Custom Built Biology for Patients

H1 2021 Results and Corporate Update

August 26, 2021

Molecular Partners AG, Switzerland
(SIX: MOLN)

Disclaimer

This presentation contains forward looking statements. Any statements contained in this presentation that do not describe historical facts may constitute forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, implied and express statements regarding the clinical development of Molecular Partners' current or future product candidates, including timing for the potential submission of emergency use authorization for ensovibep, expectations regarding timing for reporting data from ongoing clinical trials or the initiation of future clinical trials, the potential therapeutic and clinical benefits of Molecular Partners' product candidates, the selection and development of future antiviral or other programs, and Molecular Partners' expected expenses and cash utilization for 2021 and that its current cash resources will be sufficient to fund its operations and capital expenditure requirements into H2 2023. These statements may be identified by words such as "anticipate", "believe", "could", "expect", "intend", "may", "plan", "potential", "will", "would" and similar expressions, although not all forward-looking statements may contain these identifying words, and are based on Molecular Partners AG's current beliefs and expectations. These statements involve risks and uncertainties that could cause actual results to differ materially from those reflected in such statements. Some of the key factors that could cause actual results to differ from our expectations include our plans to develop and potentially commercialize our product candidates; our reliance on third party partners and collaborators over which we may not always have full control; our ongoing and planned clinical trials and preclinical studies for our product candidates, including the timing of such trials and studies; the risk that the results of preclinical studies and clinical trials may not be predictive of future results in connection with future clinical trials; the timing of and our ability to obtain and maintain regulatory approvals for our product candidates; the extent of clinical trials potentially required for our product candidates; the clinical utility and ability to achieve market acceptance of our product candidates; the potential impact of the COVID19 pandemic on our operations or clinical trials; our plans and development of any new indications for our product candidates; our commercialization, marketing and manufacturing capabilities and strategy; our intellectual property position; our ability to identify and in-license additional product candidates; the adequacy of our cash resources and our anticipated cash utilization; and other risks and uncertainties that are described in the Risk Factors section of Molecular Partners' Registration Statement on Form F-1 filed with Securities and Exchange Commission (SEC) on June 14, 2021 and other filings Molecular Partners makes with the SEC. These documents are available on the Investors page of Molecular Partners' website at http://www.molecularpartners.com.

Any forward-looking statements speak only as of the date of this press release and are based on information available to Molecular Partners as of the date of this release, and Molecular Partners assumes no obligation to, and does not intend to, update any forward-looking statements, whether as a result of new information, future events or otherwise.

H1 2021 Results & Corporate Update

R&D

COVID19 – Ensovibep (Novartis)

- Phase 1 & small trial in patients completed
- 2 pivotal trials ongoing, recruiting well
  - **EMPATHY** – ambulatory
  - **ACTIV-3** – hospitalized
- Activity on **all viral variants of concern**

Local immune agonists

- **AMG 506 / MP0310** – (FAP x 4-1BB, Amgen) weekly dosing; on track to initial read-out in H2/2021
- **MP0317** – (FAP x CD40) on track to FIH in H2/2021

AML (CD33+CD70+CD123 x CD3)

- **Triple-TAA-targeting TCE** on track for candidate selection in H2/2021

OPERATIONAL

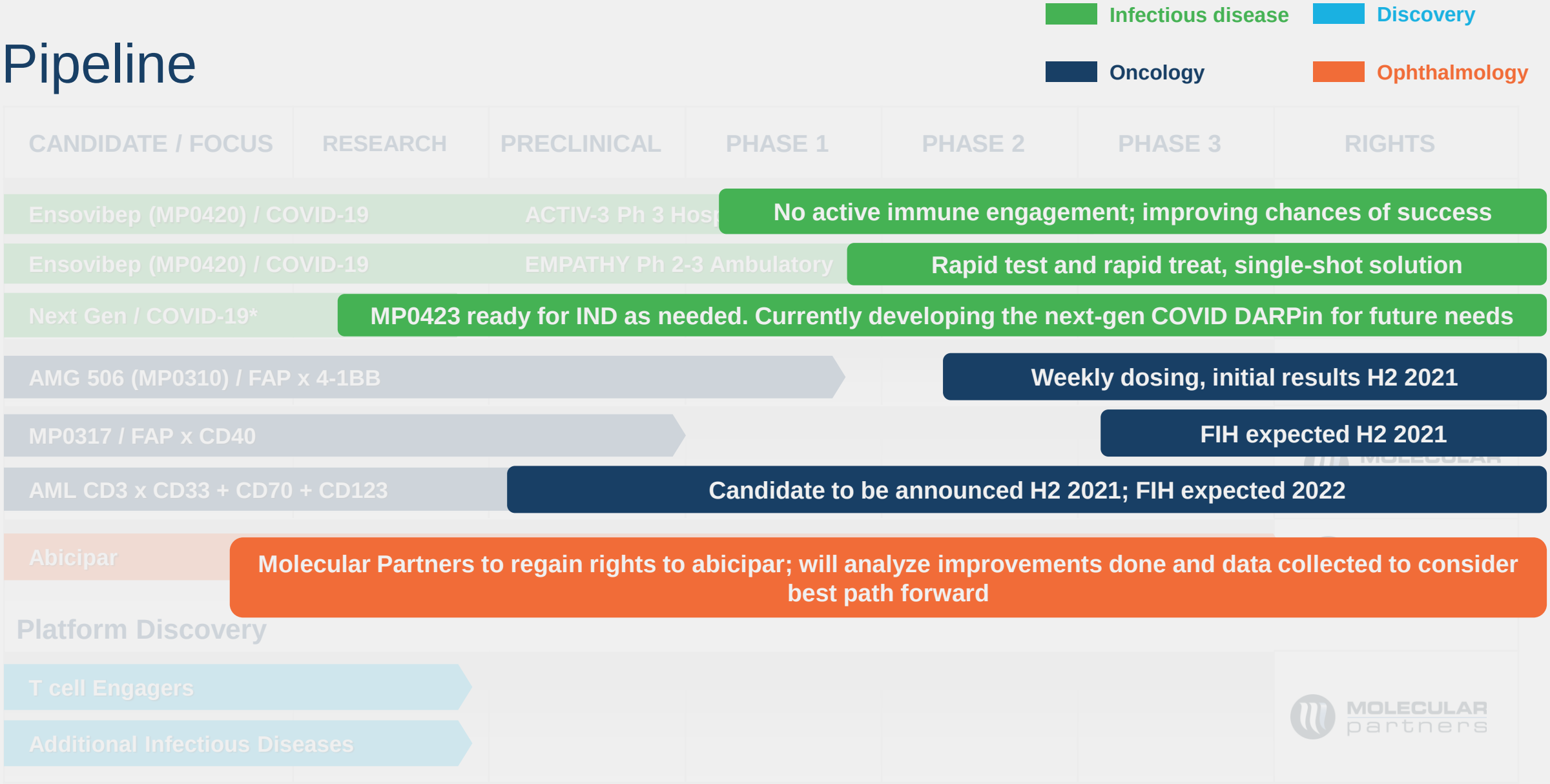
- **Team** – 2 new BoD members
  - **Agnete Fredriksen** – founder of Vaccibody
  - **Dominik Hochli** – late-stage and commercial development
- **Financials**
  - Listed on **NASDAQ**
  - Raised **CHF 58 million** gross proceeds
  - Strong balance sheet, funded into **H2 2023**
- **Abicipar**
  - Molecular Partners will regain rights from AbbVie; transition and evaluation of data initiated

