

Brain Cancer Molecular Medicine Laboratory (BCMML)

Publications

1. **Mehrian R**, Quismorio FP Jr, Strassmann G, Stimmler MM, Horwitz DA, Kitridou RC, Gauderman WJ, Morrison J, Brautbar C, Jacob CO. *Synergistic effect between IL-10 and bcl-2 genotypes in determining susceptibility to systemic lupus erythematosus.* **Arthritis Rheum** 1998; 41: 596-602.
2. **Shai R**, Quismorio FP, Li L, Kwon OJ, Morrison J, Wallace DJ, Neuwelt CM, Brautbar C, Gauderman WJ, Jacob CO. *Genome-wide screen for systemic lupus erythematosus susceptibility genes in multiplex families.* **Human Molecular Genetics.** 1999; 8: 639-44.
3. **Shai R**, Mischel PS, Shi T, Horvath S, Lu KV, Choe G, Seligson D, Kremen TJ, Palotie A, Liao LM, Cloughesy TF, Nelson SF. *Identification of molecular subtypes of glioblastoma by gene expression profiling.* **Oncogene** 2003 Apr 17; 22(15): 2361-73. (Oncology 14/165 Genetics & Heredity 14/144 Cell Biology 24/161 Biochemistry & Molecular Biology 29/283, **IF 7.1**)
4. **Shai R**, Shi T, Kremen TJ, Horvath S, Liao LM, Cloughesy TF, Mischel PS, Nelson SF. *Gene expression profiling identifies molecular subtypes of gliomas.* **Oncogene** 2003 Jul 31; 22(31): 4918-23.
5. **Shai R**, Reichardt J. *A Renaissance of "Biochemical Genetics"? SNPs, Haplotypes, Function and Complex Diseases.* **Molec. Genet. Metabol.** 2004; Aug. 83: 47-50.
6. **Mehrian Shai R**, Reichardt J, Hsu Y, Kremen T, Liao L, Cloughesy T, Mischel P, Nelson S. *Robustness of gene expression profiling in glioma specimen samplings and derived cell lines.* **Molec. Brain Res.** 2005. 136: 99-103.
7. Ji C, **Mehrian-Shai R**, Chan C, Hsu Y, Kaplowitz N. *Role of CHOP in hepatic apoptosis in the murine intragastric ethanol fed model.* **Alcohol Clin Exp Res.** 2005 Aug; 29(8):1496-503.
8. **Mehrian Shai R.** *Microarray tools for deciphering complex diseases.* **Frontiers in Bioscience.** 2006 May 1, 11, 1414-1424.
9. Pike BL, Groshen S, Hsu YH, **Shai RM**, Wang X, Holtan N, Futscher BW, Hacia JG. *Comparisons of PCR-based genome amplification systems using CpG island microarrays.* **Hum Mutation.** 2006 May 1;27(6):589-596.

