M., Davis, R. W.  
2007; 4 (4): 327-329
- **Accelerating the discovery of biologically active small molecules using a high-throughput yeast halo assay** *JOURNAL OF NATURAL PRODUCTS*  
Gassner, N. C., Tamble, C. M., Bock, J. E., Cotton, N., White, K. N., Tenney, K., St Onge, R. P., Proctor, M. J., Giaever, G., Nislow, C., Davis, R. W., Crews, P., Holman, et al

2007; 70 (3): 383-390

- **PathogenMip Assay: A Multiplex Pathogen Detection Assay** *PLOS ONE*  
Akhras, M. S., Thiyagarajan, S., Villablanca, A. C., Davis, R. W., Nyren, P., Pourmand, N.  
2007; 2 (2)
- **Systematic pathway analysis using high-resolution fitness profiling of combinatorial gene deletions** *NATURE GENETICS*  
St Onge, R. P., Mani, R., Oh, J., Proctor, M., Fung, E., Davis, R. W., Nislow, C., Roth, F. P., Giaever, G.  
2007; 39 (2): 199-206
- **High-density yeast-tiling array reveals previously undiscovered introns and extensive regulation of rneiotic splicing** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Juneau, K., Palm, C., Miranda, M., Davis, R. W.  
2007; 104 (5): 1522-1527
- **Genome-wide analysis of barcoded *Saccharomyces cerevisiae* gene-deletion mutants in pooled cultures** *NATURE PROTOCOLS*  
Pierce, S. E., Davis, R. W., Nislow, C., Giaever, G.  
2007; 2 (11): 2958-2974
- **Modeling and test of traveling-wave electrode Mach-Zehnder InP/InGaAsP quantum well modulators** *20th Annual Meeting of the IEEE-Lasers-and-Electro-Optics-Society*  
Kunkee, E. T., Shah, A. R., Shih, S., Smith, A. D., Davis, R.  
IEEE.2007: 266-267
- **Gate-controlled microfluidic chamber with magnetic bead for DNA sequencing-by-synthesis technology** *5th International Conference on Nanochannels, Microchannels and Minichannels*  
Esfandyarpour, H., Davis, R. W.  
AMER SOC MECHANICAL ENGINEERS.2007: 163-167
- **Array-based pyrosequencing** *5th International Forum on Post-Genome Technologies*  
Gharizadeh, B., Goel, S., Eltoukhy, H., Agah, M. N., Babrzadeh, F., Jalili, R., Talasaz, A. H., Davis, R. W., Ronaghi, M.  
PHOENIX PUBL & MEDIA NETWORK.2007: 8-9
- **Electronic detection of bio-molecules with synthetic and organic Nanopores.** *51st Annual Meeting of the Biophysical-Society*  
Tropini, C., Talasaz, A., Marziali, A., Ronaghi, M., Davis, R. W.  
CELL PRESS.2007: 649A-649A
- **Chemical genomic profiling for identifying intracellular targets of toxicants producing Parkinson's disease** *TOXICOLOGICAL SCIENCES*  
Doostzadeh, J., Davis, R. W., Giaever, G. N., Nislow, C., Langston, J. W.  
2007; 95 (1): 182-187
- **Rapid and Highly Informative Diagnostic Assay for H5N1 Influenza Viruses** *PLOS ONE*  
Pourmand, N., Diamond, L., Garten, R., Erickson, J. P., Kumm, J., Donis, R. O., Davis, R. W.  
2006; 1 (1)
- **PathogenMIPer: a tool for the design of molecular inversion probes to detect multiple pathogens** *BMC BIOINFORMATICS*  
Thiyagarajan, S., Karhanek, M., Akhras, M., Davis, R. W., Pourmand, N.  
2006; 7
- **Current rectification with poly-L-lysine-coated quartz nanopipettes** *NANO LETTERS*  
Umehara, S., Pourmand, N., Webb, C. D., Davis, R. W., Yasuda, K., Karhanek, M.  
2006; 6 (11): 2486-2492
- **Cell-specific expression and pathway analyses reveal alterations in trauma-related human T cell and monocyte pathways** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Laudanski, K., Miller-Graziano, C., Xiao, W., Mindrinos, M. N., Richards, D. R., De, A., Moldawer, L. L., Maier, R. V., Bankey, P., Baker, H. V., Brownstein, B. H., Cobb, J. P., Calvano, et al  
2006; 103 (42): 15564-15569
- **Prediction of protein orientation upon immobilization on biological and nonbiological surfaces** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*

