Making the DARPin® Difference Reality for Patients

Patrick Amstutz, CEO Molecular Partners

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Presentation of Molecular Partners AG, Switzerland (Ticker: MOLN)

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Molecular Partners: Who We Are

Teamwork

- Swiss biotech
- 120 team members
- Discovery to Phase 2 (POC)
- Science & patients first

DARPin® Therapies

- Abicipar in Phase 3 (ophtha)
- MP0250 in Phase 2 (onc)
- MP0274 in Phase 1 (onc)
- Broad preclin. I/O portfolio

Long-term Partnerships

- Alliance with Allergan
- Swiss listing (MOLN)
- Cash CHF 152mn*
- Financed well beyond key value inflection points

DARPin® Platform

- DARPin® Difference: unlock novel modes of action
- Proof of Platform in the eye and systemically
- Fast and cost effective drug discovery engine

*As of Sep 30, 2017. I/O, immuno-oncology.

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DARPin® Proteins: A Different Class of Therapeutics

Derived from ankyrin repeat proteins which are naturally occurring binding proteins in multifunctional contexts

Drug discovery engine

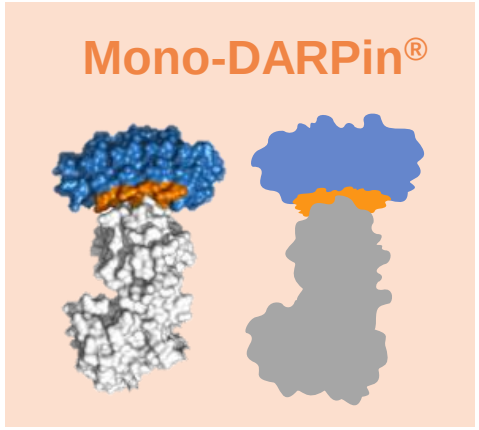
- Mono-DARPin® are selected to a target from large DARPin libraries
- Fast and cost-effective

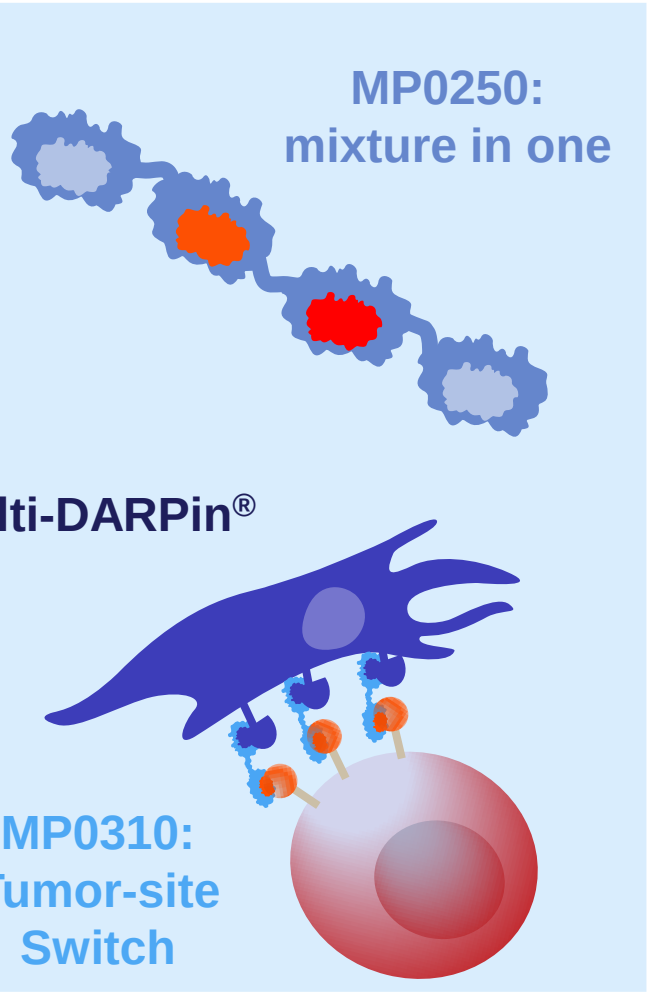
Ideal properties

- Small size, high potency, high stability, high affinity, high developability

Proof of platform

- Low immunogenicity and long $t_{1/2}$ in bloodstream (14 days) and eye





Flexible architecture

Multi-DARPin® candidates:

- Linked mono-DARPin® domains (≤6 so far)
- Different linkers – short, long, flexibel, rigid,…

DARPin® Difference

Collections of 10,000 multi-DARPin® candidates are screened for new MoA

- Allosteric modulation
- Local agonists
- …

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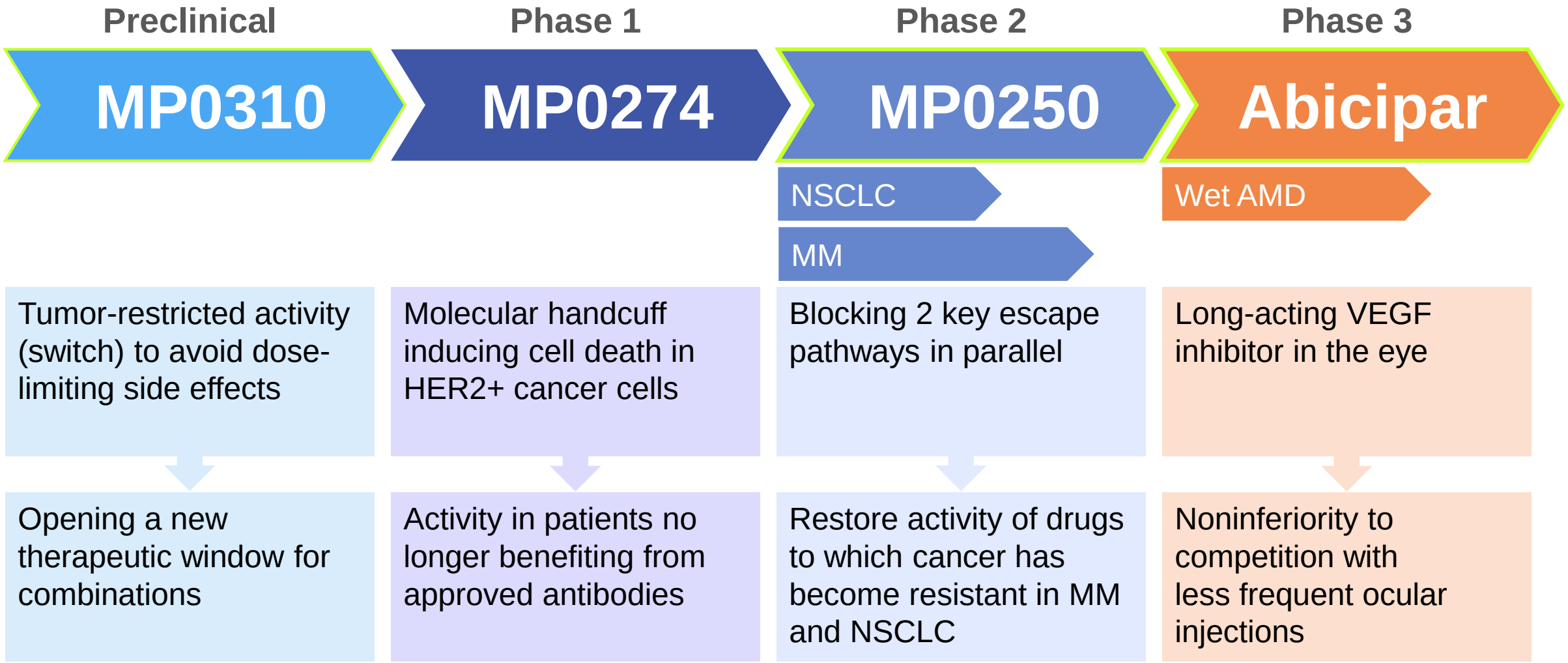
Turning the DARPin® Differentiation into Patient Outcome – Our Target Profiles



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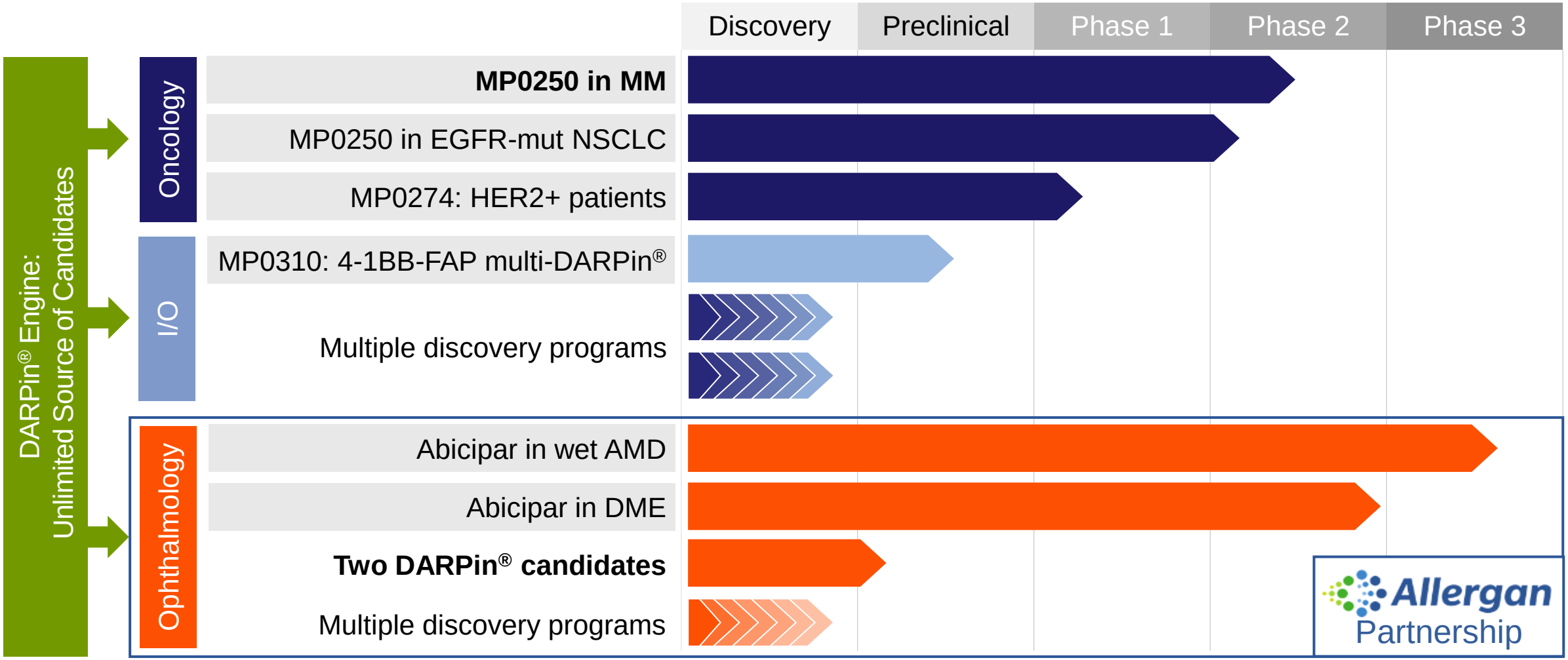
Balanced and Robust Portfolio



AMD, age-related macular degeneration; DME, diabetic macular edema; MM, multiple myeloma; NSCLC, non-small cell lung cancer.

