

The Cell and Molecular Biology Newsletter

Fall 2009

Please join me in welcoming the incoming CMB students

Linh Aven

Ariana Darcy

Haney Ashton Brooke

Brian Fluharty

Sarah Rozelle

Potluck given by students to welcome incoming students

Erica Walsh will host the second fall potluck for entering students of the CMB program to meet all other students
Thank you Erica!

September 10 2009 at Erica Walsh's
7PM

83 Brown St Apt 2

Brookline MA

Walking distance of BU shuttle stop by
BU gym

The Cell Biology Program was well represented in the 2009 Russek Day!

A number of students presented their work as posters or oral presentations at the Russek Day in June 2008. Partha Chakrabarti (Biochemistry) gave a talk on his work and Florin Craciun (Pathology) and Elma Kurtagic received honorable mention for their work. I would like to see all students in our program put up a poster in 2010.

Other awards in the past year

-Elma Kurtagic received the ASIP 2008 Trainee Travel Award to present her doctoral work

-Bethany Hannafon wrote and received a DOD grant for her doctoral award

-Florin Craciun received the Shock Society Travel Award to present his doctoral work

-Partha Chakrabarti and Elma Kurtagic received a Carl and Myrna Franzblau fellowship to attend meetings

Student Seminars

Friday 12:30 PM L705

**Lunch is provided – please
come!**

September 18 Bethany Hannafon and Mike Breen

Oct 2 Questions from incoming students / faculty and student mentors

October 30 Rotation talks

Nov. 20: Greg Staples and Aditi Gurkar
Dec 5 TBA

Jan 15 Rotation talks

Feb 12 Jeremy Farelli

March 12 Rotation talks

April 9 Liling Zeng and end of year party

Students giving research talks outside BU

Stephanie Seidl spoke at the Smooth muscle meeting in RI.

Florin Craciun spoke at the International Shock Meeting

Greg Staples and Hicham Niamyi presented their work at the recent Mass Spec meeting in Phil, PA.

Greg Staples will be presenting a paper at the 6th International Conference in Proteoglycans in Aix-les-Bains.

Erica Walsh is presenting a paper on the Inhibition of MDM2 phosphorylation in the central acidic domain activates p53 and Rb in Ghent, Belgium. She is a world traveler having already visited Shanghai last year for another meeting!

For a more complete list please see the back! I also can only report what you send me!

A record number of students received PhDs this past 2 years. A note on what they are doing.

Cynthia St. Hillaire is doing a postdoctoral fellowship at NIH/NCI, DJ MCCrann has returned to Maine to

pursue a postdoctoral fellowship in Stem Cell biology at the Maine Medical Research Center Institute, Kristen Park is pursuing a postdoctoral fellowship at Harvard University at CBRC, Alnoor Pirani has joined Adalytix/Olympus America, Deepa Subramanian returned to India and we hear that she is looking to return to the states for a postdoc, Fang Ming Gao is at the U of Kentucky, Phyllis Ottaviano is doing her postdoctoral work at Beth Israel Deaconess Medical Center, and Anne Zhang is pursuing a postdoctoral fellowship at HMS. Panos Papageorgis is revising ms and looking for postdocs at HMS, Albert Tomayo is applying to Standford and Hutchins for postdocs. Kulle Daley is finishing up work at BUSM and Dorothy Pazin defended on August 26 and is going to the Harvard Dental School to do a postdoctoral fellowship. Patha Chakrabarti will be defending in September and I hear that there are several more!!

Questions about health care?

There are 2 levels of healthcare insurance available. Please think about your options. Check the website for the GMS office

Fellowships

DOD predoctoral fellowships

Several of our students have received these

AAAS-Science and Technology Policy Fellow

Washington DC

Applicants must have a PhD and be an American citizen

Apply by January 2008

202-326-6700 or

www.fellowships.aas.org

Did you know?

That the CMB student takes an average 5 years to graduate.

