



## H.C. Wainwright Global Life Sciences Conference

Adesh Kaul

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London, April 8, 2019

# Disclaimer and forward-looking statements

## Forward looking statements

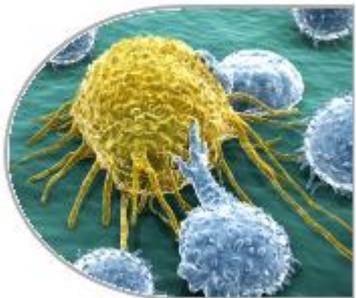
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# Basilea — At a glance



- Revenue-generating, commercial-stage Swiss biotech company with solid cash position (YE2018 ~CHF 223mn)
- Focused in the areas of oncology, hospital antibiotics and hospital antifungals



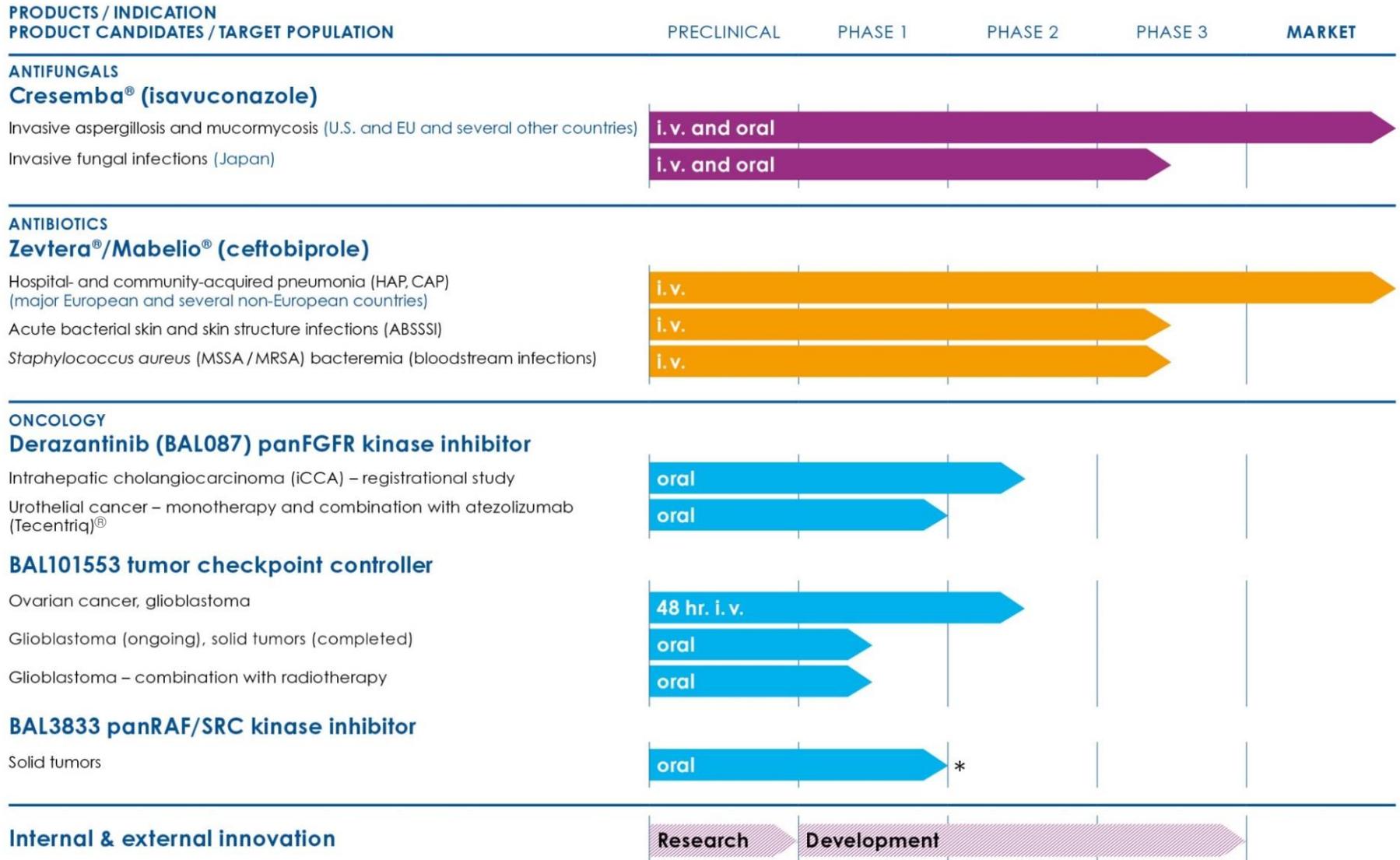
- Two marketed anti-infective brands (Cresemba and Zevtera) and three oncology drug candidates in development
- Potential for sustainable growth and value generation based on increasing revenues and selective investments into internal and external innovation



- Founded in 2000 as spin-off from Roche
- Listed on the SIX Swiss Stock Exchange since 2004 (SIX: BSLN)
- Based in life sciences hub Basel (Switzerland); approx. 225 employees



# Potential for sustainable growth and value creation based on commercialized products and differentiated pipeline



\* pre-clinical reformulation activities initiated

# Established strong partnerships to fully exploit commercial potential of Cresemba® and Zevtera®

## License partners

- **Pfizer**, for Europe (ex. Nordics), China, Asia-Pacific, Russia, Turkey and Israel (*Cresemba*)
- **Astellas**, for the U.S. (*Cresemba*)
- **Asahi Kasei Pharma**, for Japan (*Cresemba*)
- **CR Gosun**, for China (*Zevtera*)



CR Gosun

## Distribution partners

- **Correvio (formerly Cardiome)**, for Europe (ex. Nordics), Israel (*Zevtera*)
- **Hikma**, for MENA region (*Cresemba and Zevtera*)
- **Grupo Biotoscana**, for LatAm (*Cresemba and Zevtera*)
- **Unimedic**, for Nordics (*Cresemba and Zevtera*)
- **Avir**, for Canada (*Cresemba and Zevtera*)