Pipeline

Infectious disease | Discovery | Oncology | Ophthalmology

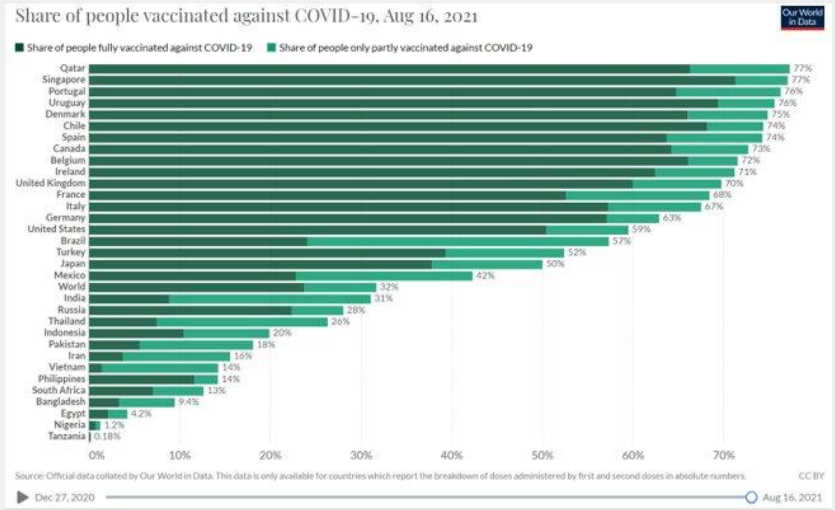
CANDIDATE / FOCUS	RESEARCH	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	RIGHTS
Ensovibep (MP0420) / COVID-19		ACTIV-3 Ph 3 Hospitalized				NOVARTIS
Ensovibep (MP0420) / COVID-19		EMPATHY Ph 2-3 Ambulatory				
Next Gen / COVID-19*						
AMG 506 (MP0310) / FAP x 4-1BB						AMGEN
MP0317 / FAP x CD40						MOLECULAR partners
AML CD3 x CD33 + CD70 + CD123						
Abicipar						MOLECULAR partners
Platform Discovery						
T cell Engagers						MOLECULAR partners
Additional Infectious Diseases						

Pipeline

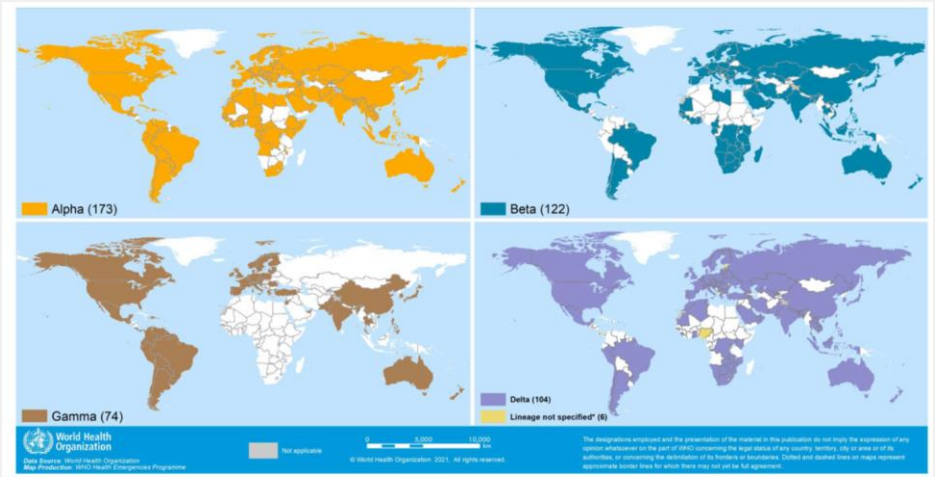

Infectious disease
Discovery
Oncology
Ophthalmology
CANDIDATE / FOCUS
RESEARCH
PRECLINICAL
PHASE 1
PHASE 2
PHASE 3
RIGHTS
Ensovibep (MP0420) / COVID-19
ACTIV-3 Ph 3 Hosp
No active immune engagement; improving chances of success
Ensovibep (MP0420) / COVID-19
EMPATHY Ph 2-3 Ambulatory
Rapid test and rapid treat, single-shot solution
Next Gen / COVID-19*
MP0423 ready for IND as needed. Currently developing the next-gen COVID DARPin for future needs
AMG 506 (MP0310) / FAP x 4-1BB
Weekly dosing, initial results H2 2021
MP0317 / FAP x CD40
FIH expected H2 2021
AML CD3 x CD33 + CD70 + CD123
Candidate to be announced H2 2021; FIH expected 2022
Abicipar
Molecular Partners to regain rights to abicipar; will analyze improvements done and data collected to consider best path forward
Platform Discovery
T cell Engagers
Additional Infectious Diseases
MOLECULAR partners

Ensovibep – COVID19

You Will Get COVID and So Will I
Therapeutics Are Needed Now, More Than Ever

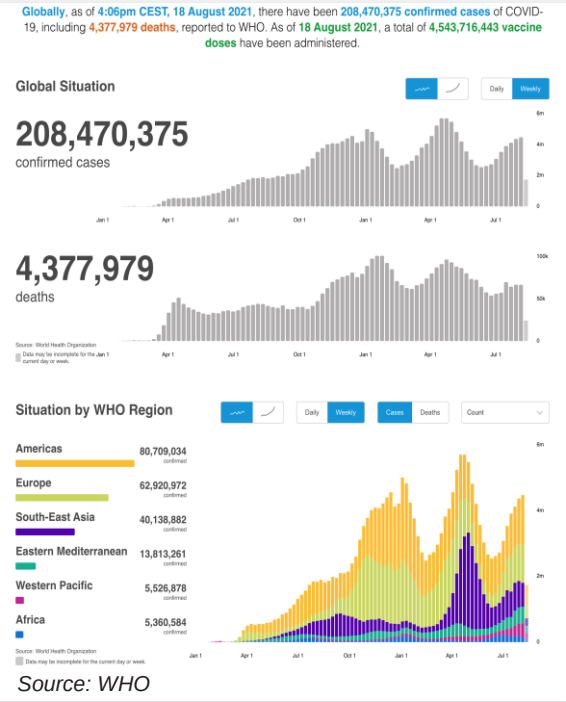


Vaccinations faster and better than anyone could have hoped



Source: WHO | COVID-19 variants Alpha, Beta, Gamma and Delta.

