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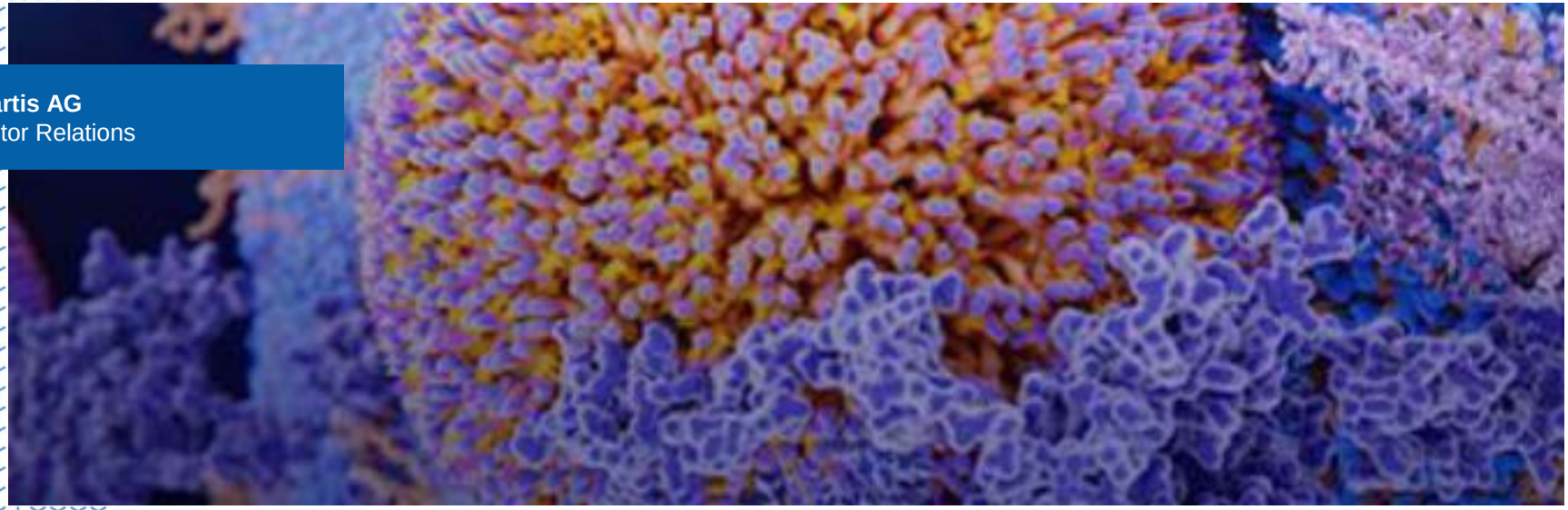
Investor Relations



Novartis enters into agreement to acquire The Medicines Company

Investor Presentation
November 25, 2019

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Disclaimer

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Additional Information

This presentation is neither an offer to purchase nor a solicitation of an offer to sell securities. The tender offer for the outstanding shares of common stock, par value USD $0.001, of The Medicines Company (the “Company”) described in this presentation has not commenced. At the time the tender offer is commenced, Novartis and Purchaser will file, or will cause to be filed, a Schedule TO Tender Offer Statement with the U.S. Securities and Exchange Commission (the “SEC”) and the Company will file a Schedule 14D-9 Solicitation/Recommendation Statement with the SEC, in each case with respect to the tender offer. The Schedule TO Tender Offer Statement (including an offer to purchase, a related letter of transmittal and other offer documents) and the Schedule 14D-9 Solicitation/Recommendation Statement will contain important information that should be read carefully when they become available and considered before any decision is made with respect to the tender offer. Those materials and all other documents filed by, or caused to be filed by, Novartis and Purchaser and the Company with the SEC will be available at no charge on the SEC’s website at www.sec.gov. The Schedule TO Tender Offer Statement and related materials also may be obtained for free under the “Investors – Financial Data” section of Novartis website at https://www.novartis.com/investors/financial-data/sec-filings. The Schedule 14D-9 Solicitation/Recommendation Statement and such other documents also may be obtained for free from the Company under the “Investors & Media” section of the Company’s website at https://www.themedicinescompany.com/investor/financial/.