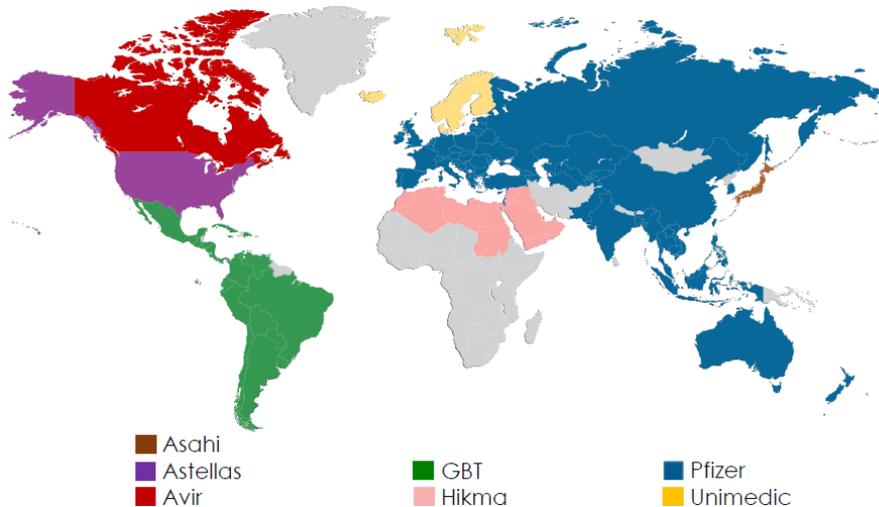


# >100 countries covered by partnerships — USD 1.1bn in total potential milestones

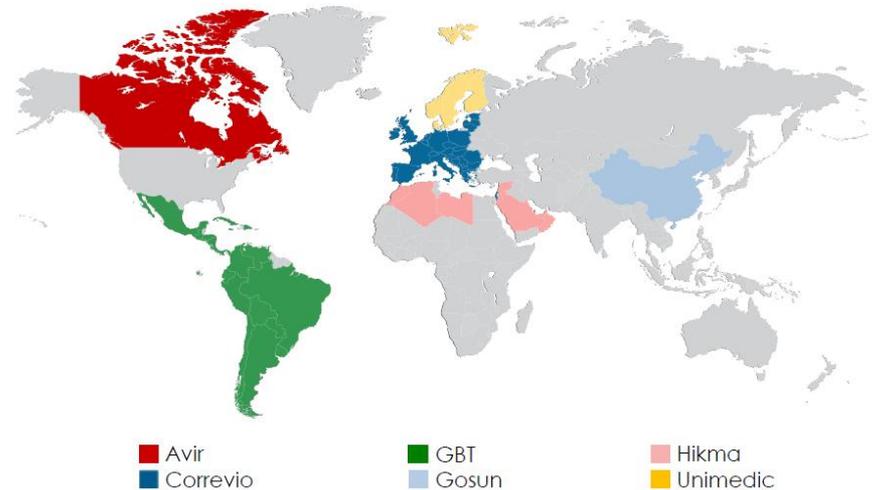
## Ongoing participation

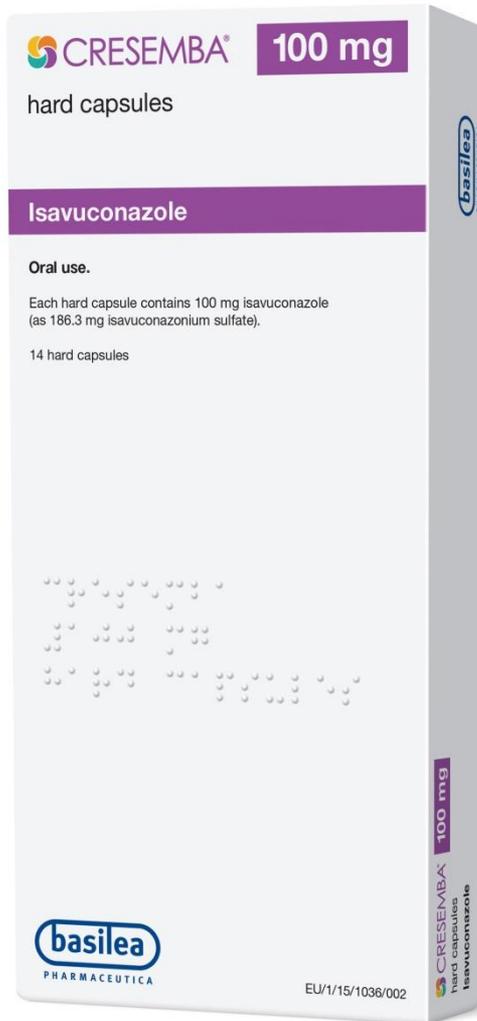
- Double-digit royalties on sales by license partners
- Participation through transfer price structure in sales by distribution partners
- Approximately USD 245mn upfront and milestone payments received; USD 1.1bn in potential milestones remaining

### Our Global Partnerships: Cresemba



### Our Global Partnerships: Zevtera





# Antifungal

## Cresemba<sup>®</sup> (isavuconazole)

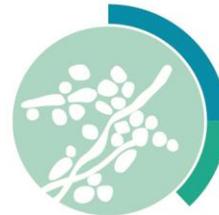
- Invasive mold infections
- Marketed in the U.S. and Europe

# Invasive fungal infections — An area of continued high unmet medical need

- Severe, potentially life-threatening infections mainly affecting immunocompromised patients
- An important cause of morbidity and mortality in cancer patients undergoing intensive chemotherapy regimens
- Rising number of immunocompromised patients (cancer and transplantations) driving therapeutic demand
- Mucorales infections on the rise – doubled from 2000 to 2013
- Limitations of current therapies (spectrum of activity, toxicity, effective plasma levels) drive the need for new agents

## Mortality rates for invasive fungal infections\*\*

CANDIDA  
23–40%



ASPERGILLUS  
34–58%



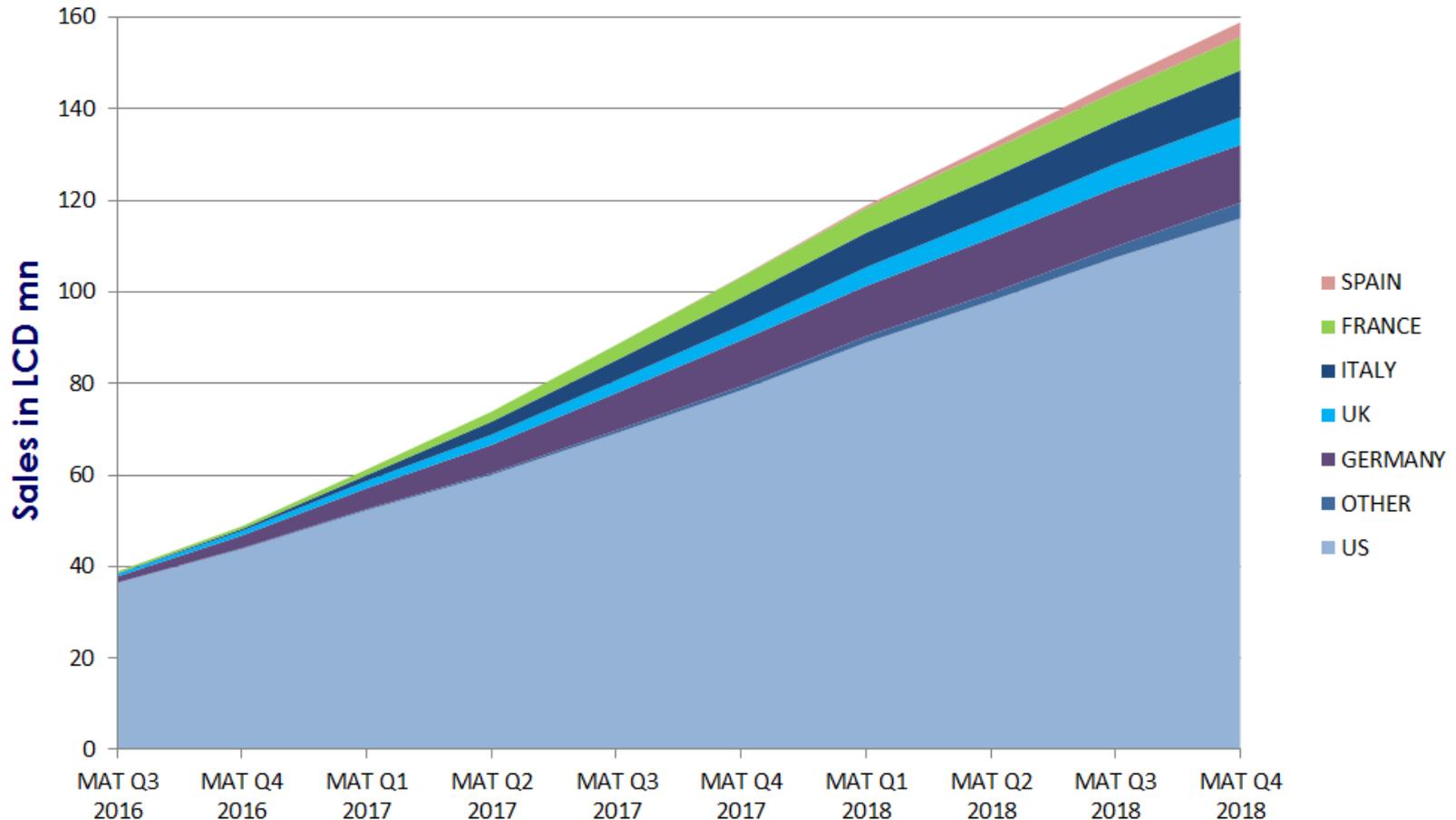
MUCORALES  
40–80%



\*\*Kullberg/Arendrup *N Engl J Med* 2015, Baddley *Clin Infect Dis* 2010, Roden *Clin Infect Dis* 2005, Greenberg *Curr Opin Infect Dis* 2004

