Medicure Inc.

Investor Presentation

August 27, 2021

MPH:TSXV

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Medicure Inc. undertakes no obligation to update publicly or otherwise revise any forward-looking information as a result of new information, future results or other such factors which affect this information, except as required by law.

A Heart For Life™

At Medicure, we focus on the heart: cardiovascular pharmaceuticals for the U.S. market

Urgent care intervention and preventative therapies

What Sets Us Apart

Our approach to engagement and service with healthcare professionals

Focusing on value for hospitals, prescribers, and patients

Our Vision

We want to be a leading provider of cardiovascular products to U.S. customers

We have a vertically integrated team, pipeline and acquisitions in place to build growth

Medicure’s Acquisition of Marley Drug Pharmacy:

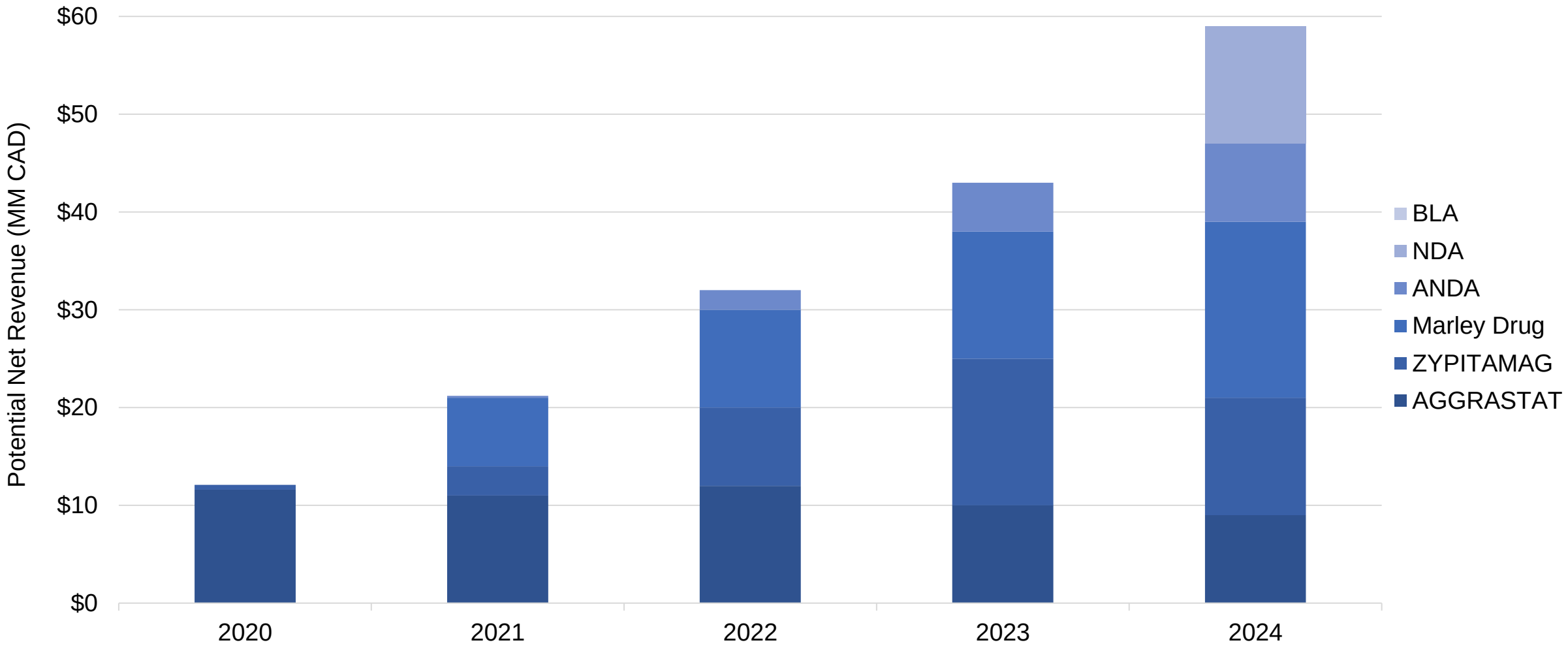
The Industry Game-Changer

Slides 21-23

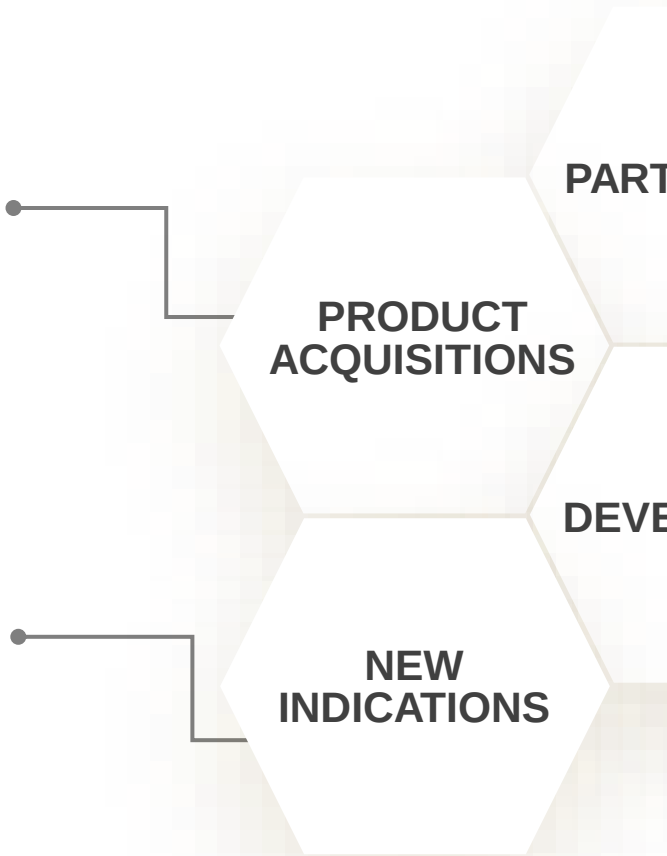
Our Products and Pipeline

PRODUCT	CATEGORY	DEVELOPMENT / CLINICAL	REGULATORY APPROVAL	APPROVED / MARKETED
AGGRASTAT®	Hospital IV Injectable	Branded antiplatelet, grew from 2% to 65% market share		
ZYPITAMAG®	Prescription Consumer	Branded statin with large market potential		
Sodium Nitroprusside	Hospital IV Injectable	Generic mainstay of hospital formularies		
ANDA	Hospital IV Injectable	Cardiovascular Generic with few competitors		
BLA	Hospital IV Injectable	Cardiovascular Biosimilar product		