Novartis proposed acquisition of The Medicines Company would add potentially transformational cholesterol lowering therapy

- Unique opportunity to address #1 cause of mortality globally with a de-risked, highly efficacious, safe, twice-yearly, subcutaneous, physician administered injection with value based pricing
- Fits with Novartis global cardiovascular footprint, strong potential synergies around the world and leverages Novartis expertise
- Soon-to-launch, potentially first-in-class, well differentiated asset, with potential to become one of the largest products by sales in Novartis portfolio
- Expected to support medium and long-term growth with significant sales and core operating income contribution in the medium and long-term
- Significant upside potential in population health agreements

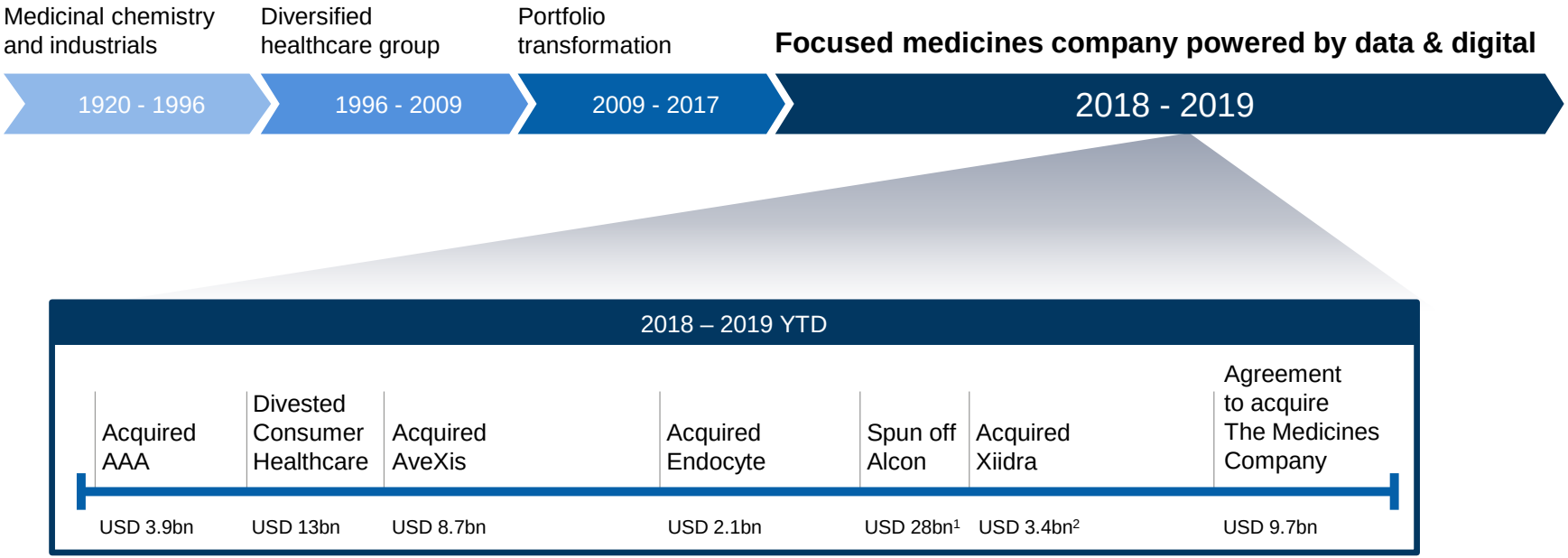
Agenda

Strategic rationale

Inclisiran: A potential first-in-class lipid-lowering agent with mega-blockbuster potential

Closing

Deal in line with strategy to continue to transform Novartis into a focused medicines company



1. Alcon market capitalization on close of 1st day of trading 2. USD 3.4bn upfront + milestone payments of up to USD 1.9 billion

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Deal fits with capital allocation priorities and target M&A profile

Capital allocation priorities

1. Investments in organic business
2. Growing annual dividend in CHF
3. Value-creating bolt-ons
4. Share buybacks

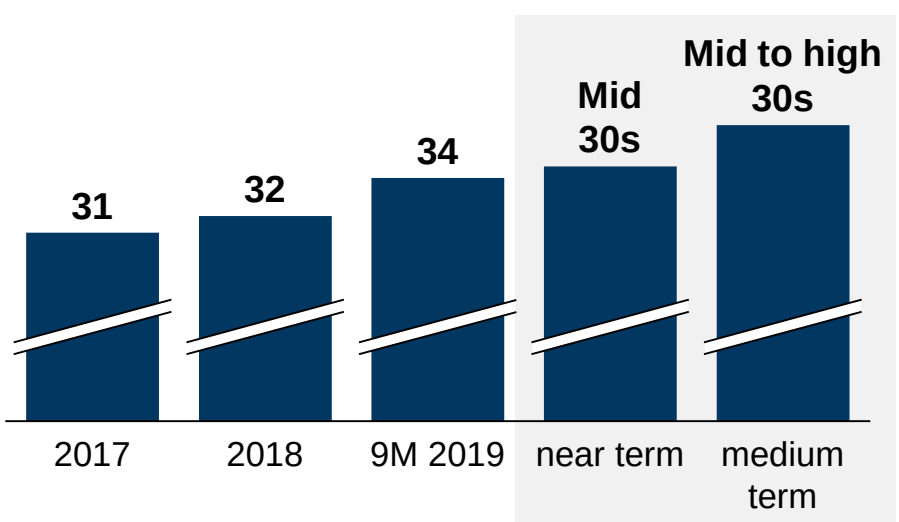
M&A profile

- ☑ Strengthens key Therapeutic Area
- ☑ **First**- or best-in-class profile
- ☑ Attractive mid-long term growth profile
- ☑ Attractive financial return profile