Variants continue to rise globally, challenging effectivity of vaccines

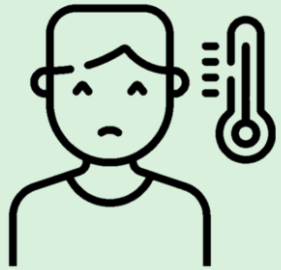


Source: WHO

Hospitalizations are up again, mostly in the unvaccinated

Targeting the Ambulatory and Mild to Moderate Hospitalized

Ensovibep



Prophylaxis

Outpatients

Hospitalized

Intensive care

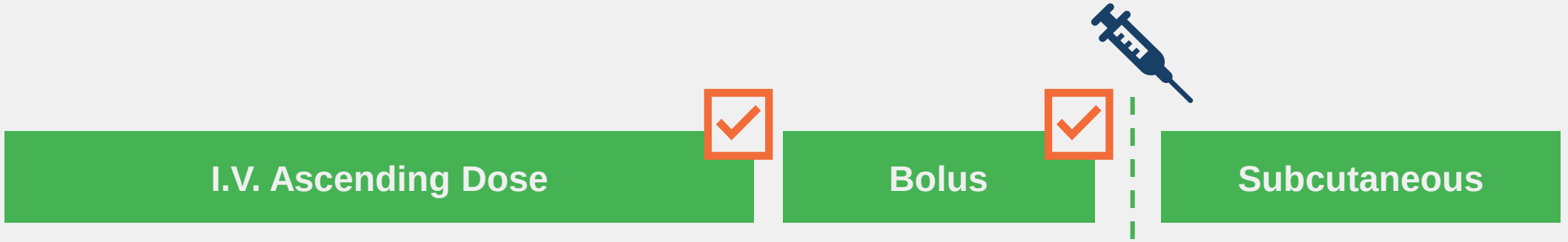
Our COVID-19 Program - Ensovibep

- Tri-specific DARPin® antiviral targeting the viral spike protein
- Designed to reach highest potency
- Designed to prevent viral escape; **Inhibits all known variants of concern to date (tested in vitro)**
- **Phase 1 and single-arm Phase 2 results confirm safety and half life**
- Single-shot administration to cover course of disease – ensovibep can be formulated at 100 mg/ml, stable at 2-8°C

Supportive Safety and Pharmacodynamics Data

PHASE 1

- Phase 1:
  - Ensovibep administered intravenously (I.V.) was safe and well tolerated in healthy subjects
  - Bolus administration (5 mins) successfully completed
  - Subcutaneous – ongoing
- Half life established at 2-3 weeks, matching preclinical studies

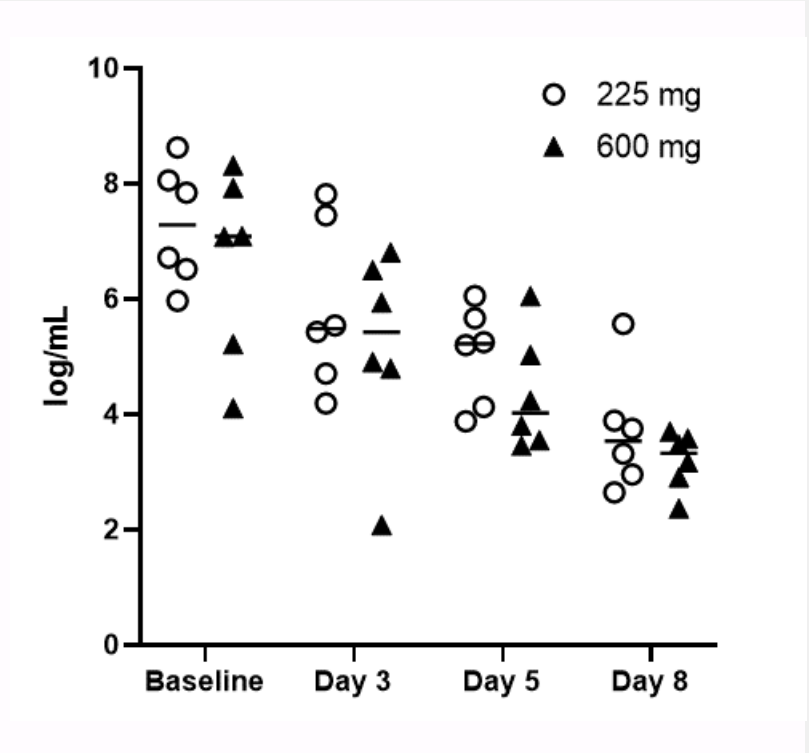


Phase 2a Data Supports Clinical Progress

- Outpatients with a minimum of two symptoms and positive on PCR and Rapid Antigen test
- Ensovibep shown to be safe and well tolerated in COVID19 patients
- Successful follow-up methods employed (e.g., qPCR & cultures) showing rapid decline of viral loads
- These results validate the trial design for our ongoing late-stage trials, EMPATHY and ACTIV-3

PHASE 2a

Single-arm exploratory trial in ambulatory patients, analyzing safety and pharmacodynamics



Phase 2 Viral load analysis by qPCR
(Serology under analysis)

Ensovibep Clinical Development; Registrational Trials

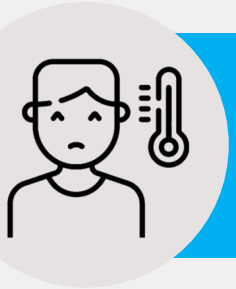
2021	2022

Possible EUA*

Potential BLA submission

EMPATHY — **Rapid Test – Rapid Treat**

NOVARTIS



Interim analysis at 400 ambulatory patients with mild to moderate symptomatic COVID-19; 3 dose levels: **75 mg, 225 mg, 600 mg**

1,700+ ambulatory patients on the selected dose level / placebo

Subcutaneous Phase 2/3 studies

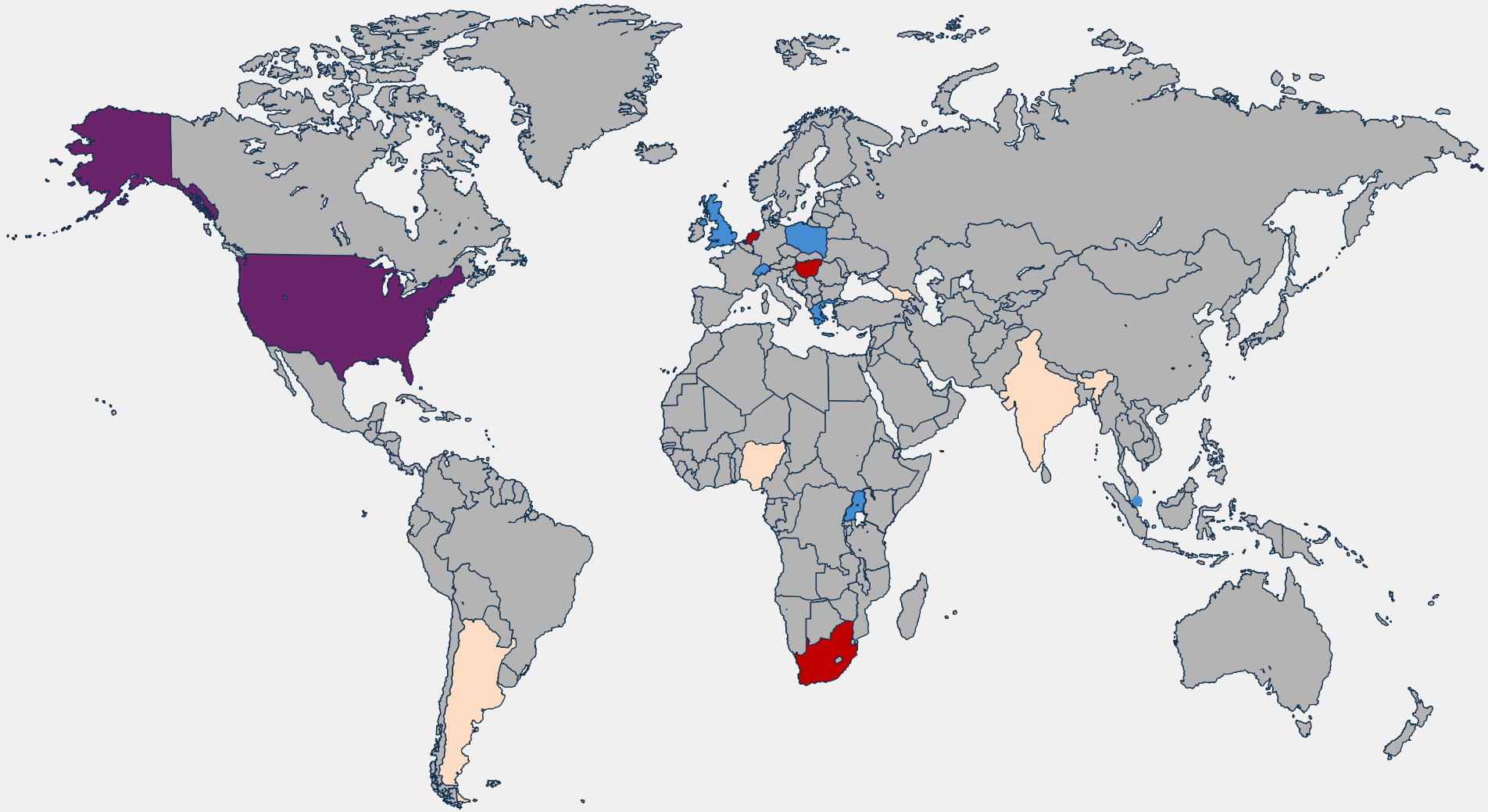
ACTIV-3 — **No active engagement of the immune system (no Fc, no ADE liability)**

