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Sommario/riassunto	In his research, David Dannheisig investigates the influence of lysine129 acetylation on the biological function of survivin including alteration of nucleocytoplasmic shuttling as well as dimerization behavior. Since survivin participates in two major hallmarks of oncogenesis, namely cell death inhibition and chromosomal segregation during the cell cycle, it reflects a valuable target in cancer therapy and research. The author establishes proximity-dependent, fluorescence-microscopic methods to quantify the interaction of survivin with the export receptor Crm1 as well as the homodimerization itself. In the future, those systems can be used to examine the feasible effect of chemical modulators which are targeting these interactions in a cellular background. The outcome achieved is an essential step towards the enhancement of potential cancer therapies. Contents

Apoptosis – The Programmed Suicide Cancer – The Enemy Inside Nucleocytoplasmic Transport– Cellular Navigation Biological Function of Survivin Protein modification – Make-Up for Proteins Cell cycle – Virchow's Heritage Target Groups Lecturers, students and researchers in the biological-medical sector Practitioners in the fields of molecular biology, cell biology, fluorescence microscopy, medical biology, protein interaction studies The Author David Dannheisig currently is a student of the International Graduate School in Molecular Medicine (IGradU) pursuing his PhD (Dr. rer. nat) degree at the Institute of Biochemistry and Molecular Biology (iBMB) at Ulm University, Germany.