That the CMB student is as likely to enter academia as business.

Scientific meetings attended in last 2 years

Chakrabarti

Keystone Symposia Conference; Obesity: Novel Aspects of the Regulation of Body Weight (J4), January 20, 2009- January 25, 2009. Poster presentation titled 'The mTOR complex 1 suppresses lipolysis and promotes accumulation of triglycerides in mammalian cells by inhibiting expression of ATGL'.

Cohen

United States/Canadian Pathology Association (USCAP) in March 09

Craciun

Shock Society, Thirty-First Annual Conference on Shock, 2008, Cologne, Germany

Seventh International Conference on Complexity in Acute Illness, 2008, Cologne, Germany (Shock Society Travel Award)

Daugherty

2008 "Quo Vadis Structural Biology?" Symposium

2009 Enzyme Mechanism Conference

Guan

53rd Annual Biophysics Meeting (Boston MA Feb28th-March4th, 2009)

Hannafon

Graduate Student Symposium at St. Judes Children's Research Hospital in March/April 2009 to give a an oral and poster presentation.

American Association of Cancer Research annual meeting in April 2009 to give a poster presentation

AACR special conference "The Role of Non-Coding RNAs in Cancer" November 2007

Krawczyk

Obesity Society Meeting, October 2008 Phoenix Arizona

Kurtagic

FASEB (ASIP 2008 Trainee Travel Award)

Liu, Lihan

American Diabetes Association 68th Scientific Sessions, San Francisco, CA. 2008

Longmire

International Society for Stem Cell Research- Philadelphia, PA July, 2008

Naimy

Glycobiology conference 2007

Glycobiology conference 2008

American Society for Mass Spectrometry conference 2008, 2009

Ottaviano

FASEB 2008

Papageorgis

"Era of Hope" Baltimore June 2008

Pazin

Northeast Regional Meeting of the Society for Developmental Biology, April 2008

Fifth International Symposium on the Biology of Vertebrate Sex Determination, April 2009

St. Hillaire

New England Smooth Muscle Society 2008 (gave oral presentation)

Seidl

Atherosclerosis and Vascular Biology 2008 and 2009

New England Smooth Muscle Society 2007

Stanvitch

16th International C. elegans meeting University of California, Los Angeles 2007

Staples

2007 American Society for Mass Spectrometry Annual Conference
2007 Annual Meeting of the Society for Glycobiology

2008 American Society for Mass Spectrometry Annual Conference
2008 Annual Meeting of the Society for Glycobiology

2009 American Society for Mass Spectrometry Annual Conference
6th International Conference in Proteoglycans in Aix-les-Bains.

Tamayo

Protein Misfolding and Misprocessing in Disease 2009 (Poster)

National Meeting of Regional Centers of Excellence for Biodefense and Emerging Infectious Diseases 2008 (Oral Presentation)

European Workshop on Bacterial Toxins 2007 (Poster)

Walsh

MDM2 International Workshop (Woods Hole, MA)- Sept 2007

p53 International Workshop (Shanghai) - Oct 2008

MDM2 International Workshop Ghent, Belgium.

Wang, Jing

The American Society for Virology 27th Annual Meeting. 2008. July

Yu, Ziang

The Era of Hope meeting for the Department of Defense (DOD) Breast Cancer Research Program (BCRP), June 2008, Baltimore, MD

Check out recent published papers written by current and former CMB students in the past

Kurtagic E, Jedrychowski MP and MA Nugent. Neutrophil elastase cleaves VEGF fragment with altered activity. *Am J Physiol Lung Mol Physiol* 296:534-546, 2009

Kathju S, Satish L, Rabik C, Rupert T, Oswald D, Johnson S, Hu FZ, Post JC, Ehrlich GD. Identification of differentially expressed genes in scarless wound healing utilizing polymerase chain reaction-suppression subtractive hybridization. *Wound Repair Regen.* 2006 Jul-Aug;14(4):413-20.