- Talasaz, A. H., Nemat-Gorgani, M., Liu, Y., Stahl, P., Dutton, R. W., Ronaghi, M., Davis, R. W.  
2006; 103 (40): 14773-14778
- **Analysis of hybridization on the molecular barcode GeneChip microarray** *BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS*  
Walton, S. P., Mindrinos, M. N., Davis, R. W.  
2006; 348 (2): 689-696
  - **Data quality in genomics and microarrays** *NATURE BIOTECHNOLOGY*  
Ji, H., Davis, R. W.  
2006; 24 (9): 1112-1113
  - **Introns regulate RNA and protein abundance in yeast** *GENETICS*  
Juneau, K., Miranda, M., Hillenmeyer, M. E., Nislow, C., Davis, R. W.  
2006; 174 (1): 511-518
  - **Molecular inversion probe analysis of gene copy alterations reveals distinct categories of colorectal carcinoma** *CANCER RESEARCH*  
Ji, H., Kumm, J., Zhang, M., Farnam, K., Salari, K., Faham, M., Ford, J. M., Davis, R. W.  
2006; 66 (16): 7910-7919
  - **A unique and universal molecular barcode array** *NATURE METHODS*  
Pierce, S. E., Fung, E. L., Jaramillo, D. F., Chu, A. M., Davis, R. W., Nislow, C., Giaever, G.  
2006; 3 (8): 601-603
  - **Transcriptional profiling of aging in human muscle reveals a common aging signature** *PLOS GENETICS*  
Zahn, J. M., Sonu, R., Vogel, H., Crane, E., Mazan-Mamczarz, K., Rabkin, R., Davis, R. W., Becker, K. G., Owen, A. B., Kim, S. K.  
2006; 2 (7): 1058-1069
  - **Direct electrical detection of DNA synthesis** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Pourmand, N., Karhanek, M., Persson, H. H., Webb, C. D., Lee, T. H., Zahradnikova, A., Davis, R. W.  
2006; 103 (17): 6466-6470
  - **A high-resolution map of transcription in the yeast genome** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
David, L., Huber, W., Granovskaia, M., Toedling, J., Palm, C. J., Bofkin, L., Jones, T., Davis, R. W., Steinmetz, L. M.  
2006; 103 (14): 5320-5325
  - **A haplotype framework for cystic fibrosis mutations in Iran** *JOURNAL OF MOLECULAR DIAGNOSTICS*  
Elahi, E., Khodadad, A., Kupersmidt, I., Ghasemi, F., Alinasab, B., Naghizadeh, R., Eason, R. G., Amini, M., Esmaili, M., Dooki, M. R., Sanati, M. H., Davis, R. W., Ronaghi, et al  
2006; 8 (1): 119-127
  - **Modeling of the bioactivated nanopore devices.** *Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference*  
Talasaz, A. H., Liu, Y., Ronaghi, M., Davis, R. W.  
2006; 1: 1830-1833
  - **Development of a new device for high throughput isolation of live circulating tumor cells.** *29th Annual San Antonio Breast Cancer Symposium*  
Talasaz, A. A., Powell, A. A., Mindrinos, M., Carlson, R. W., Pease, F. W., Davis, R. W., Jeffrey, S. S.  
SPRINGER.2006: S213-S213
  - **Modeling of the bioactivated nanopore devices** *28th Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society*  
Talasaz, A. H., Liu, Y., Rodaghi, M., Davis, R. W.  
IEEE.2006: 3403-3406
  - **Cell trapping in activated micropores for functional analysis** *28th Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society*  
Talasaz, A. H., Powell, A. A., Stahl, P., Ronaghi, M., Jeffrey, S. S., Mindrinos, M., Davis, R. W.  
IEEE.2006: 1397-1400
  - **Cell trapping in activated micropores for functional analysis.** *Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference*  
Talasaz, A. H., Powell, A. A., Stahl, P., Ronaghi, M., Jeffrey, S. S., Mindrinos, M., Davis, R. W.



2006; 1: 1838-1841

- **Quantitative trait loci mapped to single-nucleotide resolution in yeast** *NATURE GENETICS*  
Deutschbauer, A. M., Davis, R. W.  
2005; 37 (12): 1333-1340
- **A network-based analysis of systemic inflammation in humans** *NATURE*  
Calvano, S. E., Xiao, W. Z., Richards, D. R., Felciano, R. M., Baker, H. V., Cho, R. J., Chen, R. O., Brownstein, B. H., Cobb, J. P., Tschoeke, S. K., Miller-Graziano, C., Moldawer, L. L., Mindrinos, et al  
2005; 437 (7061): 1032-1037
- **Multiplexed variation scanning for 1,000 amplicons in hundreds of patients using mismatch repair detection (MRD) on tag arrays** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Faham, M., Zheng, J. B., Moorhead, M., Fakhrai-Rad, H., Namsaraev, E., Wong, K., Wang, Z. Y., Chow, S. G., Lee, L., Suyenaga, K., Reichert, J., Boudreau, A., EBERLE, et al  
2005; 102 (41): 14717-14722
- **Significance analysis of time course microarray experiments** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Storey, J. D., Xiao, W. Z., Leek, J. T., Tompkins, R. G., Davis, R. W.  
2005; 102 (36): 12837-12842
- **A novel method for STR-based DNA profiling using microarrays** *JOURNAL OF FORENSIC SCIENCES*  
Kemp, J. T., Davis, R. W., White, R. L., Wang, S. X., Webb, C. D.  
2005; 50 (5): 1109-1113
- **Genome-wide requirements for resistance to functionally distinct DNA-damaging agents** *PLOS GENETICS*  
Lee, W., Onge, R. P., Proctor, M., Flaherty, P., Jordan, M. I., Arkin, A. P., Davis, R. W., Nislow, C., Giaever, G.  
2005; 1 (2): 235-246
- **Bioluminescence regenerative cycle (BRC) system: Theoretical considerations for nucleic acid quantification assays** *BIOPHYSICAL CHEMISTRY*  
Hassibi, A., Contag, C., Vlad, M. O., Hafezi, M., Lee, T. H., Davis, R. W., Pourmand, N.  
2005; 116 (3): 175-185
- **Microbes on the human vaginal epithelium** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Hyman, R. W., Fukushima, M., Diamond, L., Kumm, J., Giudice, L. C., Davis, R. W.  
2005; 102 (22): 7952-7957
- **Quantitative proteome analysis of human plasma following in vivo lipopolysaccharide administration using O-16/O-18 labeling and the accurate mass and time tag approach** *MOLECULAR & CELLULAR PROTEOMICS*  
Qian, W. J., Monroe, M. E., Liu, T., Jacobs, J. M., Anderson, G. A., Shen, Y. F., Moore, R. J., ANDERSON, D. J., Zhang, R., Calvano, S. E., Lowry, S. F., Xiao, W. Z., Moldawer, et al  
2005; 4 (5): 700-709
- **Mechanisms of haploinsufficiency revealed by genome-wide profiling in yeast** *GENETICS*  
Deutschbauer, A. M., Jaramillo, D. F., Proctor, M., Kumm, J., Hillenmeyer, M. E., Davis, R. W., Nislow, C., Giaever, G.  
2005; 169 (4): 1915-1925
- **Application of genome-wide expression analysis to human health and disease** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Cobb, J. P., Mindrinos, M. N., Miller-Graziano, C., Calvano, S. E., Baker, H. V., Xiao, W. Z., Laudanski, K., Brownstein, B. H., Elson, C. M., Hayden, D. L., Herndon, D. N., Lowry, S. F., Maier, et al  
2005; 102 (13): 4801-4806
- **Profiling early infection responses: Pseudomonas aeruginosa eludes host defenses by suppressing antimicrobial peptide gene expression** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Apidianakis, Y., Mindrinos, M. N., Xiao, W. Z., Lau, G. W., Baldini, R. L., Davis, R. W., Rahme, L. G.  
2005; 102 (7): 2573-2578
- **Single DNA molecule detection using nanopipettes and nanoparticles** *NANO LETTERS*  
Karhanek, M., Kemp, J. T., Pourmand, N., Davis, R. W., Webb, C. D.