NDA	Prescription Consumer	MC-1 for Rare orphan disease		

Growth Potential



Five Point Strategic Approach



Key Opinion Leaders drive change, and we partner with the best to make that happen

Acquisitions of synergistic branded or 505b2 approved cardio products for US market

Expand product offering through development of biosimilars, injectables and solid dose cardio products

Investing in clinical research to expand on product indications

Direct sales to consumers and efficiencies in distribution

Key Financial Information

Capital Structure as of August 27th, 2021

- Issued Shares 10,251,313
- Fully Diluted Total 11,073,913
- **Share Price** **C$1.13**
- **Market Cap** **C$11.6M**

Financial Highlights

- 2020 Net Revenue $11.6M
- 2020 Adj. EBITDA ($3.9M) – investments in sales of 2 new products and R&D
- Q2 2021 Net Revenue $ 5.1M
- Q2 2021 Adj. EBITDA $ 0.158
- Cash $ 2.9 million – No Debt
- Change to positive EBITA – Q1 & Q2 2021
- Completed substantial issuer bid in 2019 returning $26M in cash to investors

The Story

Medicure Leadership Team

Albert D. Friesen, PhD
Chief Executive Officer and
Chairman of the Board

- Founded Medicure in 1997
- Created and developed multiple companies, including ABI Biotechnology (Apotex Fermentation), The Winnipeg Rh Institute, DiaMedica and Genesys Venture Inc.

Neil Owens, PhD
President and
Chief Operating Officer

- Joined Medicure in 2014 in Medical Affairs, named as President in 2019
- Responsible for the execution of strategic plans and oversight of operations

