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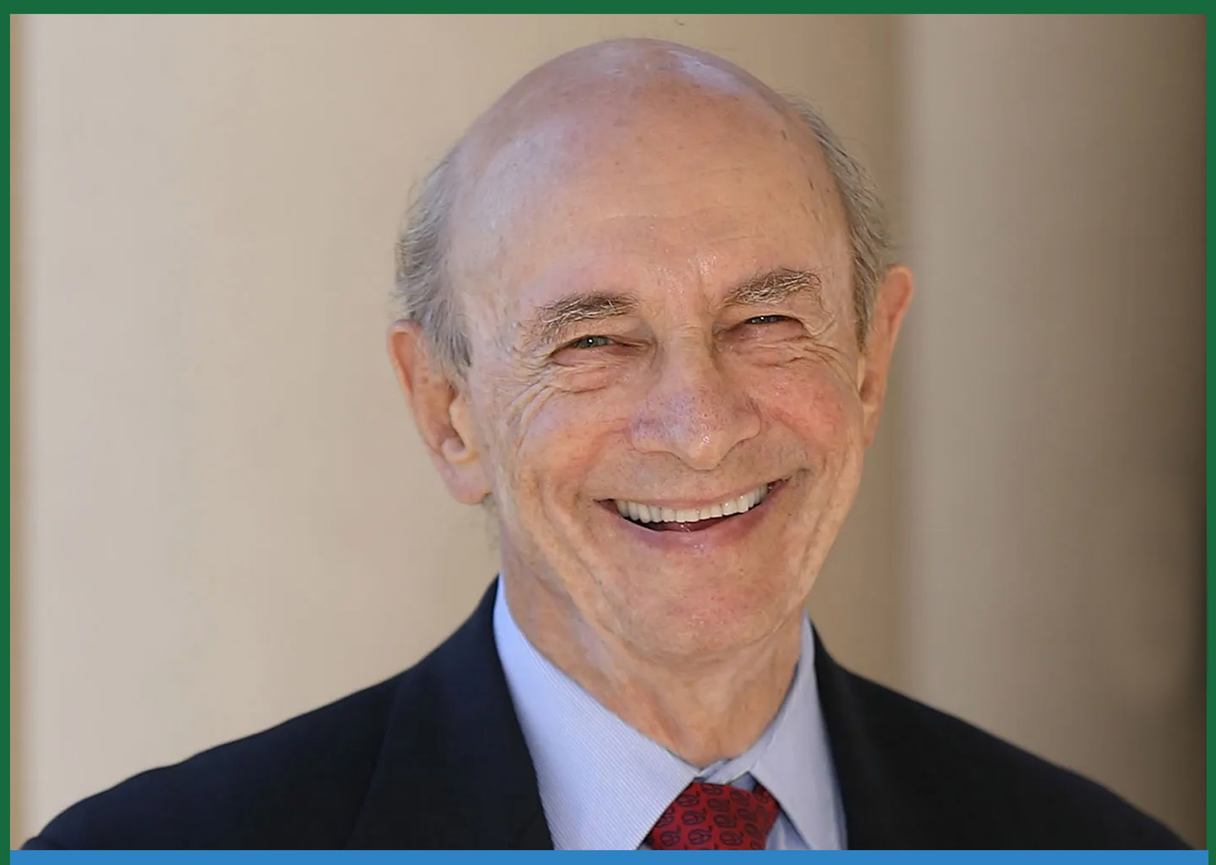
THE AZİZ SANCAR LECTURE



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Hepatitis C: The End of the Beginning and Possibly the Beginning of the End

September 27 2022, 19:00 - 20:00 (GMT +3)