Novartis expected to continue driving IM core margin expansion during the launch of inclisiran

Innovative Medicines Division

Core margin (%)



+ Sales momentum of key growth drivers and operational excellence on upcoming launches
+ Productivity programs in Novartis Technical Operations and Novartis Business Services
+ Resource allocation in commercial units
– Generic erosion
– Launch investments for potential future blockbusters, including inclisiran

Key assumption: All guidance includes forecast assumption that no Gilenya® generics enter in 2020 in the US

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Significant unmet needs in ASCVD treatment despite availability of PCSK9 mAbs

Significant unmet needs in ASCVD

40%	Adults WW have high LDL-C; ASCVD leading cause of death WW
50m+	Patients across key markets with ASCVD or FH on current SOC not at goal
7%	Treated patients statin intolerant[1]
60%+	Patients treated with statins +/- ezetimibe do not meet goal[2]

Shortcomings of current PCSK9 mAbs treatments

Expensive	Prices at launch above cost-effective benchmarks[3]
Reimbursement hurdles	Leading to 80% of PCSK9i claims being initially rejected[4]
Affordability hurdles	Leading to 50% abandonment rate for PCSK9i after 90 days[5]
Inconvenient	Up to 26 injections per year[6], and cold chain requirement

Persistent and underserved market in ASCVD

Inclisiran could help tackle current issues with existing treatments

Source: DRG (2019), Novartis Commercial team. 1. A Comparison of 2 Claims-Based Algorithms by Bellows et al. JMCP September 2017 Vol. 23, No. 9. 2. Boekholdt et al. Very Low LDL-C levels and CVD Risk JACC VOL 64.No 5 2014:485-94. 3. FonarowGC, KeechAC, Pedersen TR, et al. Cost-effectiveness of Evolocumab Therapy for Reducing Cardiovascular Events in Patients With Atherosclerotic Cardiovascular Disease (2017). 4. NavarAM, Taylor BT, FlevitzE, et al. Early challenges for PCSK9 inhibitor prescriptions and patients: rejections and rates unfilled. Abstract 415-08. 5. Hines DM et al. Poster presented at ACC 2017. 6. PCSK9 prescribing informations

Secondary prevention guidelines have introduced LDL-C targets and support CV benefits of PCSK9 inhibitors

US Guidelines

- In high-risk ASCVD, LDL-C > 70 mg/dL warrants additional therapy
- Primary prevention patients with LDL-C ≥100 mg/dL may be considered for non-statin therapies
- KOLs expect AHA to follow ESC guidance in next update in 2022

EU Guidelines

- ESC 2019, updated ESC/EAS guidelines reduced target to 55 mg/dL in ASCVD patients

Potential new first-in-class siRNA asset, well differentiated from current lipid lowering medicines

Mechanism of Action (MoA)

Inclisiran degrades PCSK9 mRNA inside the cell, thereby preventing the production of PCSK9 in the first place

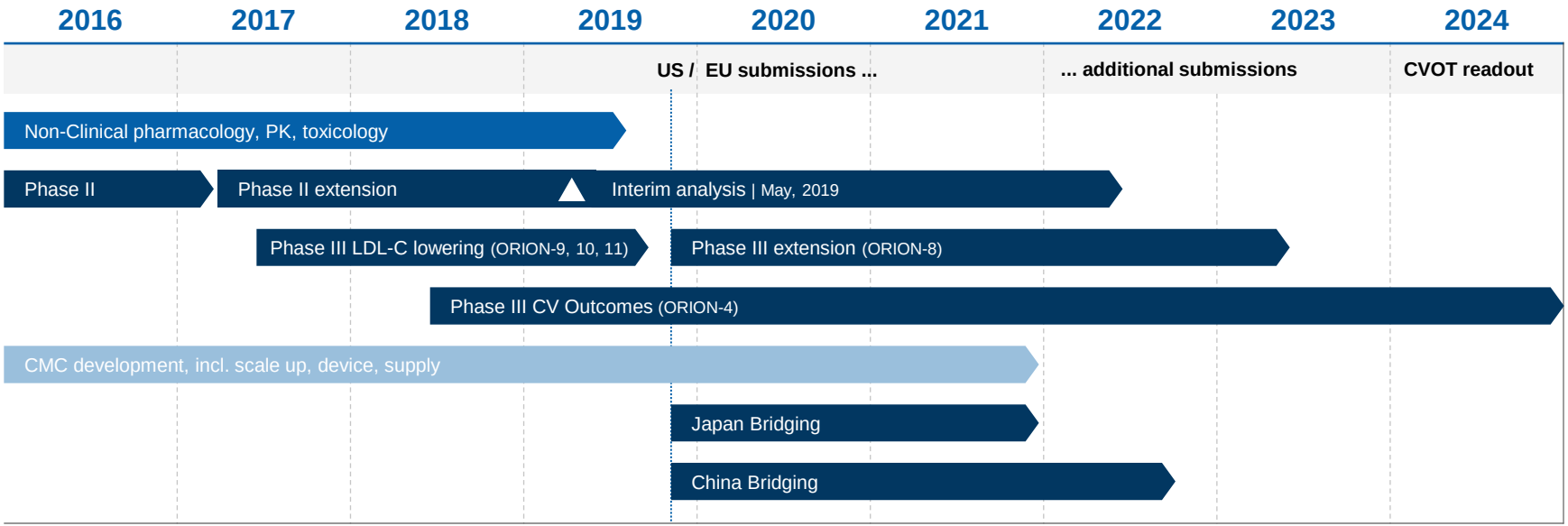
With lower levels of PCSK9 circulating and within tissues, there is higher expression of LDL receptors in the liver and consequently **lower LDL-C levels in the blood**