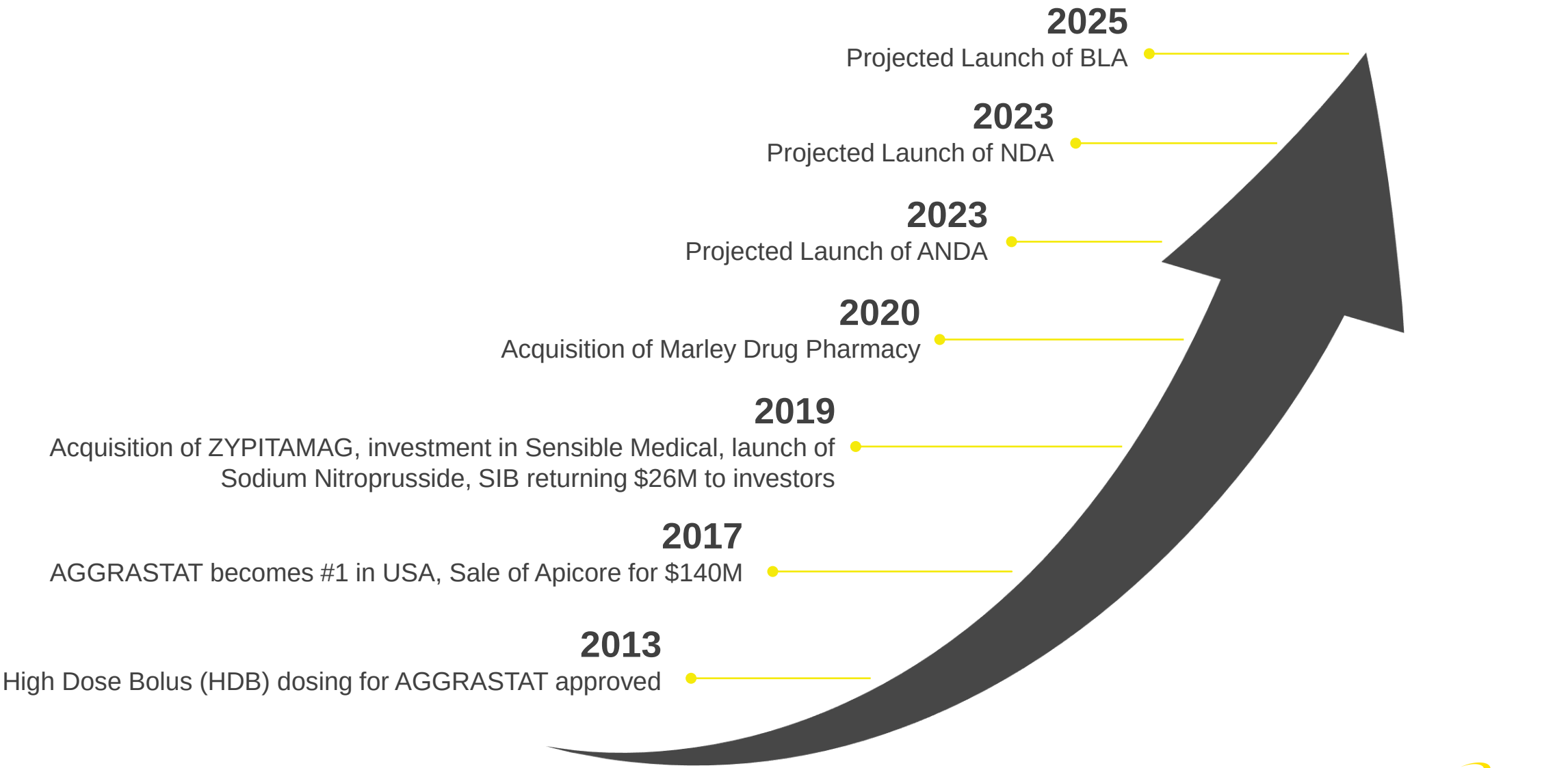
David Gurvey, CPA, CMA, B.Sc.
Chief Financial Officer

- Joined Medicure in 2021
- An accomplished finance leader with an established track record of strong financial stewardship and strategically building company value