Phase 3 in hospitalized patients with COVID-19
Futility analysis after 300 patients
Up to 1000 hospitalized patients with 600 mg

NIH

* Emergency Use Authorization submission, pending interim analysis of data is supportive of EUA

Global Clinical Trial Sites of Ensovibep



EMPATHY*

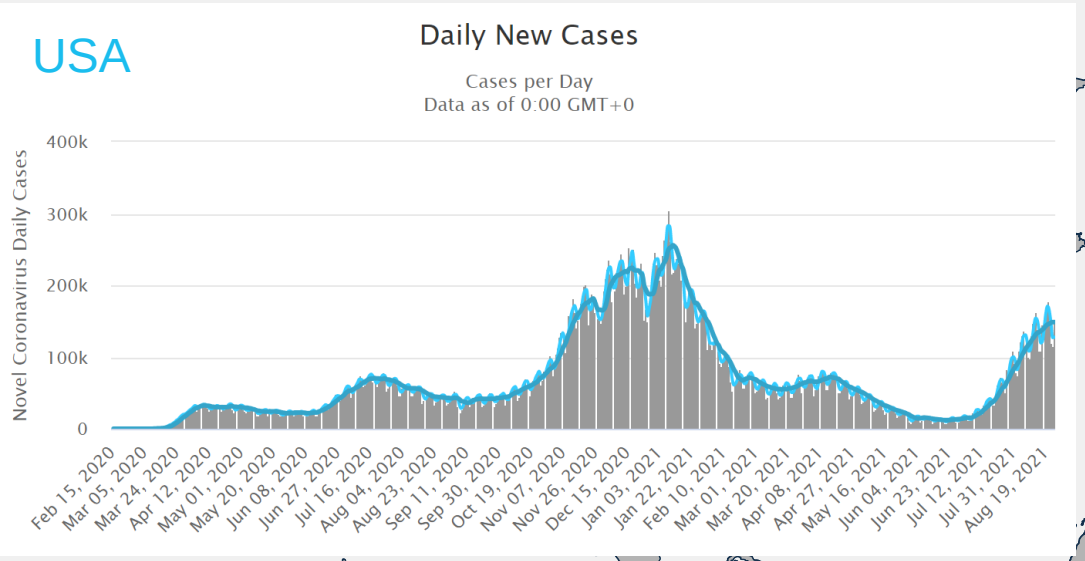
ACTIV-3

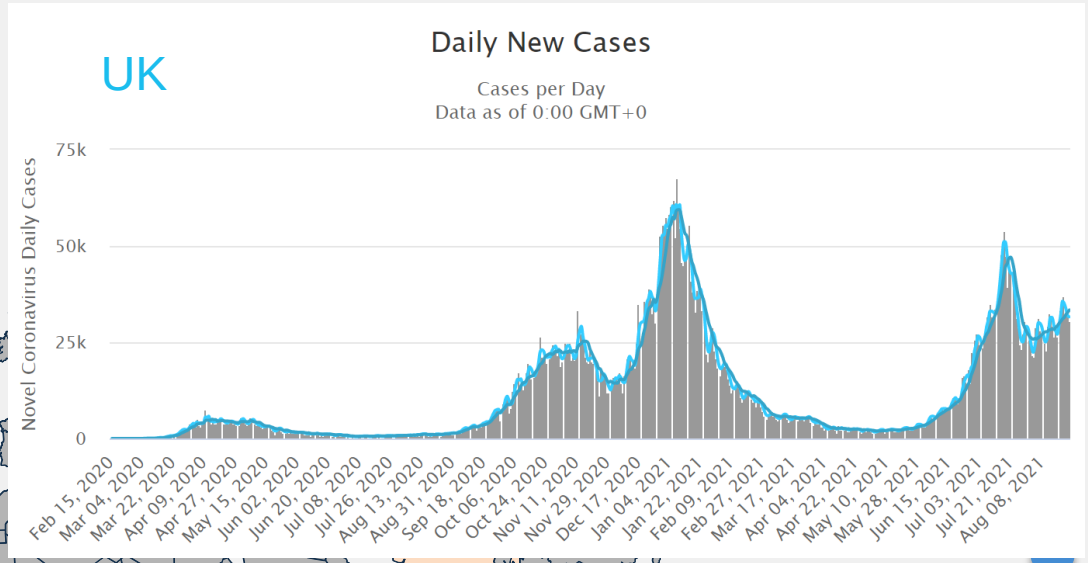
Both Trials

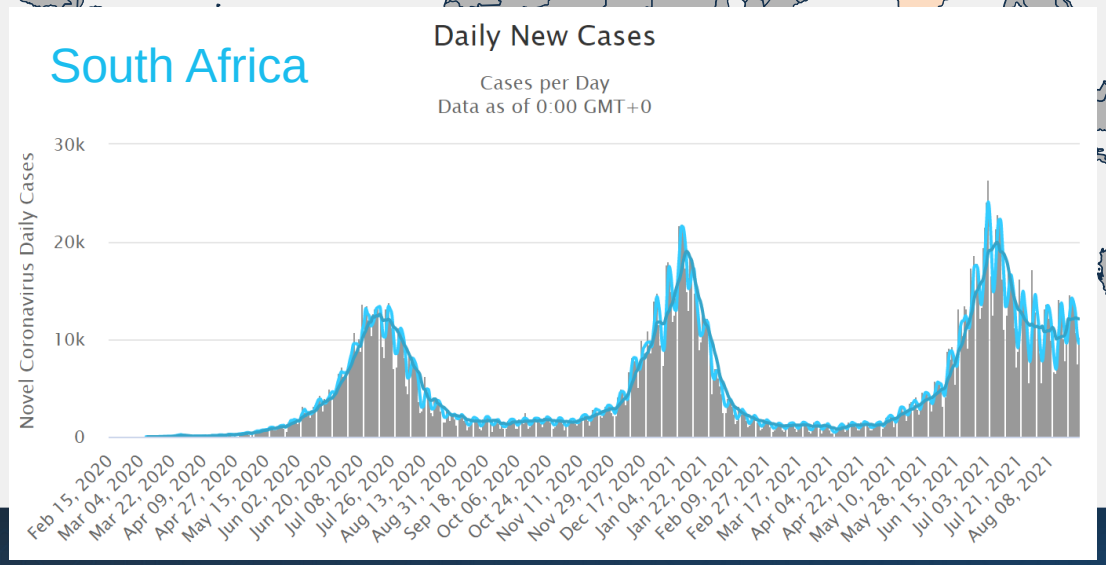
Approved, not recruiting yet

*EMPATHY to expand globally in the Phase 3 stage

Global Clinical Trial Sites of Ensovibep







EMPATHY*

ACTIV-3

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*EMPATHY to expand globally in the Phase 3 stage