# Cresemba continues strong sales uptake in established and new markets

Approx. USD 160mn in-market sales in 2018

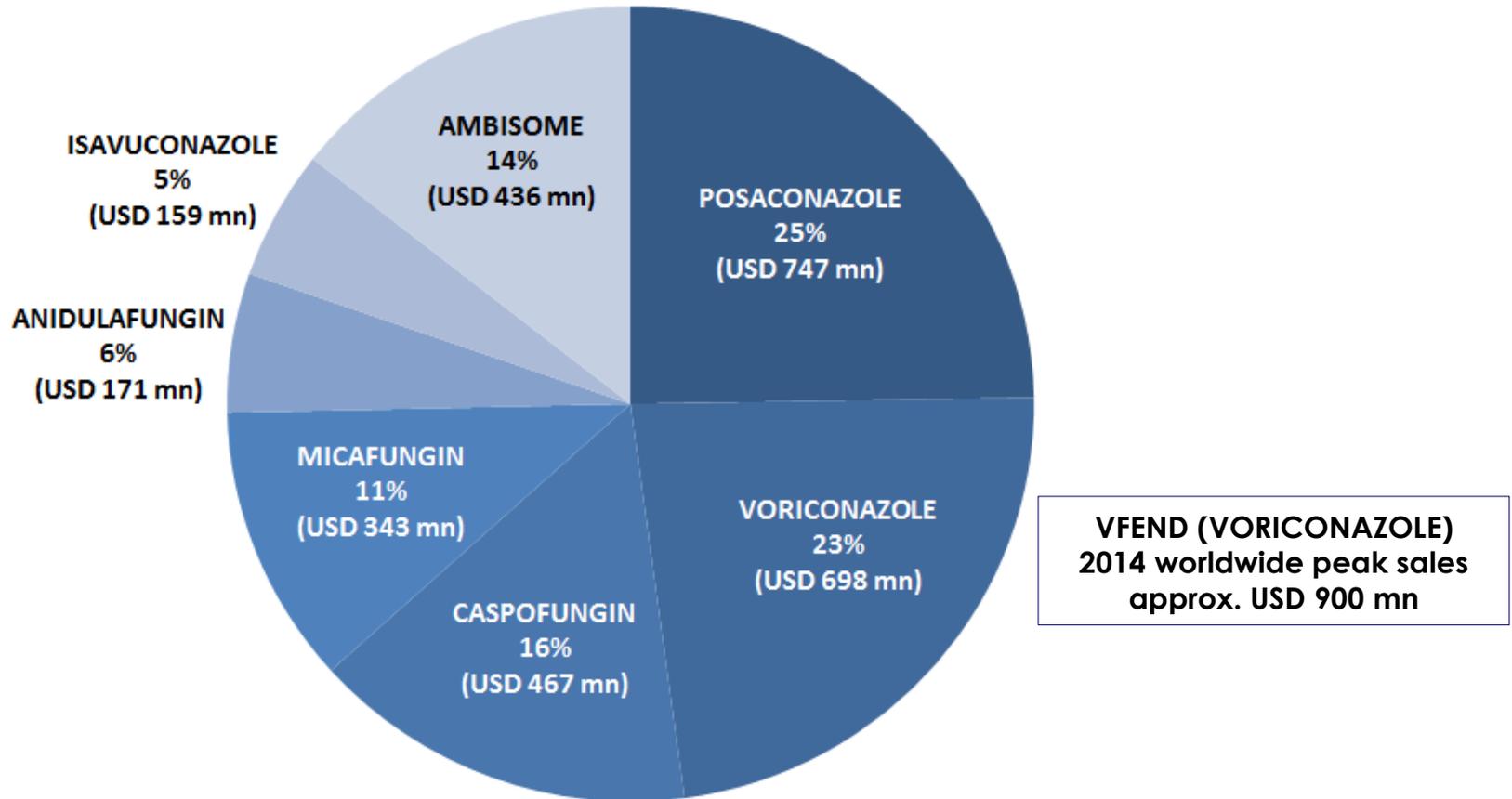


LCD: USD corrected for currency fluctuations; MAT: Moving annual total; Source: IQVIA, December 2018



# Sales of best-in-class antifungals\* by product

USD 3bn sales (MAT Q4 2018)



\* Best-in-class antifungals: isavuconazole, posaconazole, voriconazole, AmBisome, anidulafungin, caspofungin, micafungin  
MAT: Moving annual total; Sales figures in USD, corrected for currency fluctuations; Source: IQVIA, December 2018



# Cresemba — Differentiated by spectrum, safety and tolerability



CT scan of patient with fungal pneumonia

- Broad spectrum of activity against molds, including emerging molds (mucorales)
- Consistent plasma levels
- Statistically fewer drug-related adverse events and treatment-emergent adverse events (liver, skin, eye) in invasive aspergillosis patients vs. voriconazole in SECURE phase 3 study
- Can be administered in patients with renal impairment
- Manageable drug-drug interaction profile
- Once daily maintenance dose, i.v./oral treatment

- ECIL-6 guideline: Cresemba recommended for the first-line treatment of invasive aspergillosis in leukemia and hematopoietic stem cell transplant patients. ECIL states that isavuconazole is as effective as voriconazole with a better safety profile.

ECIL: The European Conference on Infections in Leukaemia



# Cresemba — Marketed in the EU and U.S. and further country launches planned



**Approved in Europe for the treatment of adults with:**  
invasive aspergillosis and mucormycosis for whom amphotericin B is inappropriate

**Approved in the U.S. for the treatment of adults with:**  
invasive aspergillosis and invasive mucormycosis

- Marketed in major European countries by Pfizer
  - USD 5mn sales milestone triggered in Q1 2019
- Marketed in the U.S. by Astellas
  - USD 113mn (+47% Y-o-Y) net sales 2018
  - CHF 10mn sales milestone triggered in Q4 2018
- Anticipated to double the number of launched countries by end-2019
- Exclusivity through 2027 in the U.S. and potential pediatric exclusivity extension to 2027 (from 2025) in the EU





European box/vials  
Cefitobiprole is not approved in the U.S.



## Antibacterial

# Zevtera<sup>®</sup>/Mabelio<sup>®</sup> (ceftobiprole)

- Hospital\* and community-acquired pneumonia
- Marketed in major European countries, Argentina, Canada , Peru and Saudi-Arabia

\* HAP (excluding VAP)

# Zevtera/Mabelio — A fast-acting hospital antibiotic with activity against a broad range of bacteria



Approved in major European countries & several non-European countries for both hospital-acquired pneumonia (HAP), excluding ventilator-acquired pneumonia (VAP), and community-acquired pneumonia (CAP)

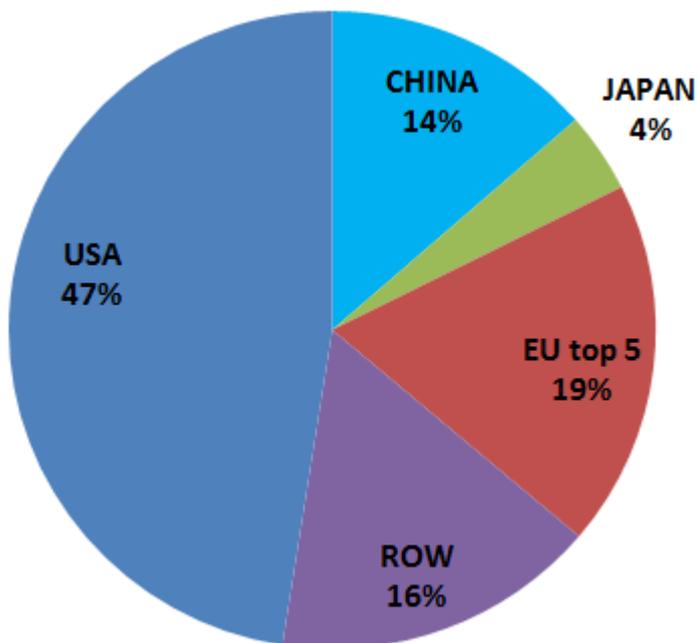
Not approved in the U.S.