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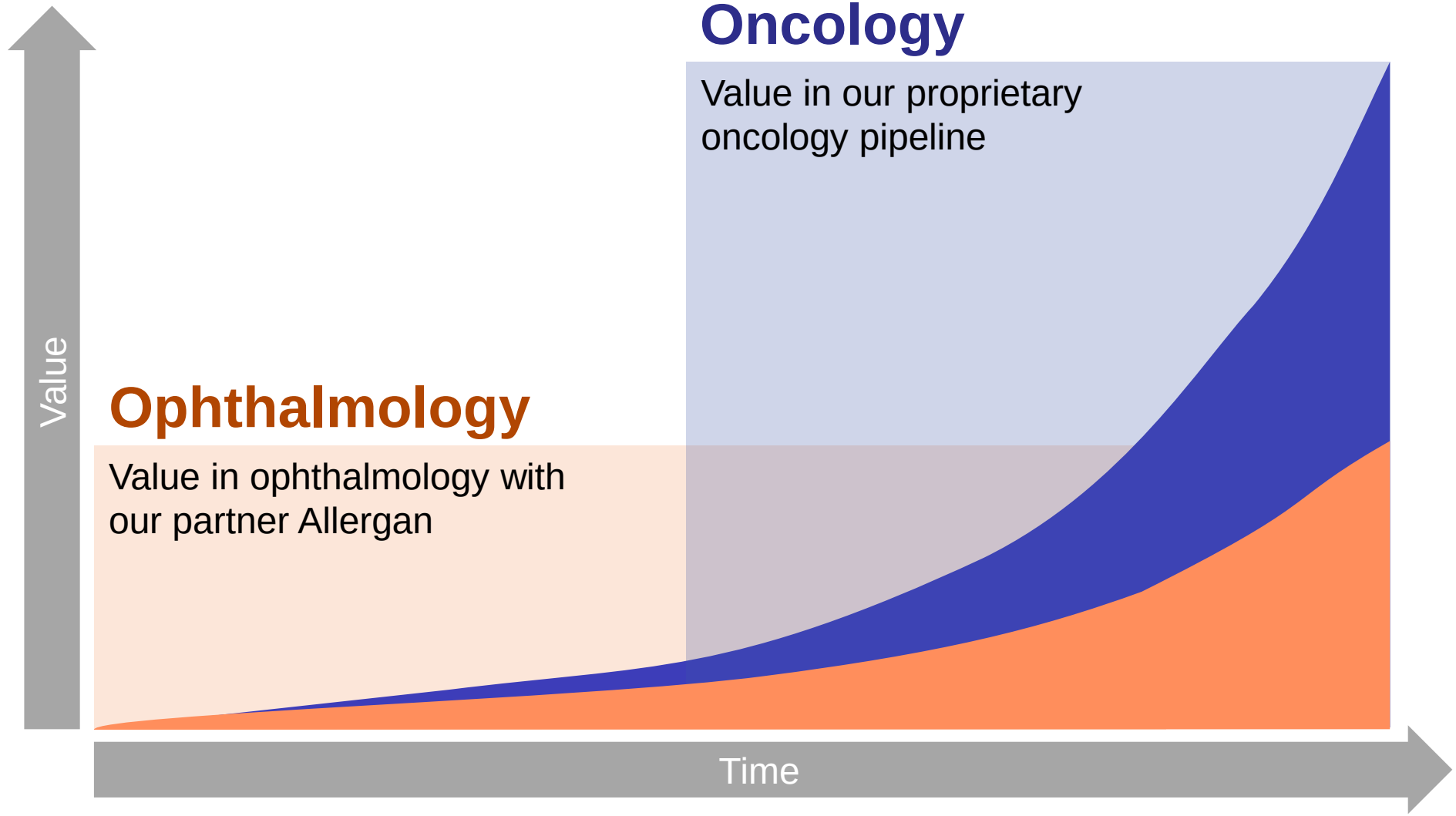
Ready to Capture Value Beyond Ophthalmology



Oncology

MP0250

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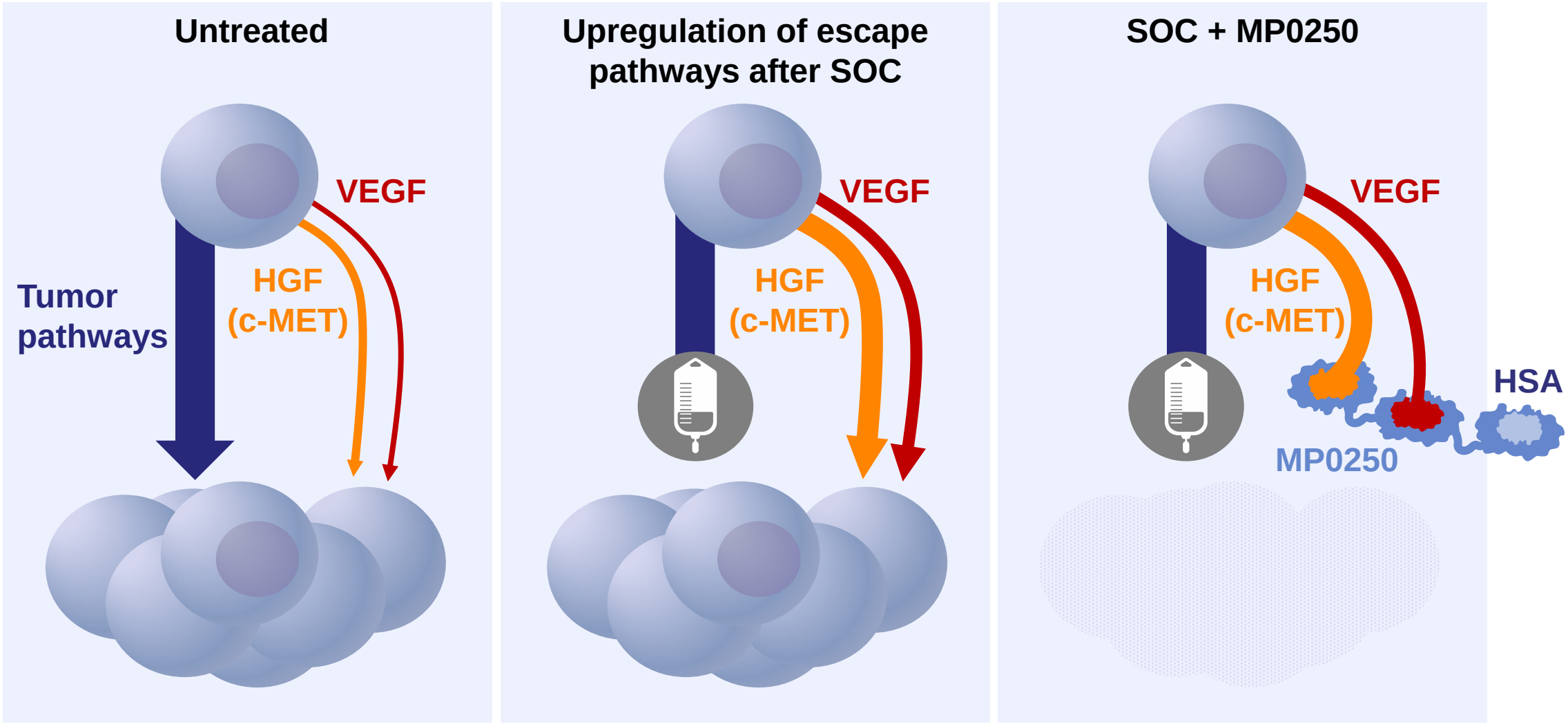
MP0250 Blocks Two Tumor Escape Pathways