2005; 5 (2): 403-407

- **Elevated evolutionary rates in the laboratory strain of *Saccharomyces cerevisiae*** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Gu, Z. L., David, L., Petrov, D., Jones, T., Davis, R. W., Steinmetz, L. M.  
2005; 102 (4): 1092-1097
- **A transcriptional profile of aging in the human kidney** *PLOS BIOLOGY*  
Rodwell, G. E., Sonu, R., Zahn, J. M., Lund, J., Wilhelmy, J., Wang, L. L., Xiao, W. Z., Mindrinos, M., Crane, E., Segal, E., Myers, B. D., Brooks, J. D., Davis, et al  
2004; 2 (12): 2191-2201
- **Characterization of synthetic DNA bar codes in *Saccharomyces cerevisiae* gene-deletion strains** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Eason, R. G., Pourmand, N., Tongprasit, W., Herman, Z. S., Anthony, K., Jejelowo, O., Davis, R. W., Stolc, V.  
2004; 101 (30): 11046-11051
- **SNP discovery in pooled samples with mismatch repair detection** *GENOME RESEARCH*  
Fakhrai-Rad, H., Zheng, J. B., Willis, T. D., Wong, K., Suyenaga, K., Moorhead, M., EBERLE, J., Thorstenson, Y. R., Jones, T., Davis, R. W., Namsaraev, E., Faham, M.  
2004; 14 (7): 1404-1412
- **The diploid genome sequence of *Candida albicans*** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Jones, T., Federspiel, N. A., Chibana, H., Dungan, J., Kalman, S., Magee, B. B., Newport, G., Thorstenson, Y. R., Agabian, N., Magee, P. T., Davis, R. W., Scherer, S.  
2004; 101 (19): 7329-7334
- **Chemogenomic profiling: Identifying the functional interactions of small molecules in yeast** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Giaever, G., Flaherty, P., Kumm, J., Proctor, M., Nislow, C., Jaramillo, D. F., Chu, A. M., Jordan, M. I., Arkin, A. P., Davis, R. W.  
2004; 101 (3): 793-798
- **A multi-enzyme model for pyrosequencing** *NUCLEIC ACIDS RESEARCH*  
Agah, A., Aghajan, M., Mashayekhi, F., Amini, S., Davis, R. W., Plummer, J. D., Ronaghi, M., Griffin, P. B.  
2004; 32 (21)
- **A genome-wide study of gene activity reveals developmental signaling pathways in the preimplantation mouse embryo** *DEVELOPMENTAL CELL*  
Wang, Q. T., Piotrowska, K., Ciemerych, M. A., Milenkovic, L., Scott, M. P., Davis, R. W., Zernicka-Goetz, M.  
2004; 6 (1): 133-144
- **Contributions of ATM mutations to familial breast and ovarian cancer** *CANCER RESEARCH*  
Thorstenson, Y. R., Roxas, A., Kroiss, R., Jenkins, M. A., Yu, K. M., Bachrich, T., Muhr, D., Wayne, T. L., Chu, G., Davis, R. W., Wagner, T. M., Oefner, P. J.  
2003; 63 (12): 3325-3333
- **Multiplexed genotyping with sequence-tagged molecular inversion probes** *NATURE BIOTECHNOLOGY*  
Hardenbol, P., Baner, J., Jain, M., Nilsson, M., Namsaraev, E. A., Karlin-Neumann, G. A., Fakhrai-Rad, H., Ronaghi, M., Willis, T. D., Landegren, U., Davis, R. W.  
2003; 21 (6): 673-678
- **Determination of hepatitis C virus genotype by Pyrosequencing** *JOURNAL OF VIROLOGICAL METHODS*  
Elahi, E., Pourmand, N., Chaung, R., Rofoogaran, A., Boisver, J., Samimi-Rad, K., Davis, R. W., Ronaghi, M.  
2003; 109 (2): 171-176
- **Genotyping African Haplotypes in ATM using a co-spotted single-base extension assay** *HUMAN MUTATION*  
Jain, M., Thorstenson, Y. R., Faulkner, D. M., Pourmand, N., Jones, T., Au, M., Oefner, P. J., White, K. P., Davis, R. W.  
2003; 22 (3): 214-221
- **Parallel phenotypic analysis of sporulation and postgermination growth in *Saccharomyces cerevisiae*** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Deutschbauer, A. M., Williams, R. M., Chu, A. M., Davis, R. W.  
2002; 99 (24): 15530-15535