- Broad-spectrum anti-MRSA cephalosporin (including Gram-negative bacteria)
- Rapid bactericidal activity
- Potential to replace antibiotic combinations
- Early improvement in HAP, particularly in patients with MRSA, and CAP, including high-risk patients
- Cephalosporin class safety profile
- Marketed in major European markets, Argentina, Canada, Peru and Saudi Arabia

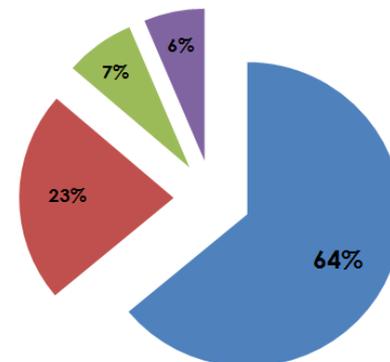


# Anti-MRSA hospital antibiotics market — A USD 3.1bn market with the U.S. being the most important region

**Global anti-MRSA hospital antibiotics sales\*  
USD 3.1bn (MAT Q4 2018)**

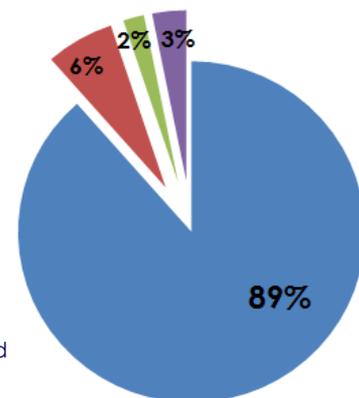


**Linezolid sales by region 2014 (before LOE)**



■ USA ■ EU 5 ■ Japan ■ ROW

**Daptomycin sales by region 2015 (before LOE)**



\* Vancomycin, linezolid, teicoplanin, daptomycin, tigecycline, telavancin, ceftaroline, dalbavancin, oritavancin and tedizolid

MRSA: Methicillin-resistant Staphylococcus aureus; LOE: Loss of exclusivity; ROW: Rest of world  
MAT: Moving annual total; Sales figures in USD, corrected for currency fluctuations; Source: IQVIA, December 2018



# Ceftobiprole — Strategy for accessing the important U.S. market providing attractive risk-return profile



\*The project is funded in part with Federal funds from the Department of Health and Human Services; Office of the Assistant Secretary for Preparedness and Response; Biomedical Advanced Research and Development Authority (BARDA) under Contract No. HSO100201600002C



**SAB:** *Staphylococcus aureus* bacteremia; **ABSSSI:** acute bacterial skin and skin structure infection; **CABP:** community-acquired bacterial pneumonia

- U.S. registration requires two cross-supportive phase 3 studies
  - FDA has approved Special Protocol Assessments for ABSSSI and SAB phase 3 studies
  - ABSSSI and SAB studies ongoing
- Few approved SAB agents available, with limitations, mainly related to resistance or tolerability
- For SAB, ceftobiprole has potential to be positioned as a rapidly cidal agent against both MSSA and MRSA with the favourable safety profile of a cephalosporin
- BARDA funding of up to USD 128mn (~70% of the total estimated program costs) to support U.S. phase 3 program\*
- QIDP designation (SAB, ABSSSI, CABP): exclusivity extended to 10 years upon approval



# Oncology

## Derazantinib (BAL087)

panFGFR kinase inhibitor  
for various solid tumors

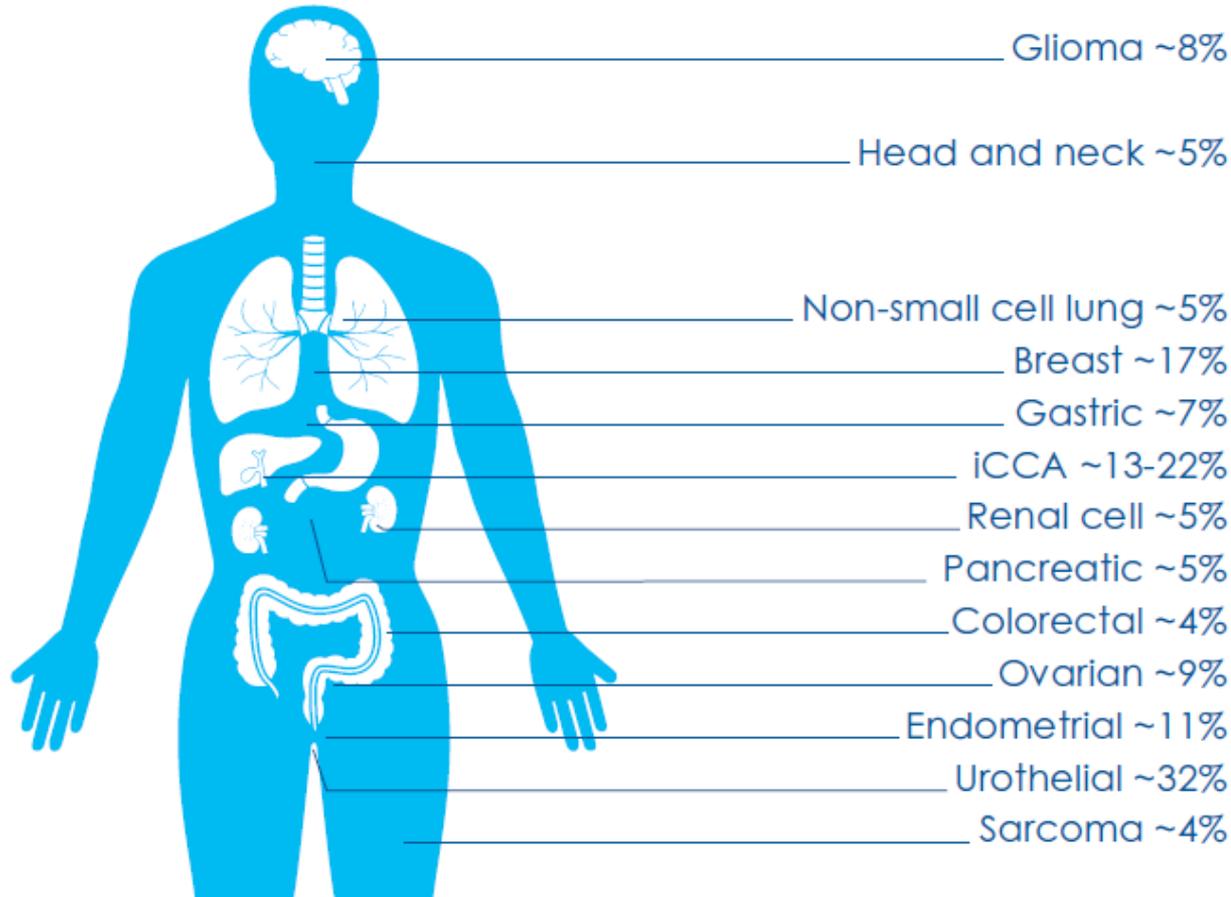
# Derazantinib — targeting FGFR-driven tumors as single agent and in combination with immunotherapy