10. Rodgers KE; Ellefson DD; Espinoza T; Hsu Y; diZerega GS; **Mehrian-Shai R**. *Expression of intracellular filament, collagen, and collagenase genes in diabetic and normal skin after injury*. **Wound Rep Reg** 2006, 14 298–305.
11. **Mehrian Shai R** and Reichardt JKV. *Genomics in breast and prostate cancer: assessment of the current state and future perspectives*. **Future Oncology** 2006, 2 (3), 357–362.
12. Mendoza G, Pemberton TJ, Lee K, Scarel-Caminaga R, **Mehrian-Shai R**, Gonzalez-Quevedo C, Ninis V, Hartiala J, Allayee H, Snead ML, Leal SM, Line SRP and Patel PI (2006) *A new locus for autosomal dominant amelogenesis imperfecta on chromosome 8q24.3*. **Hum Genet** 2006 sep 21.
13. Mahller YY, Vaikunth SS, Currier MA, Miller SJ, Ripberger MC, Hsu Y, **Mehrian-Shai R**, Margaret H Collins, Timothy M Crombleholme, Nancy Ratner, Timothy P Cripe. *Oncolytic HSV and Erlotinib Inhibit Tumor Growth and Angiogenesis in a Novel Malignant Peripheral Nerve Sheath Tumor Xenograft Model*. **Molecular Therapy** 2007, Feb;15(2):279–286.
14. **Mehrian Shai R**, Chen C, Tao S, Horvath S, Nelson SF, Reichardt JKV, Sawyer CL. *IGFBP2 is a Biomarker for PTEN Status and PI3K/Akt Pathway Activation in Glioblastoma and Prostate Cancer*. **Proc Natl Acad Sci U S A**. 2007 Mar 27;104(13):5563–8. Epub 2007 Mar 19.
15. Pemberton TJ, Li F, Hsu Y, Oka S, Mendoza GA, Bringas P, Chai Y, Snead ML, **Mehrian-Shai R**, and Patel PI. *Identification of novel genes expressed during mouse molar tooth development by microarray gene expression*. **Developmental Dynamics** 2007 Aug 236 (8): 2245–57.
16. Qiao R, Yan W, Clavijo C, **Mehrian-Shai R**, Kim K, Ann D, Crandall ED and Borok Z. *Effects of KGF on alveolar epithelial cell transdifferentiation are mediated by JNK signaling*. *American Thoracic Society*. **Am. J. Respir. Cell Mol. Biol.** 2007 Sep 13.
17. Pike BL, Greiner TC, Weisenburger DD, Smith LM, Lynch JC, Vose JM, Wang X, Hsu Y, **Mehrian Shai R**, Wolfsberg TG, Kim M, Weisenberger DJ, Ye W, Siegmund KD, Groshen S, Armitage JO, Chan WC, Laird PW, & Hacia JG. *DNA methylation profiles in diffuse large B-cell lymphoma and their relationship to gene expression status*. **Leukemia**. 2008 Feb 21.
18. Mahller YY, Baird SB, Aronow BJ, Hsu Y, Cripe TP, **Mehrian-Shai R**. *Molecular Analysis of Human Cancer Cells Infected by an Oncolytic HSV-1 Reveals a Role For SOCS1 in Virus Replication*. **Cancer Gene Therapy**. (2008), 1–9.
19. **Mehrian Shai R**, Reichardt JKV and Chen T. *Pharmacogenomics of Brain Cancer*. **Future Oncology** 2008 Aug; 4(4):525–34.