- **Sequence of *Plasmodium falciparum* chromosome 12** *NATURE*  
Hyman, R. W., Fung, E., Conway, A., Kurdi, O., Mao, J., MIRANDA, M., Nakao, B., Rowley, D., Tamaki, T., Wang, F., Davis, R. W.  
2002; 419 (6906): 534-537
- **Yeast tRNA as carrier in the isolation of microscale RNA for global amplification and expression profiling** *BIOTECHNIQUES*  
Wang, Q. T., Xiao, W. Z., Mindrinos, M., Davis, R. W.  
2002; 33 (4): 788-?
- **Gene expression during the life cycle of *Drosophila melanogaster*** *SCIENCE*  
Arbeitman, M. N., Furlong, E. E., Imam, F., JOHNSON, E., Null, B. H., Baker, B. S., Krasnow, M. A., Scott, M. P., Davis, R. W., White, K. P.  
2002; 297 (5590): 2270-2275
- **Systematic screen for human disease genes in yeast** *NATURE GENETICS*  
Steinmetz, L. M., Scharfe, C., Deutschbauer, A. M., Mokranjac, D., Herman, Z. S., Jones, T., Chu, A. M., Giaever, G., Prokisch, H., Oefner, P. J., Davis, R. W.  
2002; 31 (4): 400-404
- **Functional profiling of the *Saccharomyces cerevisiae* genome** *NATURE*  
Giaever, G., Chu, A. M., Ni, L., CONNELLY, C., Riles, L., Veronneau, S., Dow, S., Lucau-Danila, A., Anderson, K., Andre, B., Arkin, A. P., Astromoff, A., El Bakkoury, et al  
2002; 418 (6896): 387-391
- **Transcriptional response of *Saccharomyces cerevisiae* to DNA-damaging agents does not identify the genes that protect against these agents** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Birrell, G. W., BROWN, J. A., Wu, H. I., Giaever, G., Chu, A. M., Davis, R. W., Brown, J. M.  
2002; 99 (13): 8778-8783
- **Multiplex pyrosequencing** *NUCLEIC ACIDS RESEARCH*  
Pourmand, N., Elahi, E., Davis, R. W., Ronaghi, M.  
2002; 30 (7)
- **Dissecting the architecture of a quantitative trait locus in yeast** *NATURE*  
Steinmetz, L. M., Sinha, H., Richards, D. R., Spiegelman, J. I., Oefner, P. J., McCusker, J. H., Davis, R. W.  
2002; 416 (6878): 326-330
- **Identification and preliminary characterization of mouse Adam33** *BMC GENETICS*  
Gunn, T. M., Azarani, A., Kim, P. H., Hyman, R. W., Davis, R. W., Barsh, G. S.  
2002; 3
- **A genome-wide screen in *Saccharomyces cerevisiae* for genes affecting UV radiation sensitivity** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Birrell, G. W., Giaever, G., Chu, A. M., Davis, R. W., Brown, J. M.  
2001; 98 (22): 12608-12613
- **Nucleotide sequence and predicted functions of the entire *Sinorhizobium meliloti* pSymA megaplasmid** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Barnett, M. J., Fisher, R. F., Jones, T., Komp, C., Abola, A. P., Barloy-Hubler, F., Bowser, L., Capela, D., Galibert, F., Gouzy, J., Gurjal, M., Hong, A., Huizar, et al  
2001; 98 (17): 9883-9888
- **Global analysis of ATM polymorphism reveals significant functional constraint** *AMERICAN JOURNAL OF HUMAN GENETICS*  
Thorntenson, Y. R., Shen, P. D., Tusher, V. G., Wayne, T. L., Davis, R. W., Chu, G., Oefner, P. J.  
2001; 69 (2): 396-412
- **Genomic evidence for a complete sexual cycle in *Candida albicans*** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Tzung, K. W., Williams, R. M., Scherer, S., Federspiel, N., Jones, T., Hansen, N., Bivolarevic, V., Huizar, L., Komp, C., Surzycki, R., Tamse, R., Davis, R. W., Agabian, et al  
2001; 98 (6): 3249-3253
- **Transcriptional regulation and function during the human cell cycle** *NATURE GENETICS*  
Cho, R. J., Huang, M. X., Campbell, M. J., Dong, H. L., Steinmetz, L., Sapinoso, L., Hampton, G., Elledge, S. J., Davis, R. W., Lockhart, D. J.

