Clínica Universidad de Navarra

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CIBERehd UNIVERSIDAD DE NAVARRA (CB06/04/0006)
2021-22 ONLINE SEMINARS

Somatic mosaicism reveals adaptive pathways in chronic liver disease

17th February 2022

16:00-17:00 (CET)

Zoom link
Passcode: 429536

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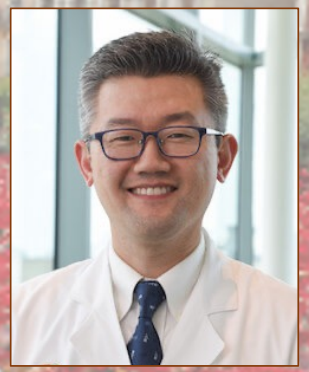

Deep sequencing of normal tissues has now established that aging cells in the blood, skin, bladder, and esophagus accumulate a high abundance of somatic mutations prior to cancer. Our work in this space has focused on the liver. By sequencing cirrhotic livers, we identified a rich landscape of somatic mutations in genes such as PKD1, PPARGC1B, KMT2D, and ARID1A. To identify functionally important mutated genes, we developed in vivo CRISPR screening approaches to assess clonal competition in regeneration. For the first time, we demonstrated that some somatic mutations promote regeneration within clones that are not destined for cancer. The key concept emerging from our work is that chronic injury, and perhaps aging, select for mutations that promote adaptive outcomes.

Links: Laboratory webpage

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