ISOO 2022

New Developments in belzupacap sarotalocan (AU-011),

an Investigational Virus-Like Drug Conjugate (VDC)

in Ocular Oncology

Legal Disclosure

This presentation contains forward-looking statements, all of which are qualified in their entirety by this cautionary statement. Many of the forward-looking statements contained herein can be identified by the use of forward-looking words such as "may", "anticipate", "believe", "could', "expect", "should", "plan", "intend", "estimate", "will", "potential" and "ongoing", among others, although not all forward-looking statements contain these identifying words. These forward-looking statements include statements about the initiation, timing, progress, results, and cost of our research and development programs and our current and future preclinical studies and clinical trials, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available, and our research and development programs; our ability to successfully manufacture our drug substances and product candidates for preclinical use, for clinical trials and on a larger scale for commercial use, if approved; the ability and willingness of our third-party strategic collaborators to continue research and development activities relating to our development candidates and product candidates; our ability to obtain funding for our operations necessary to complete further development and commercialization of our product candidates; our ability to obtain and maintain regulatory approval of our product candidates; the size and growth potential of the markets for our product candidates, and our ability to serve those markets; our financial performance; the effect of the COVID-19 pandemic, including mitigation efforts and economic effects, on any of the foregoing or other aspects of our business operations, including but not limited to our preclinical studies and clinical trials and any future studies or trials; our ability to commercialize our products, if approved; and the implementation of our business model, and strategic plans for our business and product candidates.

Except as otherwise noted, these forward-looking statements speak only as of the date of this presentation, and we undertake no obligation to update or revise any of such statements to reflect events or circumstances occurring after this presentation. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. We caution you not to place undue reliance on the forward-looking statements contained in this presentation.

This presentation discusses product candidates that are under preclinical or clinical evaluation and that have not yet been approved for marketing by the U.S. Food and Drug Administration or any other regulatory authority. Until finalized in a clinical study report, clinical trial data presented herein remain subject to adjustment as a result of clinical site audits and other review processes. No representation is made as to the safety or effectiveness of these product candidates for the use for which such product candidates are being studied.

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Aura is Dedicated to Science and Supports Collaborative Research

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Novel Oncology Platform Using Virus-Like Drug Conjugates (VDCs)

Ocular Oncology	- Opportunity to develop vision preserving therapy for early-stage choroidal melanoma
Foundational Value	- Completed Phase 1b/2 trial: Positive data in key clinical endpoints - FDA/EMA/MHRA are in alignment with pivotal trial design
Oncology Pipeline	- Solid tumor development programs - Platform to develop additional VDCs
Anticipated Milestones in Ocular Oncology	- Retrospective vision data versus radiotherapy - Phase 2 Choroidal Melanoma safety and efficacy data - Initiate Pivotal Trial in Choroidal Melanoma - IND filing in Choroidal Metastases
Public Company	- Successful IPO 2021

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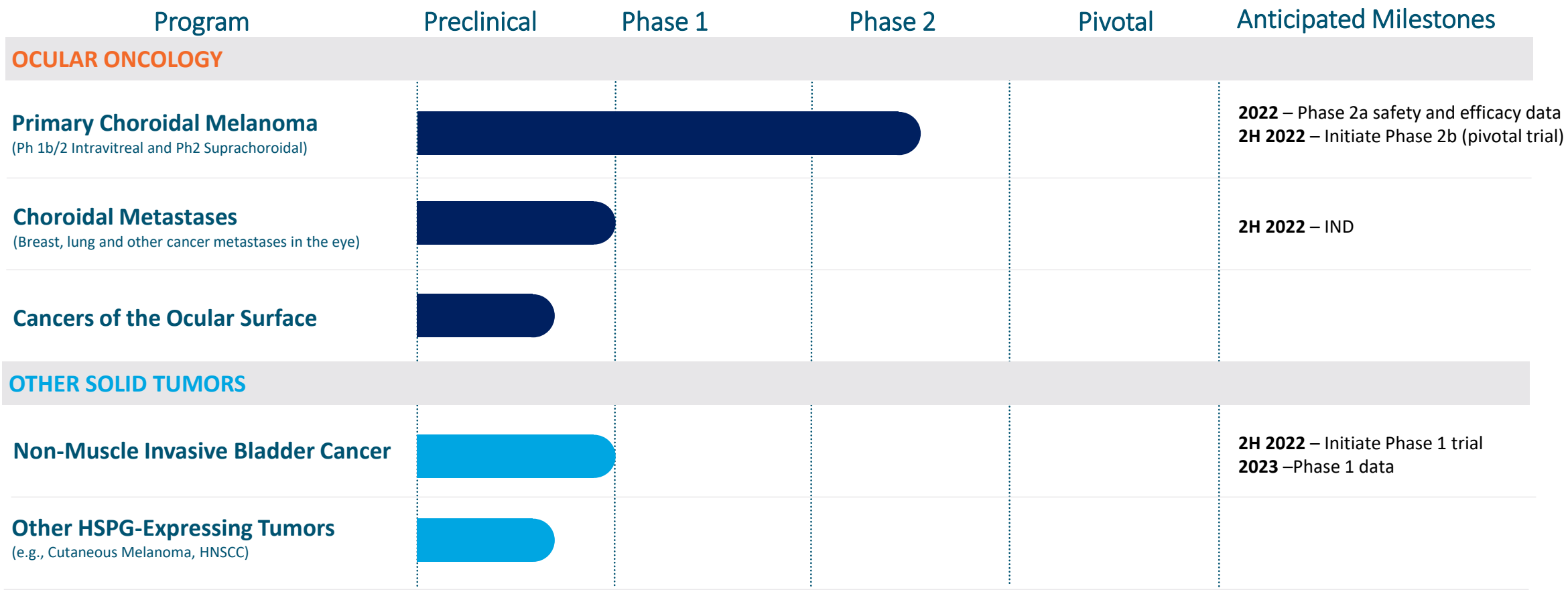
Pipeline Targeting Life-Threatening Cancers with High Unmet Needs



Global Planning for All Product Candidate Indications

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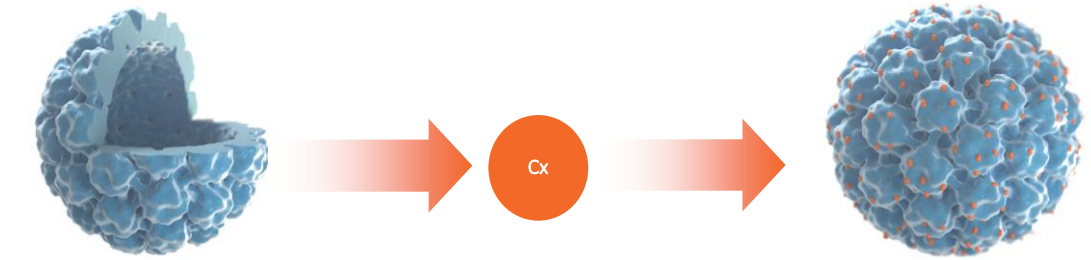
Choroidal Metastasis

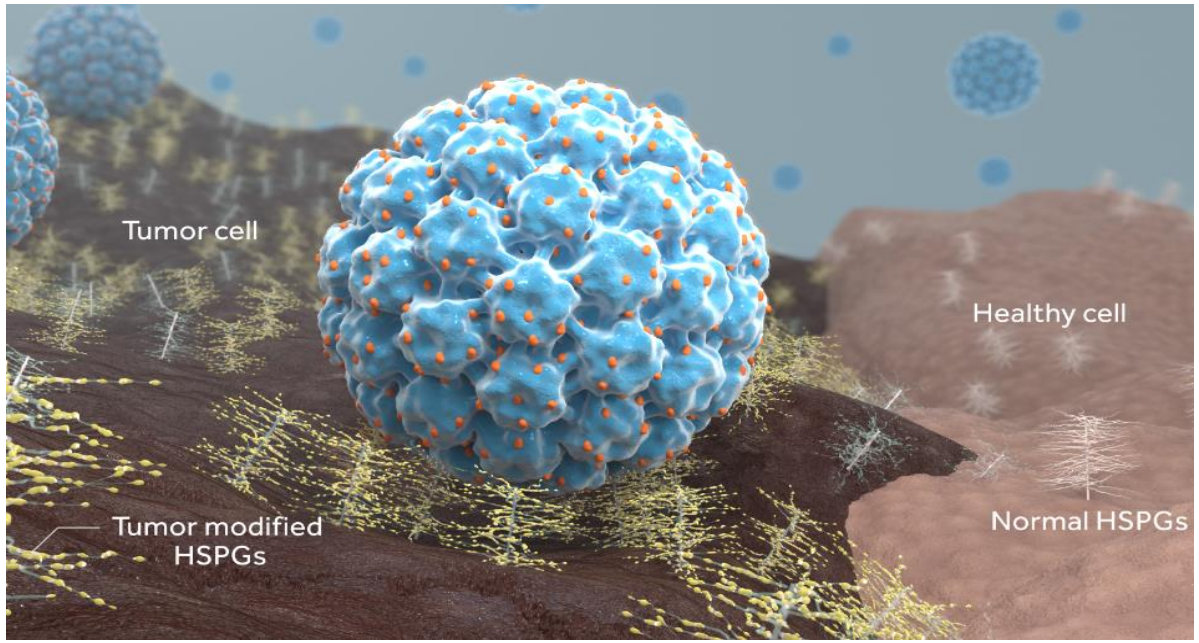
Targeted Oncology Platform - Virus-Like Drug Conjugates (VDCs)

Virus-Like Particles Conjugated to a Cytotoxic Payload to form the VDC



Virus-Like Particle (VLP) | Cytotoxic Drug | Virus-Like Drug Conjugate (VDC)

VDCs can Recognize Tumor Associated HSPGs*

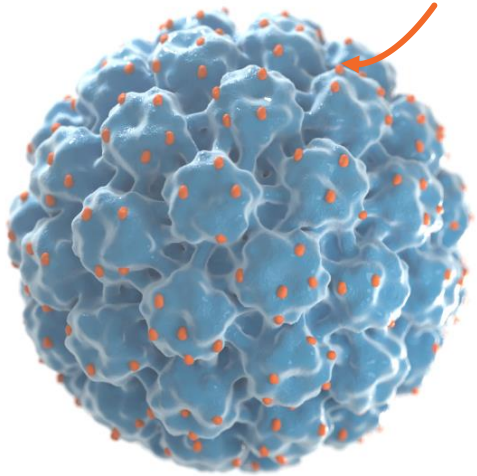


Technology Platform Designed to Target a Broad Range of Solid Tumors Based on Virus-Like Particles with Multiple Options for Cytotoxic Payloads

Kines et al; *International Journal of Cancer*, 138;901–911, February 2016; Kines et al; *Molecular Cancer Therapeutics*, 17(2) February 2018; Kines et al; *Cancer Immunology Research*, May 2021

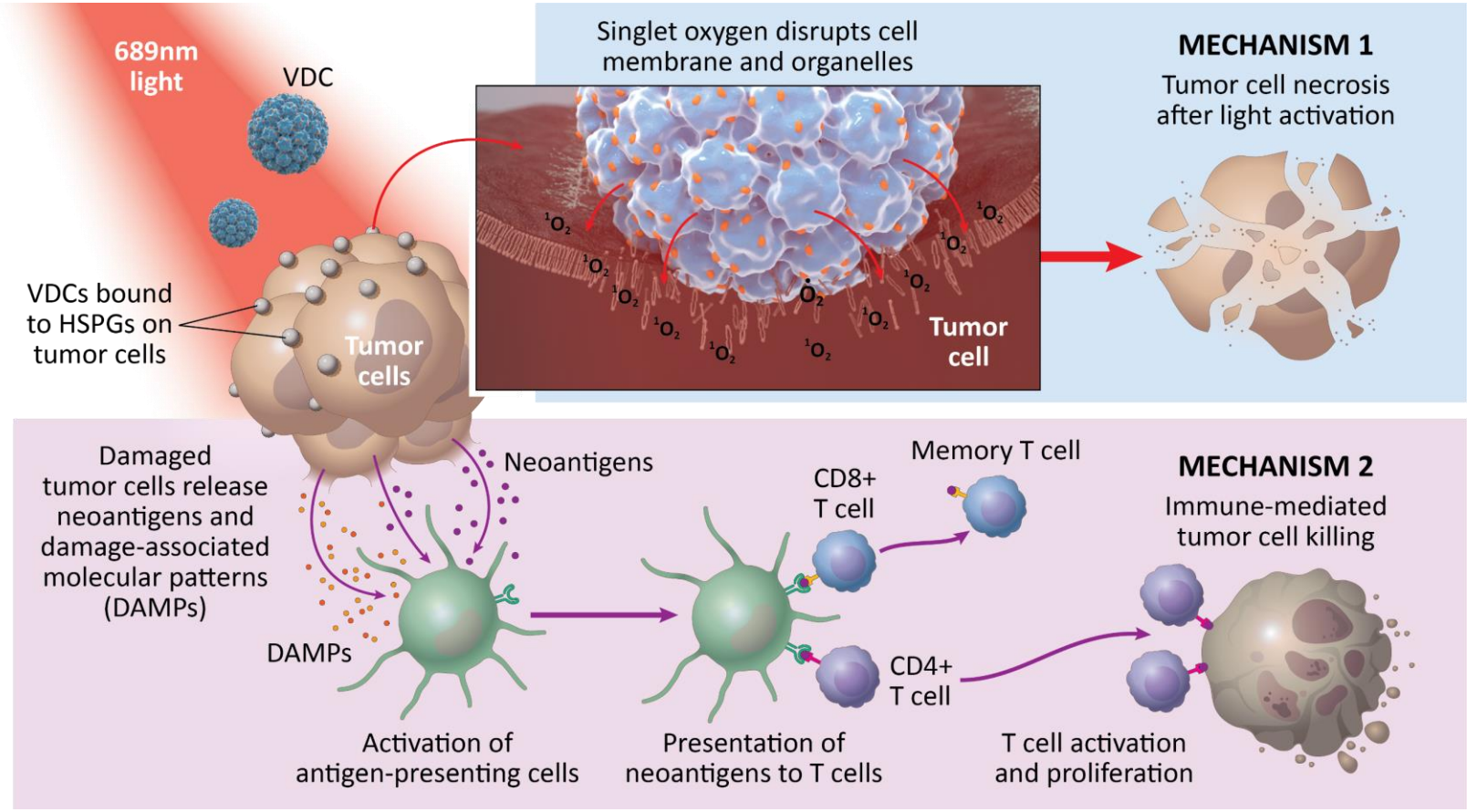
* HSPGs - Heparan Sulphate Proteoglycans