2001; 27 (1): 48-54

- **Prevalence of small inversions in yeast gene order evolution** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Seoighe, C., Federspiel, N., Jones, T., Hansen, N., Bivolarovic, V., Surzycki, R., Tamse, R., Komp, C., Hulzar, L., Davis, R. W., Scherer, S., Tait, E., Shaw, et al  
2000; 97 (26): 14433-14437
- **Y chromosome sequence variation and the history of human populations** *NATURE GENETICS*  
Underhill, P. A., Shen, P. D., Lin, A. A., Jin, L., Passarino, G., Yang, W. H., Kauffman, E., Bonne-Tamir, B., Bertranpetit, J., Francalacci, P., Ibrahim, M., Jenkins, T., Kidd, et al  
2000; 26 (3): 358-361
- **Population genetic implications from sequence variation in four Y chromosome genes** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Shen, P. D., Wang, F., Underhill, P. A., Franco, C., Yang, W. H., Roxas, A., Sung, R., Lin, A. A., Hyman, R. W., Vollrath, D., Davis, R. W., Cavalli-Sforza, L. L., Oefner, et al  
2000; 97 (13): 7354-7359
- **Ventilation with lower tidal volumes as compared with traditional tidal volumes for acute lung injury and the acute respiratory distress syndrome.** *International Conference of the American-Lung-Association/American-Thoracic-Society*  
Brower, R. G., Matthay, M. A., Morris, A., Schoenfeld, D., Thompson, B. T., Wheeler, A., Wiedemann, H. P., Arroliga, A. C., Fisher, C. J., Komara, J. J., Perez-Trepichio, P., Parsons, P. E., Wolkin, et al  
MASSACHUSETTS MEDICAL SOC.2000: 1301-8
- **High-density arrays and insights into genome function** *BIOTECHNOLOGY & GENETIC ENGINEERING REVIEWS, VOL 17*  
Steinmetz, L. M., Davis, R. W.  
2000; 17: 109-146
- **DAtA: database of Arabidopsis thaliana annotation** *NUCLEIC ACIDS RESEARCH*  
Palm, C. J., Federspiel, N. A., Davis, R. W.  
2000; 28 (1): 102-103
- **Functional analysis of the yeast genome by precise deletion and parallel phenotypic characterization.** *Novartis Foundation symposium*  
Winzeler, E. A., Liang, H., Shoemaker, D. D., Davis, R. W.  
2000; 229: 105-109
- **Genome-wide mapping with biallelic markers in Arabidopsis thaliana** *NATURE GENETICS*  
Cho, R. J., Mindrinos, M., Richards, D. R., Sapolsky, R. J., Anderson, M., Drenkard, E., Dewdney, L., Reuber, T. L., Stammers, M., Federspiel, N., Theologis, A., Yang, W. H., Hubbell, et al  
1999; 23 (2): 203-207
- **Functional characterization of the S-cerevisiae genome by gene deletion and parallel analysis** *SCIENCE*  
Winzeler, E. A., Shoemaker, D. D., Astromoff, A., Liang, H., Anderson, K., Andre, B., Bangham, R., Benito, R., Boeke, J. D., Bussey, H., Chu, A. M., CONNELLY, C., Davis, et al  
1999; 285 (5429): 901-906
- **An automated sample preparation system for large-scale DNA sequencing** *GENOME RESEARCH*  
Marziali, A., Willis, T. D., Federspiel, N. A., Davis, R. W.  
1999; 9 (5): 457-462
- **Comparative genomes of Chlamydia pneumoniae and C-trachomatis** *NATURE GENETICS*  
Kalman, S., Mitchell, W., Marathe, R., Lammel, C., Fan, L., Hyman, R. W., Olinger, L., Grimwood, L., Davis, R. W., Stephens, R. S.  
1999; 21 (4): 385-389
- **Distribution of haplotypes from a chromosome 21 region distinguishes multiple prehistoric human migrations**  
Jin, L., Underhill, P. A., Doctor, V., Davis, R. W., Shen, P. D., Cavalli-Sforza, L. L., Oefner, P. J.  
NATL ACAD SCIENCES.1999: 3796-3800
- **The mouse mahogany locus encodes a transmembrane form of human attractin** *NATURE*  
Gunn, T. M., Miller, K. A., He, L., Hyman, R. V., Davis, R. W., Azarani, A., Schlossman, S. F., Duke-Cohan, J. S., Barsh, G. S.  
1999; 398 (6723): 152-156

- **Genomic profiling of drug sensitivities via induced haploinsufficiency** *NATURE GENETICS*  
Giaever, G., Shoemaker, D. D., Jones, T. W., Liang, H., Winzeler, E. A., Astromoff, A., Davis, R. W.  
1999; 21 (3): 278-283
- **On the in vivo function of the RecA ATPase** *JOURNAL OF MOLECULAR BIOLOGY*  
Campbell, M. J., Davis, R. W.  
1999; 286 (2): 437-445
- **Toxic mutations in the recA gene of E. coli prevent proper chromosome segregation** *JOURNAL OF MOLECULAR BIOLOGY*  
Campbell, M. J., Davis, R. W.  
1999; 286 (2): 417-435
- **An arrayable flow-through microcentrifuge for high-throughput instrumentation** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Marziali, A., Willis, T. D., Davis, R. W.  
1999; 96 (1): 61-66
- **Whole genome genetic-typing in yeast using high-density oligonucleotide arrays** *PARASITOLOGY*  
Winzeler, E. A., Lee, B., McCusker, J. H., Davis, R. W.  
1999; 118: S73-S80
- **Fluorescence-based expression monitoring using microarrays** *EXPRESSION OF RECOMBINANT GENES IN EUKARYOTIC SYSTEMS*  
Winzeler, E. A., Schena, M., Davis, R. W.  
1999; 306: 3-?
- **Imaging of apoptosis (programmed cell death) with Tc-99m annexin V** *JOURNAL OF NUCLEAR MEDICINE*  
Blankenberg, F. G., Katsikis, P. D., Tait, J. F., Davis, R. E., Naumovski, L., Ohtsuki, K., Kopywoda, S., Abrams, M. J., Strauss, H. W.  
1999; 40 (1): 184-191
- **Direct allelic variation scanning of the yeast genome** *SCIENCE*  
Winzeler, E. A., Richards, D. R., Conway, A. R., Goldstein, A. L., Kalman, S., McCullough, M. J., McCusker, J. H., Stevens, D. A., Wodicka, L., Lockhart, D. J., Davis, R. W.  
1998; 281 (5380): 1194-1197
- **An automated hydrodynamic process for controlled, unbiased DNA shearing** *GENOME RESEARCH*  
Thorstenson, Y. R., Hunnicke-Smith, S. P., Oefner, P. J., Davis, R. W.  
1998; 8 (8): 848-855
- **Microarrays: biotechnology's discovery platform for functional genomics** *TRENDS IN BIOTECHNOLOGY*  
Schena, M., Heller, R. A., Theriault, T. P., Konrad, K., Lachenmeier, E., Davis, R. W.  
1998; 16 (7): 301-306
- **A genome-wide transcriptional analysis of the mitotic cell cycle** *MOLECULAR CELL*  
Cho, R. J., Campbell, M. J., Winzeler, E. A., Steinmetz, L., Conway, A., Wodicka, L., Wolfsberg, T. G., Gabrielian, A. E., Landsman, D., Lockhart, D. J., Davis, R. W.  
1998; 2 (1): 65-73
- **Parallel analysis of genetic selections using whole genome oligonucleotide arrays** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Cho, R. J., Fromont-Racine, M., Wodicka, L., Feierbach, B., Stearns, T., Legrain, P., Lockhart, D. J., Davis, R. W.  
1998; 95 (7): 3752-3757
- **Functional analysis of the yeast genome** *CURRENT OPINION IN GENETICS & DEVELOPMENT*  
Winzeler, E. A., Davis, R. W.  
1997; 7 (6): 771-776
- **Yeast microarrays for genome wide parallel genetic and gene expression analysis** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
LASHKARI, D. A., DeRisi, J. L., McCusker, J. H., Namath, A. F., Gentile, C., Hwang, S. Y., Brown, P. O., Davis, R. W.  
1997; 94 (24): 13057-13062