MP0250



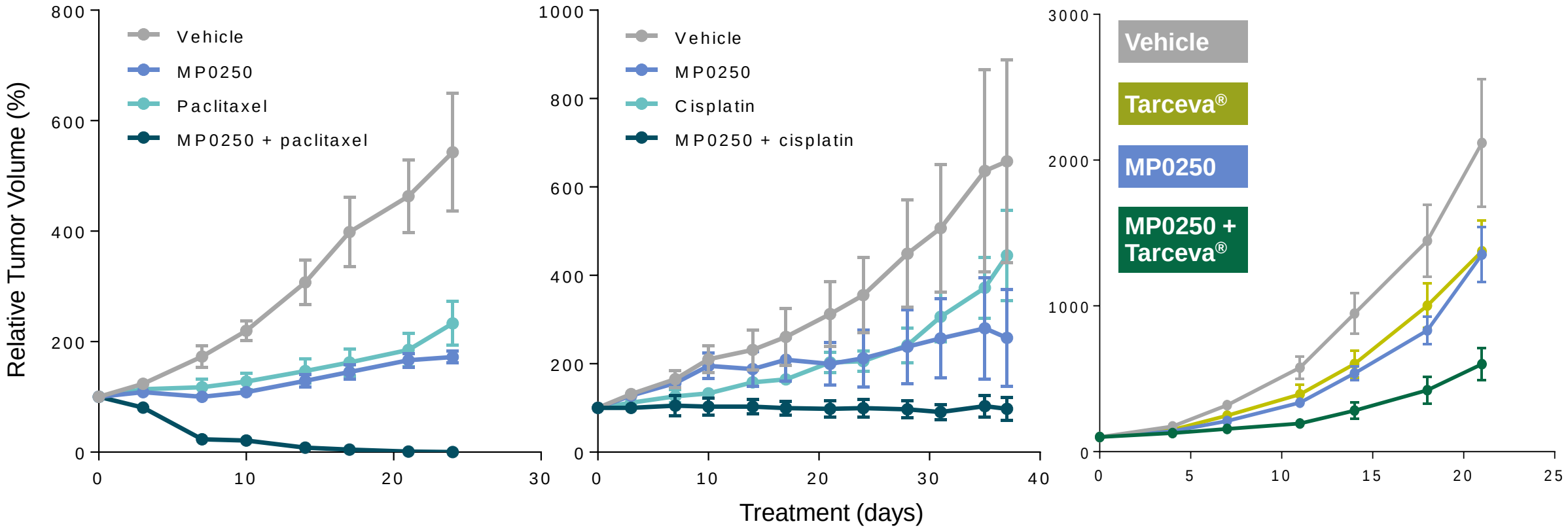
Combination with MP0250 Increases the Potency of Many Agents Across Different Tumors

MP0250

Gastric cancer PDX model
GXA3027

Head & neck cancer PDX model
HNXF1905

MP0250 in Lung Cancer Model



PDX model, patient-derived xenograft mouse model.

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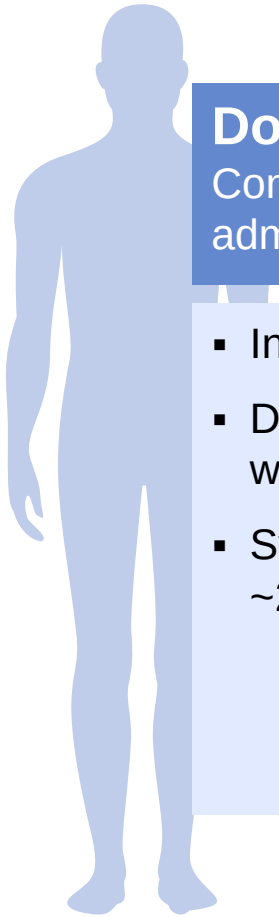
MP0250 Can Be Dosed Safely, Conveniently and Shows Clear Signs of Efficacy in Phase 1 Study

MP0250



Dosing*
Convenient, flexible administration

- Infusion well tolerated
- Dosing every 2 or 3 weeks possible
- Systemic half-life: ~2 weeks

Exposure
Repeated dosing resulted in good exposure

- Sustained drug exposure throughout treatment periods (max. to date >12 mo)
- Only 1/40 patients developed a relevant titer of ADAs (>10 fold above background)

Safety
Well tolerated

- Most common AE was hypertension, generally well controlled with standard medication
- AEs were as expected for a VEGF inhibitor

Efficacy
Clear signs of antitumor efficacy

- 2 patients showed significant reduction in tumor volume
- Treatment duration was ≥3 mo in 18 patients (40%) and ≥6 mo in 4 patients (10%)

These first-in-human data support the development of DARPin® therapy via systemic administration.

* 1- and 3-h infusion q2wk at doses ≤8 mg/kg or q3wk at 12 mg/kg; 1- and 3-h infusion well tolerated.
ADA, anti-drug antibody; AE, adverse event. Study details can be found at clinicaltrials.gov/NCT02194426.

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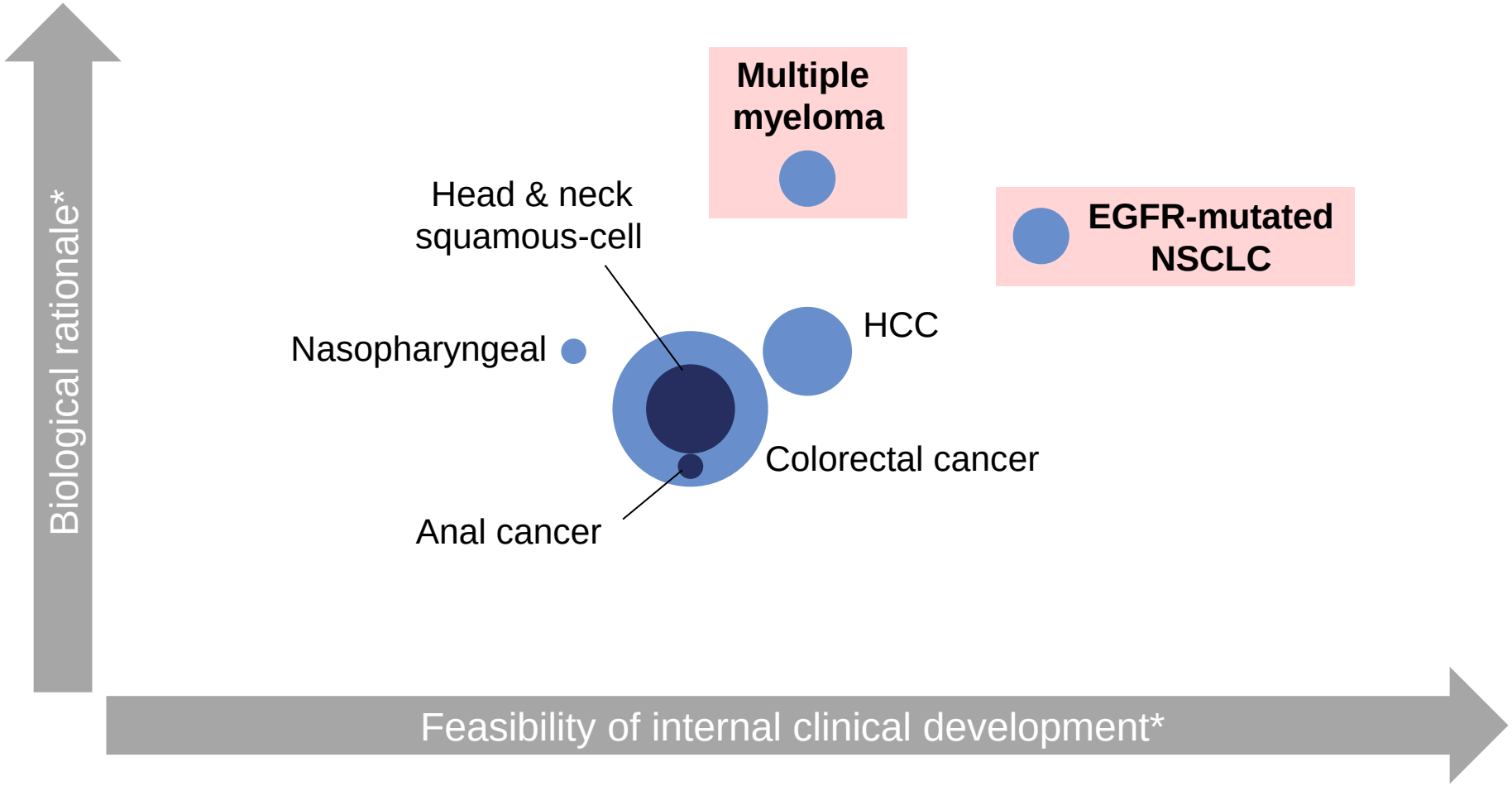
Our Indications for Phase 2: MM and NSCLC

MP0250



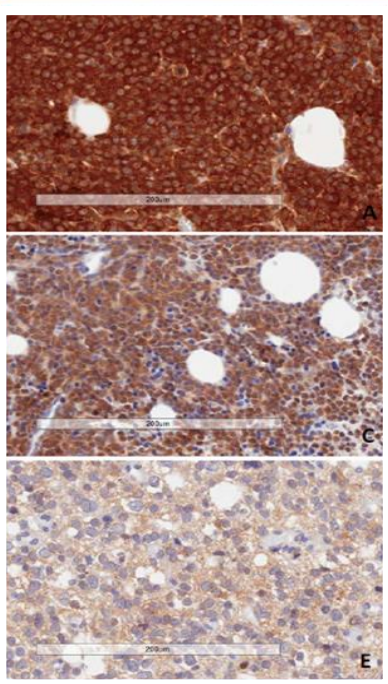
Bubble size indicates estimated relative market potential (incidences). Source: Datamonitor.
*Based on internal assessment on speed to market and complexity of development program. Potential of gastric, renal and other cancers under evaluation.