	LDLR	PCSK9	LDL-C	
Statin	↑	↑	↓	Statins up-regulate the LDL receptor but raise PCSK9, particularly in higher doses
PCSK9 Synthesis Inhibition	↑	↓	↓↓	PCSK9i up-regulate the LDL receptor and down-regulate PCSK9, which in combination lowers LDL more effectively

Key differentiating factors

MoA	Inhibits synthesis of PCSK9 by RNA interference
Efficacy	Potent, durable, consistent LDL-C reduction >50%
Safety	Profile similar to placebo (no liver, muscle, renal nor platelet signals) in entire clinical program
Convenience	Durable efficacy with only 2 subcutaneous injections per year, less patient abandonment
Adherence	Payers confidence reinforced by physician administration dosing regimen
Pricing & access	Value-based pricing & flexible access strategy
Outcome	Potential for better treatment outcome
Supply chain	Room temperature storage, competitive COGS
Patent expiry	Compound patent: US 2035, EU 2036 including anticipated extensions

Clinical development program overview



Extension for ORION-9, 10, 11 with 48 months follow-up (ORION-8)

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Strong consistent efficacy across ORION-9, 10 and 11, demonstrating rapid, potent and durable LDL-C lowering

Over 3600 ASCVD / FH patients, 18 months treatment, inclisiran on top of max. tolerated statins, ezetimibe allowed

Primary endpoints (% LDL-C reduction)	ORION-9 (n=482 HeFH)			ORION-10 (n=1,561 ASCVD)			ORION-11 (n=1,617 ASCVD)		
	Placebo	**Inclisiran**	Δ	**Placebo**	**Inclisiran**	Δ	**Placebo**	**Inclisiran**	Δ
ITT population	240	242		780	781		807	810	
At day 510	+8%	-41%	-50%	+1%	-56%	-58%	+4%	-49%	-54%
Days 90-540 average	+6%	-39%	-45%	+3%	-53%	-56%	+3%	-48%	-50%

Source: The Medicines Company presentation, September 2, 2019; October 18, 2019

- ✓ Reductions of LDL-C (day 510) as high as 58%, >50% in all populations
- ✓ Reductions observed at days 90 and were broadly stable long term (day 540) over dosing period (6 months)
- ✓ Met all key secondary endpoints: LDL-C change over time, changes in PSCK9 and other lipids

ORION-10 and 11 pooled analysis getting high risk patients to or below recommended goals

Treatment group	N (ITT) 3,178	Mean observed percent change in LDL-C at day 510
Placebo	1,587	+3%
Inclisiran	1,591	-53%
Difference (primary endpoint)		-56%
P-value		<0.00001

Source: The Medicines Company presentation, September 2, 2019; October 18, 2019

Results for patients randomized to inclisiran

<70 mg/dL LDL-C threshold: >90%

≥50% LDL-C lowering: 87%

Safety comparable to placebo (ORION-9, 10, 11)