- **Detection of numerous Y chromosome biallelic polymorphisms by denaturing high-performance liquid chromatography** *GENOME RESEARCH*  
Underhill, P. A., Jin, L., Lin, A. A., Mehdi, S. Q., Jenkins, T., Vollrath, D., Davis, R. W., CAVALLISFORZA, L. L., Oefner, P. J.  
1997; 7 (10): 996-1005
- **Whole genome analysis: Experimental access to all genome sequenced segments through larger-scale efficient oligonucleotide synthesis and PCR** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
LASHKARI, D. A., McCusker, J. H., Davis, R. W.  
1997; 94 (17): 8945-8947
- **Application of DNA typing methods and genetic analysis to epidemiology and taxonomy of *Saccharomyces* isolates** *JOURNAL OF CLINICAL MICROBIOLOGY*  
Clemons, K. V., Park, P. S., McCusker, J. H., McCullough, M. J., Davis, R. W., Stevens, D. A.  
1997; 35 (7): 1822-1828
- **The nucleotide sequence of *Saccharomyces cerevisiae* chromosome V** *NATURE*  
Dietrich, F. S., Mulligan, J., Hennessy, K., Yelton, M. A., Allen, E., Araujo, R., Aviles, E., Berno, A., Brennan, T., Carpenter, J., Chen, E., Cherry, J. M., Chung, et al  
1997; 387 (6632): 78-81
- **Discovery and analysis of inflammatory disease-related genes using cDNA microarrays** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Heller, R. A., Schena, M., Chai, A., Shalon, D., Bedilion, T., Gilmore, J., Woolley, D. E., Davis, R. W.  
1997; 94 (6): 2150-2155
- **Automation for the Arabidopsis genome sequencing project** *TRENDS IN PLANT SCIENCE*  
Marziali, A., Federspiel, N., Davis, R.  
1997; 2 (2): 71-74
- **CDP1, a novel *Saccharomyces cerevisiae* gene required for proper nuclear division and chromosome segregation** *GENETICS*  
Foreman, P. K., Davis, R. W.  
1996; 144 (4): 1387-1397
- **Quantitative phenotypic analysis of yeast deletion mutants using a highly parallel molecular bar-coding strategy** *NATURE GENETICS*  
Shoemaker, D. D., LASHKARI, D. A., Morris, D., Mittmann, M., Davis, R. W.  
1996; 14 (4): 450-456
- **Efficient random subcloning of DNA sheared in a recirculating point-sink flow system** *NUCLEIC ACIDS RESEARCH*  
Oefner, P. J., HUNICKESMITH, S. P., Chiang, L., Dietrich, F., Mulligan, J., Davis, R. W.  
1996; 24 (20): 3879-3886
- **Parallel human genome analysis: Microarray-based expression monitoring of 1000 genes** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Schena, M., Shalon, D., Heller, R., Chai, A., Brown, P. O., Davis, R. W.  
1996; 93 (20): 10614-10619
- **QUANTITATIVE MONITORING OF GENE-EXPRESSION PATTERNS WITH A COMPLEMENTARY-DNA MICROARRAY** *SCIENCE*  
Schena, M., Shalon, D., Davis, R. W., Brown, P. O.  
1995; 270 (5235): 467-470
- **AN AUTOMATED MULTIPLEX OLIGONUCLEOTIDE SYNTHESIZER - DEVELOPMENT OF HIGH-THROUGHPUT, LOW-COST DNA-SYNTHESIS** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
LASHKARI, D. A., HUNICKESMITH, S. P., NORNGREN, R. M., Davis, R. W., Brennan, T.  
1995; 92 (17): 7912-7915
- **SLIDING-PLATE GEL CASTER** *BIOTECHNIQUES*  
LASHKARI, D. A., NORNGREN, R. M., Davis, R. W.  
1995; 18 (4): 625-626
- **PATHOGENICITY OF SACCHAROMYCES-CEREVISIAE IN COMPLEMENT FACTOR-5 DEFICIENT MICE** *INFECTION AND IMMUNITY*  
Byron, J. K., Clemons, K. V., McCusker, J. H., Davis, R. W., Stevens, D. A.

