SCIENTIFIC SEMINAR

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Probing ubiquitin signalling

Post-translational modifications composed of ubiquitin regulate a wide range of cellular functions and are tightly controlled by deubiquitinating enzymes (DUBs). The recent start of clinical trials with inhibitors of two DUBs highlights the therapeutic potential of their modulation in cancer and neurodegenerative diseases. However, how DUBs decode ubiquitin signals and how they are engaged by small molecule ligands remain poorly understood at the molecular level. My group uses an integrated chemical and structural biology approach to shed light on how DUBs function and how they can be specifically inhibited. In my talk, I will discuss recently published and unpublished projects: I will focus on how protein-based probes have enabled the discovery of novel activities in DUBs. Moreover, I will cover how a chimeric protein engineering approached revealed how the mitophagy-regulating DUB USP30 can be specifically inhibited and how this provided a framework for specific DUB inhibition. Collectively, I will highlight how ubiquitin signalling in cells can be deciphered with chemical biology.

CIC bioGUNE
MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE
EXCELENCIA SEVERO OCHOA

Friday
June 27
Atrio 800
12.00H

BRTA
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