Safety Population	ORION-9 (n=481)				ORION-10 (n=1,559)				ORION-11 (n=1,615)			
	Placebo 240		Inclisiran 241		Placebo 778		Inclisiran 781		Placebo 804		Inclisiran 811	
	n	%	n	%	n	%	n	%	n	%	n	%
Patients with at least one serious TEAE	33	13.8%	18	7.5%	205	26.4%	175	22.4%	181	22.5%	181	22.3%
All Cause Death	1	0.4%	1	0.4%	11	1.4%	12	1.5%	15	1.9%	14	1.7%
Cardiovascular Death	0	0.0%	1	0.4%	5	0.6%	7	0.9%	10	1.2%	9	1.1%
Cancer Death	0	0.0%	0	0.0%	3	0.4%	1	0.1%	3	0.4%	3	0.4%
New, Worsening or Recurrent Malignancy	3	1.30%	2	0.8%	26	3.3%	26	3.3%	20	2.5%	16	2.0%
Pre-specified Exploratory CV Endpoint (MedDra Basket)	10	4.2%	10	4.2%	79	10.2%	58	7.4%	83	10.3%	63	7.8%
Cardiovasular Death	0	0.0%	1	0.4%	5	0.6%	7	0.9%	10	1.2%	9	1.1%
Fatal or Non-fatal MI and Stroke	1	0.4%	3	1.2%	26	3.3%	32	4.1%	30	3.7%	12	1.5%

Source: The Medicines Company company presentation, September 2, 2019; October 18, 2019 The Medicines Company Management presentation

No liver, kidney, muscle or platelet safety signals (ORION-9, 10, 11)

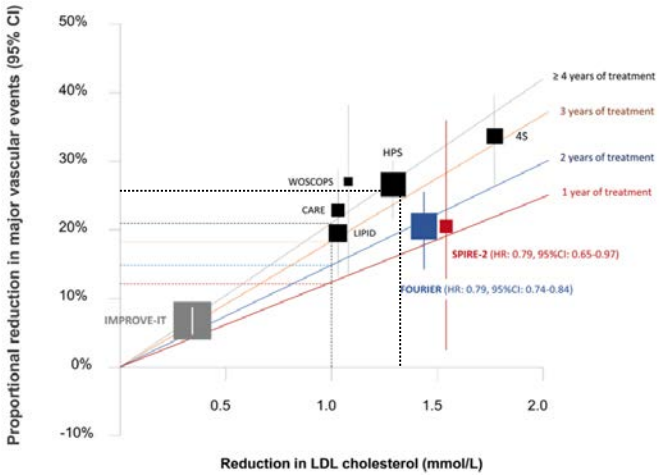
		ORION-9 (n=481)				ORION-10 (n=1,559)				ORION-11 (n=1,615)			
	Safety Population	**Placebo 240**		**Inclisiran 241**		**Placebo 778**		**Inclisiran 781**		**Placebo 804**		**Inclisiran 811**	
		n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Hepatic	ALT >3x ULN	1	0.42%	3	1.24%	2	0.26%	2	0.26%	4	0.50%	4	0.49%
	AST >3x ULN	1	0.42%	2	0.83%	5	0.64%	4	0.51%	4	0.50%	2	0.25%
	ALP >2x ULN	0	0.00%	2	0.83%	3	0.39%	5	0.64%	2	0.25%	1	0.12%
	Bilirubin >2x ULN	3	1.25%	4	1.66%	3	0.39%	4	0.51%	8	1.00%	6	0.74%
Renal	Creatinine >2 mg/dL	1	0.42%	1	0.41%	30	3.86%	30	3.84%	11	1.37%	5	0.62%
Muscle	CK >5x ULN	6	2.50%	6	2.49%	10	1.29%	11	1.41%	12	1.49%	11	1.35%
Hematology	Platelet count <75x10^9/L	1	0.42%	0	0.00%	0	0.00%	1	0.13%	1	0.12%	0	0.00%

ORION-4 outcome study designed to confirm MACE and CV mortality benefit over 5 years

Protocol overview

Eligibility	Age > 55 years, with ASCVD Prior MI, ischemic stroke, or peripheral artery disease High-risk patients with LDL-C values above 100 mg/dL
Sample size	15,000 patients (randomized 1:1 inclisiran: placebo)
Primary endpoint	Composite MACE: powered for >25% reduction ▪ CHD death ▪ MI ▪ Fatal or non-fatal ischemic stroke ▪ Urgent coronary revascularization procedure
Secondary endpoint	▪ A composite of CHD death or MI ▪ CV death

CTTC model



Source: Cholesterol Treatment Trialists (CTT) Collaboration
European Heart Journal (2018) 39, 2540–2545 - doi:10.1093/eurheartj/ehx450

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Upside potential for larger cardiovascular MACE risk reduction possible

Using phase 2 and 3 data to predict CV outcomes

	Phase 1-2 data model	ORION-10, 11	ORION-4
Baseline LDL-C (mg/dL)	112	105	≥100 est.
LDL-C lowering effects	Predicted	Observed	15,000 patients 5 year follow-up
1º endpoint: day 510 % LDL-C reduction	54%	56%	
Time-averaged % LDL-C reduction	51%	54%	
LDL-C reduction (mg/dL)	57-60	53-57	
Computed 5-year MACE RRR[1,2]	0.67-0.69	0.68-0.69	~0.70 est.