Source: Worldometers.info

Cooperative Binding Translates to Prevention of Mutational Escape

Lineage (Origin)	VSV or Lentivirus Pseudotype Neutralization Assay IC_{50} [ng/mL]
Reference	1.0
	1.1
Alpha / B.1.1.7 / United Kingdom	1.7
	0.9
Beta / B.1.351 / South Africa	5.0
	1.2
Gamma /P.1 / Brazil	1.2
	0.7
Delta / B.1.617.2 / India	**2.4**
Epsilon / B.1.429 / California (US)	2.2
	0.9
Eta / B.1.525 / Nigeria	6.2
	6.8
Lambda / C.37 / Peru	**0.5**
Iota/ B.1.526 / New York (US)	3.0
R.1	2.4
A.23.1	1.6
	0.3
Kappa / B.1.617.1 / India	3.2
	2.0
B.1.618 / India	8.1

All Variants | Reported *in vitro* Therapeutic Activity

H1 Financials

Andreas Emmenegger – CFO

H1 2021 Financial Highlights

- Ongoing strong financial position with CHF 174.3 million in cash and short-term deposits as of June 30, 2021
- Completed initial public offering of American Depositary Shares (“ADSs”) on the Nasdaq, raising $63.8 million (CHF 58.8 million) in gross proceeds to secure financing of ongoing operations into H2 2023
- Net cash outflow from operating activities of CHF 52.5 million in H1 2021
- Unchanged FY 2021 guidance

Key Figures H1 2021

(CHF million, except per share and FTE data)	***H1 2021***	*H1 2020*	***change***
Revenues	**4.4**	7.5	**(3.1)**
Total operating expenses [1]	**(39.2)**	(30.6)	**(8.6)**
Operating result	**(34.8)**	(23.1)	**(11.7)**
Net financial result	**1.2**	(1.6)	**2.8**
Net result	**(33.6)**	(24.7)	**(8.9)**
Basic net result per share (in CHF)	**(1.13)**	(1.14)	**0.01**
Net cash used in operations	**(52.5)**	(27.9)	**(24.6)**
Cash balance (incl. s.t. deposits) as of June 30 [2]	**174.3**	64.4	**109.9**
Number of FTE's as of June 30	**158.3**	143.6	**14.7**

MOLECULAR partners

[1] Thereof non-cash costs of CHF 3.7 million in H1 2021 and CHF 3.3 million in H1 2020'
[2] Including CHF 47.7 million short-term time deposits as per June 30, 2021 and CHF 17.1 million short-term time deposits as per June 30, 2020
Note: Rounding differences may occur

Financial Guidance for Full-Year 2021

- Total expenses of CHF 65-75 million,
  of which around CHF 7 million non-cash effective costs
- Gross cash burn of CHF 85-95 million, incl. CHF 20 million payable to Novartis for the manufacturing of commercial supply of Ensovibep
- With CHF 174.3 million cash at hand (incl. short-term time deposits) and no debt, the Company is funded into H2 2023, excluding any potential receipts from R&D partners
- Guidance subject to progress and changes of pipeline