Belzupacap Sarotalocan (AU-011) is an Investigational VDC with a Novel Dual Mechanism of Action



AU-011

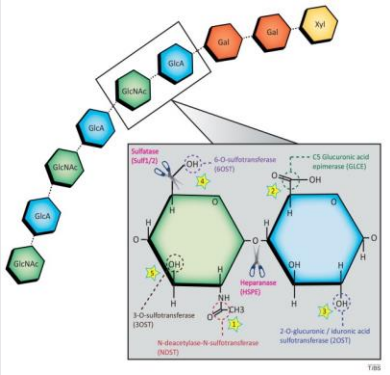
Belzupacap sarotalocan (AU-011) is a novel VDC that consists of an HPV derived VLP conjugated to ~200 molecules of phthalocyanine dye

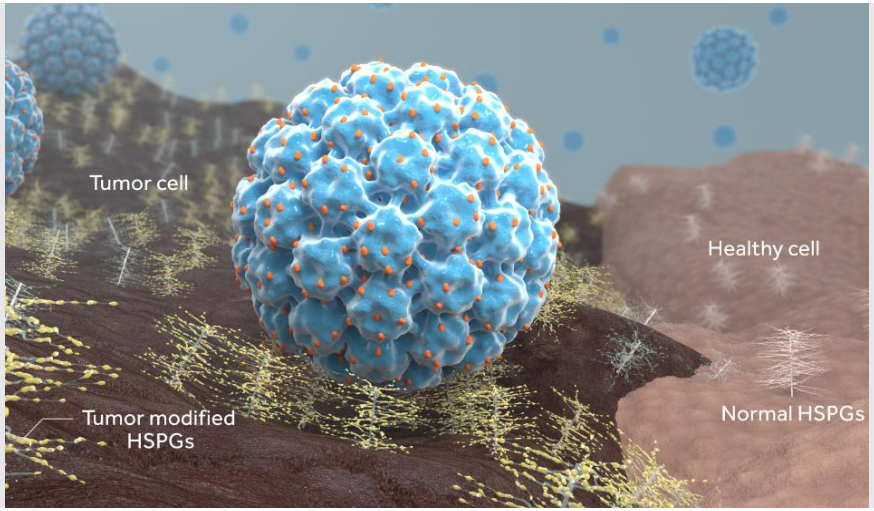


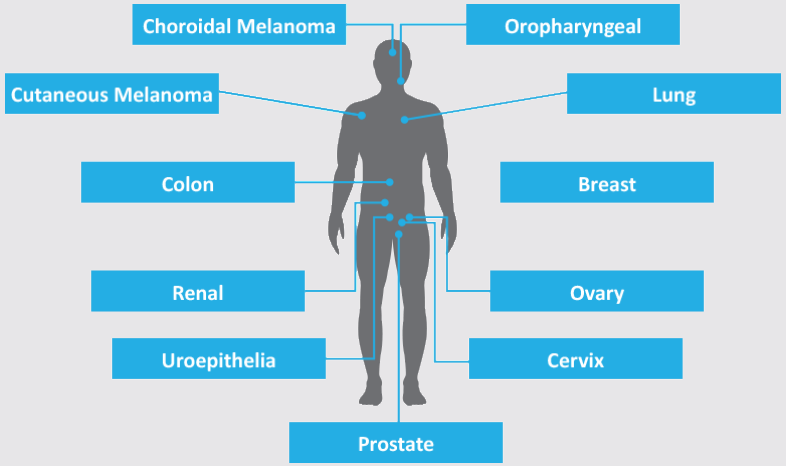
AU-011 Demonstrated Positive Data in Phase 1b/2 Trial in Choroidal Melanoma

Kines et al; Cancer Immunology Research, May 2021

Potential to Target Tumors That Express HSPGs







- Heparan sulfate proteoglycans (HSPGs) are a large family of molecules found in the extracellular matrix (ECM) and on the membranes of cells
- Tumors specifically modify HSPGs with key sulfation modifications that provide high binding specificity to a number of ligands
- Tumor modified HSPGs regulate many aspects of tumor progression, including proliferation, invasion, angiogenesis and metastases
- Our VLPs can selectively bind to tumor modified HSPGs and not to normal cells

Broad-based Tumor Targeting Mechanism by Virtue of the Binding to Tumor Specific HSPGs

Knelson et al., Trends in Biochemical Sciences 2014; Fuster and Esko, Nature Reviews Cancer, 2005; Blackhall et al., British Journal of Cancer (2001) 85(8), 1094–1098; Kines et al.; International Journal of Cancer, 138;901–911, February 2016; Kines et al.; Molecular Cancer Therapeutics, 17(2) February 2018

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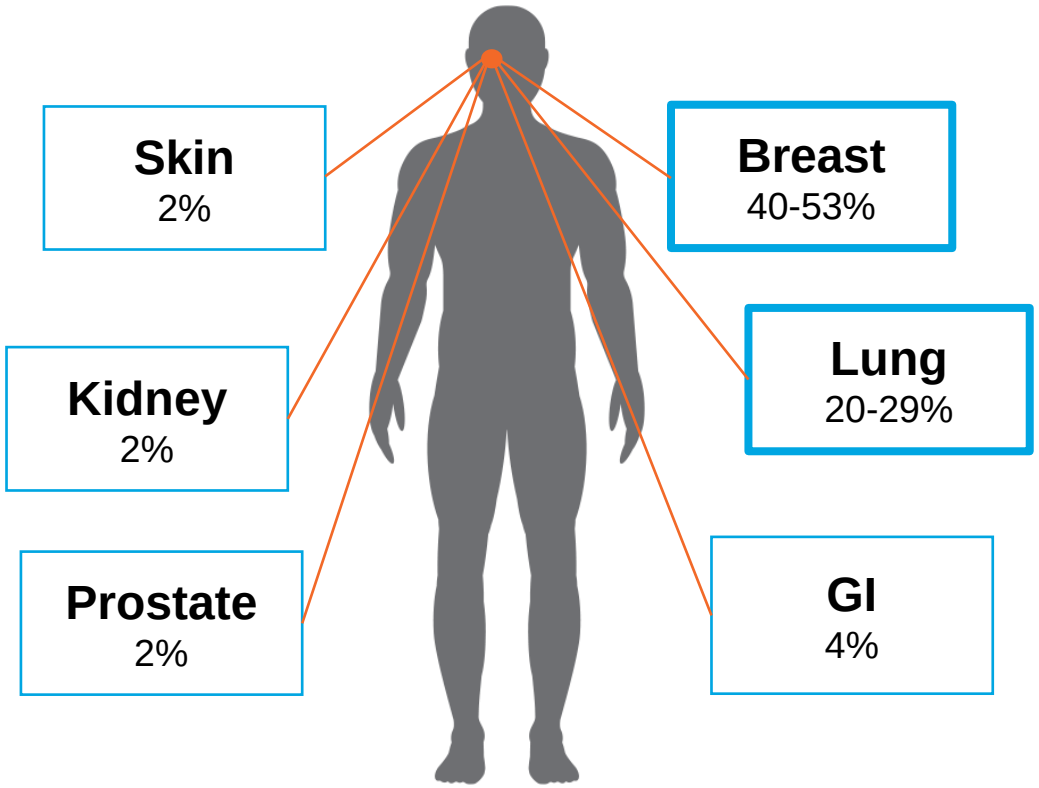
Choroidal Metastasis – Background

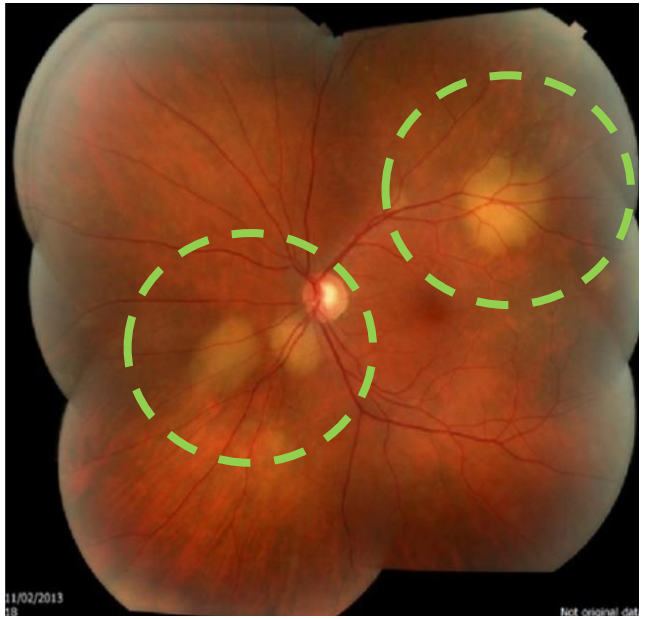
C-Mets Originates from Multiple Primary Cancers[1]



~20K eyes with choroidal metastases in the U.S. annually[2]

Common Features of C-Mets[3]

- Unilateral (72%)
- Solitary (72%)
- Choroidal location (88%)



Choroidal Metastasis from non-small cell lung cancer[4]

[1]Mathis et al. New concepts…choroidal metastasis, *Progress in retinal and eye research* (2019), [2]Cohen, Ocular metastasis, Eye (2014), [3]Shields et al. Survey of 520 eyes with uveal metastases. *Ophthalmology* (1997), [4]Namad et al. Bilateral choroidal metastasis from non-small lung cancer, Case reports in oncological medicine (2014).

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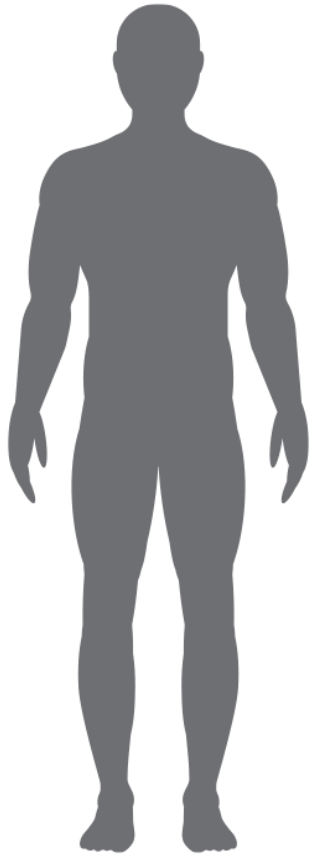
AU-011 Induced Potent Cytotoxicity in Multiple Human Cancer Cell Lines Commonly Causing Choroidal Metastasis

Skin (2%)
EC_{50} = 5 - 113 pM

Kidney (2%)
EC_{50} = 21 - 82 pM

Prostate (2%)
EC_{50} = 13 - 560 pM



Breast (40-53%)
EC_{50} = 58 - 118 pM

Lung (20-29%)
EC_{50} = 20 - 40 pM

GI (4%)
EC_{50} = 34 - 386 pM

AU-011 induced potent cell killing upon light activation with potencies (EC50's) in the picomolar range