1. MACE relative risk reduction estimate assumes 50% of effect year-1; 100% of effect thereafter. 2. Based on Cholesterol Treatment Trialists' (CTT) Collaboration (Baigent et al, 2005)

Anticipated regulatory submissions based on robust and comprehensive development program

Study (countries)	**Population**	**Control group**	**Total subjects**	**Treatment period**	**Status**
Pivotal Phase 3 studies (LDL-C)					
ORION-11 (EU, SA)	ASCVD & Risk Equivalents	Placebo	1,617	18 months	Complete
ORION-10 (US)	ASCVD	Placebo	1,561	18 months	Complete
ORION-9 (US, EU, SA, Ca)	HeFH	Placebo	482	18 months	Complete
ORION-5	HoFH	Placebo	54	6+18 months	Follow-up
Phase 3b studies (CVOT and LDL-C extension)					
ORION-4 (US, UK)	ASCVD	Placebo	~15,000	~60 months	2024
ORION-8	Extension for ORION-9/10/11	None	~3,400	~48 months	Follow-up
Phase 2 studies					
ORION-1 (US, EU, Ca)	ASCVD	Placebo	501	12 months	Complete
ORION-3 (US, EU, Ca)	Extension for ORION-1	None	371	36 months	Follow-up
ORION-2 (US, EU, SA)	HoFH pilot	None	4	6 months	Complete
Phase I studies					
ORION-6 (US)	Hepatic	None	28	6 months	Complete
ORION-7 (NZ)	Renal	None	31	6 months	Complete
ORION-12 (US)	T-QT	Moxifloxacin, placebo	48	6 months	Complete
ALN-PCSSC-001 (EU)	SAD/MD	Placebo	69	6 months	Complete

Note: SA = South Africa; Ca = Canada; NZ = New Zealand.

Regulatory discussions under way with clear pathway to approval

Aligned regulatory pathway to submission and approval in US and Europe

Proactive communication and detailed HA feedback received

Initial focus on US, Europe, Japan and China

The Medicines Company expects submission Q4 2019

The Medicines Company expects submission Q1 2020

Single-study bridging program and alignment on path to approval

Traditional local development program aligned with China Drug Administration

Inclisiran expected use in a subset of the potentially large population of treatable patients

2033 projections			US (million)	EU5 (million)	JPN (million)	CN (million)
Prevalence	Secondary prevention ASCVD	Patients who have experienced an event (i.e. heart attack, stroke) and/or high-risk (e.g. diabetic, CKD), including FH and SI Dyslipidaemia Report 2018 and published literature	36	28	13	30
PCSK9 eligible	Not at goal despite lipid lowering treatment	LDL-C ≥70 mg/dL Meta-analysis of all statin trials	18	14	6	15
Target patients	Highest risk	US: LDL-C ≥90mg/dL CHD, ≥100mg/dL CHD Re Ex-US: LDL-C ≥100mg/dL CHD, CHD Re	13	9	4	10

Source: DRG Dyslipidemia Report, Peer reviewed literature, and internal projections until 2033

Flexible US market access strategy through Medical Benefit (Buy & Bill) and Pharmacy Benefit

Attractive for physicians	Attractive for patients
Better LDL-C control	More convenient
Lower administrative burden	Seamless integration in routine healthcare visit
Lower cost to practice	Better compliance
Lower prior-authorization burden	

Significant potential cost synergies given overlap with current global Entresto® field force in US...

Tiers 1-4 Entresto® HCP prescribers cover > 80% of statin/PCSK9 prescribers

Prescriber Tier (quintile)	% Common HCP Entresto®
T1	82.7%
T2	83.0%
T3	84.9%
T4	77.0%
Total	**80.8%**

Potential synergies with Entresto®

- Significant physician overlap with over 80% of Tier 1-Tier 3 HCP, despite different indications
- Incremental few hundred reps required to support launch of inclisiran
- High potential primary care prescribers covered

Leverages Novartis operational expertise

- Including primary care, medical education, market access

Leverages Novartis pipeline

- Entresto LCM
- TQJ230 a promising mRNA antisense oligonucleotide targeting same physicians audience

... as well as in ex-US market

Ex-US access strategy

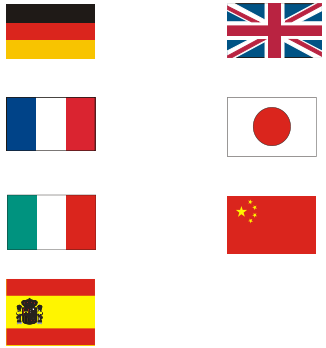
Established dyslipidemia areas

Support long-term competitive access strategy with mortality benefit (post-CVOT)