Clinical Data Supports Targeting HGF & VEGF in Multiple Myeloma

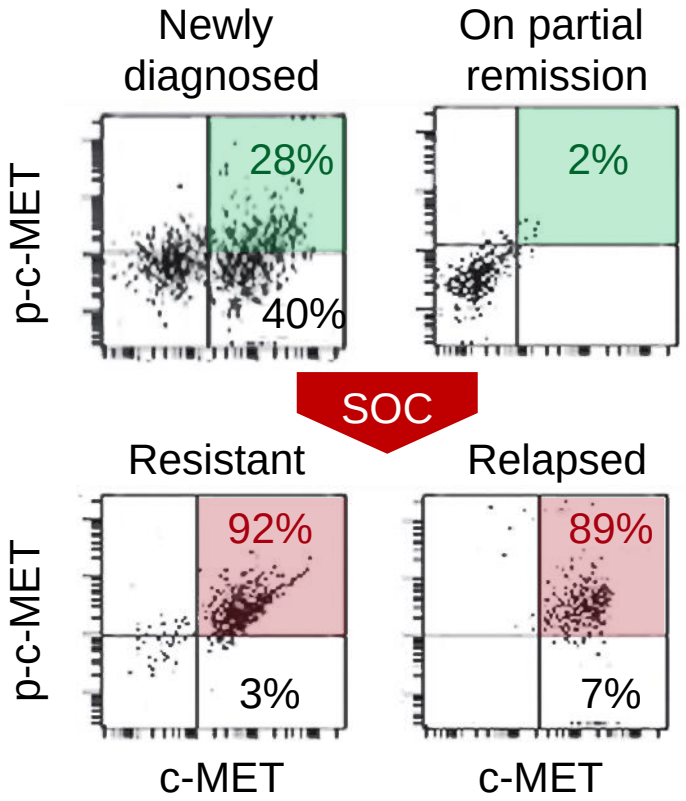
MP0250

Bone marrow of 8 MM patients sampled for HGF expression levels:

HGF score	Patients
3+	6/8
2+	2/8
1+	0/8



HGF receptor activation[1] dynamics



VEGF rationale: A small MM study of bevacizumab (Avastin®) + bortezomib (Velcade®) demonstrated benefit over Velcade® alone[2]

1. Moschetta M, et al. Clin Cancer Res 2013;19:4371-82; 2. White D, et al. Cancer 2013;119:339-47.

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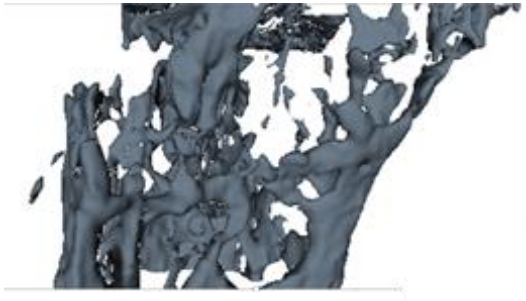
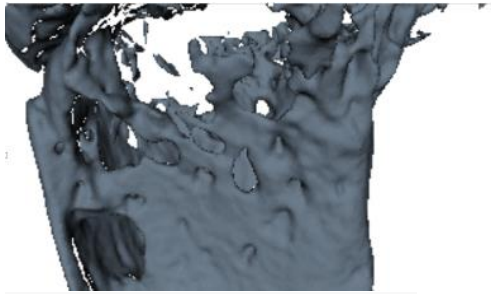
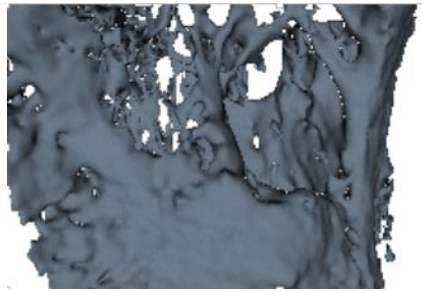
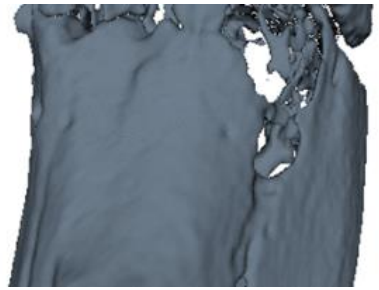
MP0250 Combination with Velcade® Results in Superior Efficacy in Mouse Model

MP0250

	Vehicle	Velcade®	MP0250	Velcade® + MP0250
Bone morphology				
Muscle invasion by tumor				

Xenograft model H929.

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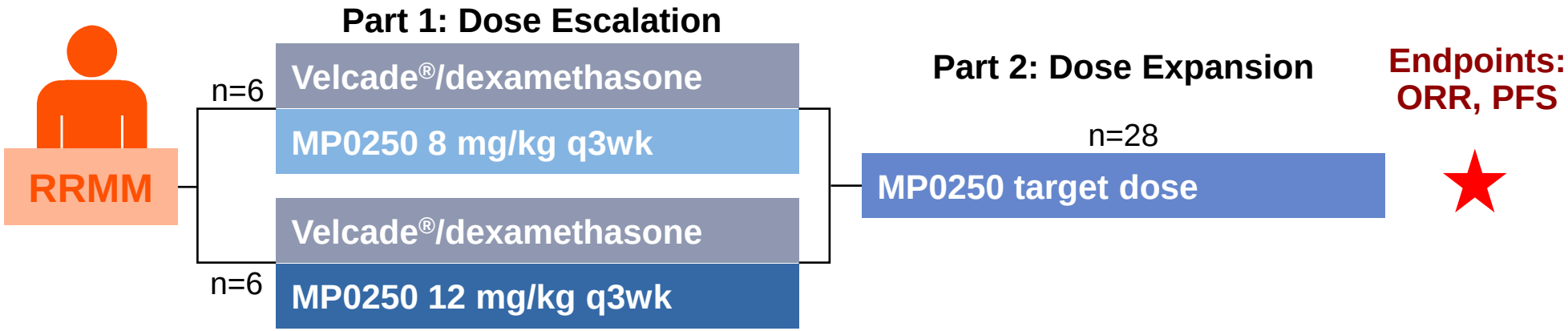
MP0250 Phase 2 Study in MM

MP0250



- Phase 2 open-label, single-arm, multicenter study of MP0250 + Velcade® + dexamethasone in patients with refractory and relapsed multiple myeloma (RRMM)
- Study population: MM patients who have received ≥2 lines of therapy, including Velcade® and an IMiD, and have shown no response to most recent therapy or progressed ≤60 days after most recent therapy
- Study status*: 8 patients have been treated in the first dose escalation cohort (MP0250, 8 mg/kg)
- Next readouts: Initial efficacy 2018

*Data cutoff 4th January 2018
Study details can be found at clinicaltrials.gov/NCT03136653.

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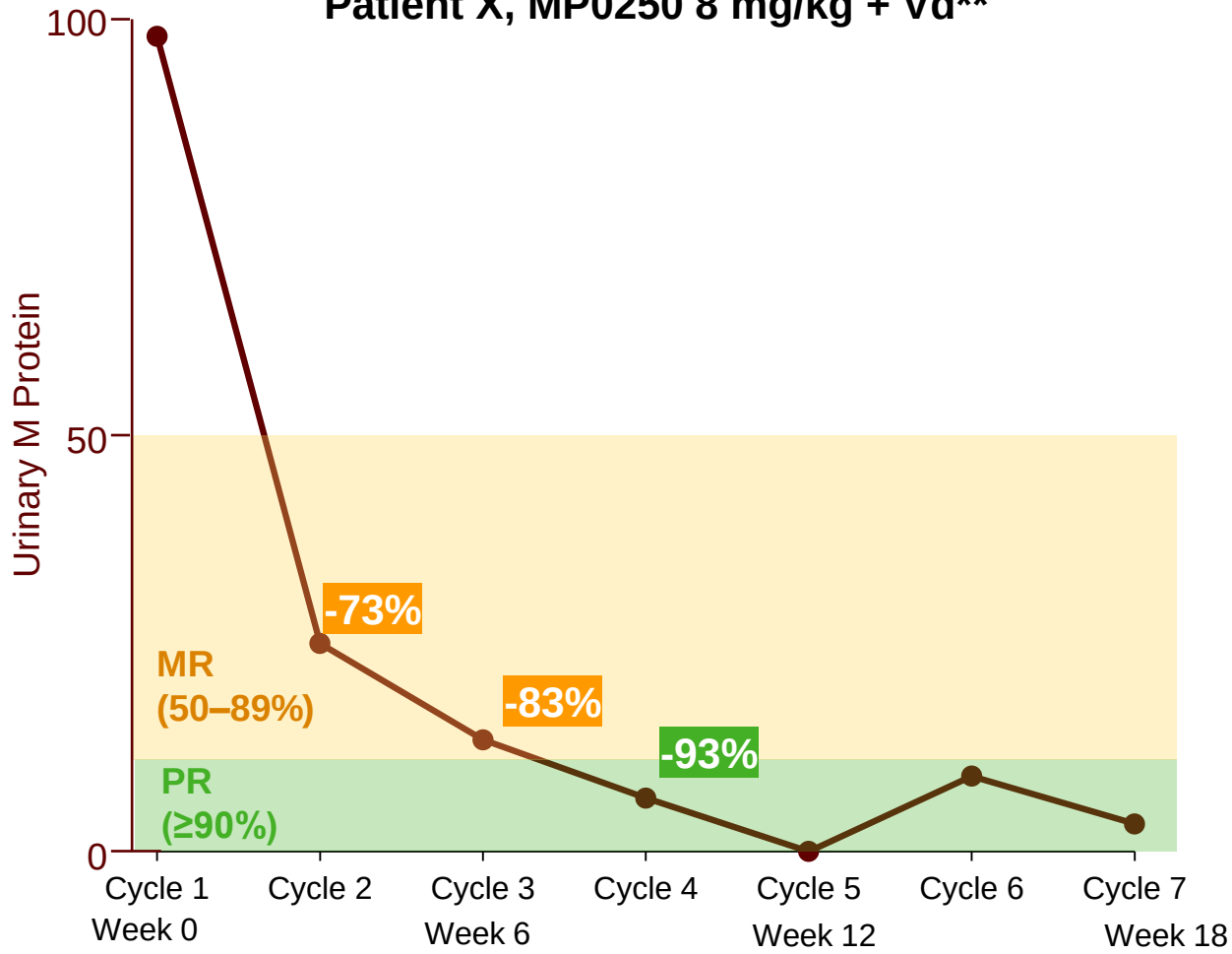
MP0250 Phase 2 in MM Initial Safety Read-out: Combination Well Tolerated with Promising Signs of Efficacy

MP0250

Initial Results & Study Status*:

- Initial dose level: 8mg/kg/3weeks
- No dose-limiting toxicities have been reported at data cutoff
- 8 RRMM patients were dosed, with 7 evaluable for safety and efficacy determination at data cutoff
- Preliminary Results
  - 4 of 7 patients have evidence of anti-myeloma activity
  - 3 patients with Partial Response (PR)
  - 1 patient with Minimal Response (MR)

Urinary M Protein % Change over Time: Patient X, MP0250 8 mg/kg + Vd**



*Data cutoff: 4th January 2018
**Kappa Free Light Chain measurement in line with M-protein
Study details can be found at clinicaltrials.gov/NCT03136653.