Gaidos G, Soni S, Oswald DJ, Toselli PA, Kirsch KH. Structure and function analysis of the CMS/CIN85 protein family identifies actin-bundling properties and heterotypic-complex formation. *J Cell Sci.* 2007 Jul 15;120(Pt 14):2366-77.

Satish L, Abdulally A, Oswald D, Johnson S, Hu FZ, Post JC, Ehrlich GD, Kathju S. Differential expression of chaperonin containing T-complex polypeptide (CCT) subunits during fetal and adult skin wound healing. *Cell Stress Chaperones.* 2008 Dec;13(4):527-33. Epub 2008 May 9.

Qui W., J Wu, EM Walsh, Y Zhang, C-Y Chen, J Fujita, and Z-XJ Xiao (2008) Retinoblastoma protein modulates gankyrin-MDM2 in regulation of p53 stability and chemosensitivity in cancer cells. *Oncogene*, 27:4034-43.

Du W, Wu J, Walsh EM, Zhang Y, Chen CY, Xiao ZX. (2009) Nutlin-3a affects expression and function of retinoblastoma protein: a role of retinoblastoma protein in cellular response to nutlin-3a, *JBC*, [Epub]

Tamayo AG, Bharti A, Harrison R, Trujillo C and Murphy JR. (2008) COPI coatamer complex proteins facilitate the translocation of Anthrax Lethal Factor across vesicular

membranes in vitro. *Proc Natl Acad Sci USA*. 102(13) p. 5254-59.

Trujillo C, Ratts R, Tamayo A, Harrison R and Murphy JR (2006) Trojan Horse or Proton Force: Finding the Right Partner(s) for Toxin Translocation. *Neurotoxicity Research*. 9(2, 3). p. 63-71.

Harrison R, Trujillo C, Tamayo AG and Murphy JR. (2006) "Host cell factors involved in diphtheria toxin catalytic domain entry into eukaryotic cells." *Crossroads Between Bacterial Protein Toxins and Host Cell Defences*. Ed. Carla Fiorentini, Sara Travaglione and Alessia Fabbri. Kerala, India: Transworld Res Network, p. 17-41.

Chitalia VC, Foy RL, Bachschmid MM, Zeng L, Panchenko MV, Zhou MI, Bharti A, Seldin DC, Lecker SH, Dominguez I, Cohen HT. Jade-1 inhibits Wnt signalling by ubiquitylating beta-catenin and mediates Wnt pathway inhibition by pVHL. *Nat Cell Biol*. 2008 10(10):1208-16.

Basu A, Contreras AG, Datta D, Flynn E, Zeng L, Cohen HT, Briscoe DM, Pal S. Overexpression of vascular endothelial growth factor and the development of post-transplantation cancer. *Cancer Res*. 2008 68(14):5689-98.

Zeng LL, Yu L, Li ZY, Perrett S, Zhou JM. Effect of C-terminal truncation on the molecular chaperone function and dimerization of Escherichia coli trigger factor. *Biochimie*. 2006 88(6):613-9.

Lee HJ, Pazin DE, Kahlon RS, Correa SM, Albrecht KH. (2009) Novel markers of early ovarian pre-granulosa cells are expressed in an *Sry*-like pattern. *Developmental Dynamics*. 238:812-825.

Liu P, Pazin DE, Merson RR, Albrecht KH, Vaziri C. (2009) The developmentally-regulated *Smoc2* gene is repressed by aryl-hydrocarbon receptor (Ahr) signaling. *Gene* 433:72-80

Lam A, Pazin DE, and Sullivan BA. Control of Gene Expression and Chromosomal Subdomains by Chromatin Regulators with Antagonistic Functions. *Chromosoma*. 2005 Sep;114(4):242-51.