Summary & Outlook

Pipeline

Infectious disease | Discovery | Oncology | Ophthalmology

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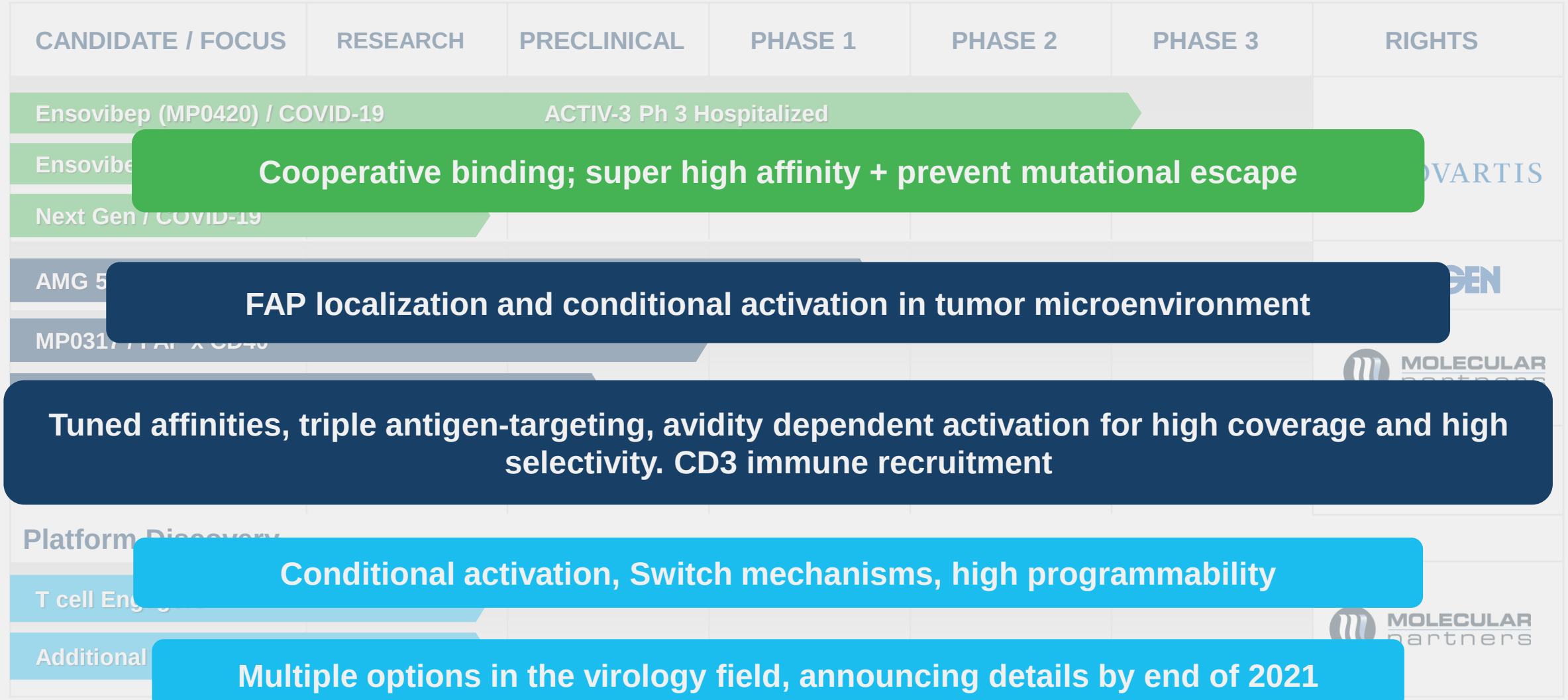
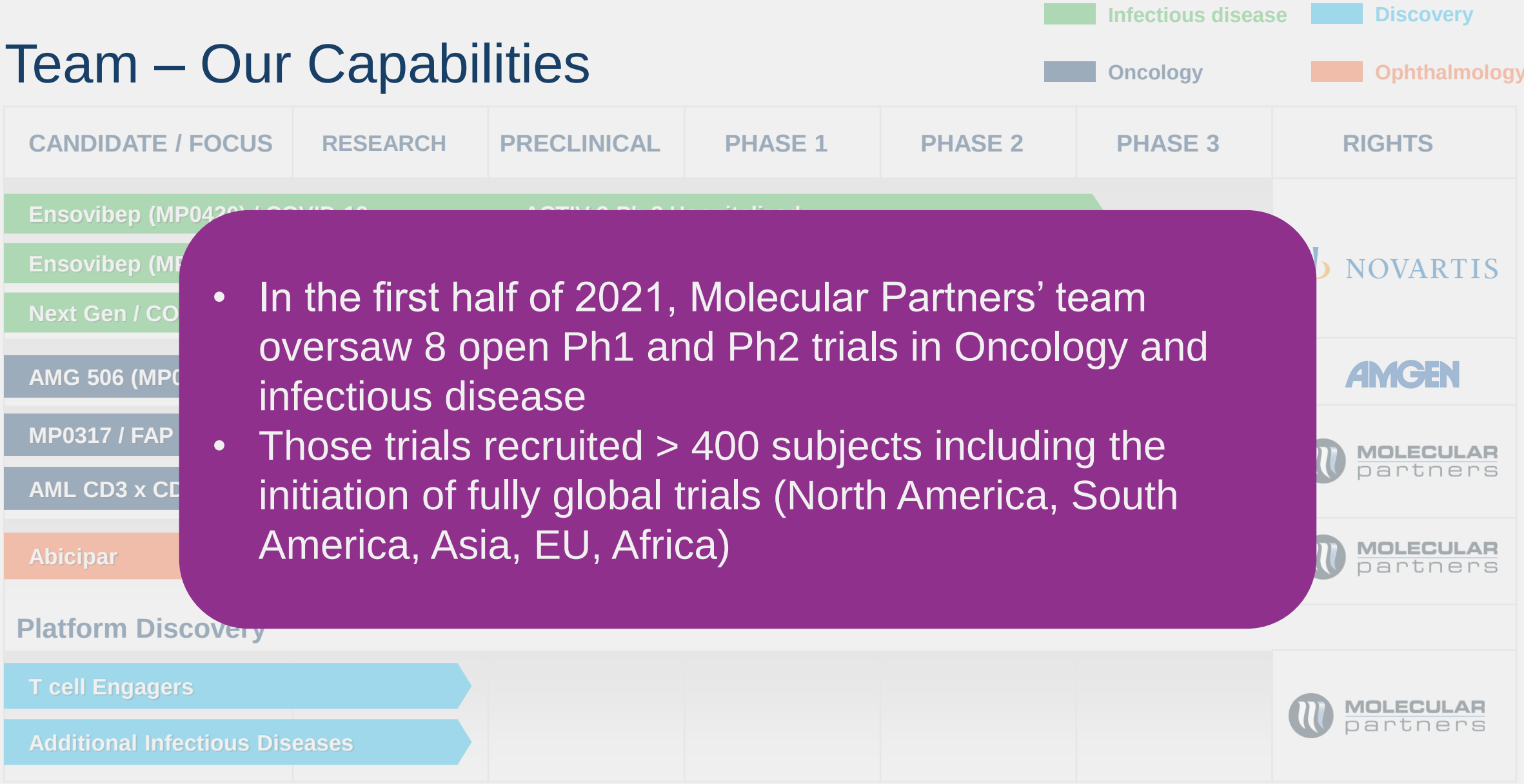
Additional Infectious Diseases						

DARPin® Platform – Our Differentiation

Infectious disease | Discovery | Oncology | Ophthalmology



Team – Our Capabilities



- In the first half of 2021, Molecular Partners' team oversaw 8 open Ph1 and Ph2 trials in Oncology and infectious disease
- Those trials recruited > 400 subjects including the initiation of fully global trials (North America, South America, Asia, EU, Africa)

Upcoming Potential Catalysts Across the Portfolio

Immuno-oncology portfolio	
AMG 506 (MP0310)	▪ Identify ideal dosing regimen in ongoing Phase 1 (H2/2021) ▪ Amgen potential review (H2/2021)
MP0317	▪ MP0317 FIH in H2 2021
MP0-AML	▪ 1st Candidate selected for development ▪ Update at ASH – FIH in 2022
Antiviral portfolio	
Ensovibep (MP0420)	▪ EMPATHY readout Phase 2b from 400 patients in H2 2021; potential for EUA applications (US&EU) ▪ ACTIV-3 futility analysis from 300 patients in H2 2021 with full data in 2022 ▪ BLA submission possible in 2022
Novel antivirals	▪ Next generation COVID drug, built for the future ▪ Develop novel DARPins for viral targets with new programs expected to be announced in R&D day 2021