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Unique Potential of MP0250 in MM

MP0250

- Multiple myeloma is the 2nd most common blood cancer
- Global market value ~USD 9bn, expected to reach >12bn by 2021 (6% CAGR)*

75%

25%

1st/2nd-line
n= >100,000*

IMiD or PI + mAb

PI or IMiD + mAb

Transplant

HGF/ c-MET

No later-line treatments target these key escape pathways

3rd/4th-line
n= ~30,000*

PI + X

IMiD + Y

+ MP0250

MP0250:
Potential to become backbone for all later lines

*Including US/5EU/JP. Datamonitor.

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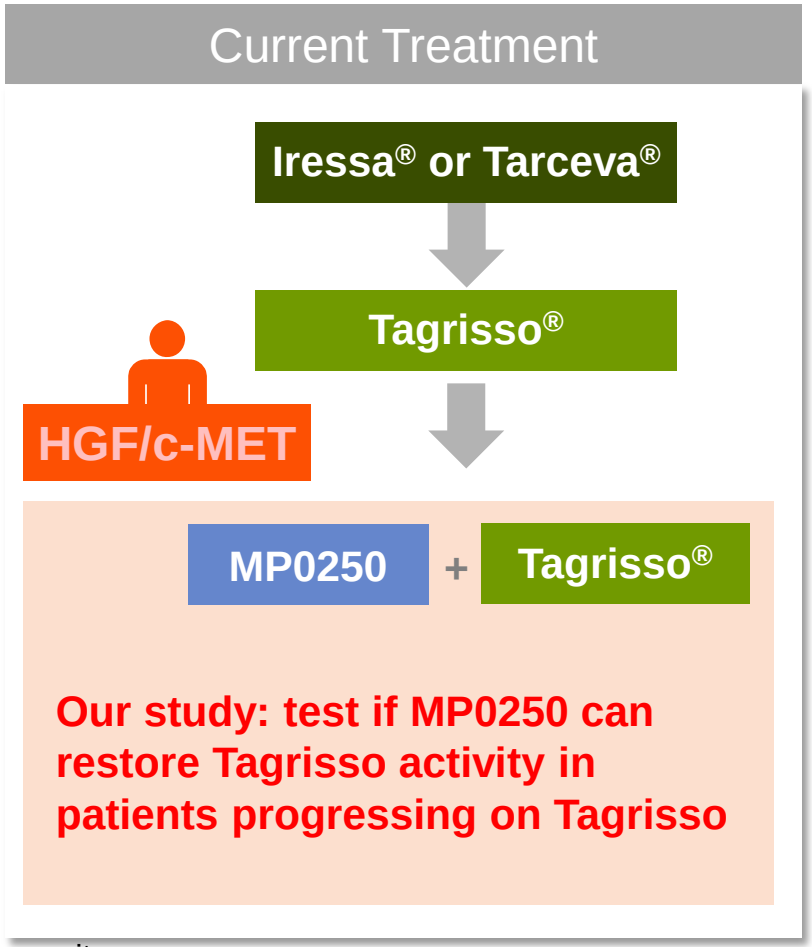
Unique Potential of MP0250 in EGFR mut NSCLC

MP0250



- NSCLC is a leading cause of cancer death
- Activating EGFR mutations are found in up to 10% of Western and up to 50% of Asian NSCLC[1]
- Global market value (EGFR NSCLC) ~USD 1.9bn, expected to reach >2.5bn by 2021 (7% CAGR)[1]
- Status: FDA approval Sep 2017
- On track to dose 1st patient in Q1 2018
- Next readouts: initial safety in 2018 & initial efficacy 2019

1. Including US/5EU/JP. Datamonitor.

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Immuno-Oncology

MP0310

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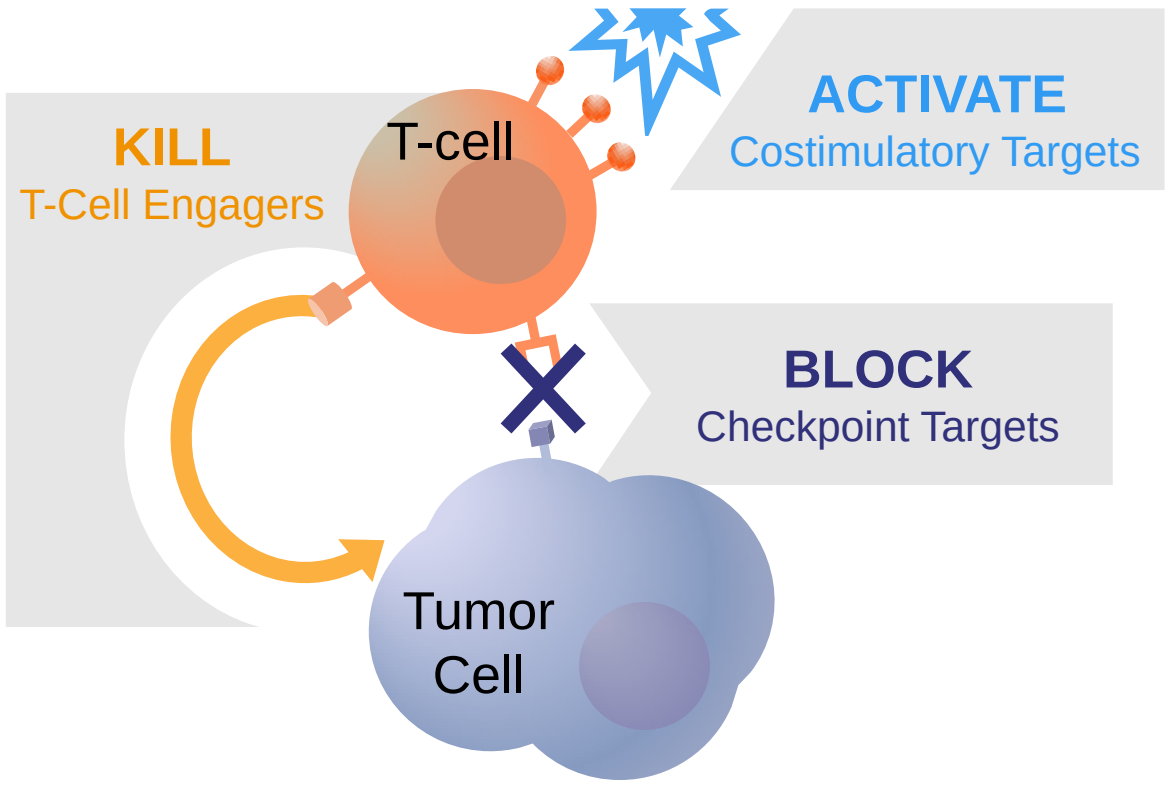
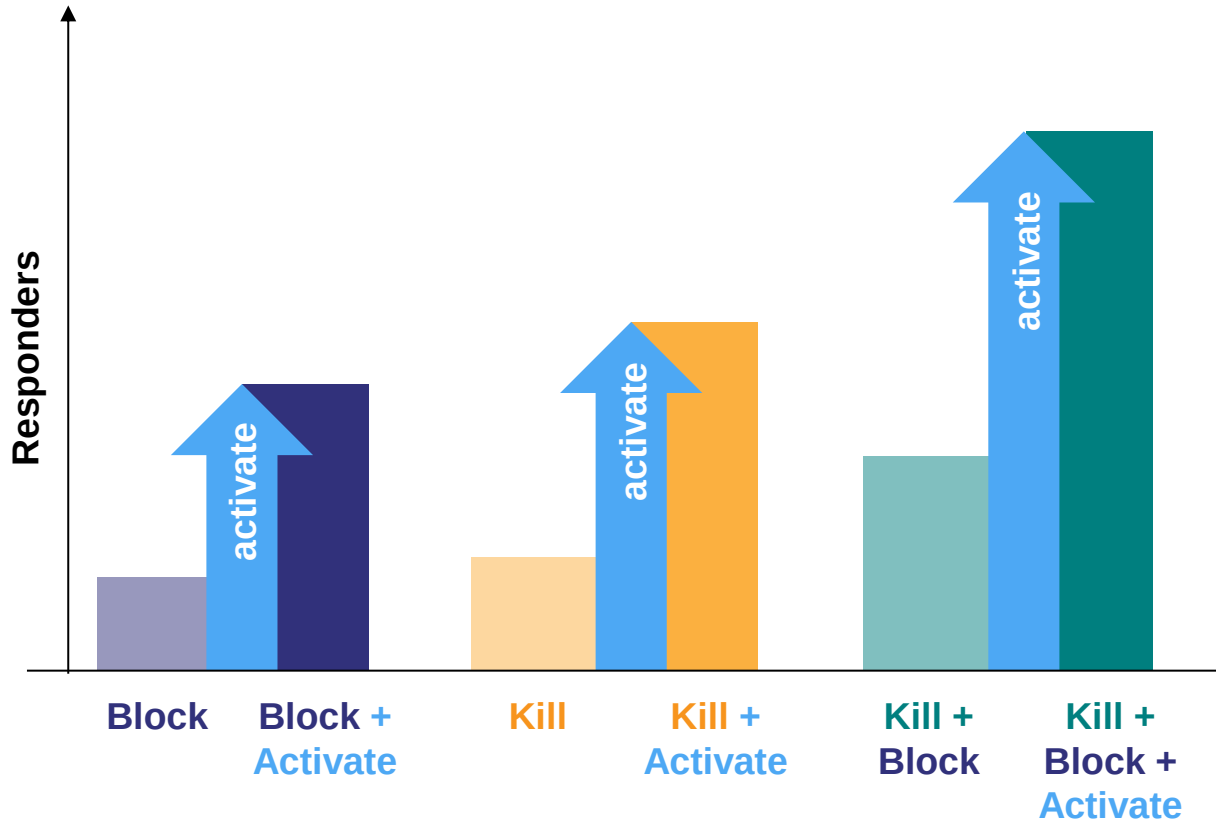
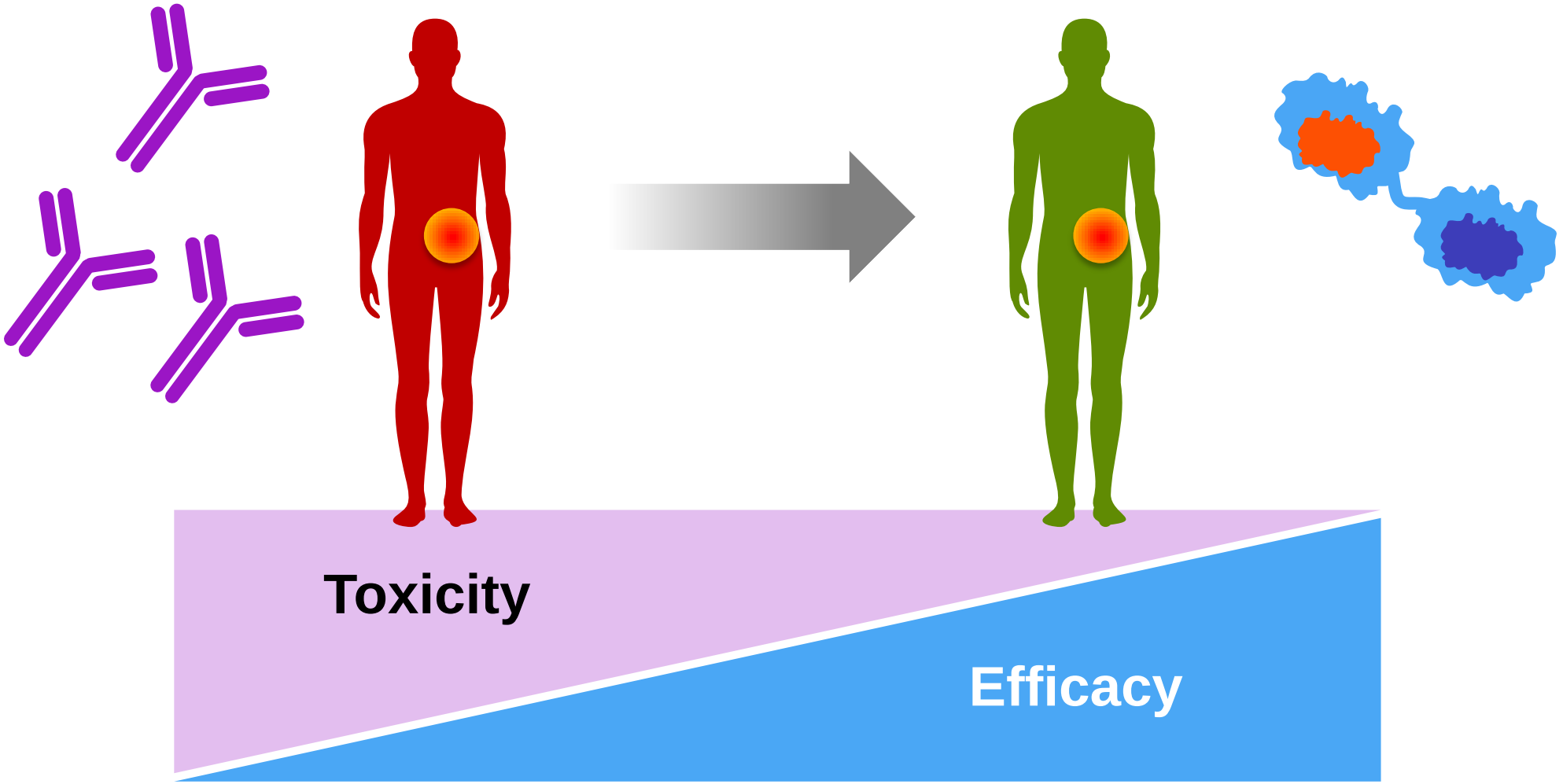
Need for Combination Therapy in I/O