Raychaudhury S, Farelli JD, Montminy TP, Matthews M, Ménétret JF, Duménil G, Roy CR, Head JF, Isberg RR, Akey CW. (2009) Structure and function of interacting IcmR-IcmQ domains from a type IVb secretion system in *Legionella pneumophila*. *Structure*. Apr 15;17(4):590-601.

Staples, G., Bowman, M., Costello, C.E., Hitchcock, A., Lau, J., Leymarie, N., Miller, C., Naimy, H., Shi, X., and Zaia, J. (2008) A Chip-based Amide-HILIC LC/MS Platform for Glycosaminoglycan Glycomics Profiling. *Proteomics*, 9 (3) 686-695.

Hitchcock, A., Bowman, M., Staples, G., and Zaia, J. (2008) Improved Workup for Glycosaminoglycan Disaccharide Analysis using Capillary Electrophoresis with Laser-Induced Fluorescence Detection. *Electrophoresis*, 29 (22) 4538-4548.

Naimy H and Zaia J. Characterization of Heparin Oligosaccharides Binding Specifically to Antithrombin III Using Mass Spectrometry. *Biochemistry*, 2008, 47 (10), pp 3155–3161

T Liu, B Hannafon, L Gill, W Kelly, D Benbrook (2007) "Flex-Hets Differentially Induce Apoptosis in Cancer over Normal Cells by Directly Targeting Mitochondria." *Molecular Cancer Therapeutics* 6: 1814-22

Zhang, J., Wang, J., Liu, Y. et al. (2009). Oncogenic Kras-induced leukemogenesis: hematopoietic stem cells as the initial target and lineage-specific progenitors as the potential targets for final leukemic transformation. *Blood* 113, 1304-1314.

Gao F., Ponte J., Levy, M, Papageorgis P., Ozturk S., Lambert AW., Thiagalingam A., Abdolmaleky H., Sullivan BA. (2009) and Thiagalingam S. hBub1 deficiency triggers a novel p53 mediated early apoptotic checkpoint pathway in mitotic spindle damaged cells. *Cancer Biol Ther*. Apr 1 8(7).

Gao F., Ponte J., Papageorgis P., Levy, M., Cook NM., Ozturk S., Lambert AW., Pan H., Chinnapan D., Cheng KH., Thiagalingam A., Abdolmaleky H. and Thiagalingam S. (2009) hBub1 negatively regulates p53 mediated early cell death upon mitotic checkpoint

activation. *Cancer Biol Ther.* Apr 1 8(7).

Thiagalingam S. and Papageorgis P. (2008) DNA methylation profiles as prognostic markers for cancer. *Cancer Epigenetics* 335-348 Taylor & Francis,

Pan H, Gao F, Papageorgis P., Abdolmaleky HM, Faller DV, Thiagalingam S. Aberrant activation of beta-catenin promotes genomic instability and oncogenic effects during cancer progression. *Cancer Biol Ther.* 2007 Oct 6; (10):1638-43, 2007.

Abdolmaleky HM, Cheng KH, Faraone SV, Wilcox M, Glatt SJ. Gao F, Smith CL, Shafa R, Aeali B, Carnevale J, Pan H, Papageorgis P., Ponte JF, Sivaraman V, Tsuang MT, Thiagalingam S. Hypomethylation of MB-COMT promoter is a major risk factor for schizophrenia and bipolar disorder. *Hum Mol Genet.* 2006 Nov 1; 15(21):3132-45, 2006.

Wong GW, Krawczyk SA., Kitidis C, Ge G, Hug C, Gimeno R, and Lodish HF. (2009) Identification and characterization of CTRP9, a novel secreted glycoprotein from adipose tissue that reduces serum glucose in mice and forms heterotrimers with Adiponectin. *FASEB J.* 1:24-58

Wong GW, Krawczyk SA., Kitidis-Mitrokostas C, Gimeno R, Revett T, and Lodish HF. Molecular, Biochemical, and Functional Characterizations of C1q/TNF Family Members: Adipose tissue-selective expression patterns, regulation by PPAR-gamma agonist, Cys-mediated oligomerizations, combinatorial associations, and metabolic functions. *Biochem. J.*, 2008 416(2):161-77.