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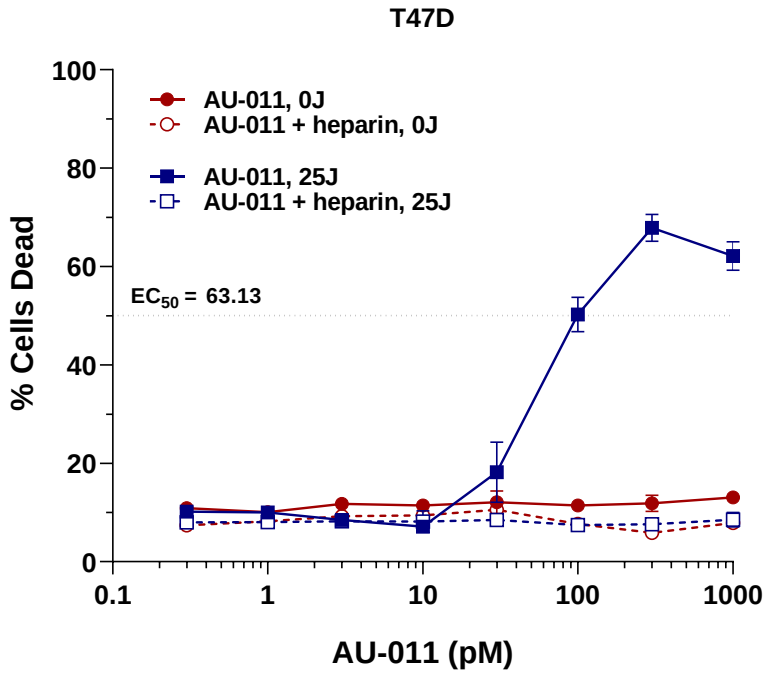
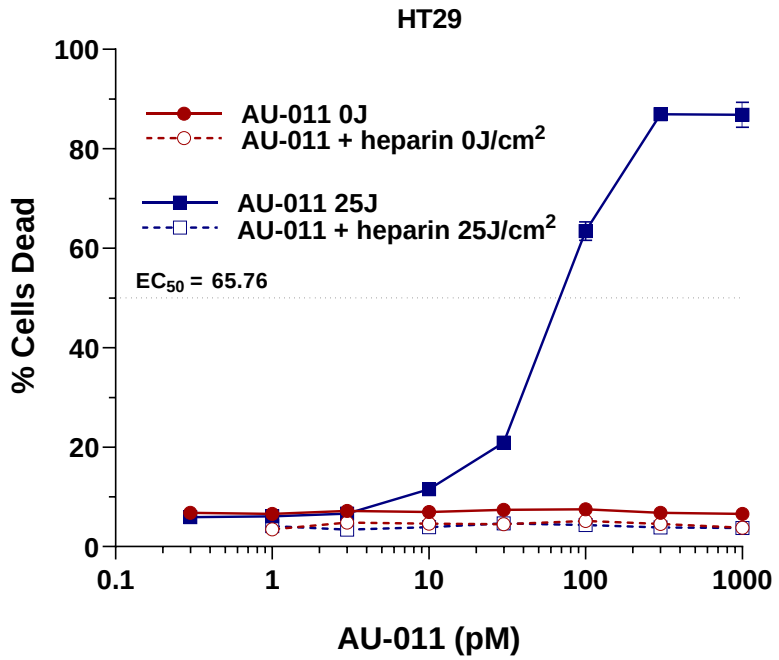
AU-011 Demonstrated Binding and Potent Cytotoxicity in Multiple Human Cancer Cell Lines Commonly Causing Choroidal Metastasis

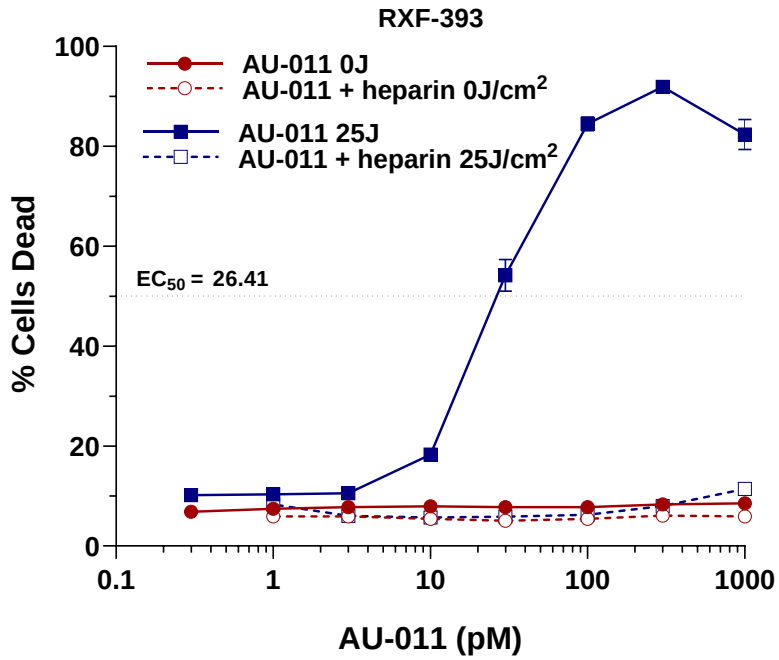
Breast



Colon



Renal



- AU-011 can bind to cancer cells and induced potent cell killing upon light activation
- Specificity was demonstrated by inhibition of HSPG's binding by heparin
- AU-011 demonstrated no cytotoxicity in the absence of light activation

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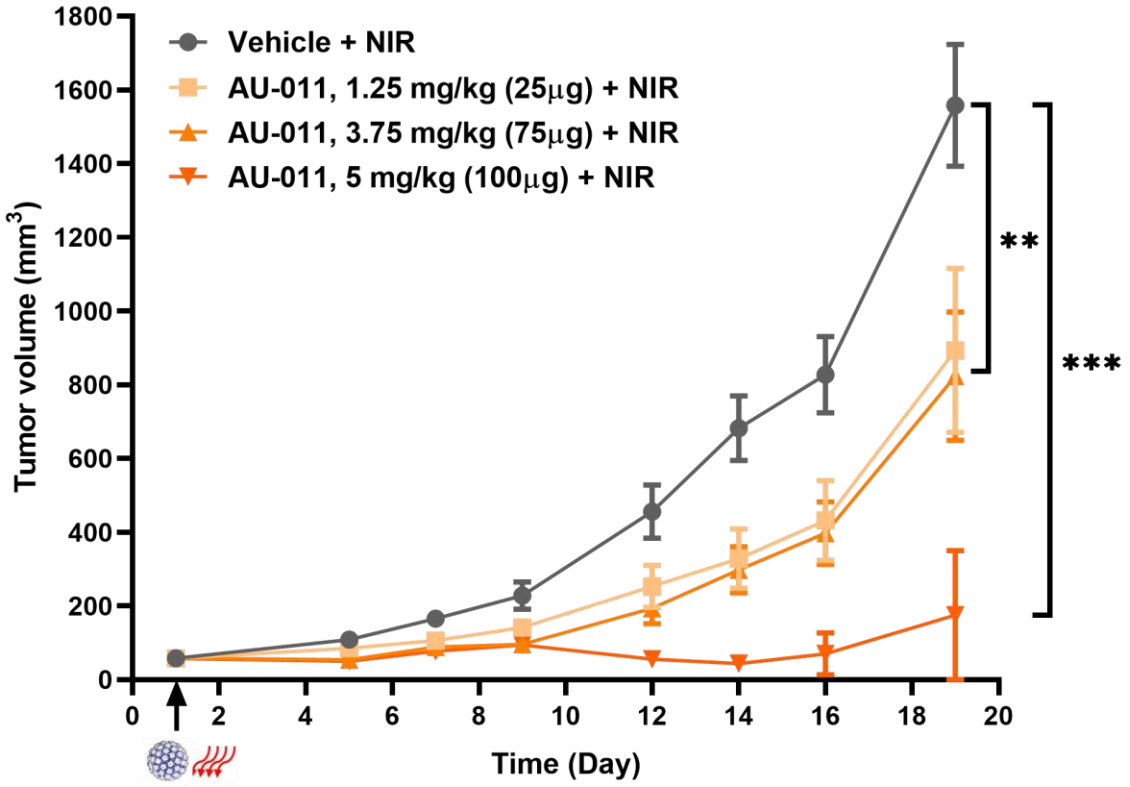
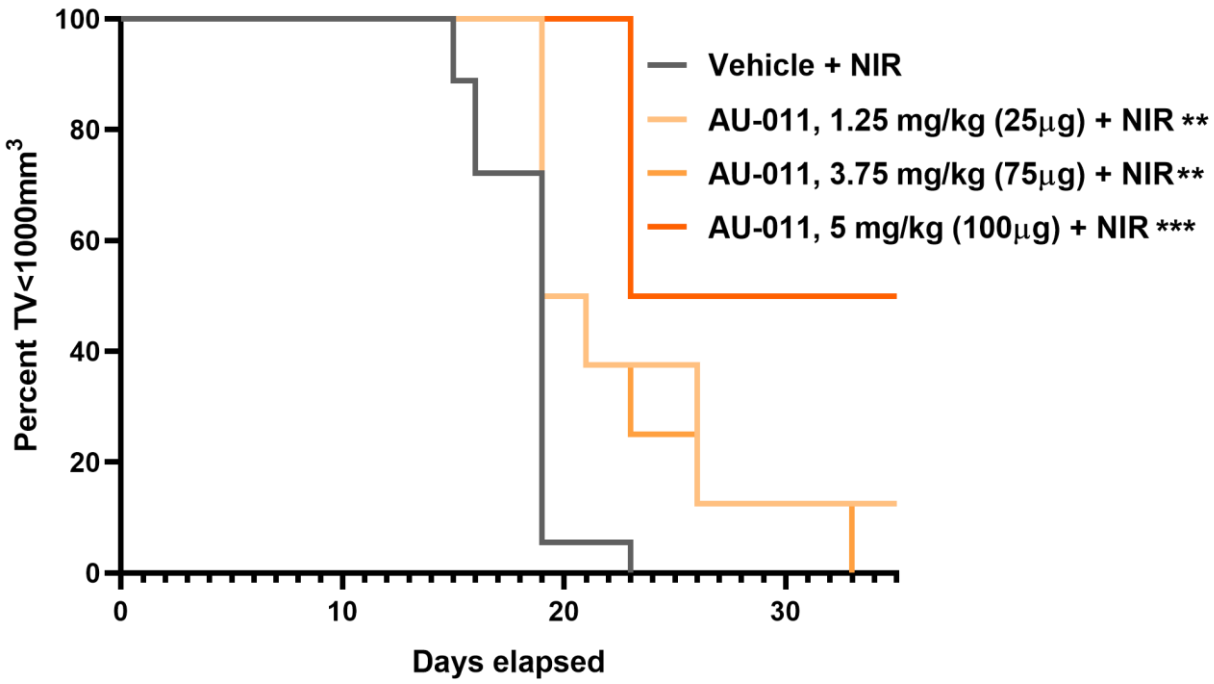
Single Administration of AU-011 Inhibited Tumor Growth and Prolonged Survival in a Dose-Dependent Fashion – Breast Cancer

Breast Cancer In-Vivo (Syngeneic Mouse Model, EMT-6)

Reduced Tumor Growth



Prolonged Survival



Tumor cells were implanted subcutaneously. AU-011 treatment was initiated when tumors reached approximately 50 mm^3. Treatment consisted of a single intravenous administration of AU-011 followed 12 hours later by light activation (400 mW/cm^2, 58 J/cm^2). Tumor volumes were measured over time (N=8-12)

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Conclusion

- AU-011 can bind to, and kill, tumor cells derived from the most common cancer types known to metastasize to the choroid
  - Binds to modified HSPG's on the surface of cancer cells
  - No cytotoxicity in the absence of light activation was observed
- AU-011 showed dose-dependent activity in vivo using syngeneic mouse models for cancer types known to metastasize to the choroid
  - Significantly inhibits tumor growth and prolongs survival
  - Statistically significant results in multiple tumor models

Study results support further evaluation of AU-011 as a potential treatment for choroidal metastasis

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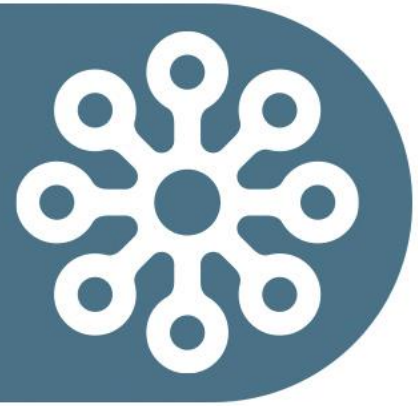
Retrospective Matched Case-Control Study



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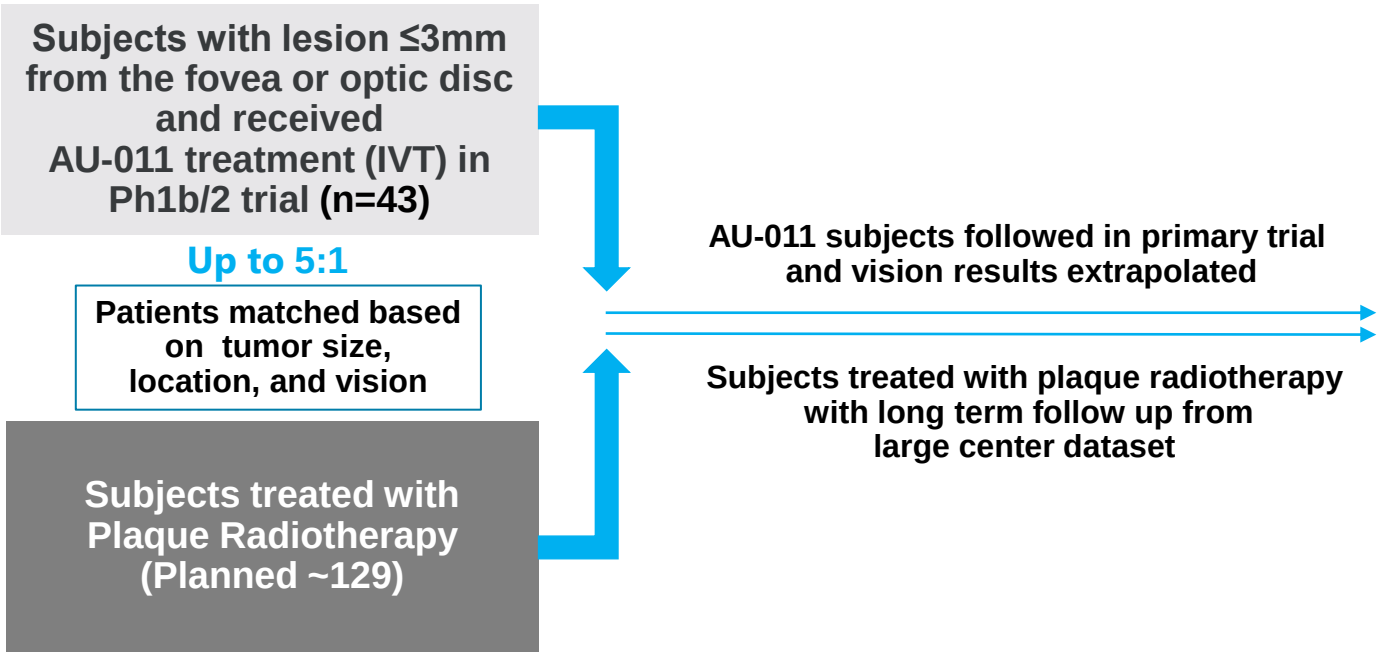
rMCC* Study to Evaluate Visual Acuity Outcomes of AU-011 vs. Plaque Radiotherapy