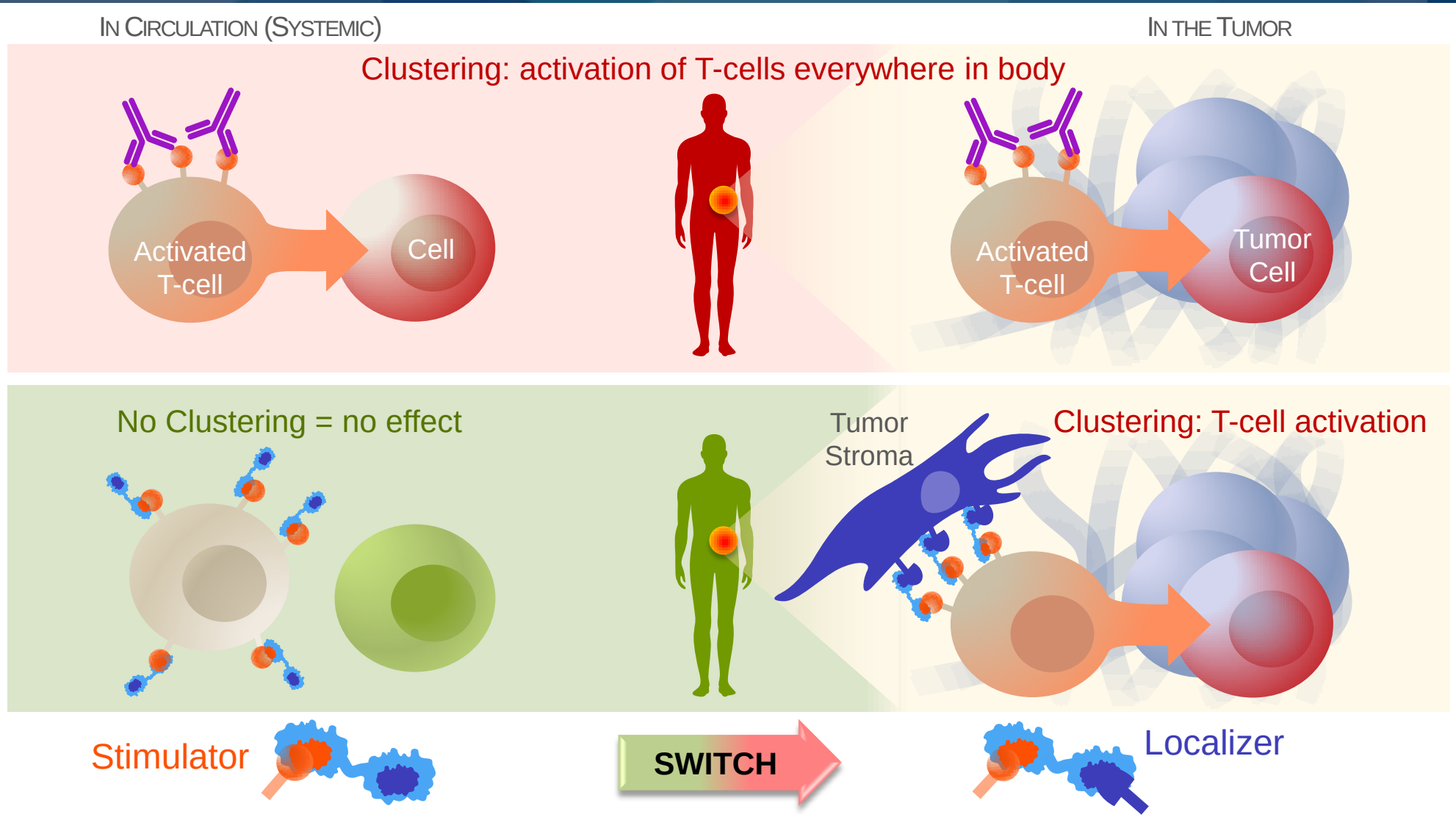




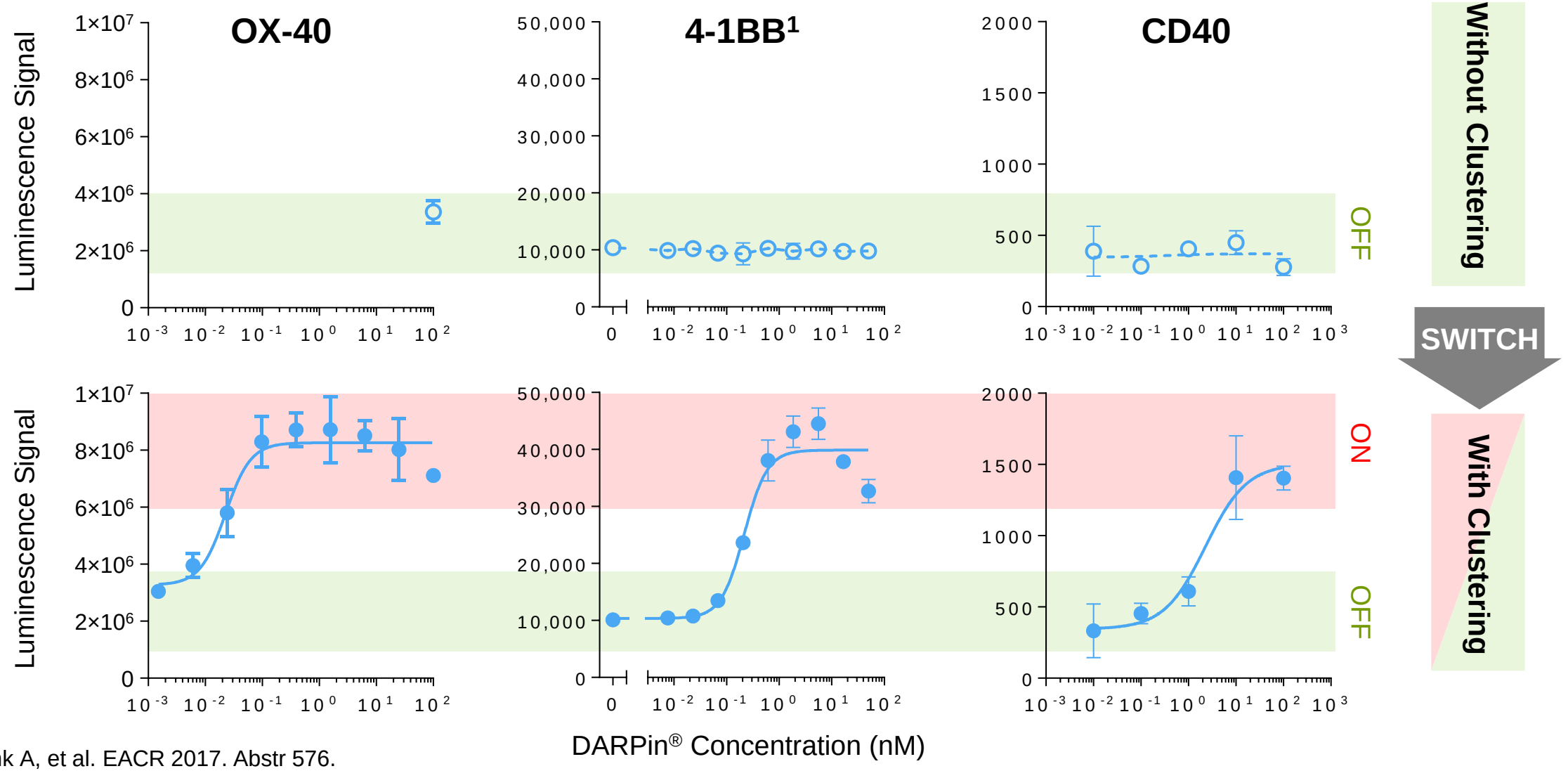
Expand the Therapeutic Window to Enabling Combinations