Heart E.; Yaney G. C.; Corkey R. F.; Schultz V.; Luc E.; Liu L.; Deeney J.T.; Shiriha O.; Tornheim K.; Smith P. J.; Corkey B. E. (2007). Ca²⁺, NAD(P)H and membrane potential changes in pancreatic beta-cells by methyl succinate: comparison with glucose. *Biochem J.* 403, 197-205.

Partha Chakrabarti. Takatoshi Anno, Brendan Manning, Zhijun Luo and Konstantin V. Kandror. The mammalian target of rapamycin complex 1 regulates

leptin biosynthesis in adipocytes at the level of translation: the role of the 5'-untranslated region in the expression of leptin messenger ribonucleic acid. (2008) *Mol. Endocrinol.* 22: 2260-67

Ramkrishna Gupta, Partha Chakrabarti., Madhu Dikshit and Debabrata Dash. Late signaling in the activated platelets upregulates tyrosine phosphatase SHP1 and impairs platelet adhesive functions: Regulation by calcium and Src kinase. (2007) *Biochim. Biophys. Acta*, 1773: 131-40

Gerald Stanvitch and Landon L. Moore (2008). cin-4, a gene with homology to topoisomerase II, is required for centromere resolution by cohesin removal from sister kinetochores during mitosis. *Genetics* 178(1):83-97

Moore, L.L., G. Stanvitch., M.B. Roth, and D. Rosen (2005). HCP-4/CENP-C Promotes the Prophase Timing of Centromere Resolution by Enabling the Centromere Association of HCP-6 in *Caenorhabditis elegans*. *Mol. Cell. Biol.* 25: 2583- 2592

Ziyang Yu., Yingshe Zhao, Bor-Tyh Lin, Shefali Soni, Chengyin Min, Siddarth Vora, July Palmer, Lynn Rosenberg, Philip C. Trackman, Gail E. Sonenshein and Kathrin H. Kirsch. Inhibition of Adapter Type Molecule p130^{Cas} Signaling in Breast Cancer. The Era of Hope meeting for the Department of Defense (DOD) Breast Cancer Research Program (BCRP), June 2008, Baltimore, MD.

Wu, M, Min, C, Wang, X, Yu, Z., Kirsch KH, Trackman PC, Sonenshein GE. Repression of BCL2 by the tumor suppressor activity of the lysyl oxidase propeptide inhibits transformed phenotype of lung and pancreatic cancer cells. *Cancer Res.* 2007 Jul 1;67(13):6278-85.

D Benbrook, S Kamelle, S Guruswamy, S Lightfoot, T Rutledge, N Gould, B Hannafon., S. T. Dunn, K. D. Berlin. (2005) "Flexible heteroarotinoids (Flex-Hets) Exhibit Improved Therapeutic Ratios as Anti-Cancer Agents over Retinoic Acid Receptor Agonists." *Investigational New Drugs* 23: 417-428

Sengupta P, Xu Y, Wang L, Widom R, Smith BD. Collagen alpha1(I) gene (COL1A1) is repressed by RFX family. *J Biol Chem*. 2005 Jun 3;280(22):21004-14.

Shi J, Kandrор KV. Sortilin is essential and sufficient for the formation of Glut4 storage vesicles in 3T3-L1 adipocytes. *Dev Cell*. 2005 Jul;9(1):99-108.

Chandramohan V, Jeay S, Pianetti S, Sonenshein GE. Reciprocal control of Forkhead box O 3a and c-Myc via the phosphatidylinositol 3-kinase pathway coordinately regulates p27Kip1 levels. *J Immunol*. 2004 May 1;172(9):5522-7.