Access large and growing China market (18m statin-treated[1]) with affordable annual net price High level of synergy with existing Entresto® field force

Ability to leverage existing Entresto® field force

Key Entresto® countries



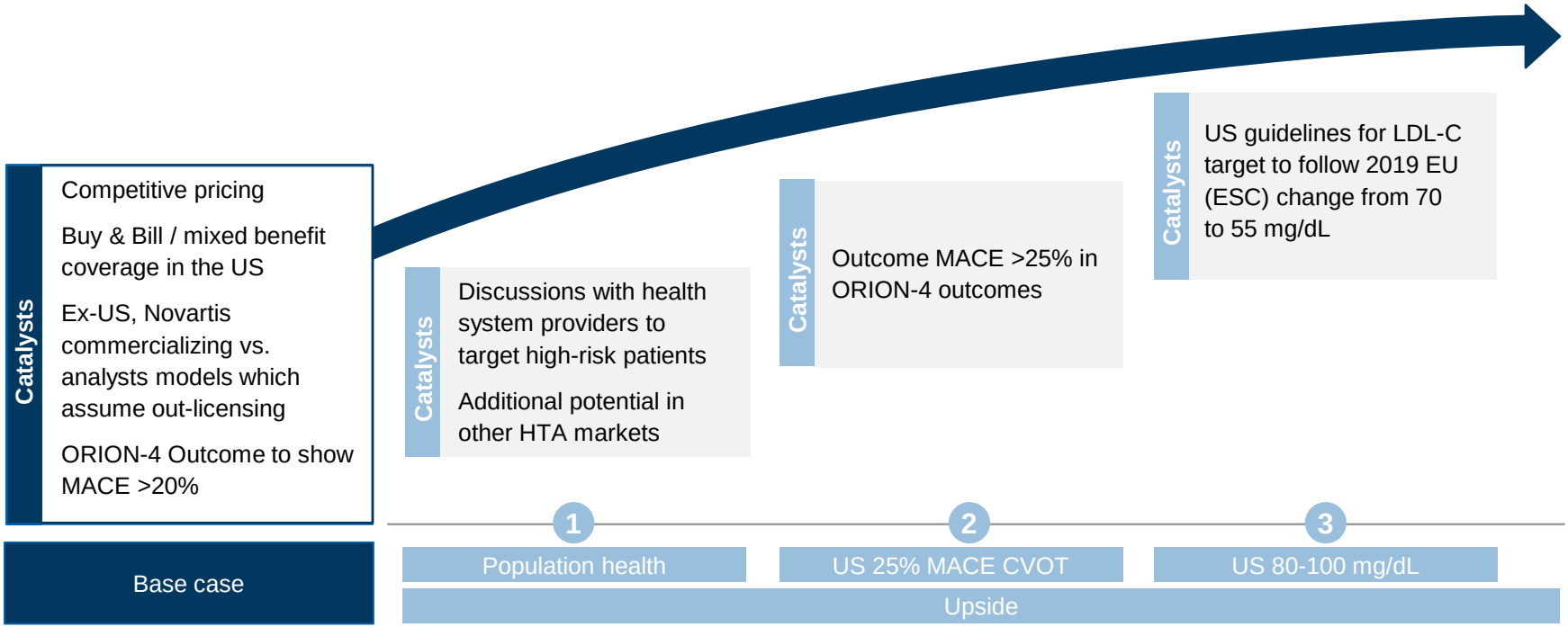
Synergy

Approximately 90% of inclisiran field force requirements can be met using existing Entresto® field force