1995; 63 (2): 478-485

- **SACCHAROMYCES-CEREVISIAE VIRULENCE PHENOTYPE AS DETERMINED WITH CD-1 MICE IS ASSOCIATED WITH THE ABILITY TO GROW AT 42-DEGREES-C AND FORM PSEUDOHYPHAE** *INFECTION AND IMMUNITY*  
McCusker, J. H., Clemons, K. V., Stevens, D. A., Davis, R. W.  
1994; 62 (12): 5447-5455
- **EPIDERMAL-CELL FATE DETERMINATION IN ARABIDOPSIS - PATTERNS DEFINED BY A STEROID-INDUCIBLE REGULATOR** *SCIENCE*  
Lloyd, A. M., Schena, M., Walbot, V., Davis, R. W.  
1994; 266 (5184): 436-439
- **STRUCTURE OF HOMEBOX-LEUCINE ZIPPER GENES SUGGESTS A MODEL FOR THE EVOLUTION OF GENE FAMILIES** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Schena, M., Davis, R. W.  
1994; 91 (18): 8393-8397
- **CLONING VECTORS FOR THE SYNTHESIS OF EPITOPE-TAGGED, TRUNCATED AND CHIMERIC PROTEINS IN SACCHAROMYCES-CEREVISIAE** *GENE*  
Foreman, P. K., Davis, R. W.  
1994; 144 (1): 63-68
- **TETRAD ANALYSIS POSSIBLE IN ARABIDOPSIS WITH MUTATION OF THE QUARTET (QRT) GENES** *SCIENCE*  
Preuss, D., Rhee, S. Y., Davis, R. W.  
1994; 264 (5164): 1458-1460
- **GENETIC-CHARACTERIZATION OF PATHOGENIC SACCHAROMYCES-CEREVISIAE ISOLATES** *GENETICS*  
McCusker, J. H., Clemons, K. V., Stevens, D. A., Davis, R. W.  
1994; 136 (4): 1261-1269
- **FUNCTIONAL EXPRESSION OF THE YEAST FLP/FRT SITE-SPECIFIC RECOMBINATION SYSTEM IN NICOTIANA-TABACUM** *MOLECULAR & GENERAL GENETICS*  
Lloyd, A. M., Davis, R. W.  
1994; 242 (6): 653-657
- **POINT MUTATIONS THAT SEPARATE THE ROLE OF SACCHAROMYCES-CEREVISIAE CENTROMERE-BINDING FACTOR-I IN CHROMOSOME SEGREGATION FROM ITS ROLE IN TRANSCRIPTIONAL ACTIVATION** *GENETICS*  
Foreman, P. K., Davis, R. W.  
1993; 135 (2): 287-296
- **A CONDITIONAL STERILE MUTATION ELIMINATES SURFACE COMPONENTS FROM ARABIDOPSIS POLLEN AND DISRUPTS CELL SIGNALING DURING FERTILIZATION** *GENES & DEVELOPMENT*  
Preuss, D., Lemieux, B., Yen, G., Davis, R. W.  
1993; 7 (6): 974-985
- **THE HAT4 GENE OF ARABIDOPSIS ENCODES A DEVELOPMENTAL REGULATOR** *GENES & DEVELOPMENT*  
Schena, M., Lloyd, A. M., Davis, R. W.  
1993; 7 (3): 367-379
- **A DOMINANT TRUNCATION ALLELE IDENTIFIES A GENE, STE20, THAT ENCODES A PUTATIVE PROTEIN-KINASE NECESSARY FOR MATING IN SACCHAROMYCES-CEREVISIAE** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Ramer, S. W., Davis, R. W.  
1993; 90 (2): 452-456
- **ARABIDOPSIS AND NICOTIANA ANTHOCYANIN PRODUCTION ACTIVATED BY MAIZE REGULATOR-R AND REGULATOR-C1** *SCIENCE*  
Lloyd, A. M., Walbot, V., Davis, R. W.  
1992; 258 (5089): 1773-1775
- **DOMINANT GENETICS USING A YEAST GENOMIC LIBRARY UNDER THE CONTROL OF A STRONG INDUCIBLE PROMOTER** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Ramer, S. W., Elledge, S. J., Davis, R. W.

1992; 89 (23): 11589-11593

- **ATP HYDROLYSIS AND THE DISPLACED STRAND ARE 2 FACTORS THAT DETERMINE THE POLARITY OF RECA-PROMOTED DNA STRAND EXCHANGE** *JOURNAL OF MOLECULAR BIOLOGY*  
Konforti, B. B., Davis, R. W.  
1992; 227 (1): 38-53
- **HD-ZIP PROTEINS - MEMBERS OF AN ARABIDOPSIS HOMEODOMAIN PROTEIN SUPERFAMILY** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Schena, M., Davis, R. W.  
1992; 89 (9): 3894-3898
- **A STEROID-INDUCIBLE GENE-EXPRESSION SYSTEM FOR PLANT-CELLS** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Schena, M., Lloyd, A. M., Davis, R. W.  
1991; 88 (23): 10421-10425
- **THE USE OF PROLINE AS A NITROGEN-SOURCE CAUSES HYPERSENSITIVITY TO, AND ALLOWS MORE ECONOMICAL USE OF 5FOA IN SACCHAROMYCES-CEREVISIAE YEAST**  
McCusker, J. H., Davis, R. W.  
1991; 7 (6): 607-608
- **DNA SUBSTRATE REQUIREMENTS FOR STABLE JOINT MOLECULE FORMATION BY THE RECA AND SINGLE-STRANDED DNA-BINDING PROTEINS OF ESCHERICHIA-COLI** *JOURNAL OF BIOLOGICAL CHEMISTRY*  
Konforti, B. B., Davis, R. W.  
1991; 266 (16): 10112-10121
- **THE SACCHAROMYCES CEREVISIAE RPB4 GENE IS TIGHTLY LINKED TO THE TIF2 GENE** *NUCLEIC ACIDS RESEARCH*  
Foreman, P. K., Davis, R. W., Sachs, A. B.  
1991; 19 (10): 2781-2781
- **YEAST CENTROMERE BINDING PROTEIN-CBF1, OF THE HELIX-LOOP-HELIX PROTEIN FAMILY, IS REQUIRED FOR CHROMOSOME STABILITY AND METHIONINE PROTOTROPHY** *CELL*  
Cai, M. J., Davis, R. W.  
1990; 61 (3): 437-446
- **THE PREFERENCE FOR A 3' HOMOLOGOUS END IS INTRINSIC TO RECA-PROMOTED STRAND EXCHANGE** *JOURNAL OF BIOLOGICAL CHEMISTRY*  
Konforti, B. B., Davis, R. W.  
1990; 265 (12): 6916-6920
- **TRANSLATION INITIATION AND RIBOSOMAL BIOGENESIS - INVOLVEMENT OF A PUTATIVE RIBOSOMAL-RNA HELICASE AND RPL46** *SCIENCE*  
Sachs, A. B., Davis, R. W.  
1990; 247 (4946): 1077-1079
- **RAIN-INDUCED, WIND-INDUCED, AND TOUCH-INDUCED EXPRESSION OF CALMODULIN AND CALMODULIN-RELATED GENES IN ARABIDOPSIS** *CELL*  
Braam, J., Davis, R. W.  
1990; 60 (3): 357-364
- **GENE TARGETING AT THE HUMAN CD4 LOCUS BY EPITOPE ADDITION** *GENES & DEVELOPMENT*  
Jasin, M., Elledge, S. J., Davis, R. W., Berg, P.  
1990; 4 (2): 157-166
- **STRATEGIES FOR GENETIC-MODIFICATION OF PARASITES** *ANNALS OF THE NEW YORK ACADEMY OF SCIENCES*  
Davis, R. W.  
1989; 569: 104-117
- **THE POLY(A) BINDING-PROTEIN IS REQUIRED FOR POLY(A) SHORTENING AND 60S RIBOSOMAL SUBUNIT-DEPENDENT TRANSLATION INITIATION** *CELL*  
Sachs, A. B., Davis, R. W.