- Small molecule, oral inhibitor of Fibroblast Growth Factor Receptor (FGFR) family of kinases in-licensed from ArQule Inc.
  - panFGFR kinase inhibitor with strongest activity against FGFR1, 2 and 3
  - Exploring therapeutic potential of additional targets of derazantinib, including targets not addressed by other selective FGFR inhibitors, such as CSF1R (Colony-stimulating Factor 1 Receptor) kinase
- Strong data foundation generated to support potential accelerated FDA approval in intrahepatic cholangiocarcinoma (iCCA), an indication with high unmet need and globally increasing incidence
- Orphan drug designation in iCCA granted by FDA and EMA
- Collaboration with Roche to study derazantinib and immune-checkpoint inhibitor atezolizumab (Tecentriq®) in a clinical study in urothelial cancer



# Derazantinib — Significant potential beyond iCCA and urothelial cancer

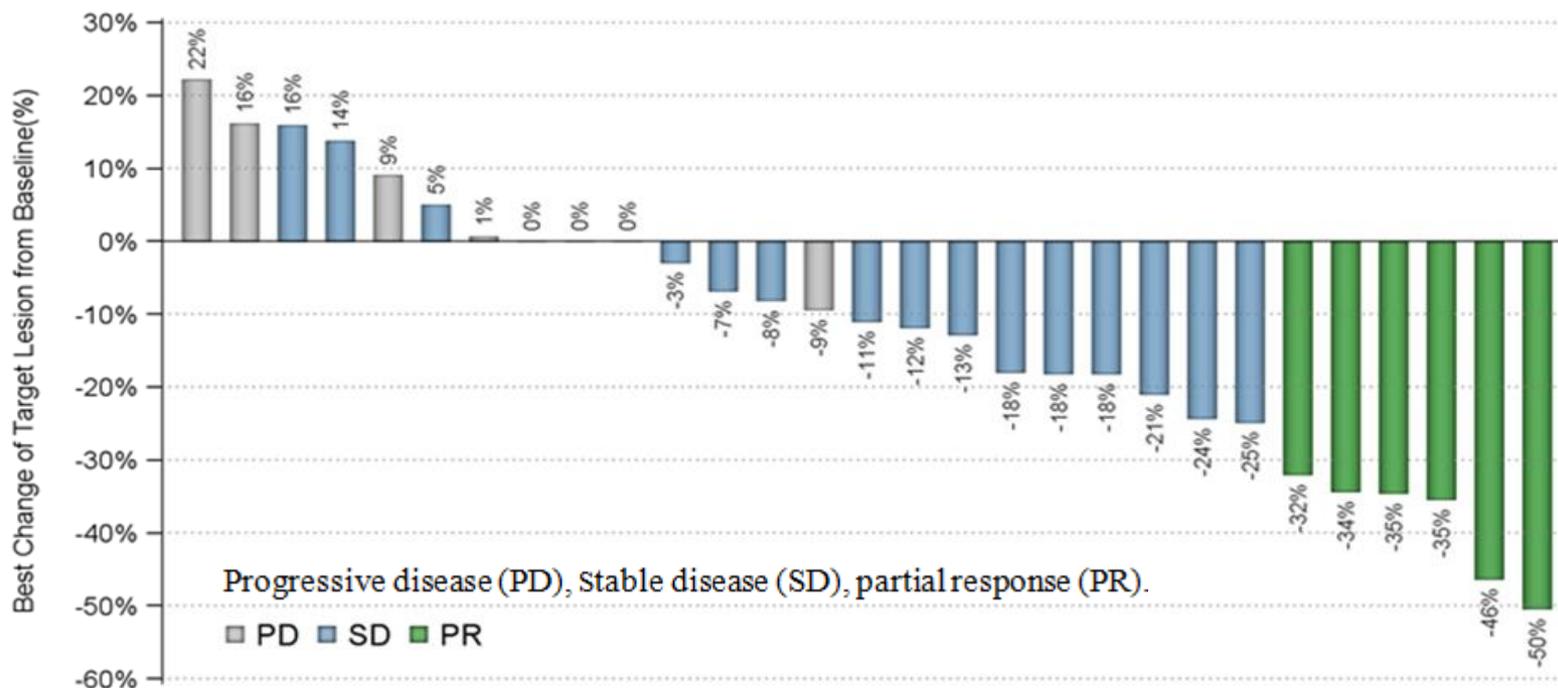
## Frequency of FGFR aberrations across different tumor types



Source:  
Helsten et al., Clin Cancer Res 2016 (22), 257-267;  
FGFR2 fusions in iCCA: Graham et al. Hum Pathol  
2014 (45), 1630-1638; Jain et al. JCO Precis Oncol  
2018 (2) 1-12



# Derazantinib — Established proof-of-concept in iCCA in phase 1/2a study



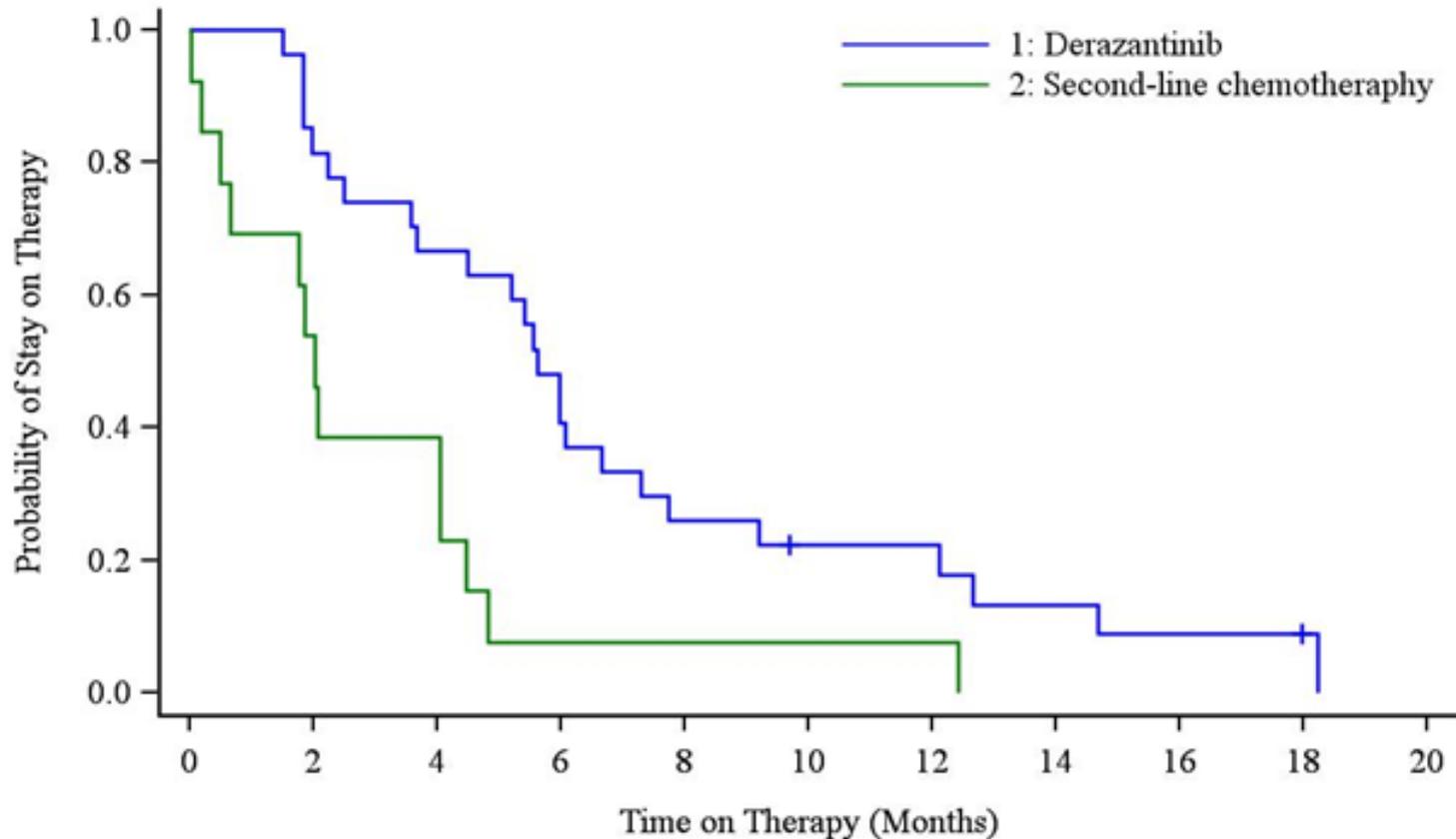
- Subgroup analysis of 29 patients with FGFR2-fusion positive iCCA:
  - Objective response rate of 21%
  - In 72% of patients, tumor response or disease stabilization for  $\geq 16$  weeks was achieved\*
  - Manageable safety profile