Leverages Novartis expertise

1. IQVIA database

Significant upside potential in future



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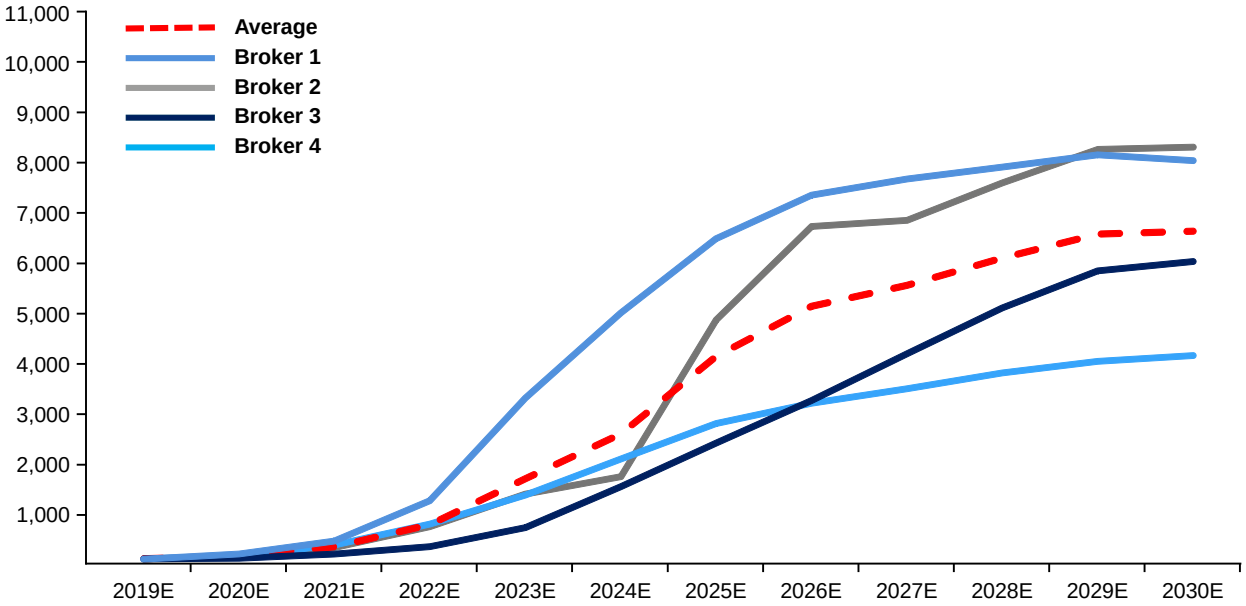
External worldwide forecasts indicate strong global potential

WW inclisiran unprobabilized revenues (USDm)



- Global asset, few brokers have worldwide sales estimates
- Slower initial ramp-up: (i) flexible access model (“Buy & Bill”) adoption (ii) ORION-4 outcome 2024
- Compound patent: US 2035, EU 2036 incl. anticipated extensions (Brokers estimate to 2030)

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Transaction highlights (expected closing Q1 2020[1])

Consideration The Medicines Company

- Closing share price of USD 68.55 on November 22, 2019 represented a fully diluted equity value of approximately USD 7.7bn (including the impact of stock options and convertible debt)[2]
- Shareholders to receive USD 85.00 per share in cash, representing a premium of approximately 41% over the 30-day volume weighted average price of USD 60.33
- Our offer values the company at approximately USD 9.7bn on a fully diluted equity basis[2]

Expected financial benefits

- Contributes to Group sales from 2021, could become a pillar for further growth of our CRM franchise (potentially one of the largest products by sales in portfolio); compound patent US 2035, EU 2036 incl. anticipated extensions
- Modestly dilutes core EPS during next few years due to inclisiran launch investments
- Be significantly accretive to Group core operating income and core EPS medium term driven by sales growth and operational synergies leveraging the CRM worldwide footprint
- IRR well in excess of cost of capital with significant value creation

Other

- Transaction unanimously approved by the Boards of Directors of both companies
- Planned to be funded through available cash and short- and long-term borrowings

1. Subject to satisfaction or waiver of customary closing conditions. Until closing, Novartis and The Medicines Company will continue to operate as separate and independent companies 2. 113.7m fully diluted shares outstanding (79.5m common shares outstanding, 27.2m diluted shares from convertible notes and make-whole provisions, 7.0m diluted shares from options and RSUs). Fully diluted equity value on November 22 was USD 7.7bn based on 113.0m fully diluted shares outstanding

Novartis proposed acquisition of The Medicines Company would add potentially transformational cholesterol lowering therapy

- Unique opportunity to address #1 cause of mortality globally with a de-risked, highly efficacious, safe, twice-yearly, subcutaneous, physician administered injection with value based pricing
- Fits with Novartis global cardiovascular footprint, strong potential synergies around the world and leverages Novartis expertise
- Soon-to-launch, potentially first-in-class, well differentiated asset, with potential to become one of the largest products by sales in Novartis portfolio
- Expected to support medium and long-term growth with significant sales and core operating income contribution in the medium and long-term
- Significant upside potential in population health agreements

Q&A session

Vas Narasimhan
Chief Executive Officer

Harry Kirsch
Chief Financial Officer

Marie-France Tschudin
President, Novartis Pharmaceuticals

John Tsai
Head of Global Drug Development and CMO

Key definitions

This presentation contains several important words or phrases that we define as below:

ASCVD – Atherosclerotic cardiovascular disease
CHD – Coronary heart disease
CHD Re – Coronary heart disease risk equivalent
CV – Cardiovascular
CVD – Cardiovascular disease
CVOT – Cardiovascular outcomes trial
FH – Familial hypercholesterolemia
HTA – Health Technology Assessments
LDL-C – Low-density lipoprotein cholesterol
LLT – Lipid Lowering Therapy
MACE – Major adverse cardiovascular events
MI – Myocardial infarction
MoA – Mechanism of action
SI – Silent ischemia
WW - Worldwide