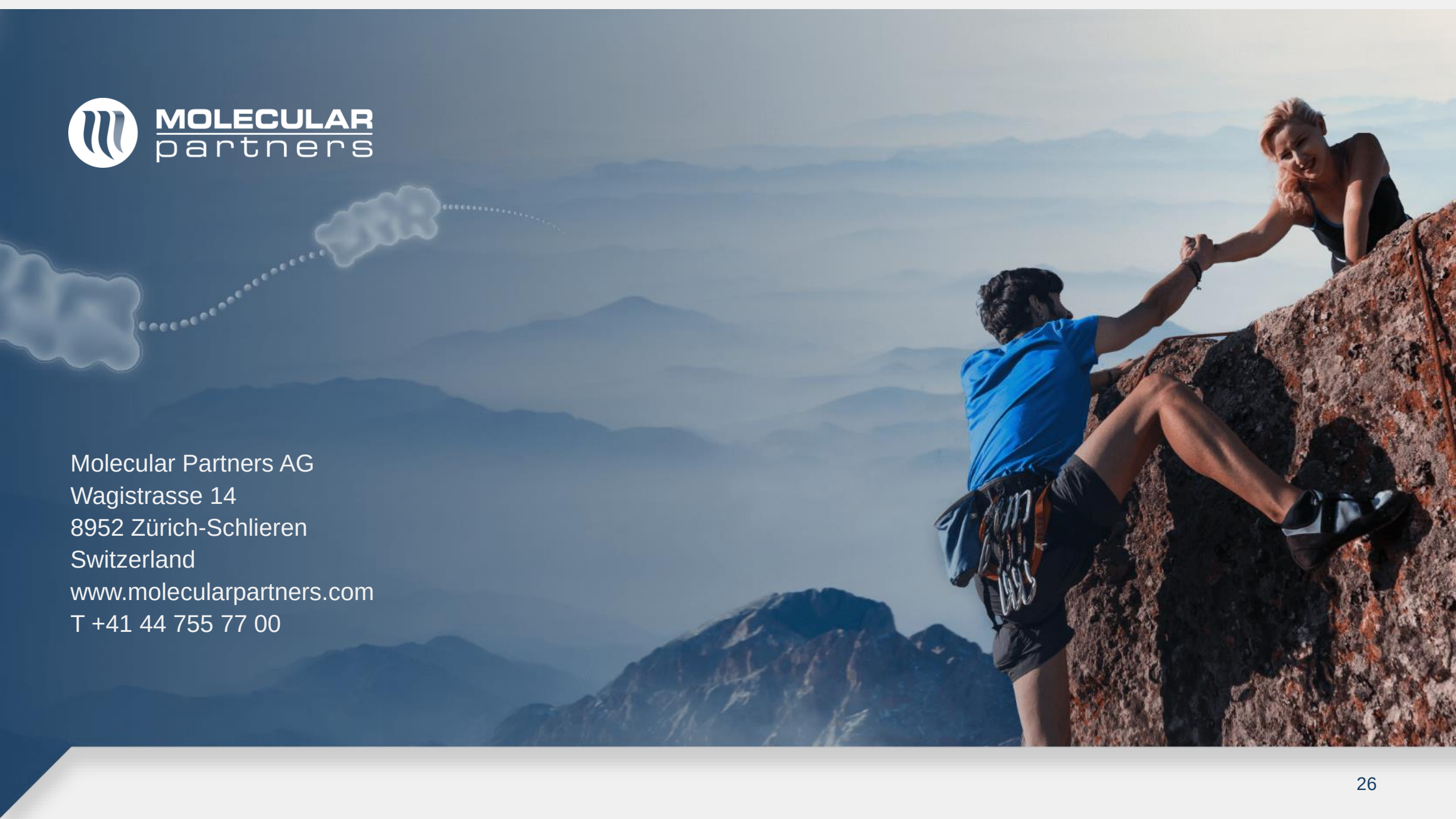
Funded into H2 2023

(Not incl. any future proceeds related to partnerships)

Virtual R&D Day, December 15, 2021 – You're Invited!

- **Year summary and projections for 2022**
- **New virology programs announced**

More details to come!



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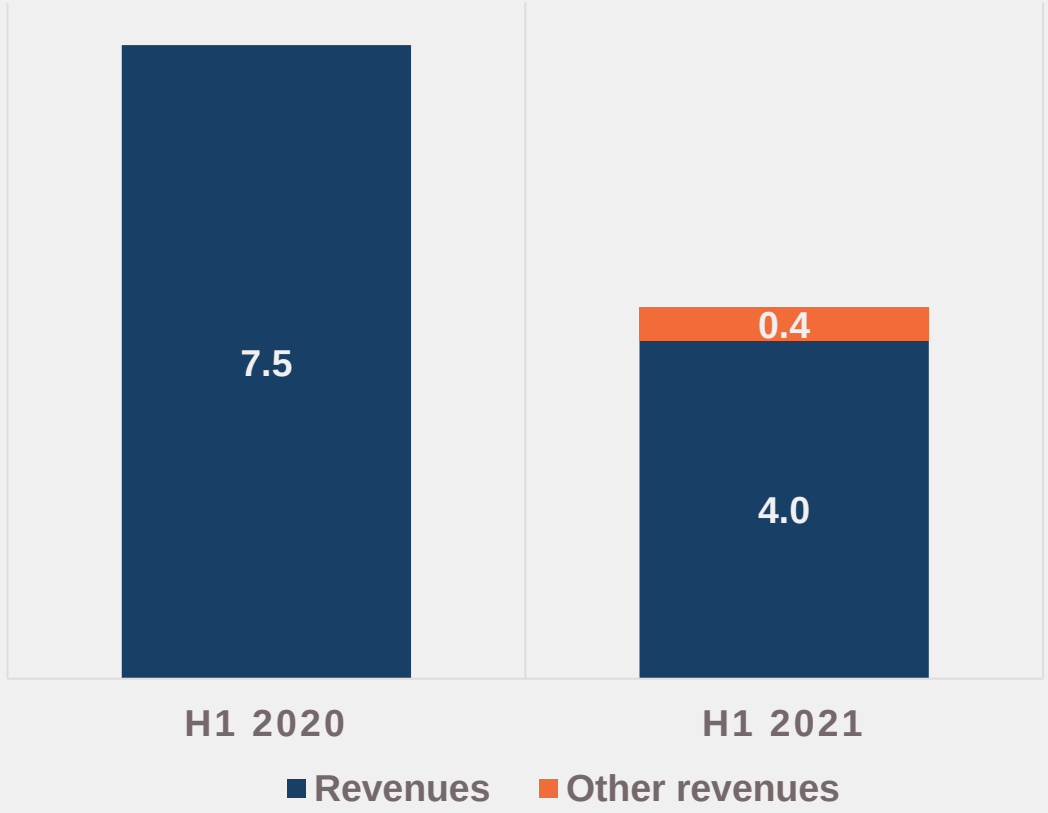
Revenues

In CHF million

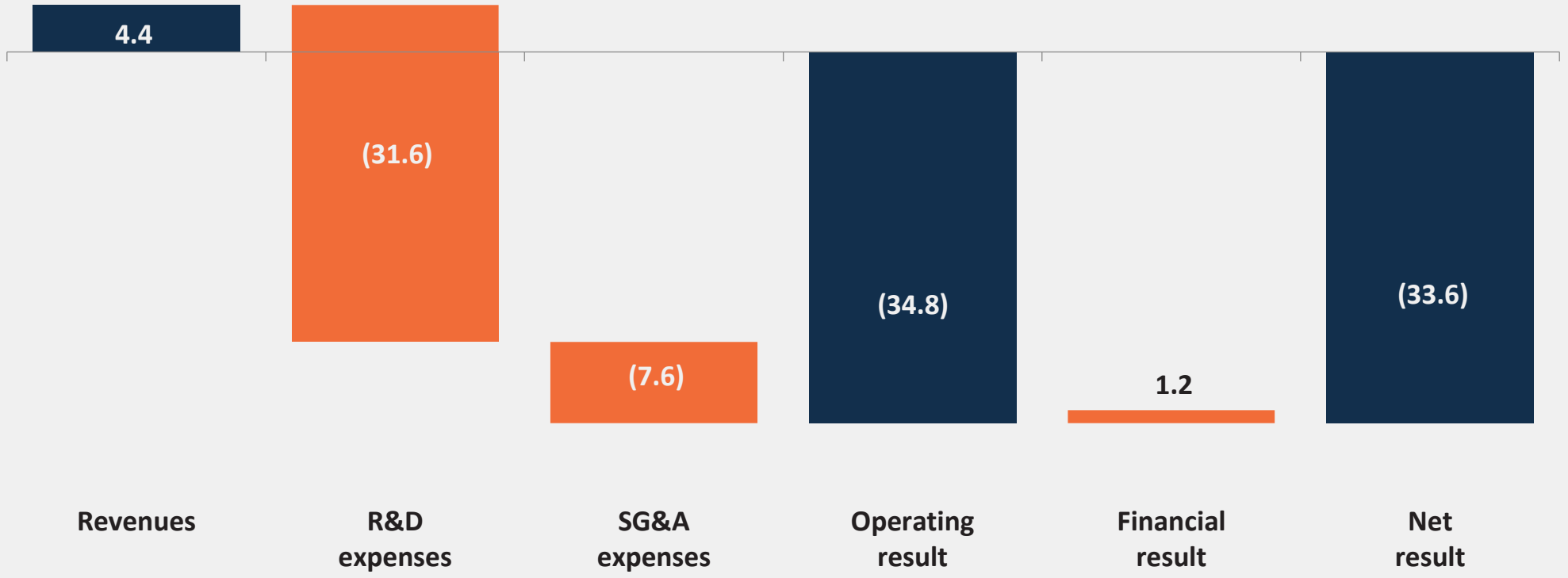


Comments

- H1 2021: CHF 4.0 million recognized out of contract liabilities related to the Amgen collaboration. CHF 0.4 million other income from Novartis collaboration
- Full H1 2020 amount relates to the Amgen collaboration
- As per June 30, 2021: CHF 15.0 million still to be recognized from the total CHF 49.6 million from the Amgen collaboration