Sources: Mazzaferro et al. British Journal of Cancer 2018; \*Mazzaferro et al. J Clin Oncol 2017;35 suppl: abstract 4017



# Derazantinib — Time on treatment supports clinical benefit in FGFR2-fusion positive iCCA

Inpatient comparison of time on study with derazantinib compared to pre-study second-line chemotherapy



Source: Mazzaferro et al. British Journal of Cancer 2018



# Derazantinib — potential for accelerated approval with solid clinical data in iCCA

## Favorable clinical data from completed phase 1/2 study

- Promising anti-tumor efficacy and clinical safety shown in biomarker-driven clinical study in patients with FGFR2-gene-fusion expressing iCCA
- Derazantinib efficacy compares favorably to standard-of-care (SoC) chemotherapy (cross-trial comparison)
  - Objective Response Rate (ORR) 21% for derazantinib<sup>1</sup> versus <10% for SoC<sup>2,3</sup>
  - Progression-Free Survival (PFS) approx. 6 months<sup>1</sup> versus 3 months for SoC<sup>2,3</sup>
- Manageable safety profile and low discontinuation rate<sup>1,4</sup>

## Registrational phase 2 study, ongoing

- Patients with FGFR2-gene-fusion expressing iCCA (2nd-line)
- Encouraging interim results reported early 2019, consistent with the earlier phase 1/2 data
- 21% ORR with six confirmed partial responses from 29 evaluable patients, 83% disease control rate
- Safety profile and tolerability of continuous dosing schedule confirmed
- Final data to be presented mid-2020

### Sources:

- 1 V. Mazzaferro et al. Derazantinib (ARQ 087) in advanced or inoperable FGFR2 gene fusion-positive intrahepatic cholangiocarcinoma. *British Journal of Cancer* 2018
- 2 A. Lamarca et al. Second-line chemotherapy in advanced biliary cancer: a systematic review. *Annals of Oncology* 2014 (25), 2328-2338 ;
- 3 L. Fornaro et al. Second-line chemotherapy in advanced biliary cancer progressed to first-line platinum-gemcitabine combination: a multicenter survey and pooled analysis with published data. *Journal of Experimental & Clinical Cancer Research* 2015 (34), 156
- 4 K. P. Papadopoulos et al. A phase 1 study of ARQ 087, an oral pan-FGFR inhibitor in patients with advanced solid tumours. *British Journal of Cancer* 2017 , 1-8



# FGFR-inhibitors show differences in safety profiles

	Cholangiocarcinoma				Urothelial cancer	
	DZB <sup>1</sup> (N=29)	INF <sup>2</sup> (N=71)	FUT <sup>3</sup> (N=45)	PEM <sup>4</sup> (N=89)	PEM <sup>5</sup> (N=108)	ERD <sup>6*</sup> (N=99)
<b>Dosing regimen</b>	300mg QD	125mg Q4W QD for 3w	16 mg, 20 mg or 24 mg QD	13.5mg Q3W QD for 2w	13.5mg Q3W QD for 2w	8 mg QD (titr. to 9mg)
<b>Most frequent AEs</b>	Phosphorus↑ Dry mouth Nausea	Phosphorus↑ Fatigue Stomatitis	Phosphorus↑ Constipation AST↑	Phosphorus↑ Alopecia Diarrhoea	Diarrhoea Alopecia Constipation	Phosphorus↑ Stomatitis Dry mouth
<b>Blood phosphorus↑†</b>	<b>76%</b>	<b>73%</b>	<b>80%</b>	<b>61%</b>	<b>31%</b>	<b>73%</b>
<b>Fatigue† [G3]</b>	<b>41%</b> [3%]	<b>49%</b> [4%]	NR	<b>36%</b> [4%]	<b>32%</b> [6%]	<b>≥21%</b> [≥2%]
<b>Alopecia†</b>	<b>28%</b>	<b>38%</b>	NR	<b>37%</b>	NR	<b>≥27%</b>
<b>Dry eye/xerophthalmia†</b>	<b>21%</b>	<b>32%</b>	NR	<b>20%</b>	NR	<b>≥19%</b>
<b>Central serous retinopathy</b>	<b>0%</b>	NR	NR	NR	NR	<b>21%</b>
<b>ALT ↑</b>	<b>31%</b>	NR	<b>31%</b>	NR	NR	NR
<b>Hand-foot syndrome/PPE</b>	<b>0%</b>	<b>27%</b>	<b>22%</b>	NR	NR	<b>≥22%</b>
<b>Nail events (drug-related)</b>	<b>&lt;5%</b>	NR	NR	NR	NR	<b>52%</b>
<b>Stomatitis</b>	<b>7%</b>	<b>45%</b>	<b>22%</b>	<b>30%</b>	<b>34%</b>	<b>≥55%</b>

Sources: <sup>1</sup>Mazzaferro et al., Br J Cancer 2018 and Basilea data on file; <sup>2</sup>Javle et al., ESMO 2018; <sup>3</sup>Meric-Bernstam et al, ESMO WC GI Cancer, 2018;

<sup>4</sup>Hollebecque, et al., ESMO 2018; <sup>5</sup>Necchi, et al., ESMO 2018; <sup>6</sup>Siefker-Radtke et al., ASCO 2018

Abbreviations: DZB: derazantinib, INF: infgratinib (BJG398), FUT: futibatinib (TAS-120), PEM: pemigatinib (INC854828), ERD: erdafitinib;

PPEs: Palmar-plantar erythrodysesthesia; NR: not reported; QD, daily; Q3W/Q4W, every 3/4 weeks; w, weeks.