A half millennium transpired between the first recognition of "serum" hepatitis and the development of the first assay to reliably detect the hepatitis B virus. It was the serendipitous discovery of the Australia antigen that set the path forward to the eventual eradication of post-transfusion hepatitis (PTH) in the developed world. The critical steps in this pathway were: 1) the recognition that the Australia antigen represented the envelope protein of the hepatitis B virus (HBsAg); 2) the establishment of prospective studies which demonstrated that the primary risk factor for PTH was the use of paid donor blood; 3) the finding in these same prospective studies that HBV accounted for only 25% of PTH and by inference that there must exist a non-B agent responsible for most PTH; 4) the discovery of HAV and the clear demonstration that HAV did not account for any cases non-B PTH, leading to the recognition of non-A, non-B hepatitis (NANBH); 5) the histologic demonstration that NANBH could evolve to cirrhosis, HCC and liver related fatality; 6) the cloning of HCV and demonstration that it accounted for virtually all cases of NANBH; 7) the development of sensitive serologic and molecular assays and their implementation in blood donor screening; 8) the virtual eradication of PTH in nations that combined sensitive HBV and HCV donor screening; 9) the development of direct-acting anti-virals (DAAs) that can now cure greater than 95% of HCV carriers and reliably prevent cirrhosis and most cases of HCV-related hepatocellular carcinoma. It is now possible that the combination wide scale population screening followed by administration of DAAs to those who test positive can virtually eliminate HCV infection even in the absence of a vaccine. Egypt has been able to implement this strategy with great success and serves as a model of what can we achieved.

The Aziz Sancar Lecture is an initiative of TÜBİTAK Research Institute for Fundamental Sciences to organize an annual event in honor of Professor Aziz Sancar, Turkish Scientist, who was awarded the 2015 Nobel Prize in Chemistry for the "mechanistic studies of DNA repair" (shared with Tomas Lindahl and Paul Modrich). The lecture will be delivered annually by eminent scientists to share the excitement of new discoveries and challenges with a general audience as well as to provide a visionary perspective in the scientific community.

Aziz Sancar Konuşması, TÜBİTAK Temel Bilimler Araştırma Enstitüsü'nün Nobel Ödüllü Türk bilim insanı Profesör Aziz Sancar'ın onuruna düzenlediği bir etkinliktir. Bu konuşma, yeni bilimsel keşiflerin heyecanını toplumun geniş kesimleriyle paylaşmak ve bilim camiasında vizyoner bir bakış açısının oluşmasında önemli katkılar sağlamak amacıyla, her yıl bir seçkin bilim insanı tarafından yapılacaktır.

Aziz Sancar, bir hücrenin moleküler düzeyde nasıl yaşadığını uzun yıllar merak etmiş ve sonuç olarak morötesi ışınlardan zarar gören DNA için hücrede var olan temel bir onarım mekanizmasını keşfederek layık görüldüğü Nobel Ödülü ile ana vatanı Türkiye'yi ve bütün Türk Dünyası'nı onurlandırmıştır.

Bio: Harvey James Alter is an American medical researcher, physician and virologist, who was awarded the 2020 Nobel Prize in Physiology or Medicine "for the discovery of Hepatitis C virus" (along with Michael Houghton and Charles M. Rice).

Harvey J. Alter, has been designated a Distinguished NIH Investigator, only one of 23 NIH scientists to hold that distinction. In his long career in clinical research, Dr. Alter has played a key role in the discovery of two hepatitis viruses, namely hepatitis B virus (HBV) and the non-A, non-B virus, later designated the hepatitis C virus (HCV). In long-term prospective studies, Alter helped define the natural history of NANB/HCV infection and proved its frequent progression to chronic hepatitis and its evolution to cirrhosis and liver related mortality.

Dr. Alter was principal investigator in sequential prospective studies of transfusion-associated hepatitis (TAH) that were instrumental in influencing national blood policy and documented the progressive decline of TAH incidence from 33% in the 1960s to near zero in 1997. Millions of cases of TAH have been prevented through interventions documented in these studies.

For these studies, Dr. Alter has been awarded the PHS Distinguished Service Medal, the AABB Landsteiner Prize, the First International Medal for Science from France's INSERM, the American College of Physicians (ACP) Award for Outstanding Work in Science, and the Distinguished Achievement Award of AASLD. He was elected to both the National Academy of Sciences and National Academy of Medicine and achieved Master status in the ACP. In 2020, Dr. Alter was awarded the Nobel Prize in Physiology or Medicine.

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