

## Structure-based drug design for both small-molecule and protein

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Our research focuses on questions related to human health using structural biology, biochemistry, molecular biology and biophysics. Even though our research often originates from structural discoveries and/or questions we use a multitude of additional methods.

We currently focus our research on two main areas important to human health.

1. The Clostridial neurotoxins –Deadly toxins that also can heal
2. Novel cancer targets in nucleotide metabolism

We use structure-based engineering to develop both novel small molecule drugs and protein toxins with new medical applications.

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2. Visnes T, Cázares-Körner A, Hao W, Wallner O, Masuyer G, Loseva O, Mortusewicz O, Wiita E, Sarno A, Manoilov A, Astorga-Wells J, Jemth AS, Pan L, Sanjiv K, Karsten S, Gokturk C, Grube M, Homan EJ, Hanna BMF, Paulin CBJ, Pham T, Rasti A, Berglund UW, von Nicolai C, Benitez-Buelga C, Koolmeister T, Ivanic D, Iliev P, Scobie M, Krokan HE, Baranczewski P, Artursson P, Altun M, Jensen AJ, Kalderén C, Ba X, Zubarev RA, Stenmark P, Boldogh I, Helleday T. Small-molecule inhibitor of OGG1 suppresses proinflammatory gene expression and inflammation. *Science.* 2018 Nov 16;362(6416):834-839. doi: 10.1126/science.aar8048. PMID: 30442810; PMCID: PMC6645780.