\*Drug-related events reported only; †assumed FGFR inhibitor class-effect



# FGFR-inhibitors show differences in kinase-inhibition profiles

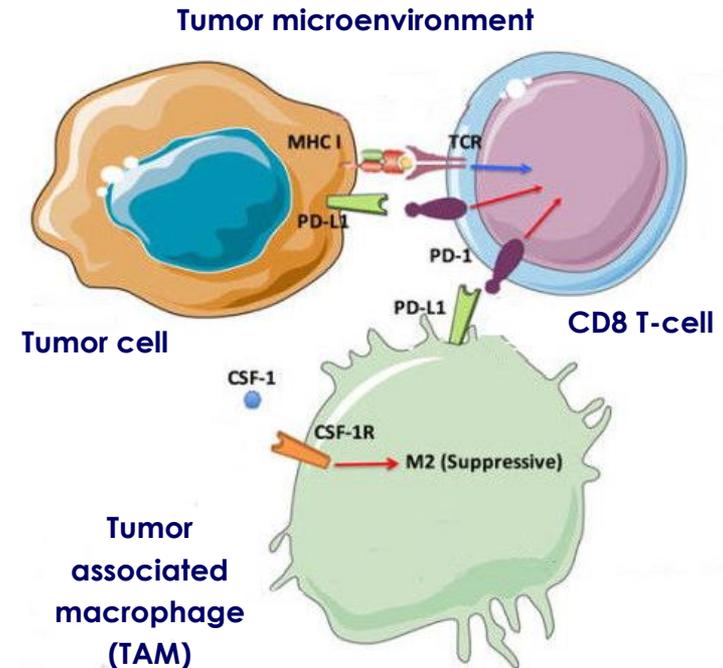
FGFR-inhibitor compound (Sponsor)	Parameter	FGFR1	FGFR2	FGFR3	FGFR4	CSF1R (FMS)
<b>Derazantinib</b> (Basilea)	Ratio to FGFR2 activity	4	1	4	77	3
<b>Pemigatinib</b> (Incyte)	Ratio to FGFR2 activity	3	1	4	39	231
<b>Erdafitinib</b> (Janssen)	Ratio to FGFR2 activity	2	1	2	13	95
<b>Rogaratinib</b> (Bayer)	Ratio to FGFR2 activity	5	1	6	18	116
<b>Infigratinib</b> (QED)	Ratio to FGFR2 activity	2	1	2	47	86
<b>Futibatinib</b> (Taiho)	Ratio to FGFR2 activity	2	1	2	18	NA

Source: Basilea data on file



# Potential therapeutic relevance of CSF1R-inhibition

- Derazantinib is active in inhibiting FGFR kinases and CSF1R (Colony-stimulating factor-1 receptor)
- CSF1R inhibition may reprogram immunosuppressive tumor-infiltrating macrophages, restore T-cell activity and thereby improve the susceptibility to PD1/PD-L1 inhibitors<sup>1</sup>
- Derazantinib may address several oncogenic mechanisms at the same time, i.e. inhibiting FGFR and making the tumor more susceptible to immunotherapy
- Basilea entered into a collaboration with Roche to study a combination of derazantinib and Roche's PD-L1-blocking immune-checkpoint inhibitor atezolizumab in patients with urothelial cancer



Blocking CSF1/CSF1R has the potential to reprogram tumor-promoting macrophages and enhance the response to immune checkpoint (PD1/PD-L1) inhibitors.<sup>2</sup>

Sources: 1. X. Zheng et al. Redirecting tumor-associated macrophages to become tumoricidal effectors as a novel strategy for cancer therapy. *Oncotarget*. 2017;8(29):48436-48452  
2. Graph adapted from: A. Ghasemzadeh et al. New Strategies in Bladder Cancer: A Second Coming for Immunotherapy. *Clin Cancer Res*. 2016;22(4):793-801

# Derazantinib/atezolizumab - a potential unique FGFR/IO combination in urothelial cancer

- Among FGFR-inhibitors, CSF1R inhibition seems unique to derazantinib
- CSF1R inhibition may restore T-cell activity, downregulate immunosuppressive macrophage activity and improve susceptibility to PD1/PD-L1 inhibitors (immunotherapy)
- In urothelial cancer, Keytruda® and Tecentriq® received label restrictions on the use for first-line treatment of patients with low PD-L1 expression
  - This subgroup of tumors shows frequent FGFR genomic abnormalities (mainly FGFR3 fusions)
  - Derazantinib combined with PD1/PD-L1 inhibitors may therefore provide benefits related to multiple mechanisms (FGFR inhibition, macrophage inhibition, enhanced response to immunotherapy) in this group of patients
- A phase 1/2 study exploring derazantinib as monotherapy and in combination with Tecentriq® anticipated to start mid-2019





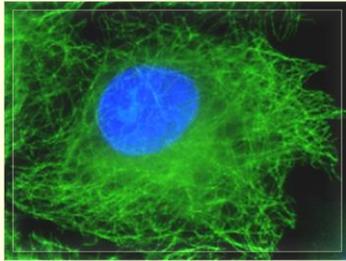
# Oncology

## BAL101553

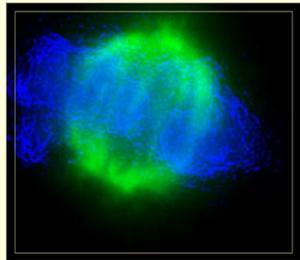
Treatment-refractory solid tumors,  
including glioblastoma

# BAL101553 — Novel tumor checkpoint controller crossing the blood-brain barrier

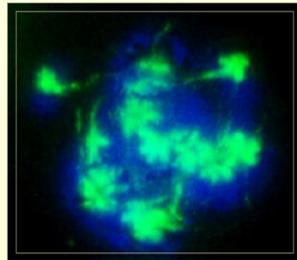
Bachmann AACR 2015



Non-dividing tumor cell



Normal dividing tumor cell



BAL27862-treated tumor cell\*

Blue = DNA  
Green = microtubules

- Novel compound inducing tumor cell death through checkpoint activation
- Destabilizing the microtubule scaffold through a novel target-binding site
- Targeting diverse tumor types resistant to standard therapeutic approaches
- Crosses the blood-brain barrier with potent activity in brain tumor models alone and in combination
- Flexible dosing potential, including daily oral dosing
- Comprehensive biomarker program to optimize patient and tumor selection

\* BAL101553 is a prodrug of BAL27862



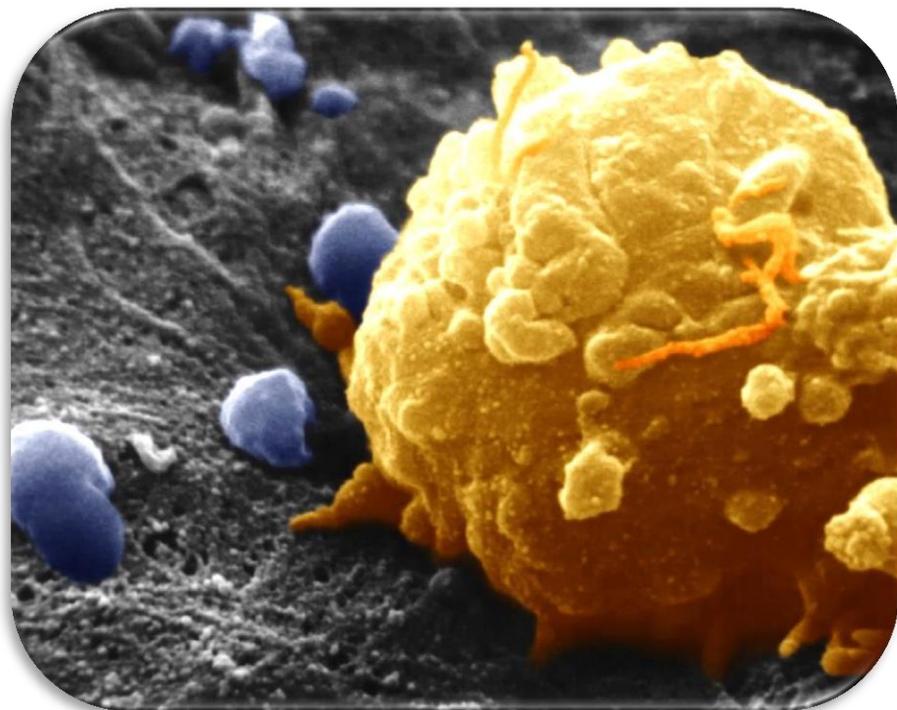
# BAL101553 — three ongoing clinical studies

