A novel CD73-blocking antibody reduces production of immunosuppressive adenosine and restores T cell function

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INTRODUCTION
ADENOSINE IS GENERATED BY CD73 AND CREATES AN IMMUNOSUPPRESSIVE TUMOR MICROENVIRONMENT

- Adenosine is an immunosuppressive cytokine that is upregulated in a variety of tumor types
- CD73 is overexpressed in multiple tumor types and high expression associates with poor prognosis
- CD73 inhibition has demonstrated anti-tumor activity as a single agent

CONCLUSIONS
We describe a unique Type 1 anti-CD73 antibody that binds to the active site of CD73 and completely inhibits CD73 activity in contrast to all other described antibodies which bind to the N-terminal lobe (Type 2)
- CPX-006 inhibits AMP-mediated suppression of T cell proliferation and IFN-gamma secretion and effects are augmented with CPI-444
- CPX-006 is well-tolerated with no observed toxicity in multi-dose non-human primate studies where complete CD73 occupancy is achieved
- IND for CPX-006 is planned for Q1 2018

REFERENCES
3. reviewed by Antonioli et al, Trends Cancer.
4. reviewed by Allard et al, Immunotherapy.
9. References cited in above text.