- Matching criteria: baseline tumor thickness, LBD, distance to fovea/ optic disk, visual acuity (all 4 must match)
- Matching performed by Independent Statistician

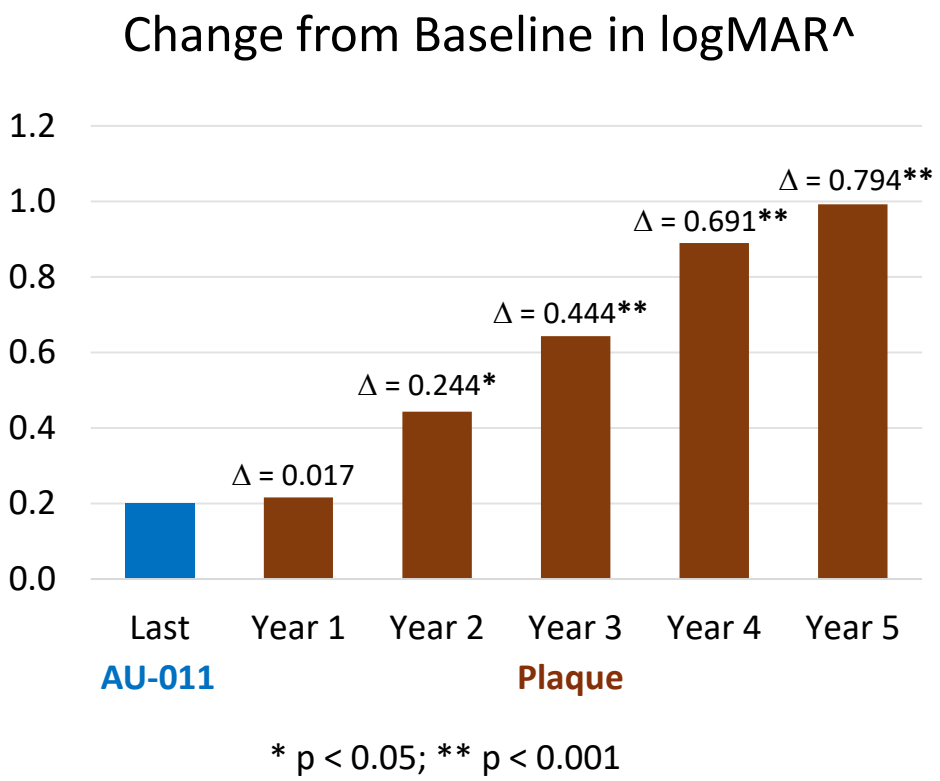


Data from patients treated with AU-011 in the Ph1b/2 study will be compared to patients treated with plaque radiotherapy at 1, 2, 3, 4 and 5 years and at last follow up to support visual acuity benefit

AU-011 has the Potential to Have Long Term Visual Acuity Benefit over Plaque Radiotherapy

*rmCC – retrospective matched case control

rMCC Results – Statistically Significant Vision Preservation with AU-011 vs Plaque Radiotherapy



* p < 0.05; ** p < 0.001

^logMAR – logarithm of the minimal angle of resolution

Change from Baseline in Vision

Source	Plaque Timepoint	Change in logMAR			
		AU-011	Plaque	Treatment Difference	p-value
AU-011 vs. Plaque	Year 1	0.199	0.216	-0.017	0.8418
	Year 2	0.199	0.443	-0.244	0.0323
	Year 3	0.199	0.643	-0.444	0.0006
	Year 4	0.199	0.890	-0.691	<.0001
	Year 5	0.199	0.992	-0.794	<.0001

- Mixed model repeated measures (MMRM) analysis controlling for matching.
- Comparing last AU-011-101 trial value (average follow up 15.6 months) with plaque timepoints.
- N=43 AU-011 subjects compared to N=150 matched plaque patients.
- Multiple imputation to address missing data.

Statistically Significant Vision Preservation Starting at 2 Years

rMCC Results – Loss of 3 and 6 Lines logMAR Vision

Source	Timepoint	Loss of logMAR of ≥ 0.3		Loss of logMAR of ≥ 0.6	
		%	p-value	%	p-value
AU-011	Last	23.3%	-	14.0%	-
AU-011 vs. Plaque	Year 1	25.7%	0.7627	12.2%	0.7338
	Year 2	42.3%	0.0304	26.0%	0.3571
	Year 3	53.3%	0.0020	35.1%	0.0419
	Year 4	67.1%	<.0001	54.0%	<.0001
	Year 5	73.3%	<.0001	60.1%	<.0001

- Analysis of the proportion of subjects with a loss of logMAR ≥ 0.3 and ≥ 0.6 via Cochran–Mantel–Haenszel test to control for matching.
- Multiple imputation to address missing data.
- Comparing AU-011-101 trial values (average follow up 15.6 months) with Plaque timepoints.

Significantly Higher Proportion of Subjects with Loss ≥3 Lines Starting at 2 Years and ≥6 Lines Starting at 3 Years with Plaque Radiotherapy vs. AU-011

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AU-011 in Combination with Checkpoint Inhibitors
Ruben Huis in t' Veld

Leids Universitair Medisch Centrum

Immune checkpoint inhibition combined with targeted therapy using a novel virus-like drug conjugate

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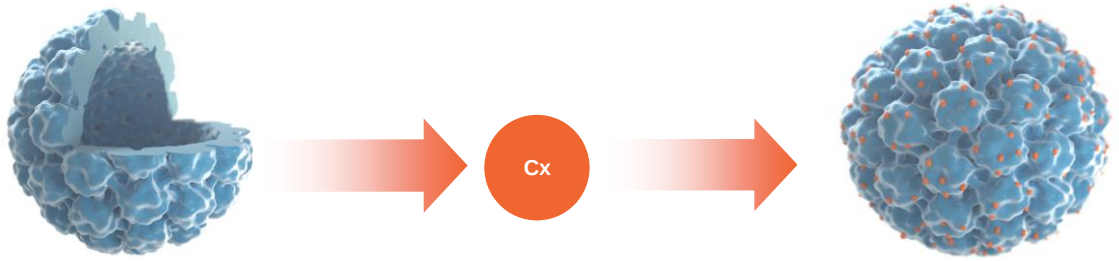
Research sponsored by Health Holland in collaboration with Aura Biosciences

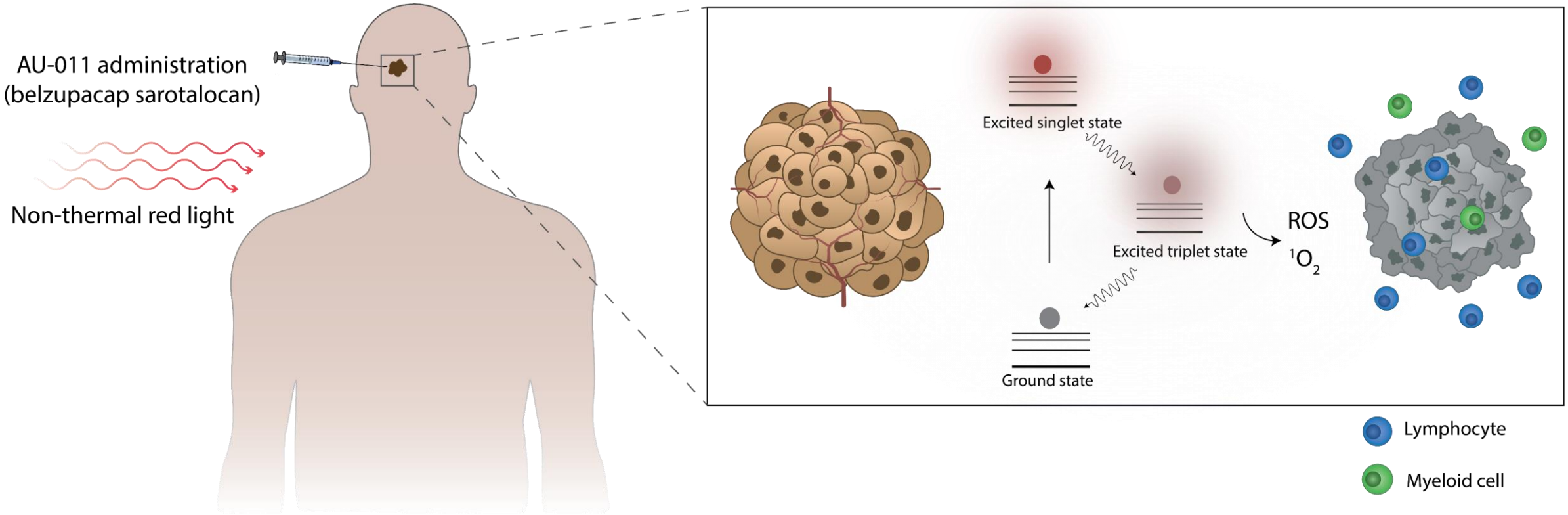
Health~ Holland

Ruben Huis in ‘t Veld



Virus-Like Particle (VLP) **Cytotoxic dye** **Virus-Like Drug Conjugate (VDC)**

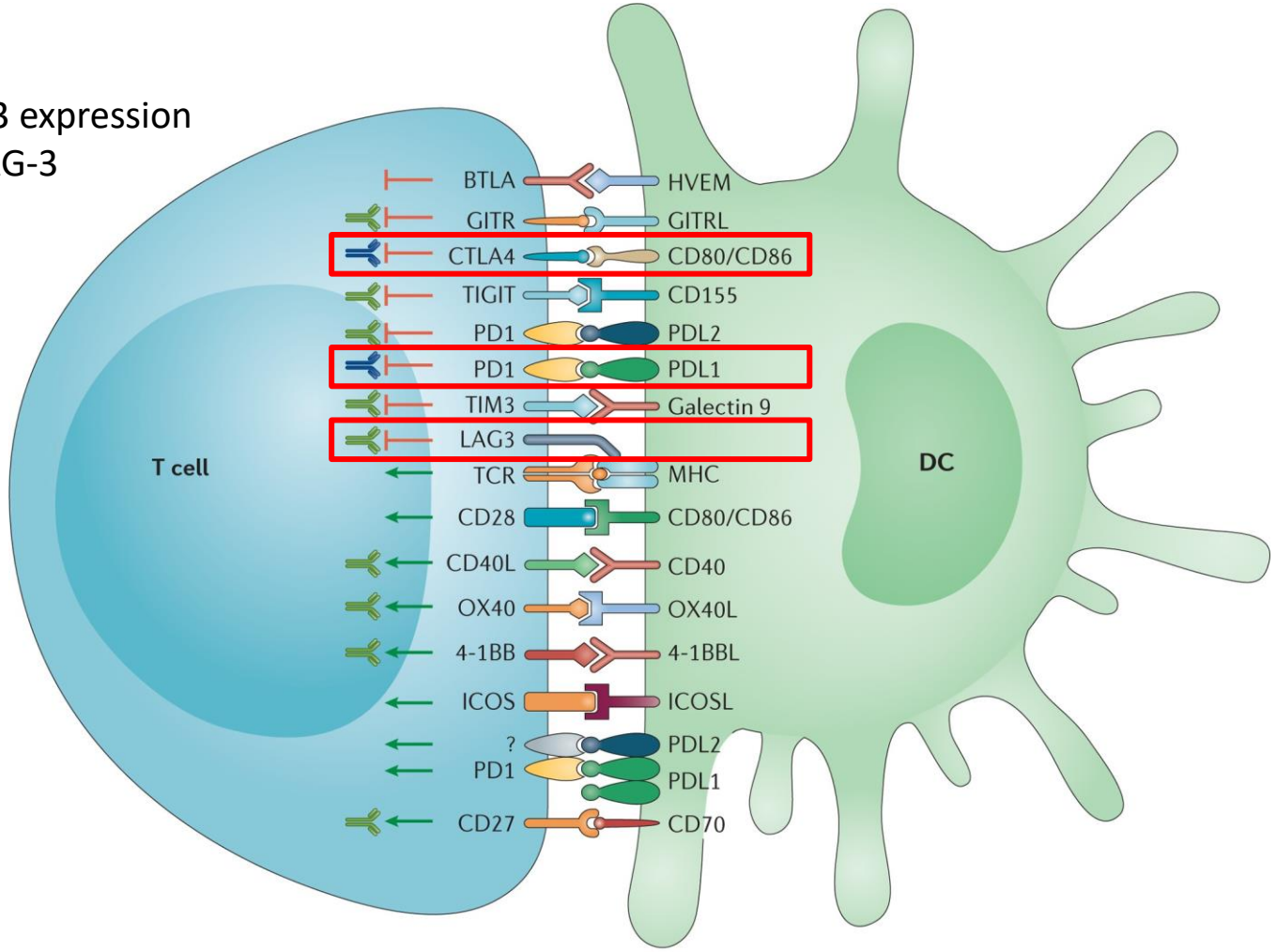
AU-011 is an investigational virus like drug conjugate with a novel mechanism of action