- Phase 2a expansion (weekly 48-hour i.v.) in patients with recurrent glioblastoma or platinum-resistant ovarian cancer
  - Anticipated to complete around year-end 2019
- Phase 1 dose escalation (daily oral) in patients with recurrent glioblastoma
  - Anticipated to complete in H1 2019
- Phase 1 study (daily oral) in combination with radiotherapy in patients with newly diagnosed glioblastoma in collaboration with the Adult Brain Tumor Consortium (ABTC)<sup>1</sup>
  - Anticipated to complete patient enrolment mid-2020



<sup>1</sup>The ABTC is funded by the U.S. National Cancer Institute (NCI)



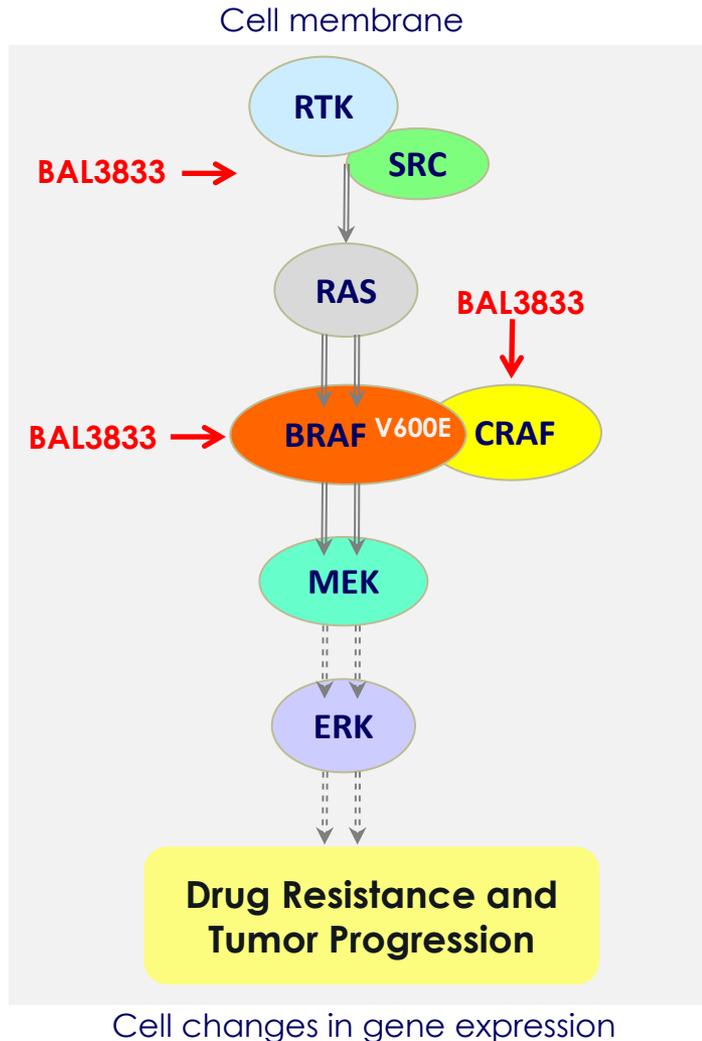


# Oncology

BAL3833

Treatment-refractory solid tumors,  
including metastatic melanoma  
and RAS-driven tumors

# BAL3833 — panRAF/SRC kinase inhibitor

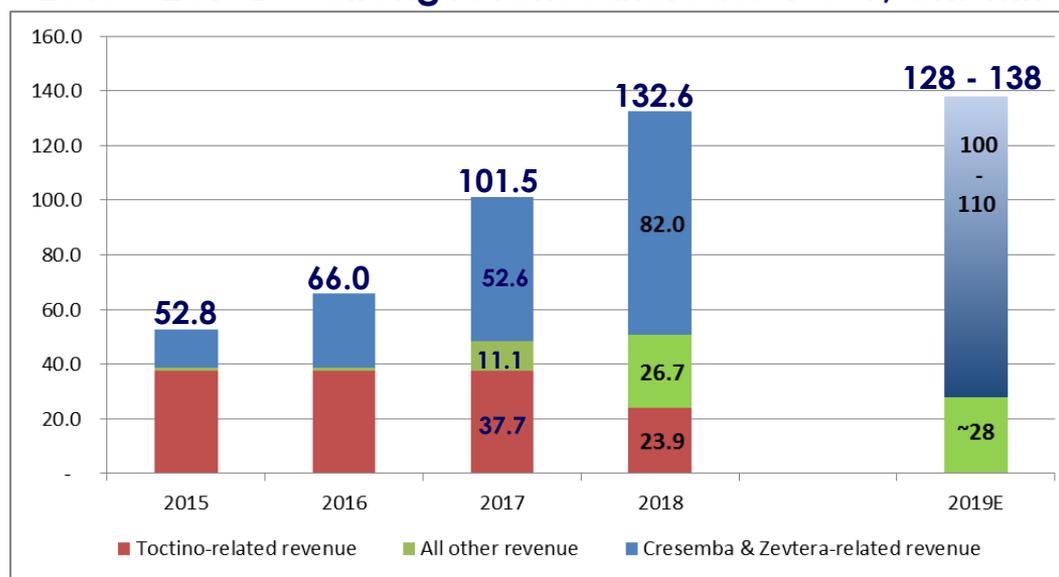


- In-licensed novel, oral, small molecule drug from consortium around Wellcome Trust & Institute of Cancer Research (ICR)
- Dual-targeting kinase inhibitor
- Targets resistance mechanisms associated with approved BRAF inhibitors (including vemurafenib and dabrafenib)
- Resistance-reversal activity in BRAF/MEK inhibitor- and immunotherapy-resistant melanoma models
- Potential in diverse non-melanoma tumor types:
  - e.g. RAS-driven tumors
  - Expanded biomarker program to aid tumor selection
- Phase 1 dose-escalation study completed
  - Broad dose range investigated, maximum tolerated dose (MTD) was not defined
  - Pre-clinical activities to explore alternative formulations initiated

# Key financials 2018 and 2019 guidance

In CHF mn	FY 2019 guidance	FY 2018 actuals	FY 2017 actuals
Total revenue	128 - 138	132.6	101.5
<i>thereof: Contributions from Cresemba &amp; Zevtera</i>	<i>100 - 110</i>	82.0	52.6
Operating loss	20 - 30	24.1	17.1
Net operating cash consumption	55 - 65	79.2	+19.0
Year-end cash and financial investments	n/a	223.0	310.7

## 2015 – 2019E – Strong revenue increase Y-o-Y, CHF mn



# Focus 2019 and beyond

**Cresemba® & Zevtera®/Mabelio®** Increasing cash-generating revenues  
By the end of 2021, Cresemba to be on the market in >60 countries

**H1 2019**

**H2 2019**

**H1 2020**

**H2 2020**

**Ceftobiprole**

Top line results from phase 3 ABSSSI study

**Derazantinib**

✓ Interim analysis of phase 2 registrational study in iCCA FGFR2 fusions

✓ Collaboration with Roche in urothelial cancer

Expand ongoing iCCA study in other FGFR gene aberrations

Complete patient enrolment in phase 2 registrational study in iCCA

Start phase 2 study in urothelial cancer

Top line results from phase 2 registrational study in iCCA

Interim data from first cohort(s) in urothelial cancer

Interim data from iCCA in other FGFR gene aberrations

**BAL101553**

Complete patient enrolment in phase 1 study arm for recurrent glioblastoma (oral)

Top line results from phase 2a study in ovarian cancer and glioblastoma (48-hr. i.v.)

Complete patient enrolment in phase 1 study in newly diagnosed glioblastoma





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