

23. p53 and Tumor Suppression

2 units, Scott Lowe, March 16-17, 2026

March 16, 2026

Lecture: p53 action and the consequences of p53 mutations

1. The discovery of p53 and its oncogenic role
2. p53 mutations in human cancers
3. p53 as a tumor suppressor and its functions
4. Functions of p53 outside cancer
5. Context dependent output of p53
6. p53 action and communication with the tissue environment
7. p53 mutant gain of function
8. Diverse consequences of p53 mutations
9. Targeting the p53 network

March 17, 2026

Discussion paper:

Kaiser AM, Gatto A, Hanson KJ, Zhao RL, Raj N, Ozawa MG, Seoane JA, Biegging-Rolett KT, Wang M, Li I, Trope WL, Liou DZ, Shrager JB, Plevritis SK, Newman AM, Van Rechem C, Attardi LD. p53 governs an AT1 differentiation programme in lung cancer suppression. *Nature*. 2023 Jul;619(7971):851-859. doi: 10.1038/s41586-023-06253-8. Epub 2023 Jul 19. PMID: 37468633.

Background reading:

Efe G, Cunningham K, Rustgi AK, Prives C, Manfredi JJ, Sánchez-Rivera FJ. Mutant p53: evolving perspectives. *Genes Dev*. 2025 Dec 15. doi: 10.1101/gad.353408.125. Epub ahead of print. PMID: 41397879.