Zhou MI, Foy RL, Chitalia VC, Zhao J, Panchenko MV, Wang H, Cohen HT. Jade-1, a candidate renal tumor suppressor that promotes apoptosis. *Proc Natl Acad Sci U S A*. 2005 Aug 2;102(31):11035-40.

Boucher I, Yang L, Mayo C, Klepeis V, Trinkaus-Randall V. Injury and nucleotides induce phosphorylation of epidermal growth factor receptor: MMP and HB-EGF dependent pathway. *Exp Eye Res*. 2007 Mar 31; [Epub ahead of print]

Li LV, Kandrор KV. Golgi-localized, gamma-ear-containing, Arf-binding protein adaptors mediate insulin-responsive trafficking of glucose transporter 4 in 3T3-L1 adipocytes. *Mol Endocrinol*. 2005 Aug;19(8):2145-53.

Mork CN, Faller DV, Spanjaard RA. A mechanistic approach to anticancer therapy: targeting the cell cycle with histone deacetylase inhibitors. *Curr Pharm Des*. 2005;11(9):1091-104. Review.

Doerre S, Mesires KP, Daley KM, McCarty T, Knoetig S, Corley RB. Reductions in I kappa B epsilon and changes in NF-kappa B activity during B lymphocyte differentiation. *J Immunol*. 2005 Jan 15;174(2):983-91.

Pirani A, Xu C, Hatch V, Craig R, Tobacman LS, Lehman W. Single particle analysis of relaxed and activated muscle thin filaments. *J Mol Biol*. 2005 Feb 25;346(3):761-72.

Bi X, Slater DM, Ohmori H, Vaziri C. DNA polymerase kappa is specifically required for recovery from the benzo[a]pyrene-dihydrodiol epoxide (BPDE)-induced S-phase checkpoint. *J Biol Chem*. 2005 Jun 10;280(23):22343-55.

Liu P, Barkley LR, Day T, Bi X, Slater DM, Alexandrow MG, Nasheuer HP, Vaziri C. The Chk1-mediated S-phase checkpoint targets initiation factor Cdc45 via a Cdc25A/Cdk2-independent mechanism. *J Biol Chem*. 2006 Oct 13;281(41):30631-44. Epub 2006 Aug 15. PMID: 16912045

Bi X, Barkley LR, Slater DM, Tateishi S, Yamaizumi M, Ohmori H, Vaziri C. Rad18 regulates DNA polymerase kappa and is required for recovery from S-phase checkpoint-mediated arrest. *Mol Cell Biol*. 2006 May;26(9):3527-40. PMID: 16611994

Hosaka T, Brooks CC, Presman E, Kim SK, Zhang Z, Breen M, Gross DN, Sztul E, Pilch PF. p115 Interacts with the GLUT4 vesicle protein, IRAP, and plays a critical role in insulin-stimulated GLUT4 translocation. *Mol Biol Cell*. 2005 Jun;16(6):2882-90.

Nagata Y, Jones MR, Nguyen HG, McCran DJ, St Hilaire C, Schreiber BM, Hashimoto A, Inagaki M, Earnshaw WC, Todokoro K, Ravid K. Vascular smooth muscle cell polyploidization involves changes in chromosome passenger proteins and an endomitotic cell cycle. *Exp Cell Res*. 2005 May 1;305(2):277-91.

Lam AL, Pazin DE, Sullivan BA. Control of gene expression and assembly of chromosomal subdomains by chromatin regulators with antagonistic functions. *Chromosoma*. 2005 Jul 13;:1-10

Moore LL, Stanvitch G, Roth MB, Rosen D. HCP-4/CENP-C promotes the prophase timing of centromere resolution by enabling the centromere association of HCP-6 in *Caenorhabditis elegans*. *Mol Cell Biol*. 2005 Apr;25(7):2583-92.

Zuo Y, Qiang L, Farmer SR. Activation of CCAAT/enhancer-binding protein (C/EBP) alpha expression by C/EBP beta during adipogenesis requires a peroxisome

proliferator-activated receptor-gamma-associated repression of HDAC1 at the C/ebp alpha gene promoter. *J Biol Chem*. 2006 Mar 24;281(12):7960-7.