20. Reichardt JKV and **Mehrian-Shai R**. *The Future of the Human Genomics Research: Manna from Heaven or Still Largely Unfulfilled Promises?* **Science**. E-Letter online. July 3, 2008.
21. Li P, Tong C, **Mehrian-Shai R**, Jia L, Wu N, Yan Y, Maxson RE, Schulze EN, Song H, Hsieh CL, Pera MF, Ying QL. *Germline Competent Embryonic Stem Cells Derived from Rat Blastocysts*. **Cell** 2008 Dec 26; 135(7):1299-310.
22. Williams C, **Mehrian Shai R**, Wu Y, Spann B, McCleary C, Sitzer T, Mo Y and Miller CA. *Transcriptome Analysis of Synaptoneurosomes Identifies Neuroplasticity Genes Overexpressed in Incipient Alzheimer's Disease*. **PLoS ONE**. 2009;4(3):e4936. Epub 2009 Mar 19.
23. Namjou B, Sestak AL, Armstrong DL, Zidovetzki R, Kelly JA, Jacob N, Ciobanu V, Kaufman KM, Ojwang JO, Ziegler J, Quismorio FP Jr, Reiff A, Myones BL, Guthridge JM, Nath SK, Bruner GR, **Mehrian-Shai R**, Silverman E, Klein-Gitelman M, McCurdy D, Wagner-Weiner L, Nocton JJ, Putterman C, Bae SC, Kim YJ, Petri M, Reveille JD, Vyse TJ, Gilkeson GS, Kamen DL, Alarcón-Riquelme ME, Gaffney PM, Moser KL, Merrill JT, Scofield RH, James JA, Langefeld CD, Harley JB, Jacob CO. *High-density genotyping of STAT4 reveals multiple haplotypic associations with systemic lupus erythematosus in different racial groups*. **Arthritis Rheum**. 2009 Apr; 60(4):1085-95.
24. Reichardt JK, **Mehrian-Shai R**. *The future of the human SNP identification: which individuals to sequence?* **Proc Natl Acad Sci U S A**. 2009 May 12; 106(19):E50 Epub 2009 Apr 29.
25. Boris Z. Simkhovich, Michael T. Kleinman, **Ruty Mehrian-Shai**, Ya-Hsuan Hsu, Dianne Meacher, Glenn Gookin, Michael Mac Kinnon, Karina Salazar, Paul Willet & Gang Feng, Simon M. Lin, Robert A. Kloner. *Chronic exposure to ambient particulate matter alters cardiac gene expression patterns and markers of oxidative stress in rats*. **Air Qual Atmos Health** 2010 December DOI 10.1007/s11869-010-0089-0.
26. Amos Toren, Juergen K Reichardt, Ali Andalibi, Nancy Ya-Hsuan Hsu, Joni Doherty, William Slattery and **Ruty Mehrian-Shai**. *Novel age-dependent targets in vestibular schwannomas*. **Human Genomics** 2014, 8:10 doi:10.1186/1479-7364-8-10.
27. **Ruty Mehrian-Shai**, Shany Freedman, Soheil Shams, Joni Doherty, William Slattery, Nancy Ya-Hsuan Hsu, Juergen KV Reichardt, Ali Andalibi, Amos Toren. *Schwannomas exhibit distinct size dependent gene expression patterns*. **Future Oncology** 2015 11, 1751-1758
28. **Ruty Mehrian-Shai**, Michal Yalon, Amos J. Simon, Eran Eyal, Tatyana Pismenyuk, Itai Moshe, Shlomi Constantini, Amos Toren. *High metallothionein predicts poor survival in glioblastoma multiforme*. **BMC Medical Genomics** 2015 Oct 22;8(1):68.