1. Cancer cell directed cytotoxicity
2. Induction of antitumor immune responses

Rationale for combining AU-011 treatment and immune checkpoint inhibition

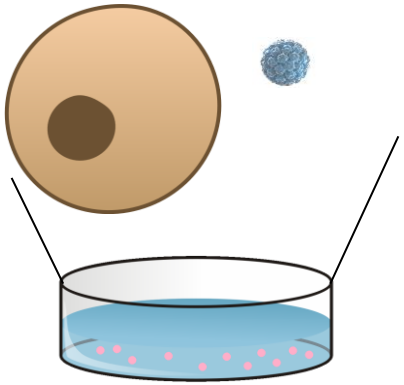
Beyrend et al. (2019):
PD-L1 blockade induces LAG-3 expression
→ Co-targeting of PD-L1 & LAG-3

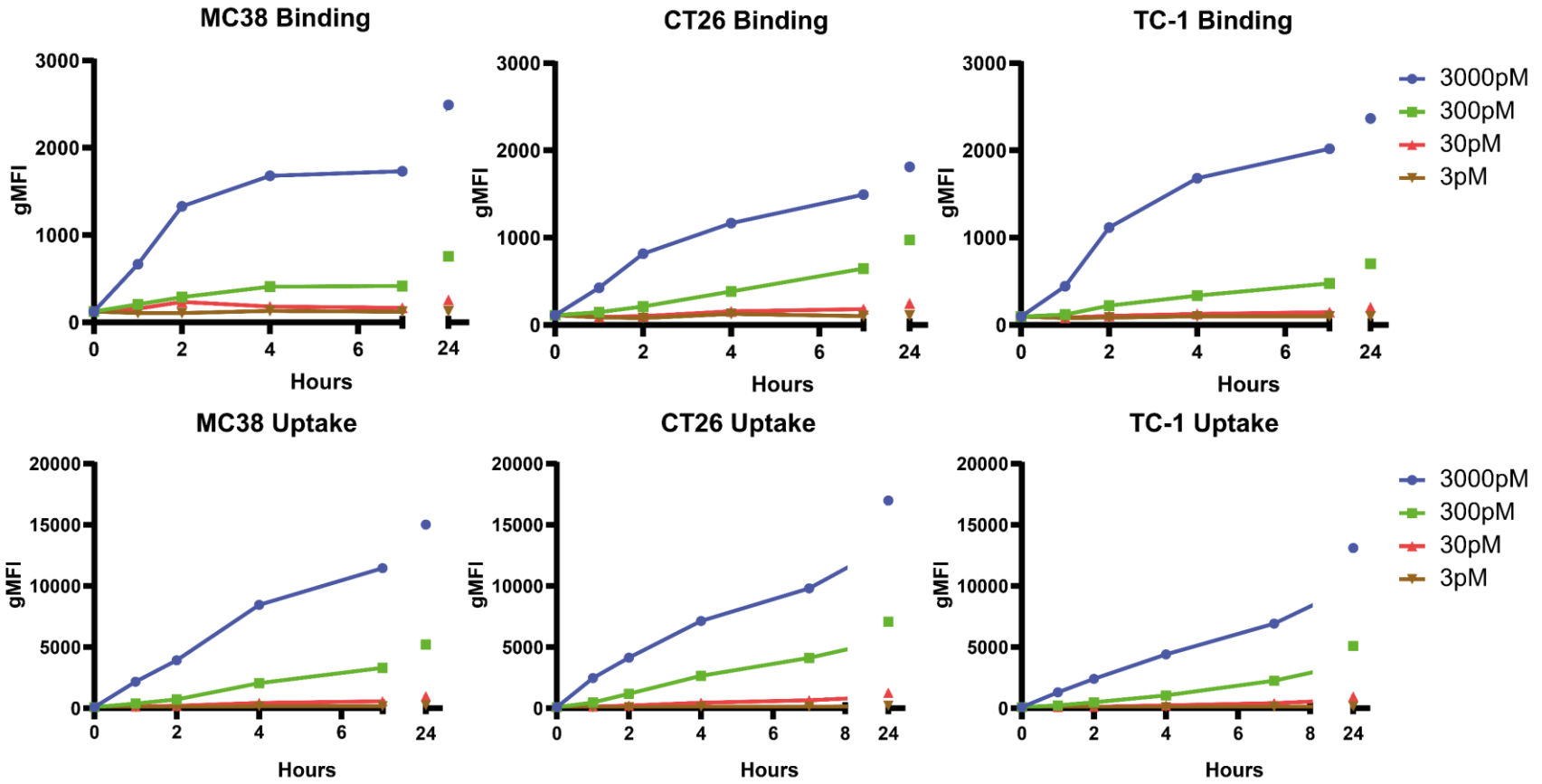


Wykes M. N. & Lewin S. R. Immune checkpoint blockade in infectious diseases. Nature Reviews Immunology. 2018;18:91–104

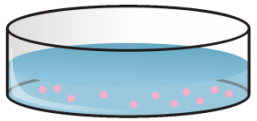
AU-011 has shown binding and uptake in multiple types of tumor cells

Cancer cells AU-011

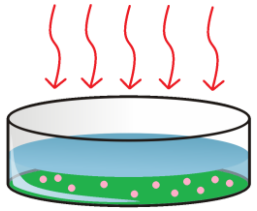




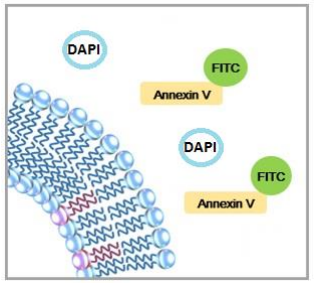
AU-011 + light activation can induce cancer cell death



