Stanford



Menashe Elazar

Sr. Research Scientist - Basic Life, Medicine - Med/Gastroenterology and Hepatology

Bio

BIO

I graduated with a Ph.D from the laboratory of Prof. Eliahu Zlotkin at the Hebrew University of Jerusalem, where my research focused on Insect-selective neurotoxins expressing Baculoviruses. In December 2000 I joined the laboratory of Professor Jeffrey Glenn's at Stanford School of Medicine as a postdoctoral fellow. Here my research focused on HCV membrane association, specifically the association of NS5A and NS4B with host cell membranes and its role in HCV replication.

As a Senior Research Scientist at Professor Glenn's lab my interests focus around three major themes:

1. Broad spectrum antivirals targeting host functions
2. Viral genome RNA structures as antiviral targets
3. None Alcoholic Steatohepatitis (NASH) and its progression to hepatocellular carcinoma (HCC)

ACADEMIC APPOINTMENTS

- Sr. Research Scientist - Basic Life, Medicine - Med/Gastroenterology and Hepatology

PROFESSIONAL EDUCATION

- Ph.D., The Hebrew University of Jerusalem , Cell Biology (2000)
- M.Sc., The Hebrew University of Jerusalem , Life Science (1994)
- B.Sc., The Hebrew University of Jerusalem , Biology (1993)

Publications

PUBLICATIONS

- **Programmable antivirals targeting critical conserved viral RNA secondary structures from influenza A virus and SARS-CoV-2.** *Nature medicine*
  Hagey, R. J., Elazar, M., Pham, E. A., Tian, S., Ben-Avi, L., Bernardin-Souibgui, C., Yee, M. F., Moreira, F. R., Rabinovitch, M. V., Meganck, R. M., Fram, B., Beck, A., Gibson, et al
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- **Combination of Novel Therapies for HDV.** *Viruses*
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- **Letter to the Editor regarding article "Emerging concepts for the treatment of hepatitis delta" [Menashe Elazar and Jeffrey S Glenn, Curr Opin Virol 24 (2017) 55-59] Reply** *CURRENT OPINION IN VIROLOGY*
  Elazar, M., Glenn, J.
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- **Quantitative Evaluation of Viral Protein Binding to Phosphoinositide Receptors and Pharmacological Inhibition** *ANALYTICAL CHEMISTRY*
  Kim, S., Jackman, J. A., Elazar, M., Cho, S., Glenn, J. S., Cho, N.
  2017; 89 (18): 9742–50

- **Long-term culture of human liver tissue with advanced hepatic functions.** *JCI insight*
  Ng, S. S., Xiong, A., Nguyen, K., Masek, M., No, D. Y., Elazar, M., Shteyer, E., Winters, M. A., Voedisch, A., Shaw, K., Rashid, S. T., Frank, C. W., Cho, et al
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- **Hepatitis delta infection - Current and new treatment options** *BEST PRACTICE & RESEARCH CLINICAL GASTROENTEROLOGY*
  Elazar, M., Koh, C., Glenn, J. S.
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- **Emerging concepts for the treatment of hepatitis delta.** *Current opinion in virology*
  Elazar, M., Glenn, J. S.
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- **A novel quantitative microarray antibody capture (Q-MAC) assay identifies an extremely high HDV prevalence amongst HBV infected Mongolians.** *Hepatology*
  Chen, X., Oidovsambuu, O., Liu, P., Grosely, R., Elazar, M., Winn, V. D., Fram, B., Boa, Z., Dai, H., Dashtseren, B., Yagaanbuyant, D., Genden, Z., Dashdorj, et al
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- **A SIGNATURE OF ELEVATED IMMUNE ACTIVATION IS OBSERVED IN THE PERIPHERAL BLOOD OF VIRALLY SUPPRESSED, HBeAg-NEGATIVE CHRONIC HBV PATIENTS**
  Frey, C., Palazzo, A., Li, L., Elazar, M., Pham, E., Fram, B., Nguyen, T., Han, H., Elazar, M., Glenn, J., Ahmed, A., Pflanz, S.
  ELSEVIER SCIENCE BV.2015: S530