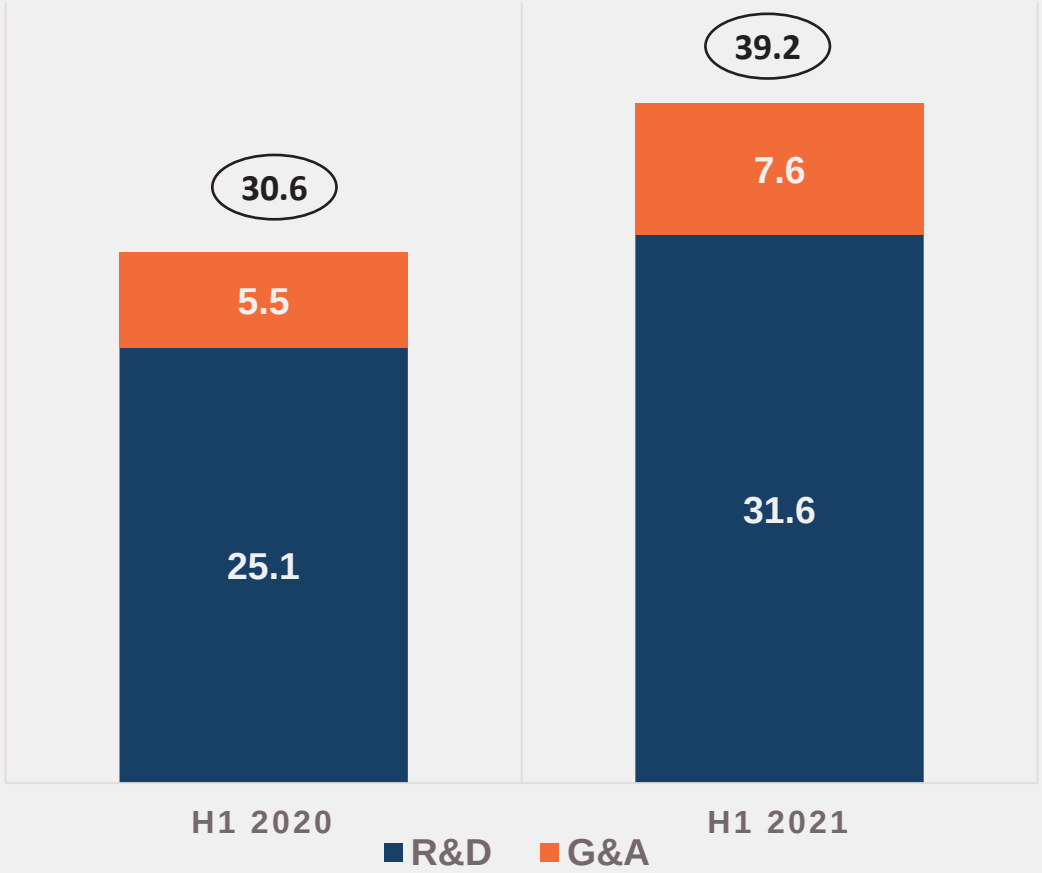
P&L break-down

in CHF million



Operating Expenses

in CHF million (incl. depreciation & amortization)

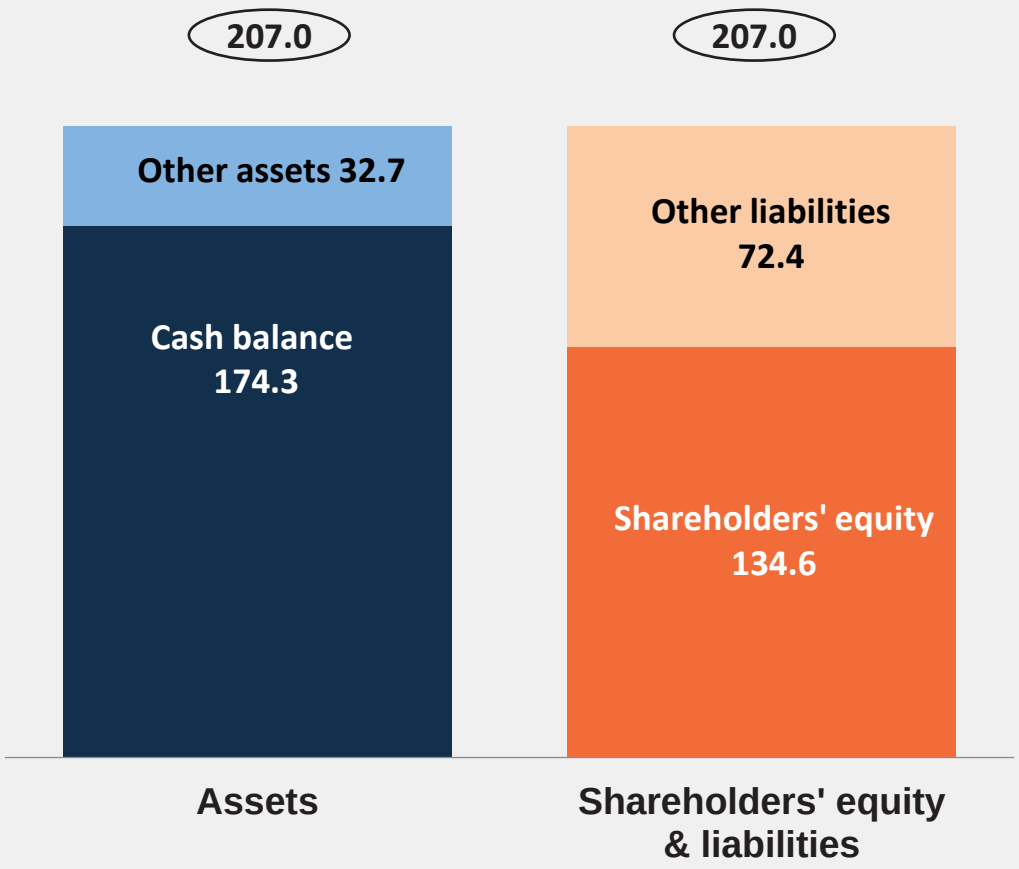


Comments

- In H1 2021 main expense positions and drivers were:
  - CHF 17.7 million People related expenses
  - CHF 17.3 million external R&D costs
  - CHF 4.2 million other (consulting and professional fees, facility, D&O insurance following US listing, and general office expenses plus depreciation)
- Included are CHF 3.7 million non-cash effective costs

Balance Sheet

as of June 30, 2021 (CHF million)



- *Comments*
- Strong and debt free balance sheet
- CHF 174.3 million cash balance (incl. time deposits) – 84% of total assets
- Equity base of CHF 134.6 million
- Other assets include prepayments for D&O insurance and for material purchases as well as receivables Novartis
- Other liabilities include CHF 15.0 million in relation to Amgen (revenue to be recognized), CHF 15.8 to be paid to Novartis (manufacturing), CHF 7.0 million for the BAG reservation (revenue to be recognized), CHF 6.6 million lease liability, CHF 7.7 million for accrued employee benefits plus CHF 20.3 million for other current liabilities