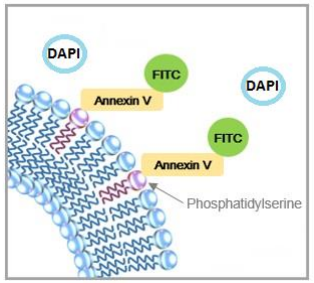
Control



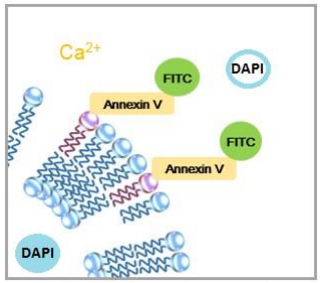
AU-011 +
Light activation



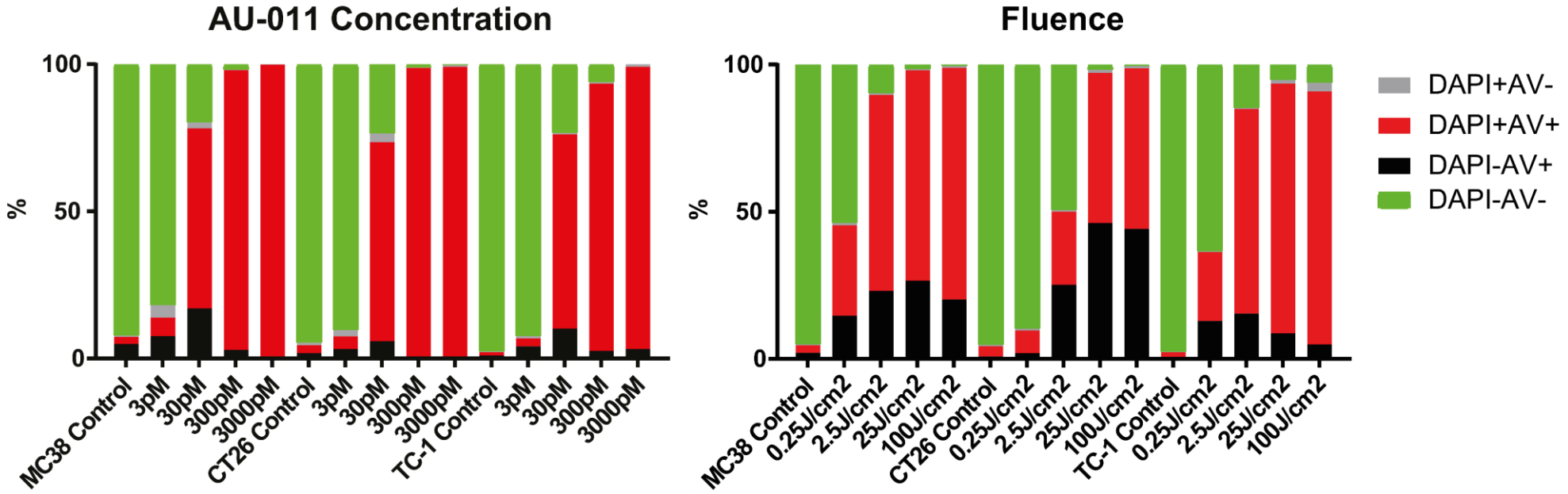
Viable cell



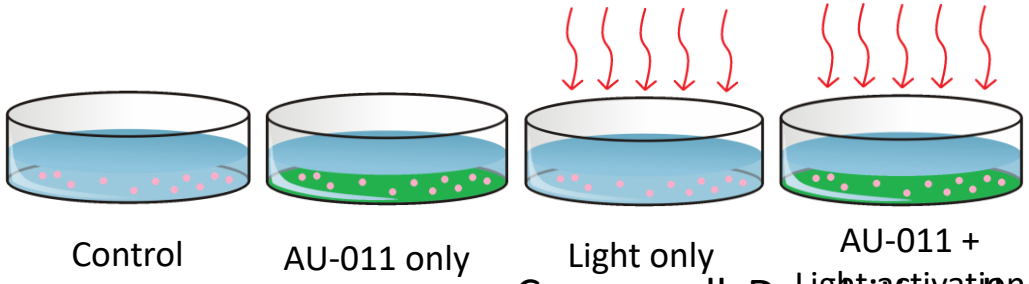
Apoptotic cell

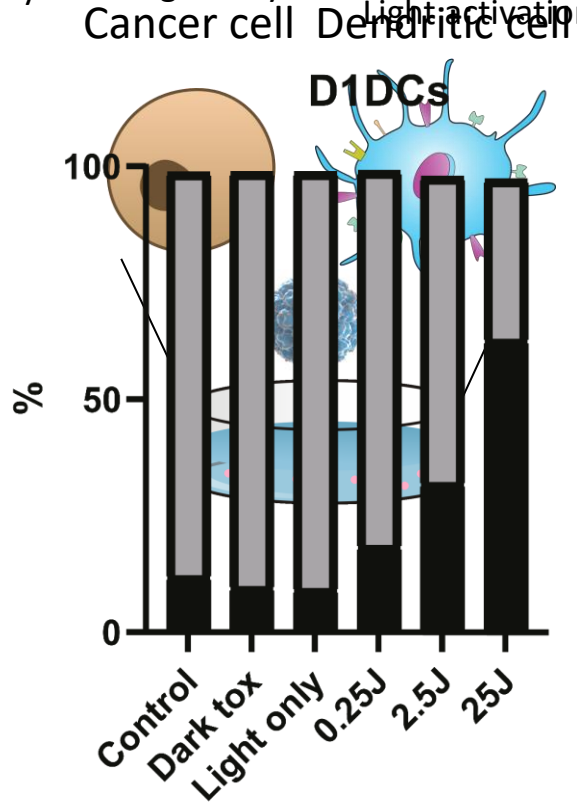


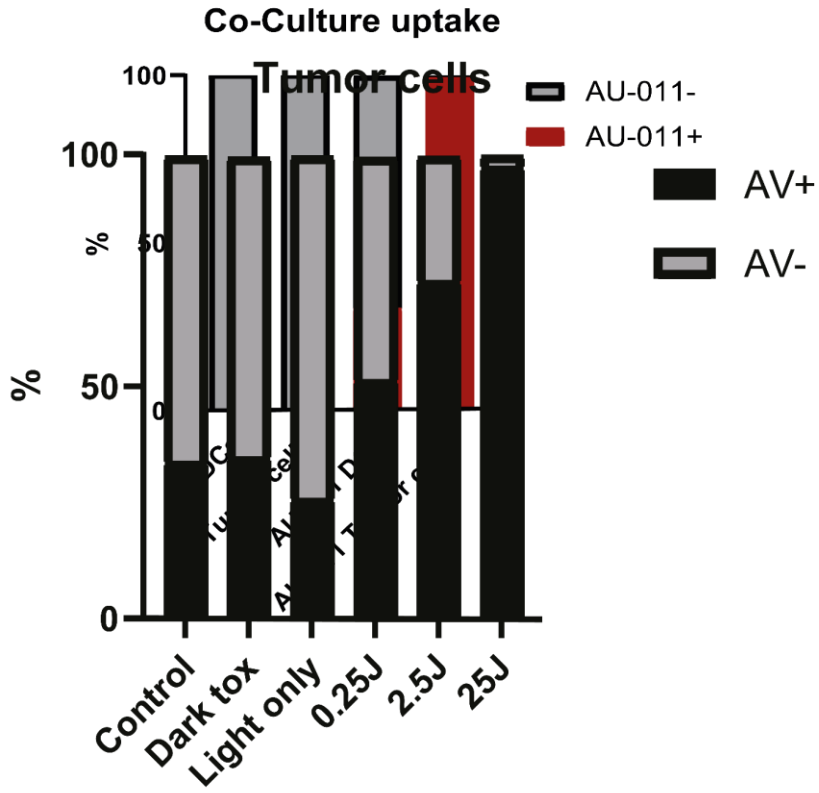
Dead cell



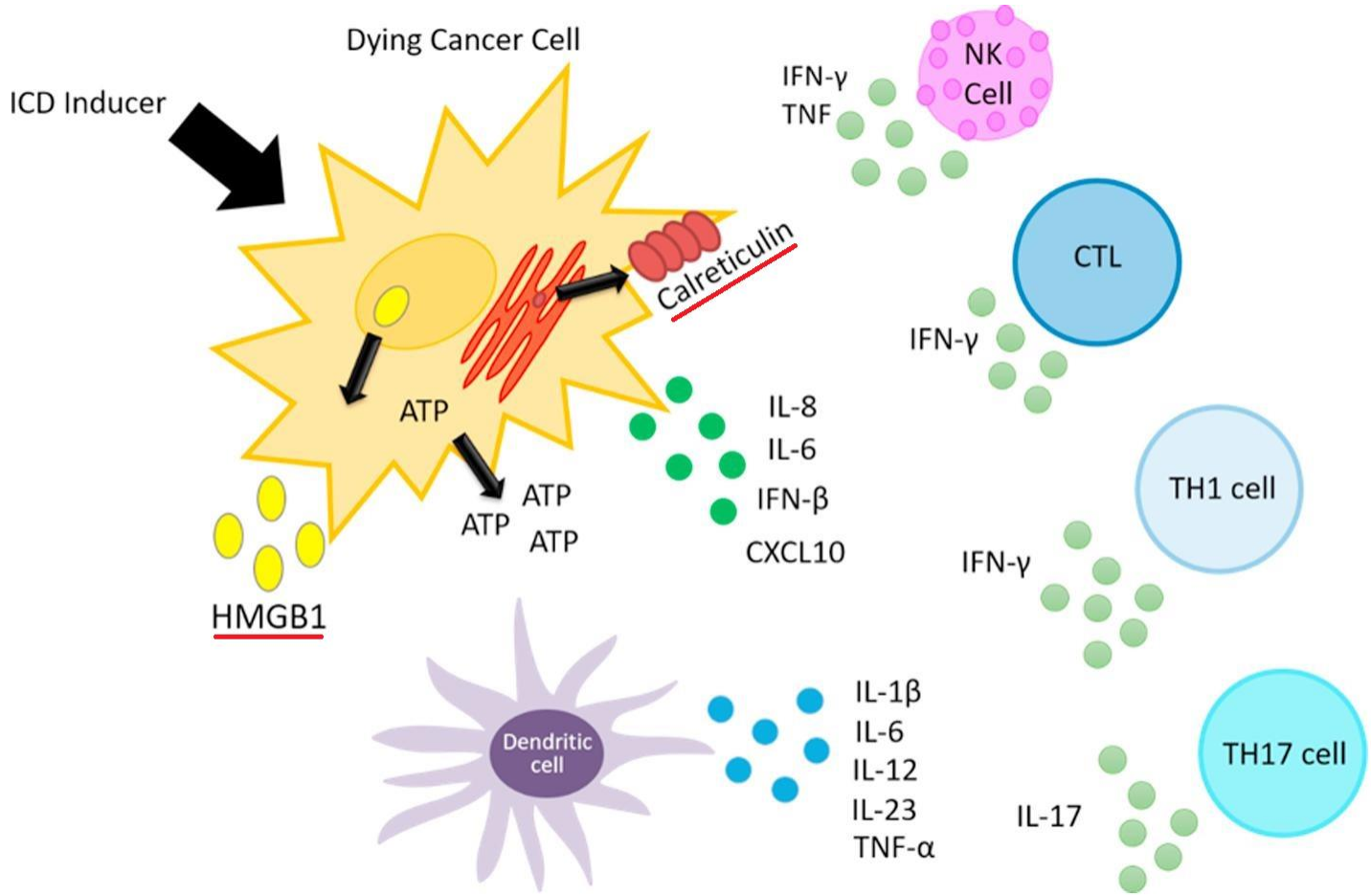
AU-011 treatment can induce cancer cell directed cytotoxicity





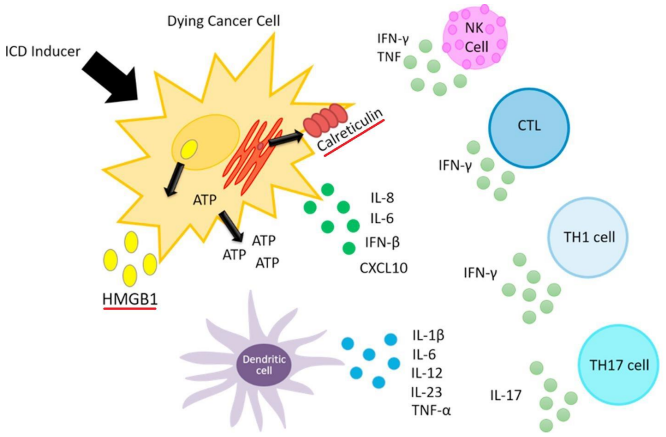


Damage-associated molecular patterns (DAMPs)

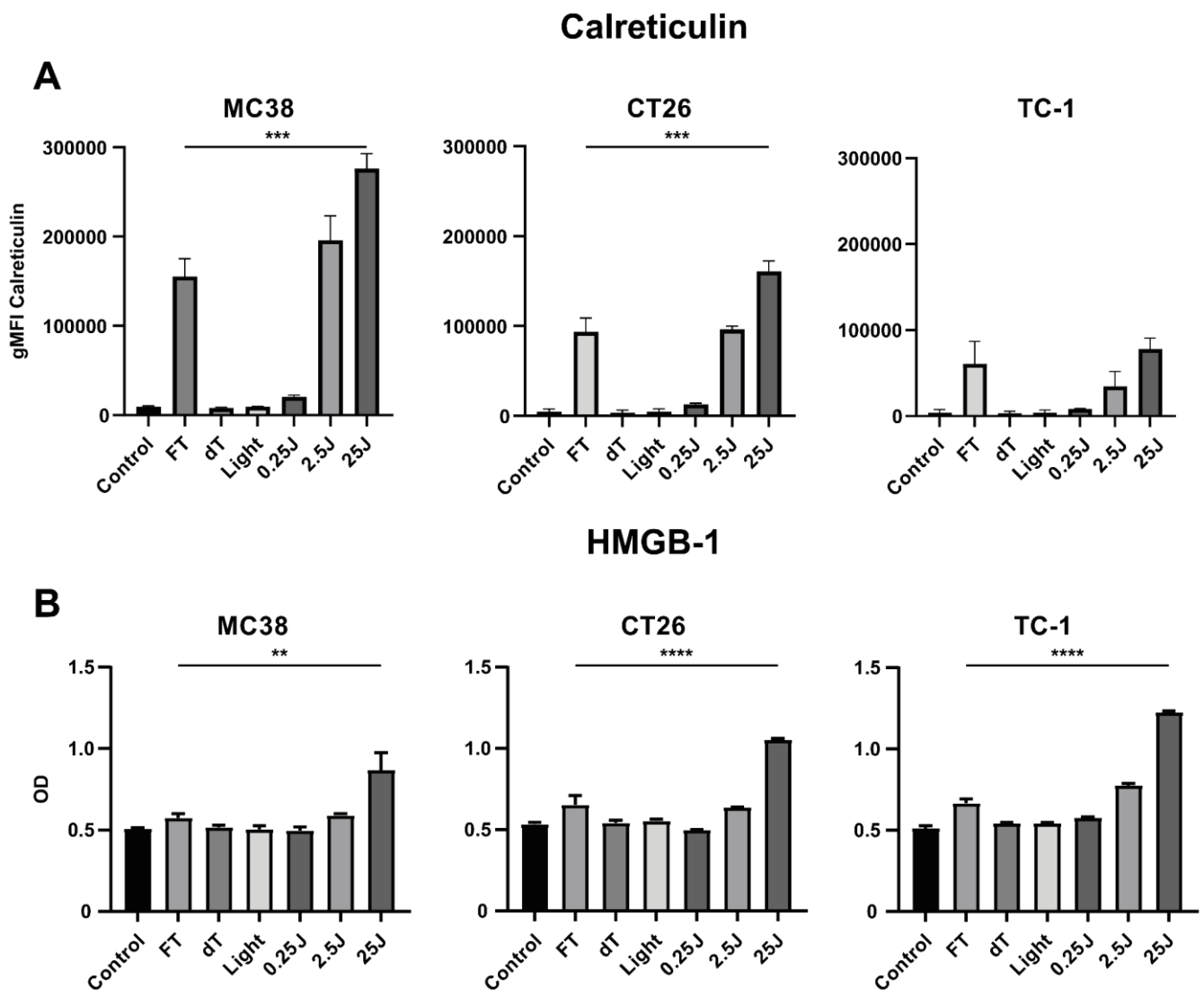


Showalter A. et al. Cytokines in immunogenic cell death: Applications for cancer immunotherapy. Cytokine. 2017;97:123-132

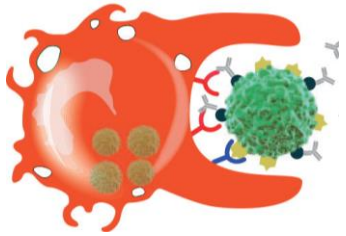
Release of DAMPs following AU-011 treatment

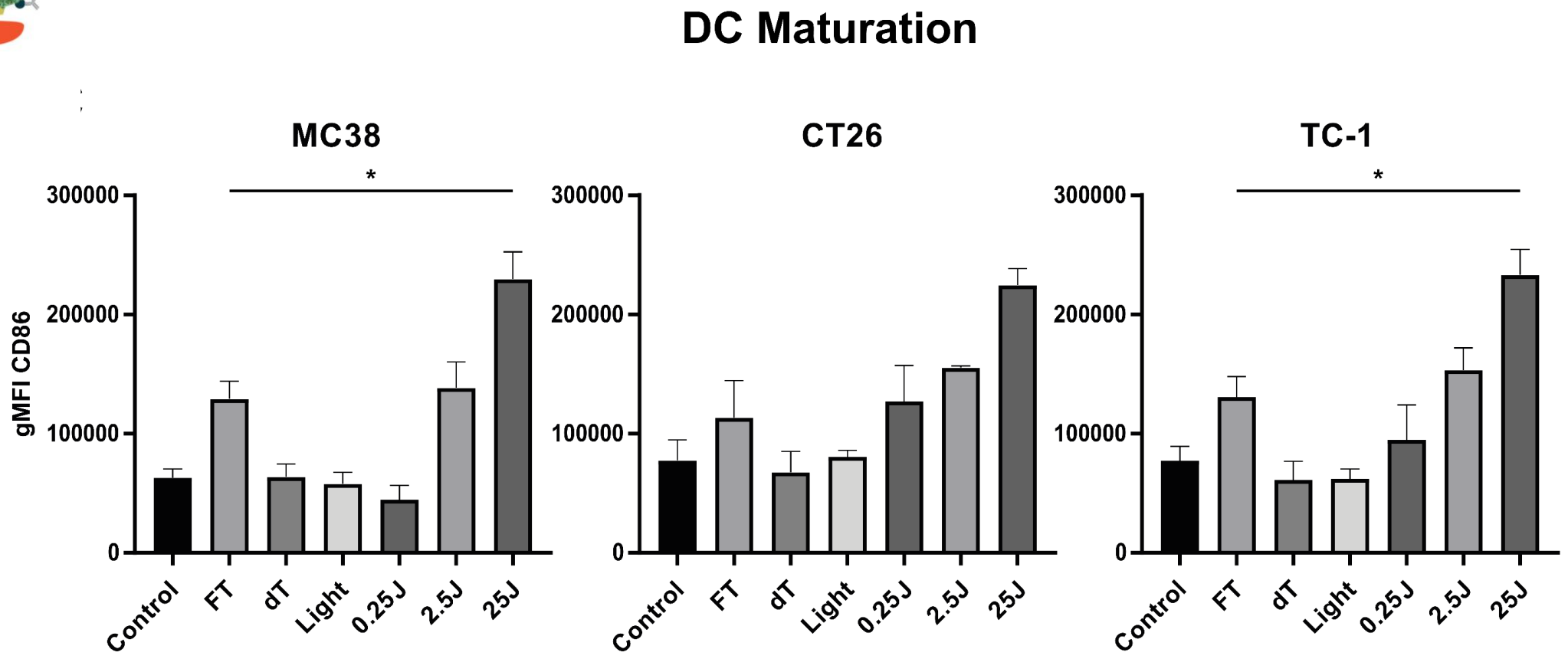


Showalter A. et al. Cytokines in immunogenic cell death: Applications for cancer immunotherapy. Cytokine. 2017;97:123-132