Toxicity Limits Full Potential of Antibody Agonists

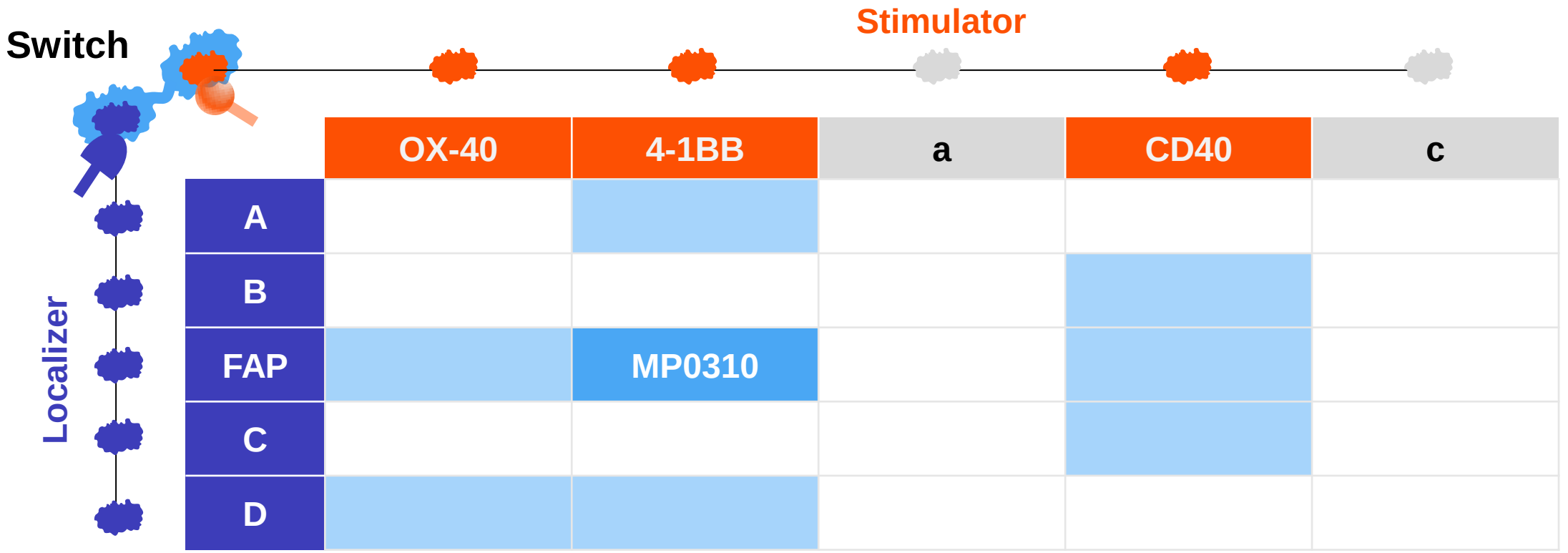


Successful DARPin® Stimulators to Date



1. Link A, et al. EACR 2017. Abstr 576.

DARPin® Toolbox with Unlimited Combinations

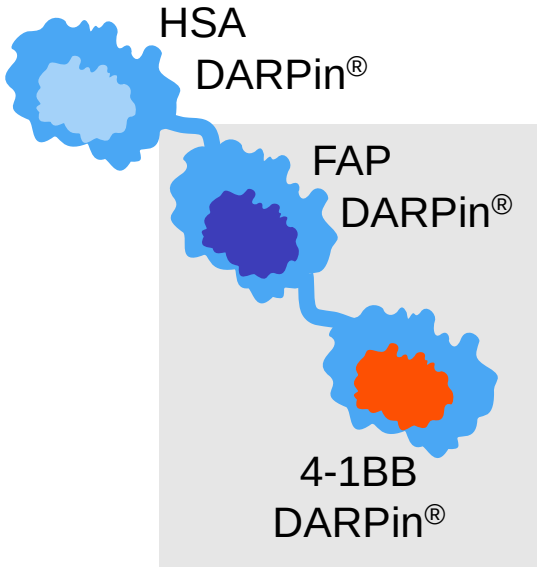


Many DARPin® candidates are under investigation for both solid and liquid tumors (including combinations)

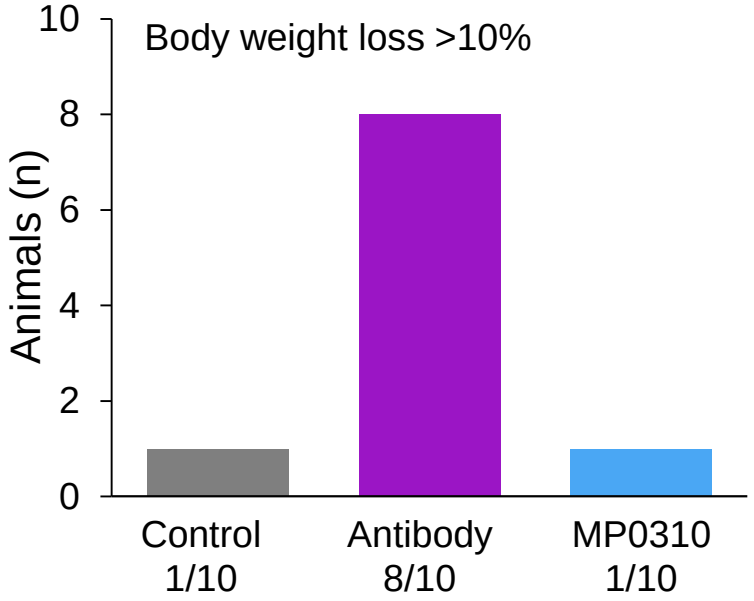
Overview of MP0310 Data

MP0310

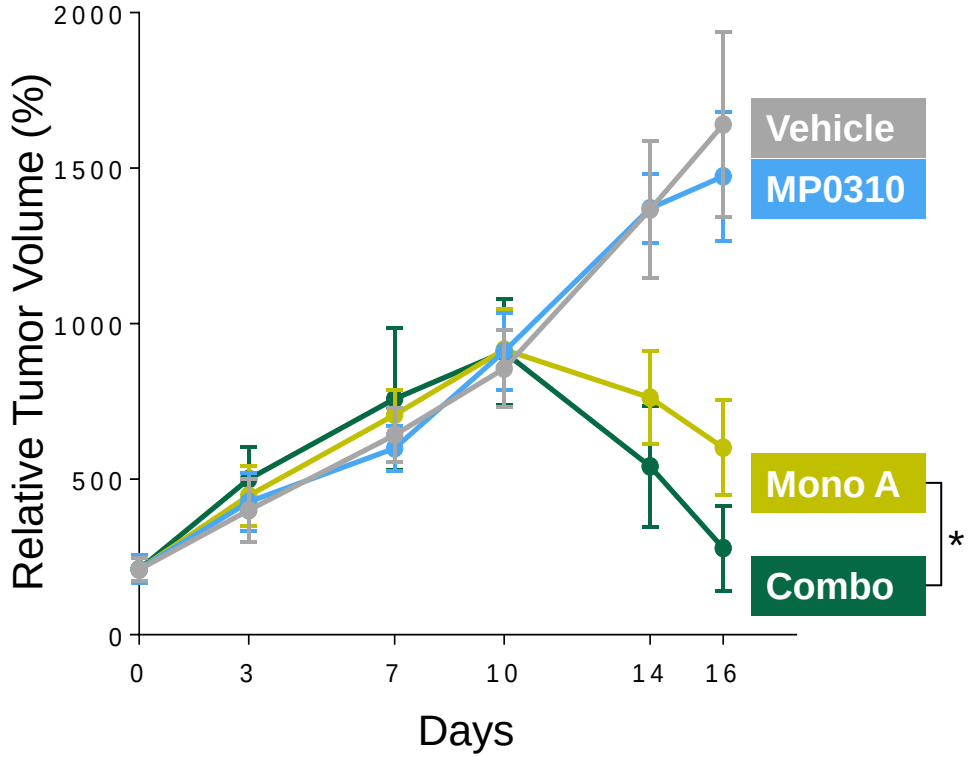
MP0310



No systemic toxicity



Ideal for combinations



- MP0310 shows lower systemic toxicity compared with current therapy
- Would be ideal combination partner with other drugs

*p<0.001, 2-way ANOVA.