- **Phosphatidylinositol 4,5-Bisphosphate Is an HCV NS5A Ligand and Mediates Replication of the Viral Genome.** *Gastroenterology*
  Cho, N., Lee, C., Pang, P. S., Pham, E. A., Fram, B., Nguyen, K., Xiong, A., Sklan, E. H., Elazar, M., Koytak, E. S., Kersten, C., Kanazawa, K. K., Frank, et al
  2015; 148 (3): 616-625

- **The interaction between the Hepatitis C proteins NS4B and NS5A is involved in viral replication.** *Virology*
  David, N., Yaffe, Y., Hagoel, L., Elazar, M., Glenn, J. S., Hirschberg, K., Sklan, E. H.
  2015; 475: 139-149

- **HCV NS5A Inhibitors: The Devil Is in the Details** *GASTROENTEROLOGY*
  Elazar, M., Glenn, J. S.
  2014; 147 (2): 273–77

- **The Anti-Genomic (Negative) Strand of Hepatitis C Virus Is Not Targetable by shRNA**
  Lisowski, L., Elazar, M., Chu, K., Glenn, J. S., Kay, M. A.
  NATURE PUBLISHING GROUP.2013: S75

- **The anti-genomic (negative) strand of Hepatitis C Virus is not targetable by shRNA.** *Nucleic acids research*
  Lisowski, L., Elazar, M., Chu, K., Glenn, J. S., Kay, M. A.
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- **Using Chimeric Mice with Humanized Livers to Predict Human Drug Metabolism and a Drug-Drug Interaction** *JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS*
  Nishimura, T., Hu, Y., Wu, M., Pham, E., Suemizu, H., Elazar, M., Liu, M., Idilman, R., Yurdaydin, C., Angus, P., Stedman, C., Murphy, B., Glenn, et al
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- **Structural Map of a MicroRNA-122: Hepatitis C Virus Complex** *JOURNAL OF VIROLOGY*
  Pang, P. S., Pham, E. A., Elazar, M., Patel, S. G., Eckart, M. R., Glenn, J. S.
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- **Simplified RNA secondary structure mapping by automation of SHAPE data analysis** *NUCLEIC ACIDS RESEARCH*
  Pang, P. S., Elazar, M., Pham, E. A., Glenn, J. S.

2011; 39 (22)

- **Using 'Humanized' TK-NOG mice to predict human drug metabolism and drug-drug interactions** *17th North American Regional International-Society-for-the-Study-of-Xenobiotics (ISSX) Meeting*
  Hu, Y., Nishimura, T., Wu, M., Suemizu, H., Elazar, M., Glenn, J., Hasegawa, M., Nakamura, M., Nomura, T., Chen, Y., Zheng, M., Fitch, W. L., Peltz, et al
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- **NOVEL ANTI-HCV THERAPY: SINGLE SHRNA TARGETING BOTH STRANDS OF HCV**
  Lisowski, L., Elazar, M., Chu, K., Glenn, J. S., Kay, M. A.
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- **The hepatitis C virus NS5A inhibitor (BMS-790052) alters the subcellular localization of the NS5A non-structural viral protein** *VIROLOGY*
  Lee, C., Ma, H., Hang, J. Q., Leveque, V., Sklan, E. H., Elazar, M., Klumpp, K., Glenn, J. S.
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- **NS4B Targets and Inhibitors** *HEPATITIS C: ANTIVIRAL DRUG DISCOVERY AND DEVELOPMENT*
  Elazar, M., Glenn, J. S.
  edited by Tan, S. L., He, Y. P.
  2011: 257–69

- **Identification of a Class of HCV Inhibitors Directed Against the Nonstructural Protein NS4B** *SCIENCE TRANSLATIONAL MEDICINE*
  Cho, N., Dvory-Sobol, H., Lee, C., Cho, S., Bryson, P., Masek, M., Elazar, M., Frank, C. W., Glenn, J. S.
  2010; 2 (15)