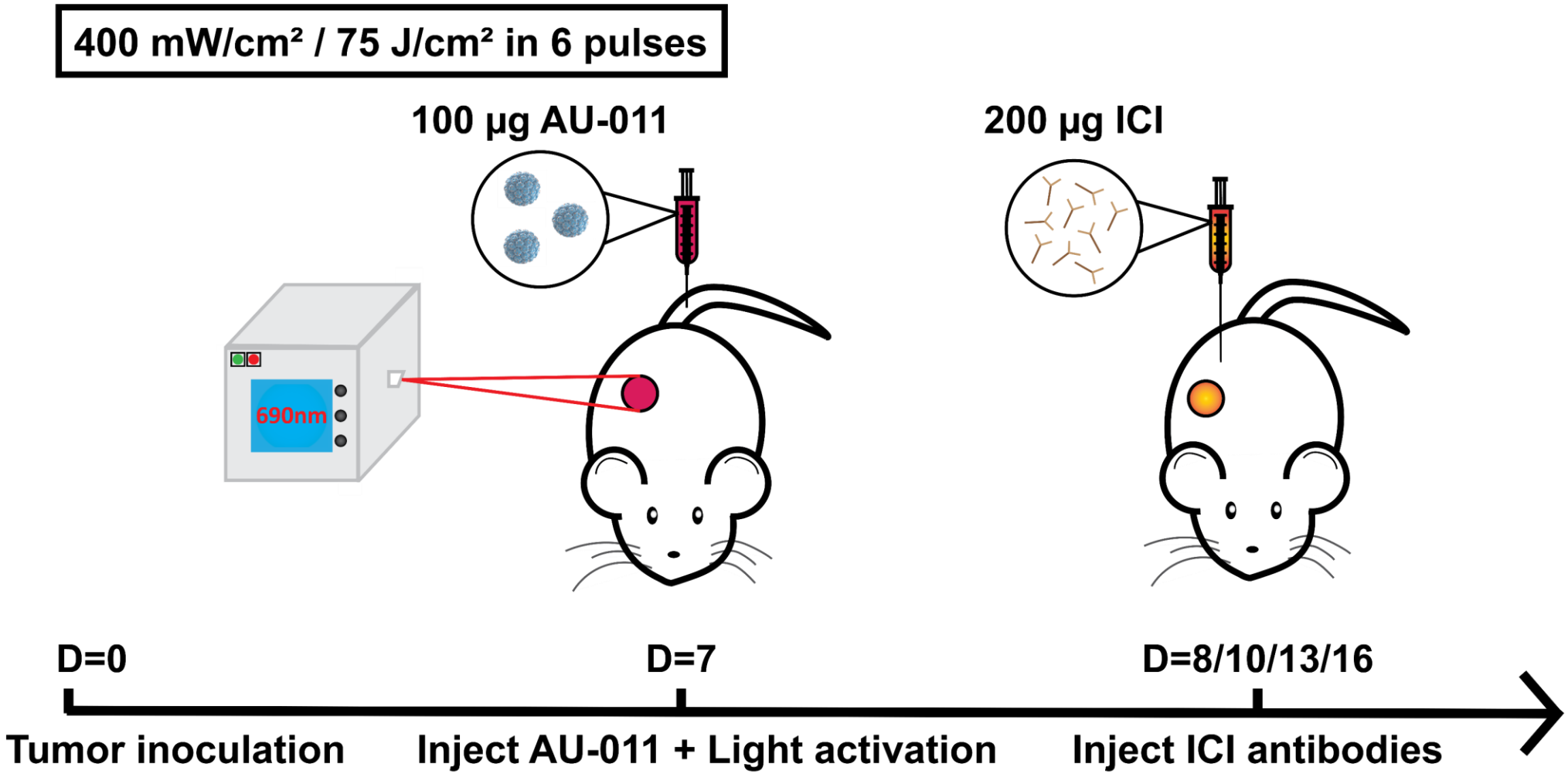


Dendritic cell maturation following AU-011 treatment

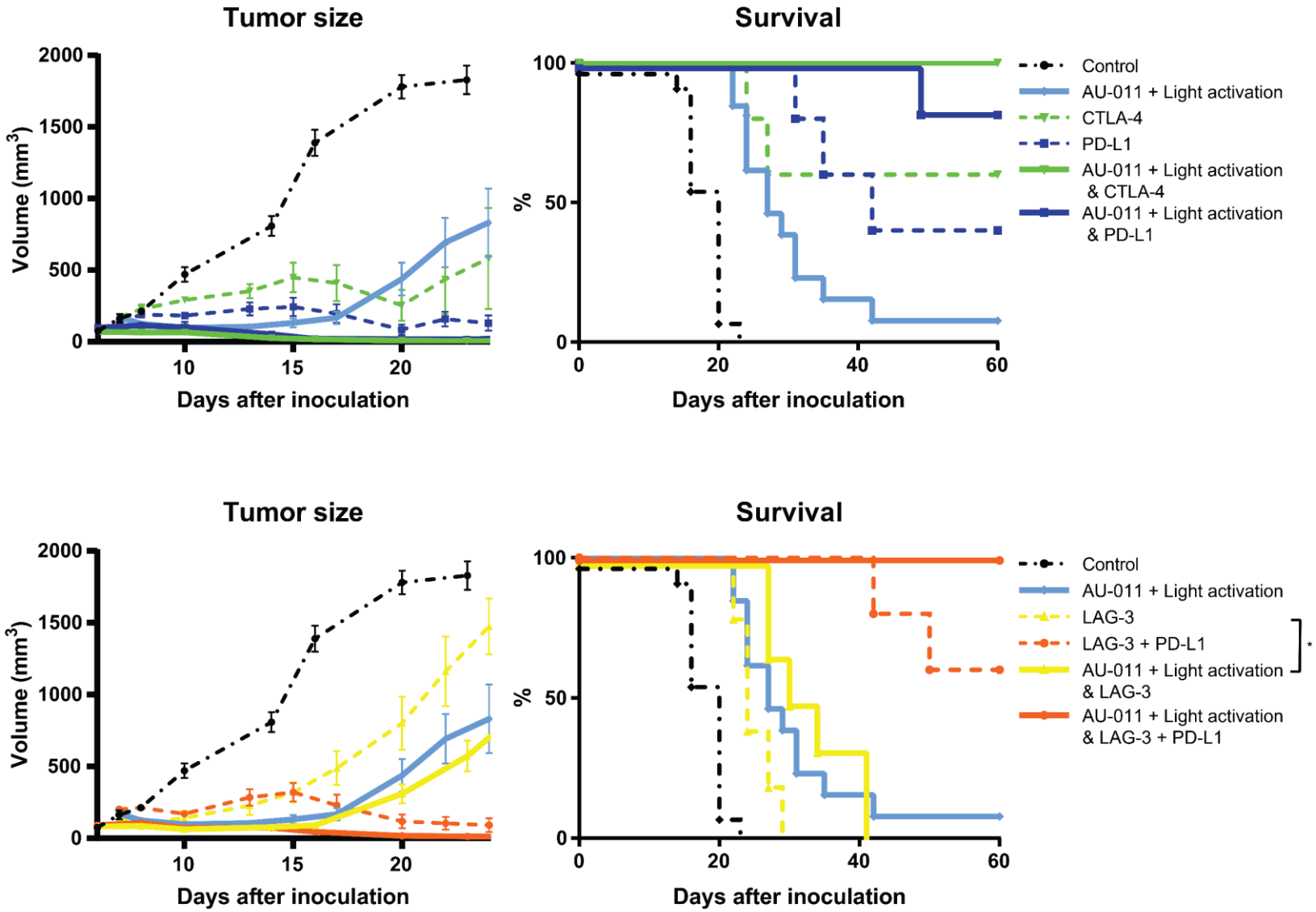




AU-011 + Light activation combined with ICI enhanced treatment response compared to either treatment alone (1 of 2)

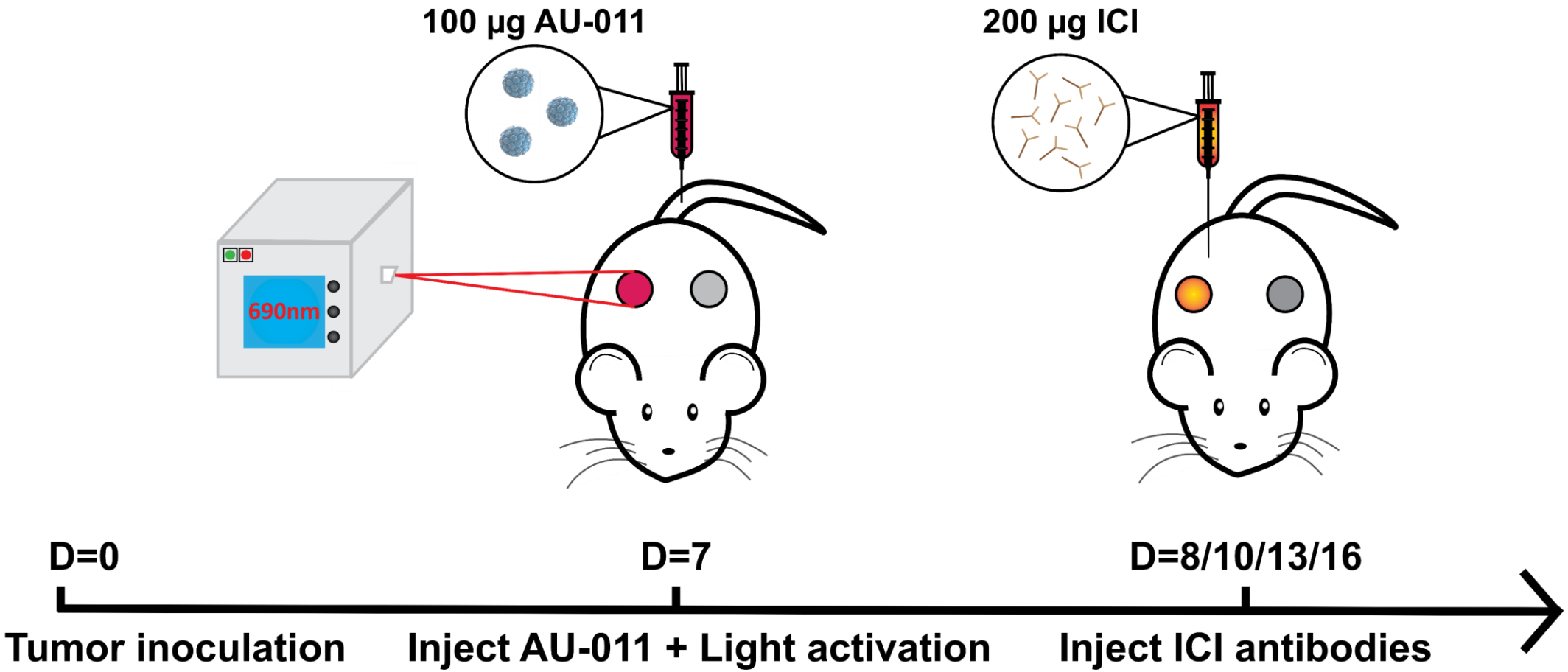


AU-011 + Light activation combined with ICI enhanced treatment response compared to either treatment alone (2 of 2)

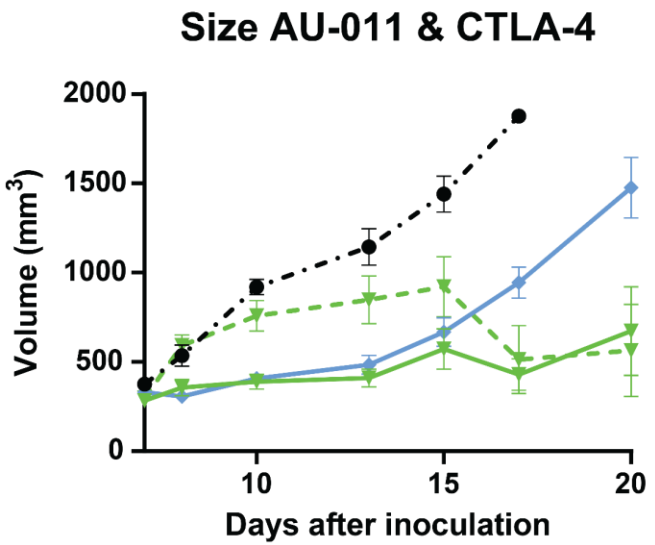


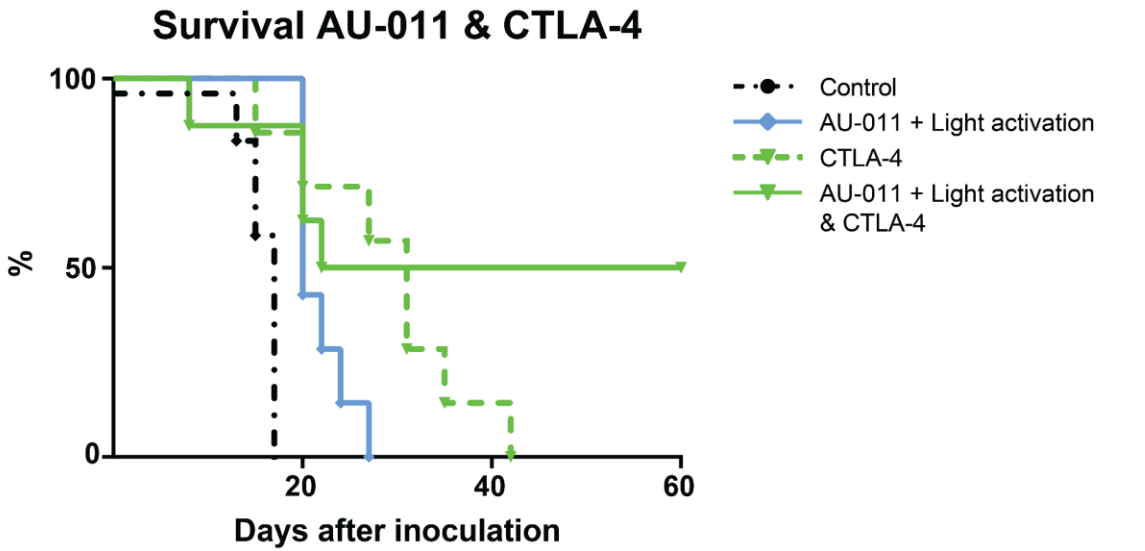
Treatment of primary and distant tumors was enhanced by AU-011 + Light activation with ICI versus either treatment alone (1 of 3)