Qiang L, Farmer SR. C/EBPalpha-dependent induction of glutathione S-transferase zeta/maleylacetoacetate isomerase (GSTzeta/MAAI) expression during the differentiation of mouse fibroblasts into adipocytes. *Biochem Biophys Res Commun*. 2006 Feb 17;340(3):845-51.

Qiang L, Wang H, Farmer SR. Adiponectin Secretion Is Regulated by SIRT1 and the Endoplasmic Reticulum Oxidoreductase Ero1-L{alpha}. *Mol Cell Biol*. 2007 Jul;27(13):4698-707. Epub 2007 Apr 23.

Poole KJ, Lorenz M, Evans G, Rosenbaum G, Pirani A, Craig R, Tobacman LS, Lehman W, Holmes KC. A comparison of muscle thin filament models obtained from electron microscopy reconstructions and low-angle X-ray fibre diagrams from non-overlap muscle. *J Struct Biol*. 2006 Aug;155(2):273-84. Epub 2006 May 7.

Pirani A, Xu C, Hatch V, Craig R, Tobacman LS, Lehman W. Single particle analysis of relaxed and activated muscle thin filaments. *J Mol Biol*. 2005 Feb 25;346(3):761-72. Epub 2005 Jan 11. PMID: 15713461

Ying J, Tong X, Pimentel DR, Weisbrod RM, Trucillo MP, Adachi T, Cohen RA. Cysteine-674 of the sarco/endoplasmic reticulum calcium ATPase is required for the inhibition of cell migration by nitric oxide. *Arterioscler Thromb Vasc Biol*. 2007 Apr;27(4):783-90. Epub 2007 Jan 18.

Xu S, Ying J, Jiang B, Guo W, Adachi T, Sharov V, Lazar H, Menzoian J, Knyushko TV, Bigelow D, Schoneich C, Cohen RA. Detection of sequence-specific tyrosine nitration of manganese SOD and SERCA in cardiovascular disease and aging. *Am J Physiol Heart Circ Physiol*. 2006 Jun;290(6):H2220-7. Epub 2006 Jan 6. PMID: 16399855

Heart E, * Yaney GC, * Corkey RF, * Schultz V, * Luc E, * Liu L, * Deeney JT, * Shirihai O, * Tornheim K, * Smith PJ, * Corkey BE. Ca²⁺, NAD(P)H and membrane potential

changes in pancreatic beta-cells by methyl succinate: comparison with glucose. *Biochem J*. 2007 Apr 1;403(1):197-205

Yang D, McCran DJ, Nguyen H, Hilaire CS, Depinho RA, Jones MR, Ravid K. Increased polyploidy in aortic vascular smooth muscle cells during aging is marked by cellular senescence. *Aging Cell*. 2007 6(2):257-60.

* Voetsch B, * Jin RC, * Bierl C, * Benke KS, * Kenet G, * Simioni P, * Ottaviano F, * Damasceno BP, * Annichino-Bizacchi JM, * Handy DE, * Loscalzo Promoter polymorphisms in the plasma glutathione peroxidase (GPx-3) gene: a novel risk factor for arterial ischemic stroke among young adults and children. *J.Stroke*. 2007 Jan;38(1):41-9. Epub 2006 Nov 22. Comment in: *Stroke*. 2007 Jan;38(1):6.

Abdolmaleky HM, Cheng KH, Faraone SV, Wilcox M, Glatt SJ, Gao F, Smith CL, Shafa R, Aeali B, Carnevale J, Pan H, Papageorgis P, Ponte JF, Sivaraman V, Tsuang MT, Thiagalingam S. Hypomethylation of MB-COMT promoter is a major risk factor for schizophrenia and bipolar disorder. *Hum Mol Genet*. 2006 Nov 1;15(21):3132-45. Epub 2006 Sep 19.

