The role of the tumor suppressor Lkb1 in energy homeostatis

Mans, L.A.

PROPOSITIONS

Accompanying the PhD thesis
"The role of the tumor suppressor Lkb1 in energy homeostasis"

1. Inactive Lkb1 constitutes an evolutionary conserved Achilles' heel that can be selectively targeted with compounds that affect metabolic processes (Chapter 3)

2. Blocking calpains induces autophagy and prolongs survival of lkb1 zebrafish larvae (Chapter 2)

3. Systemic metabolism is important for maintenance of hematopoietic (stem) cells (Chapter 6)

4. Do not overlook the unexpected: Lkb1 inactivation results in upregulation of crystallins, originally described as eye-related genes, in the trunk region of zebrafish larvae (Chapter 4)

5. Starvation-induced autophagy is essential for survival after termination of the maternal nutrient supply (Kuma et al., 2004)

6. Using an organism to study the regulation of metabolism has, despite its complexity, added value over cell cuture assays, because the whole is greater than the sum of its parts

7. Owing to the lack of a specific target to treat LKB1 tumors, a synthetic lethal approach is required to unravel the points of vulnerability of these tumors (Momcilovic and Shackelford, 2015)

8. Cancer is a multifaceted disease that should be treated using a multidirectional approach

9. One point-mutation in a tumor suppressor gene results not only in loss of its protective function against cancer, but also in the premature death of the organism, showing that an organism is only as strong as its weakest link

10. Transcriptome analysis is seeing the wood for the trees

11. Starting a new line of research is like a dive in the water, where under the water surface you discover a whole new world

12. Science is the key to getting to know the wonders of nature

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Laurie A. Mans