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Ophthalmology

Abicipar

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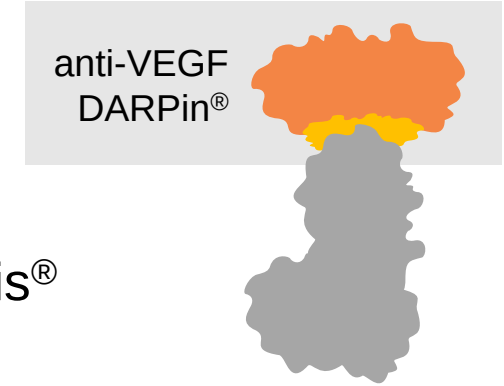
Abicipar: Most Advanced DARPin® Therapy

Abicipar

- Long-acting PEGylated mono-DARPin® protein blocking VEGF



- Potentially transformative therapy with **less frequent ocular injections** compared with standard of care
- Phase 2 data suggest **quarterly dosing** & comparable efficacy to Lucentis®
- Drug Safety Monitoring Committee (DSMC): no changes recommended

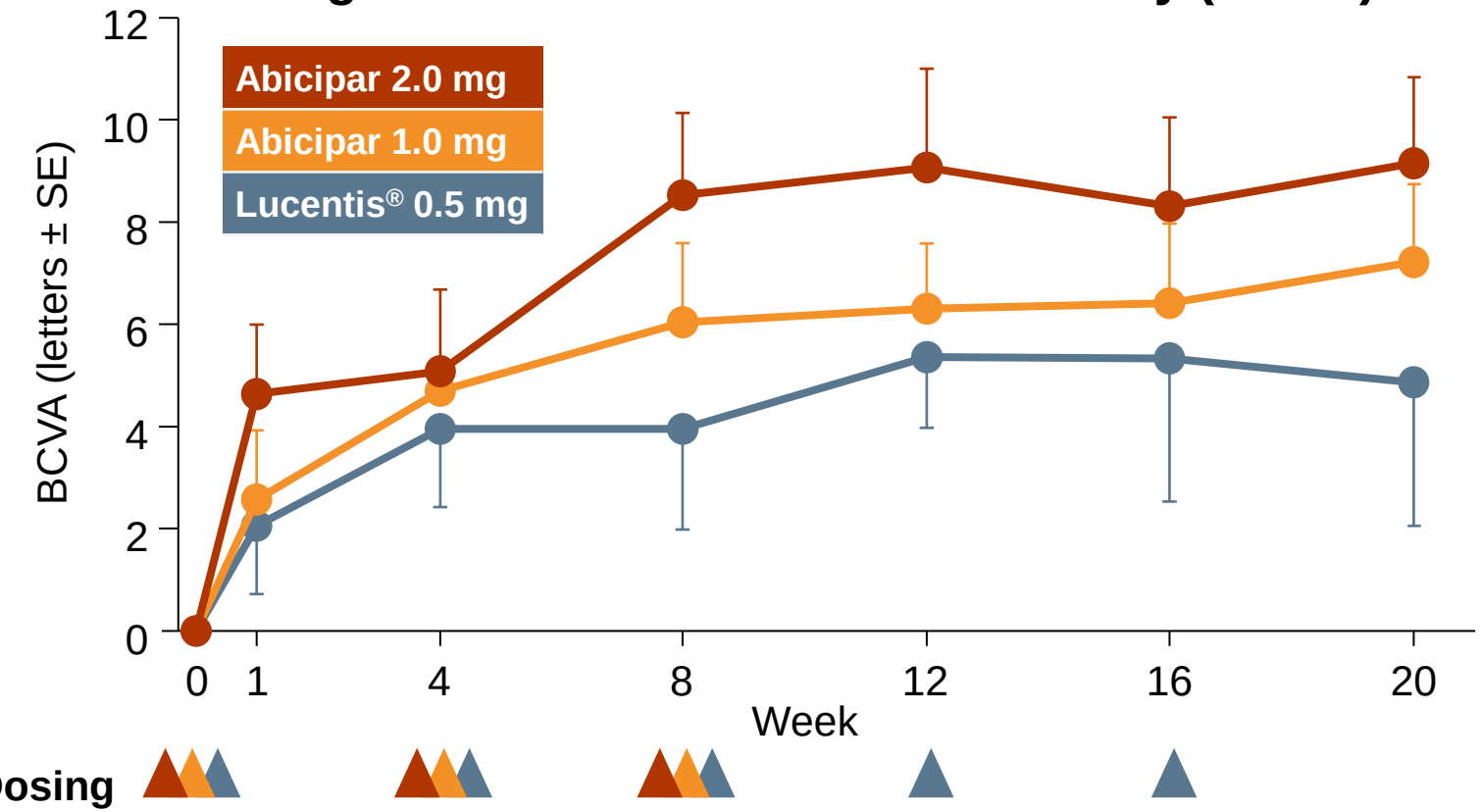
- Market: USD 8bn annual sales (2016) and growing (wet AMD and DME)
- Economics: Up to $360mn open milestones & low double-digit to mid-teen tiered royalties

- Wet AMD Phase 3 read out: 1 year data in 2018
- Allergan plans to start DME Phase 3 in 2018

Phase 2 Data Suggest Quarterly Dosing for Wet AMD

Abicipar

Change of Best-Corrected Visual Acuity (BCVA)*



Safety Data

Vision Gain (letters)		Safety (n/N)
Wk 16	Wk 20	AEs†
8.2	9.0	2/23
6.3	7.1	3/25
5.3	4.7	0/16

The abicipar formulation has been further optimized for safety for use in Phase 3.

Allergan, 12 August 2014.
*Study not powered to reach statistical significance; †Ocular inflammation.
SE, standard error.

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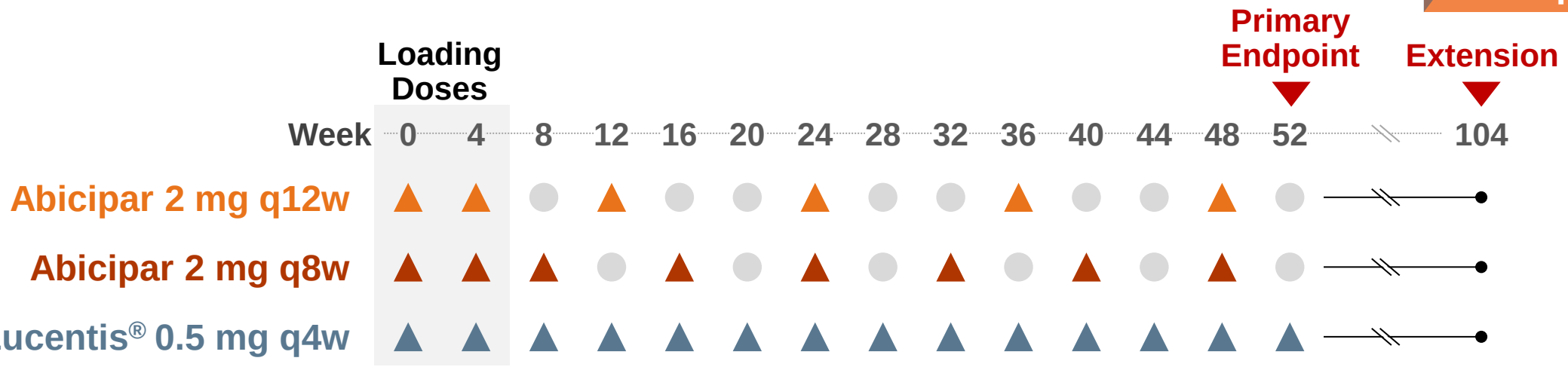
CEDAR & SEQUOIA: Abicipar Registration Studies in nAMD

Abicipar



- 2 parallel, randomized, double-blind phase 3 studies
  - 2x 900 patients globally
  - Patient recruitment completed since early May 2017 (4 months ahead of plan)
- Drug Safety Monitoring Committee (DSMC): no changes recommended
- Next milestones: 1 year read-out in 2018 (triggers FDA filing), targeted launch in 2020

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Abicipar: One of Allergan's Star Programs

Abicipar

DEVELOPMENT PROGRESS OF 6 STAR PROGRAMS

Ubrogepant Acute Migraine	2 Ph 3 trials in US initiated with recruitment well ahead. Topline results 1H 2018.
Atogepant Migraine Prophylaxis	Ph 2b trial in US initiated. Topline results 1H 2018.
Rapastinel MDD	Ph 3 trials ahead of schedule. Topline results expected 2019.
ESMYA Uterine Fibroids	NDA submission on track for 2H 2017. Submission for long-term intermittent therapy.
Abicipar AMD	2 Ph 3 trials enrollment completed. Topline results 2018.
Cenicriviroc NASH	Patient screening for Ph 3 initiated.

Program	TA/Indication	MOA	Year Launch	Estimated Peak Sales	Key Highlight
ABICIPAR	AMD DME	Recombinant designed ankyrin repeat protein. Potent blocker of all forms of soluble VEGF-A	2020 2022	$1.5B-$3B	• Reduction in injection burden is a significant unmet need • Offers sustained efficacy with fewer injections

Allergan: Q1 2017 earnings call (May 9th) & Leerink Partner conference (Feb 15th).

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Summary & Outlook

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Key messages

- Successful transition from DARPin® platform into clinical product company
- Key value in oncology & ophthalmology:
  - Encouraging MP0250 data from first cohort in MM; NSCLC study on track
  - Abicipar on track in P3 in wet AMD; AGN optioned 2 additional candidates
- MP0310 selected as 1st development candidate from our I/O DARPin® toolbox
- Financed beyond 2020, capturing key value inflection points
- Keep on forward integrating towards late-stage development and the market

Multiple Value Inflection Points Ahead

	2018	2019	2020
Abicipar	Wet AMD: 1-y Ph 3 efficacy DME: Ph 3 expected start		Wet AMD: expected launch in 2020
MP0250	MM: initial efficacy NSCLC: initial safety	MM: efficacy NSCLC: initial efficacy	NSCLC: efficacy
MP0274	Initial safety	Efficacy	
MP0310	Preclinical data	FIH	

Funding beyond 2019

Thank you

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