Steven K. Albanese

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EDUCATION

PH.D., Biomedical Sciences: Cancer Biology, Gerstner Sloan Kettering   2014-present
Committee: John D. Chodera (thesis advisor, MSKCC), Sarat Chandarlapaty(MSKCC), James Hsieh(MSKCC), Robert Abel(Schrodinger)
B.A., Biological Sciences, Chemistry, Cornell University, *cum laude*   2010-14

RESEARCH EXPERIENCE

Gerstner Sloan Kettering, Ph.D. research with John D. Chodera   2015-present
Selective kinase inhibitor design, computational modeling of hyperactivating mutations in mTOR, laboratory automation
Cornell University, Undergraduate research with Holger Sondermann   2011-14
Developing high-throughput screen for atlastin-1 drug design, identification and characterization of atlastin-1 binding partners.

ACADEMIC LEADERSHIP EXPERIENCE

Gerstner Sloan Kettering Student Council, Co-Chair	2015-present
Experimental Therapeutics Symposium at Gerstner Sloan Kettering, Organizer	2016
Biology Scholars Program, Cornell University, Study Group Leader	2011-2014

AWARDS AND HONORS

B.A. awarded *cum laude* for original research from Cornell University	2014

SCIENCE COMMUNICATION AND OUTREACH

Organizer for Experimental Therapeutics Symposium at Gerstner Sloan Kettering	2016
Recruiter for Gerstner Sloan Kettering at SACNAS	2016
Volunteer with Rockefeller University Outreach: Lab Experiences, program to introduce NYC public school students to scientific research	2015-present
Recruiter for Gerstner Sloan Kettering at Annual Biomedical Research Conference for Minority Students	2015

PROFESSIONAL MEMBERSHIP

New York Academy of Sciences	2014-present
Biophysical Society	2015-present

TALKS AND POSTERS

Rational approach to selective inhibitor design using multitarget constraints   2016
   Poster, Workshop on Free Energy Methods in Drug Design: Targeting Cancer - Boston, MA
   Albanese S, Grinaway P, Hanson S, Rodriguez L, Tan Z, Chodera JD

Simulating mTOR hyperactivating mutations to understand functionally significant structural rearrangements   2016
    Poster, 60th Annual Biophysical Society Meeting - Los Angeles, CA
    Albanese S, Xu J, Hsieh J, Chodera JD

PUBLICATIONS   * asterisks denote that marked authors contributed equally

Xu J, Pham CG, **Albanese SK**, Dong Y, Oyama T, Lee CH, Rodrik-Outmezguine V, Yao Z, Han S, Chen D, Parton DL, Chodera JD, Rosen N, Cheng EH, and Hsieh JJ.
Mechanistically distinct cancer-associated mTOR activation clusters predict sensitivity to rapamycin. *Journal of Clinical Investigation* 126:3529, 2016 · DOI
We use massively parallel distributed molecular simulations on Folding@home to probe the mechanism activating mutations of the mTOR kinase identified in clinical populations.

Preprints, Submitted and Under Review   * asterisks denote that marked authors contributed equally

Wojnarowicz P, Desai B, Chin Y, Lima e Silva R, Ohnaka M, Lee SB, Cao MG, Ouerfelli O, Xu S, Goldgur Y, Miller M, Chaudhary J, GarlandW, StollerG, **Albanese SK**, Soni R, Philip J, Healey J, Vinagolu R, Norton L, Rosen N, Hendrickson R, Iavarone A, Dannenberg A, Chodera JD, Pavletich N, Lasorella A, Campochiaro P, Benezra R.
A small-molecule pan Id antagonist, AGX51, shows strong anti-tumor and anti-neovascular activity. *Under review at Nature* ·
We identify the binding site of a new small-molecule pan-Id antagonist prior to its confirmation by mass spectrometry crosslinking data
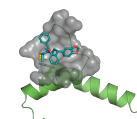
Parton DL, Hanson SM, Rodríguez-Laureano L, **Albanese SK**, Gradia S, Jeans C, Seeliger M, Chodera JD
An open library of human kinase domain constructs for automated bacterial expression. *Preprint at BioRXiv* ·
Designed, automated, and executed thermophoretic melt experiments to quantify kinase stability in different buffer conditions