29. **Ruty Mehrian-Shai**, Juergen K. V. Reichardt. *Genomics is changing personal healthcare and medicine: the dawn of iPH (individualized preventive healthcare)*. **Hum Genomics**. 2015 Nov 4;9(1):29.
30. **Ruty Mehrian-Shai**, Michal Yalon, Itai Moshe, Iris Barshack, Dvorah Nass, Jasmine Jacob, Chen Dor, Juergen K. V. Reichardt, Shlomi Constantini, Amos Toren. *Identification of Genomic Aberrations in Hemangioblastoma by Droplet Digital PCR and SNP Microarray Highlights Novel Candidate Genes and Pathways for Pathogenesis*. **BMC Genomics** 2016, 17:56 DOI: 10.1186/s12864-016-2370-6.
31. Toren A, Pismenyuk T, Yalon M, Freedman S, Simon AJ, Fisher T, Moshe I, Reichardt JK, Constantini S, Mardor Y, Last D, Guez D, Daniels D, Assoulin M, **Mehrian-Shai R**. *Zinc Enhances Temozolomide Cytotoxicity in Glioblastoma Multiforme Model System*. **Oncotarget** 2016, Nov 15;7.
32. Bella Bielorai, Moshe Leitner, Gal Goldstein, **Ruty Mehrian-Shai**, Luba Trakhtenbrot, Tamar Fisher, Victoria Marcu, Michal Yalon, Ginette Schiby, Ortal Barel, Nitzan Cal, Hana Golan and Amos Toren. *Sustained response to imatinib in a pediatric patient with concurrent myeloproliferative disease and lymphoblastic lymphoma associated with a CCDC88C- PDGFRB fusion gene*. **Acta Hematologica** 2019; 141:119-127.
33. Yalon M, Toren A, Jabarin D, Fadida E, Constantini S, **Mehrian-Shai R**. *Elevated NLR May Be a Feature of Pediatric Brain Cancer Patients*. **Front Oncol**. 2019 Apr 30;9:327. doi: 10.3389/fonc.2019.00327. eCollection 2019.
34. Baynam GS, Groft S, van der Westhuizen FH, Gassman SD, du Plessis K, Coles EP, Selebatso E, Selebatso M, Gaobinelwe B, Selebatso T, Joel D, Llera VA, Vorster BC, Wuebbels B, Djoudalbaye B, Austin CP, Kumuthini J, Forman J, Kaufmann P, Chipeta J, Gavhed D, Larsson A, Stojiljkovic M, Nordgren A, Roldan EJA, Taruscio D, Wong-Rieger D, Nowak K, Bilkey GA, Easteal S, Bowdin S, Reichardt JKV, Beltran S, Kosaki K, van Karnebeek CDM, Gong M, Shuyang Z, **Mehrian-Shai R**, Adams DR, Puri RD, Zhang F, Pachter N, Muenke M, Nellaker C, Gahl WA, Cederroth H, Broley S, Schoonen M, Boycott KM, Posada M. *A call for global action for rare diseases in Africa*. **Nat Genet**. 2020 Jan;52(1):21-26. doi: 10.1038/s41588-019-0552-2. PMID: 31873296.
35. **Ruty Mehrian-Shai**, Juergen K. V. Reichardt , Curtis C. Harris , Amos Toren. *The Gut-Brain Axis, Paving the Way to Brain Cancer*. Trends in Cancer. **Trends in Cancer** 2019 Ap.15 4 200-207.
36. **Mehrian-Shai R**, Novelli G, Vasiliou V, Watt J, Reichardt JKV. *Genomics of COVID-19: molecular mechanisms going from susceptibility to severity of the disease*. **Hum Genomics**. 2020 Jun 10;14(1):22. doi: 10.1186/s40246-020-00273-5. PMID: 32522249; PMCID: PMC7283035.

37. Giuseppe Novelli , Michela Biancolella, **Ruty Mehrian-Shai**, Caroline Erickson, Krystal J. Godri Pollitt, Vasilis Vasiliou, Jessica Watt and Juergen K. V. Reichardt. *COVID-19 update: the first 6 months of the pandemic*. **Human Genomics** (2020) 14:48 <https://doi.org/10.1186/s40246-020-00298>.
38. **R Mehrian-Shai**, D Rogachevsky, PA Stempor, A Toren, P Dobosz. *Immune checkpoint genes expression vary among paediatric an adult glioblastoma models*. *European Journal Of Human Genetics* 2020, 28, 525-526.
39. **Mehrian-Shai, R**. *A rational approach to COVID-19*. **Hum Genomics** 14, 47 (2020). <https://doi.org/10.1186/s40246-020-00300-5>.
40. **Mehrian-Shai, R**. *NextGen--Beyond DNA: The rest of the story*. **Science** 371 (6529), 560-563. Feb.5.2021 DOI: 10.1126/science.abg5843.
41. Giuseppe Novelli, Michela Biancolella, **Ruty Mehrian-Shai**, Vito Luigi Colona, Anderson F. Brito, Nathan D. Grubaugh, Vasilis Vasiliou, Lucio Luzzatto, Juergen K.V. Reichardt. *COVID-19 one year into the Pandemic: from Genetics and Genomics to Therapy, Vaccination and Policy*. **Hum Genomics**. 2021 HUGM-D-21-0001.
42. Biancolella M, Colona VL, **Mehrian-Shai R**, Watt JL, Luzzatto L, Novelli G, Reichardt JKV. *COVID-19 2022 update: transition of the pandemic to the endemic phase*. **Hum Genomics**. 2022 Jun 1;16(1):19. doi: 10.1186/s40246-022-00392-1. PMID: 35650595; PMCID: PMC9156835. Hum Genomics. 2021 HUGM-D-21-00019R1
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