Trujillo C, * Ratts R, * Tamayo A, * Harrison R, * Murphy JR. Trojan horse or proton force: finding the right partner(s) for toxin translocation. *Neurotox Res*. 2006 Apr;9(2-3):63-71.

Ratts R, Trujillo C, Bharti A, vanderSpek J, Harrison R, Murphy JR. A conserved motif in transmembrane helix 1 of diphtheria toxin mediates catalytic domain delivery to the cytosol. *Proc Natl Acad Sci U S A*. 2005 Oct 25;102(43):15635-40. Epub 2005 Oct 17.

O'Callaghan-Sunol C, Gabai V, Sherman MY. Heat Shock Transcription Factor (HSF1) Plays a Critical Role in Cell Migration via Maintaining MAP Kinase Signaling. *Cell Cycle*. 2006 Jul;5(13):1431-7. Epub 2006 Jul 1.

Basagoudanavar SH, Perlman DH, Hu J. Regulation of hepadnavirus reverse transcription by dynamic nucleocapsid

phosphorylation. J Virol. 2007 Feb;81(4):1641-9. Epub 2006 Nov 29. PMID: 17135319 [

Madico G, Welsch JA, Lewis LA, McNaughton A, Perlman DH, Costello CE, Ngampasutadol J, Vogel U, Granoff DM, Ram S. The meningococcal vaccine candidate GNA1870 binds the complement regulatory protein factor H and enhances serum resistance. J Immunol. 2006 Jul 1;177(1):501-10. PMID: 16785547

Perlman DH, Berg EA, O'connor PB, Costello CE, Hu J. Reverse transcription-associated dephosphorylation of hepadnavirus nucleocapsids. Proc Natl Acad Sci U S A. 2005 Jun 21;102(25):9020-5. Epub 2005 Jun 10. PMID: 15951426 [

Szepessy E, Sahin-Toth M. Human mesotrypsin exhibits restricted S1' subsite specificity with a strong preference for small polar side chains. FEBS J. 2006 Jul;273(13):2942-54. Epub 2006 Jun 5.

Witt H, Sahin-Toth M, Landt O, Chen JM, Kahne T, Drenth JP, Kukor Z, Szepessy E, Halangk W, Dahm S, Rohde K, Schulz HU, Le Marechal C, Akar N, Ammann RW, Truninger K, Bargetzi M, Bhatia E, Castellani C, Cavestro GM, Cerny M, Destro-Bisol G, Spedini G, Eiberg H, Jansen JB, Koudova M, Rausova E, Macek M Jr, Malats N, Real FX, Menzel HJ, Moral P, Galavotti R, Pignatti PF, Rickards O, Spicak J, Zarnescu NO, Bock W, Gress TM, Friess H, Ockenga J, Schmidt H, Pfitzer R, Lohr M, Simon P, Weiss FU, Lerch MM, Teich N, Keim V, Berg T, Wiedenmann B, Luck W, Groneberg DA, Becker M, Keil T, Kage A, Bernardova J, Braun M, Guldner C, Halangk J, Rosendahl J, Witt U, Treiber M, Nickel R, Ferec C. A degradation-sensitive anionic trypsinogen (PRSS2) variant protects against chronic pancreatitis. Nat Genet. 2006 Jun;38(6):668-73. Epub 2006 May 14.

Kiraly O, Guan L, Szepessy E, Toth M, Kukor Z, Sahin-Toth M. Expression of human cationic trypsinogen with an authentic N terminus using intein-mediated splicing in aminopeptidase P deficient Escherichia coli. Protein Expr Purif. 2006 Jul;48(1):104-11. Epub 2006 Feb 21. PMID:

Szepessy E, Sahin-Toth M. Inactivity of recombinant ELA2B provides a new example of evolutionary elastase silencing in humans. Pancreatol. 2006;6(1-2):117-22. Epub 2005 Dec 1.