- **The Anti-Hepatitis C Agent Nitazoxanide Induces Phosphorylation of Eukaryotic Initiation Factor 2 alpha Via Protein Kinase Activated by Double-Stranded RNA Activation** *GASTROENTEROLOGY*
  Elazar, M., Liu, M., Mckenna, S. A., Liu, P., Gehrig, E. A., Puglisi, J. D., Rossignol, J., Glenn, J. S.
  2009; 137 (5): 1827-1835

- **AAV Based RNAi Therapies To Treat and/or Prevent HCV in Animal Models**
  Lisowski, L., Elazar, M., Grompe, M., Glenn, J. S., Kay, M. A.
  NATURE PUBLISHING GROUP.2009: S14

- **A Role for Nitazoxanide in Combination with STAT-C Agents for Inhibition of HCV Replication and the Potential for the Prevention of Viral Resistance**
  Korba, B., Glenn, J., Elazar, M., Rossignol, J.
  ELSEVIER SCIENCE BV.2009: A20

- **Viral infection of human progenitor and liver-derived cells encapsulated in three-dimensional PEG-based hydrogel** *BIOMEDICAL MATERIALS*
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- **Potential for Hepatitis C Virus Resistance to Nitazoxanide or Tizoxanide** *ANTIMICROBIAL AGENTS AND CHEMOTHERAPY*
  Korba, B. E., Elazar, M., Lui, P., Rossignol, J., Glenn, J. S.
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- **PHARMACOLOGICAL INHIBITORS OF A NEW HEPATITIS C TARGET-RNA BINDING BY NS4B-DISCOVERED BY MICROFLUIDIC AFFINITY ANALYSIS** *59th Annual Meeting of the American-Association-for-the-Study-of-Liver-Diseases*
  Einav, S., Gerber, D., Bryson, P. D., Sklan, E., Elazar, M., Maerkl, S., Dvory, H. S., Machlin, E., Gu, W., Quake, S., Glenn, J. S.
  WILEY-BLACKWELL.2008: 356A–356A

- **POTENTIAL ROLE FOR NITAZOXANIDE IN COMBINATION WITH STAT-C AGENTS FOR THE INHIBITION OF HCV REPLICATION WITHOUT THE DEVELOPMENT OF RESISTANCE**
  Korba, B., Elazar, M., Liu, P., Glenn, J. S., Rossignol, J.
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- **Discovery of a hepatitis C target and its pharmacological inhibitors by microfluidic affinity analysis** *NATURE BIOTECHNOLOGY*
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- **Isolation and transcriptional profiling of purified hepatic cells derived from human embryonic stem cells** *STEM CELLS*
  Chiao, E., Elazar, M., Xing, Y., Xiong, A., Kmet, M., Millan, M. T., Glenn, J. S., Wong, W. H., Baker, J.
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- **Bj alpha IT: a novel scorpion alpha-toxin selective for insects - unique pharmacological tool** *INSECT BIOCHEMISTRY AND MOLECULAR BIOLOGY*
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- **A nucleotide binding motif in hepatitis C virus (HCV) NS4B mediates HCV RNA replication** *JOURNAL OF VIROLOGY*
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  2004; 78 (20): 11288-11295
- **An n-terminal amphipathic helix in hepatitis C virus (HCV) NS4B mediates membrane association, correct localization of replication complex proteins, and HCV RNA replication** *JOURNAL OF VIROLOGY*
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- **Amphipathic helix-dependent localization of NS5A mediates hepatitis C virus RNA replication** *JOURNAL OF VIROLOGY*
  Elazar, M., Cheong, K. H., Liu, P., Greenberg, H. B., Rice, C. M., Glenn, J. S.
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  Elazar, M., Shichor, I., Zlotkin, E.
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- **Targeting of an expressed neurotoxin by its recombinant baculovirus** *JOURNAL OF EXPERIMENTAL BIOLOGY*
  Elazar, M., Levi, R., Zlotkin, E.
  2001; 204 (15): 2637–45
- **AaIT: From neurotoxin to insecticide** *BIOCHIMIE*
  Zlotkin, E., Fishman, Y., Elazar, M.
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