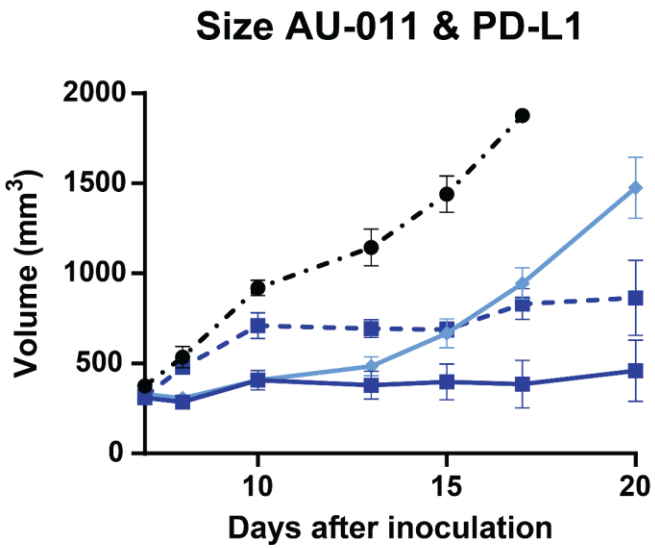
400 mW/cm² / 75 J/cm² in 6 pulses

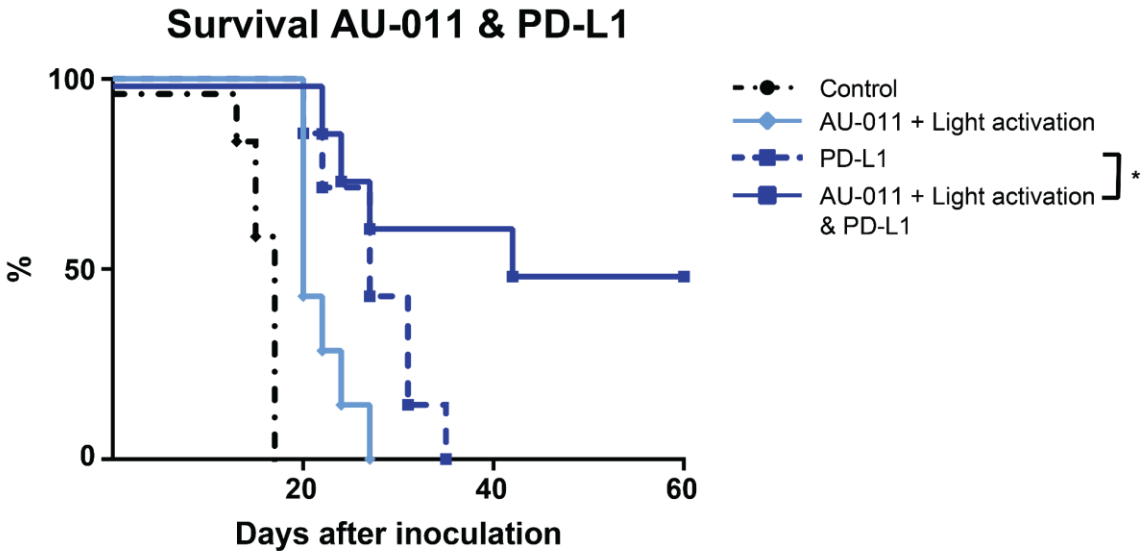


Treatment of primary and distant tumors was enhanced by AU-011 + Light activation with ICI versus either treatment alone (2 of 3)

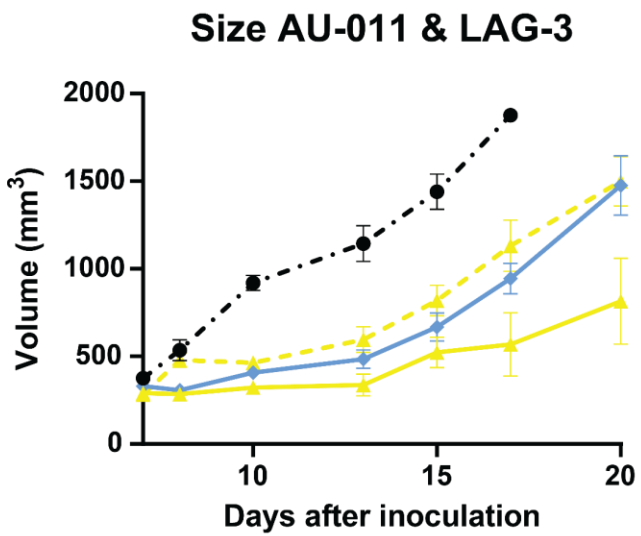


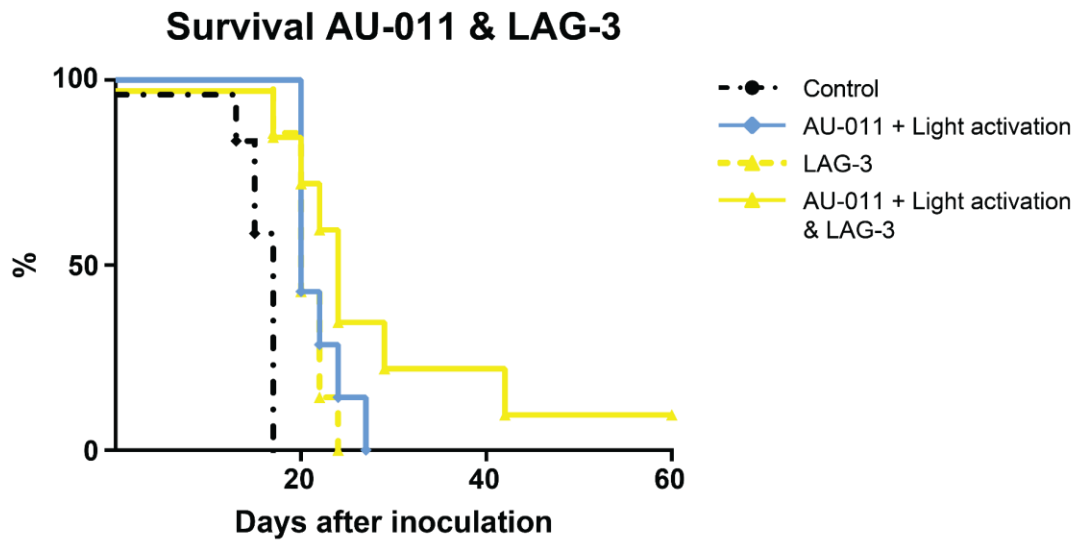


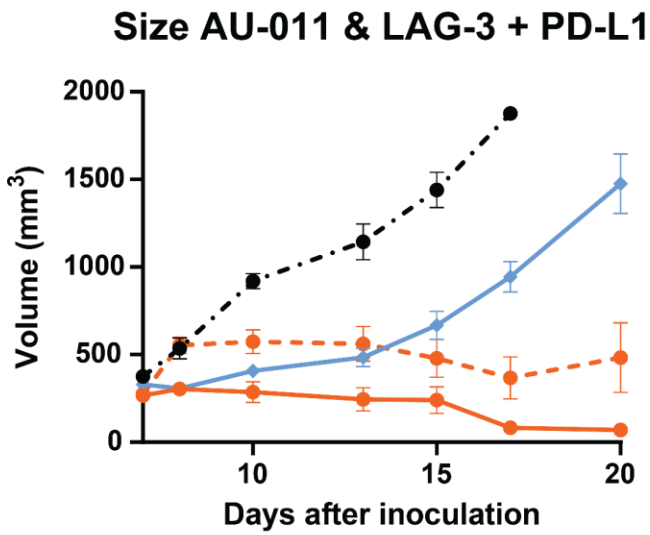


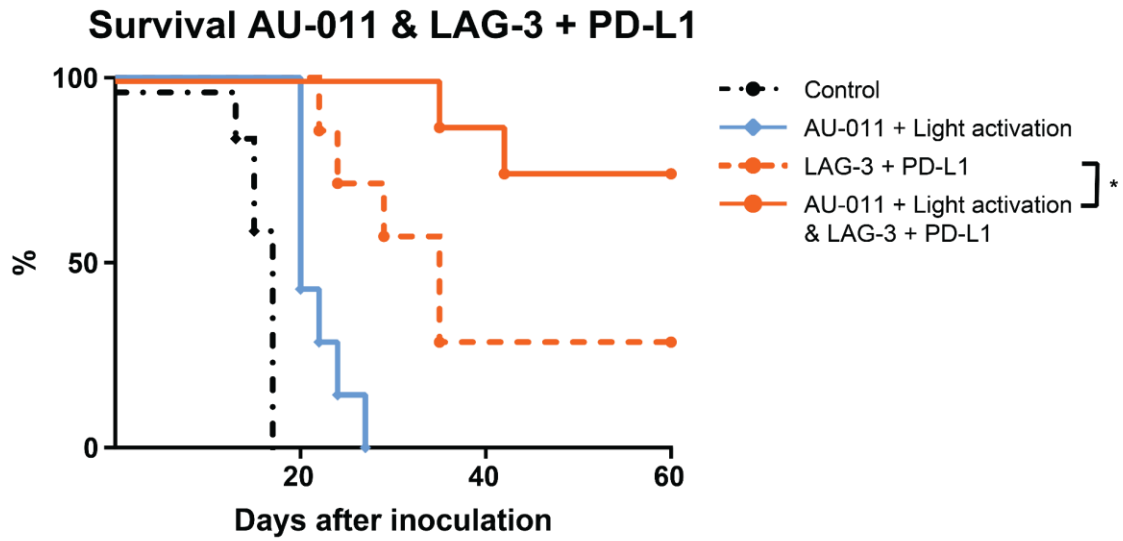


Treatment of primary and distant tumors was enhanced by AU-011 + Light activation with ICI versus either treatment alone (3 of 3)









AU-011 + light activation with ICI enhanced treatment response versus either treatment alone in both primary and distant tumors

		AU-011	CTLA-4	PD-L1	LAG-3	LAG-3 + PD-L1	AU-011 & CTLA-4	AU-011 & PD-L1	AU-011 & LAG-3	AU-011 & LAG-3 + PD-L1
Control	Tumor Volume	****	****	****	****	****	****	****	****	****
	Survival	****	****	****	***	****	****	****	****	****
AU-011	Tumor Volume	-	ns	ns	ns	ns	*	ns	ns	ns
	Survival	-	ns	*	ns	**	***	**	ns	***

Significance of the data presented in figure 5, determined by a one-way ANOVA with Tukey correction for multiple comparisons at day 20 post inoculation for tumor volume and a Mantel-Cox test for survival (* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, **** $p < 0.0001$; $n \geq 8$).

J Clin Oncol 40, 2022 (suppl 16; abstr e14544)

Conclusions

AU-011 + Light activation:

- **Induced cancer cell-directed cytotoxicity**
- **Released DAMPs and induced maturation of antigen-presenting cells**
- **Combined with ICI using anti-PD-L1 & anti-LAG-3 antibodies showed potential to induce complete and lasting tumor responses in both primary and distant tumors in murine models**

Leids Universitair Medisch Centrum

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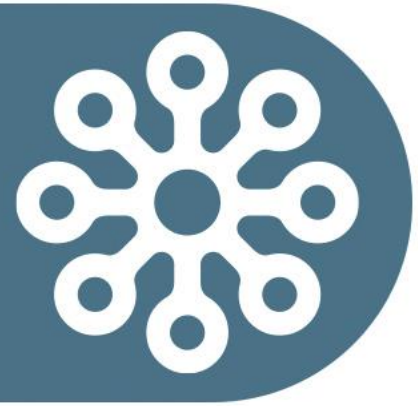
- Leiden University Medical Center

Question & Answer



ISOO 2022

Thank you!

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