1989; 58 (5): 857-867

- **RAPID SCREENING OF A HUMAN GENOMIC LIBRARY IN YEAST ARTIFICIAL CHROMOSOMES FOR SINGLE-COPY SEQUENCES** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
TRAVER, C. N., KLAPHOLZ, S., Hyman, R. W., Davis, R. W.  
1989; 86 (15): 5898-5902
- **PURIFICATION OF A YEAST CENTROMERE-BINDING PROTEIN THAT IS ABLE TO DISTINGUISH SINGLE BASE-PAIR MUTATIONS IN ITS RECOGNITION SITE** *MOLECULAR AND CELLULAR BIOLOGY*  
Cai, M. J., Davis, R. W.  
1989; 9 (6): 2544-2550
- **GENETIC SELECTION FOR GENES ENCODING SEQUENCE-SPECIFIC DNA-BINDING PROTEINS** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Elledge, S. J., SUGIONO, P., Guarente, L., Davis, R. W.  
1989; 86 (10): 3689-3693
- **POSITION AND DENSITY EFFECTS ON REPRESSION BY STATIONARY AND MOBILE DNA-BINDING PROTEINS** *GENES & DEVELOPMENT*  
Elledge, S. J., Davis, R. W.  
1989; 3 (2): 185-197
- **A FAMILY OF VERSATILE CENTROMERIC VECTORS DESIGNED FOR USE IN THE SECTORING-SHUFFLE MUTAGENESIS ASSAY IN SACCHAROMYCES-CEREVISIAE** *GENE*  
Elledge, S. J., Davis, R. W.  
1988; 70 (2): 303-312
- **DIRECTION OF CHROMOSOME REARRANGEMENTS IN SACCHAROMYCES-CEREVISIAE BY USE OF HIS3 RECOMBINATIONAL SUBSTRATES** *MOLECULAR AND CELLULAR BIOLOGY*  
FASULLO, M. T., Davis, R. W.  
1988; 8 (10): 4370-4380
- **PHYSICAL MAPPING OF LARGE DNA BY CHROMOSOME FRAGMENTATION** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Vollrath, D., Davis, R. W., CONNELLY, C., Hieter, P.  
1988; 85 (16): 6027-6031
- **SEQUENCE AND NITRATE REGULATION OF THE ARABIDOPSIS-THALIANA MESSENGER-RNA ENCODING NITRATE REDUCTASE, A METALLOFLAVOPROTEIN WITH 3 FUNCTIONAL DOMAINS** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Crawford, N. M., Smith, M., BELLISSIMO, D., Davis, R. W.  
1988; 85 (14): 5006-5010
- **TANDEM ARRAY OF HUMAN VISUAL PIGMENT GENES AT XQ28** *SCIENCE*  
Vollrath, D., Nathans, J., Davis, R. W.  
1988; 240 (4859): 1669-1672
- **AN ELECTROPHORETIC KARYOTYPE OF NEUROSPORA-CRASSA** *MOLECULAR AND CELLULAR BIOLOGY*  
Orbach, M. J., Vollrath, D., Davis, R. W., Yanofsky, C.  
1988; 8 (4): 1469-1473
- **RESOLUTION OF DNA-MOLECULES GREATER THAN 5 MEGABASES BY CONTOUR-CLAMPED HOMOGENEOUS ELECTRIC-FIELDS** *NUCLEIC ACIDS RESEARCH*  
Vollrath, D., Davis, R. W.  
1987; 15 (19): 7865-7876
- **A SINGLE DOMAIN OF YEAST POLY(A)-BINDING PROTEIN IS NECESSARY AND SUFFICIENT FOR RNA-BINDING AND CELL VIABILITY** *MOLECULAR AND CELLULAR BIOLOGY*  
Sachs, A. B., Davis, R. W., Kornberg, R. D.  
1987; 7 (9): 3268-3276

- **IDENTIFICATION AND ISOLATION OF THE GENE ENCODING THE SMALL SUBUNIT OF RIBONUCLEOTIDE REDUCTASE FROM SACCHAROMYCES-CEREVISIAE - DNA DAMAGE-INDUCIBLE GENE REQUIRED FOR MITOTIC VIABILITY** *MOLECULAR AND CELLULAR BIOLOGY*  
Elledge, S. J., Davis, R. W.  
1987; 7 (8): 2783-2793
- **PLANT DEFENSE GENES ARE REGULATED BY ETHYLENE** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Ecker, J. R., Davis, R. W.  
1987; 84 (15): 5202-5206
- **3' HOMOLOGOUS FREE ENDS ARE REQUIRED FOR STABLE JOINT MOLECULE FORMATION BY THE RECA AND SINGLE-STRANDED BINDING-PROTEINS OF ESCHERICHIA-COLI** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Konforti, B. B., Davis, R. W.  
1987; 84 (3): 690-694
- **NITRATE REDUCTASE FROM SQUASH - CDNA CLONING AND NITRATE REGULATION** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Crawford, N. M., Campbell, W. H., Davis, R. W.  
1986; 83 (21): 8073-8076
- **INHIBITION OF GENE-EXPRESSION IN PLANT-CELLS BY EXPRESSION OF ANTISENSE RNA** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Ecker, J. R., Davis, R. W.  
1986; 83 (15): 5372-5376