Reuben Saba, PhD
Vice President,
Medical and Business Affairs

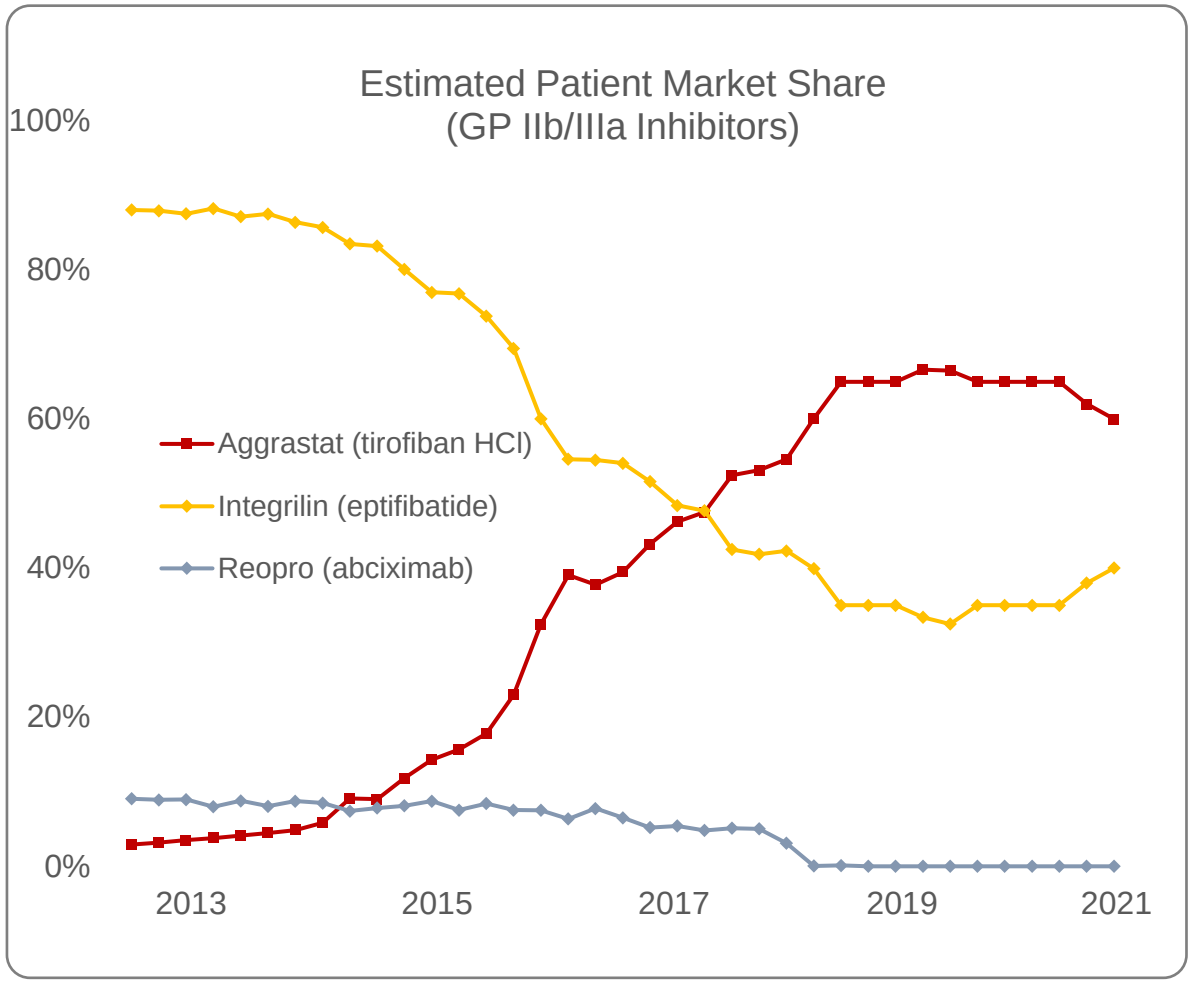
- Joined Medicure in 2014 in Medical Affairs
- Responsible for the development of new business opportunities for Medicure and management of Medical Affairs

Medicure's History and Trajectory



AGGRASTAT® (tirofiban hydrochloride) Profile

AGGRASTAT® (tirofiban hydrochloride) Injection



Background:

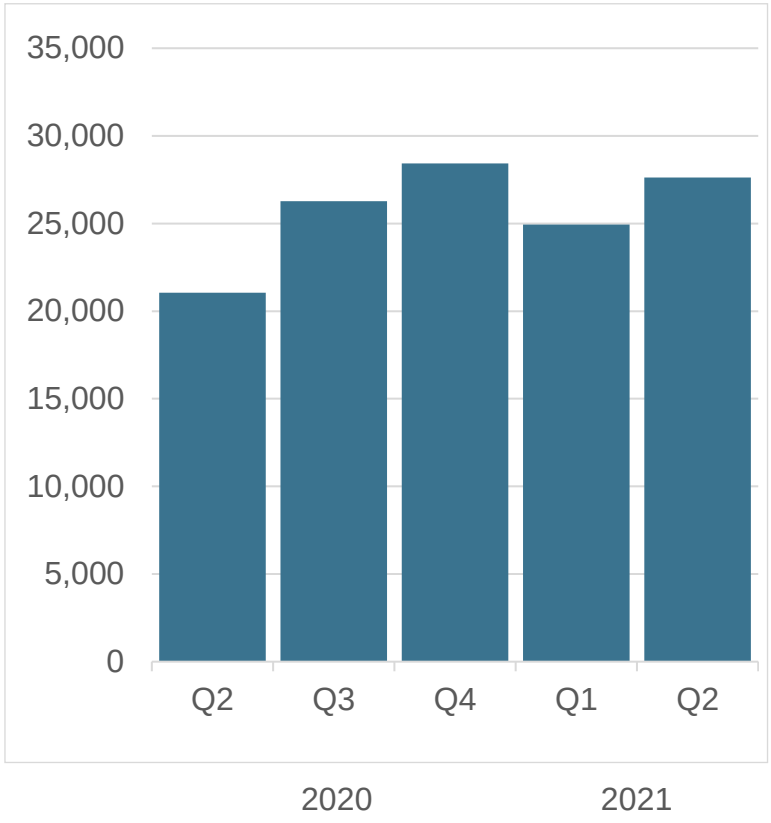
- Hospital product (GP IIb/IIIa inhibitor) for acute cardiovascular care
- US rights acquired in 2006
- High Dose Bolus (HDB) dosing approved in 2013
- New 15 mL bolus vial format approved in 2016
- Used in more than 1,200 US hospitals

The Story:

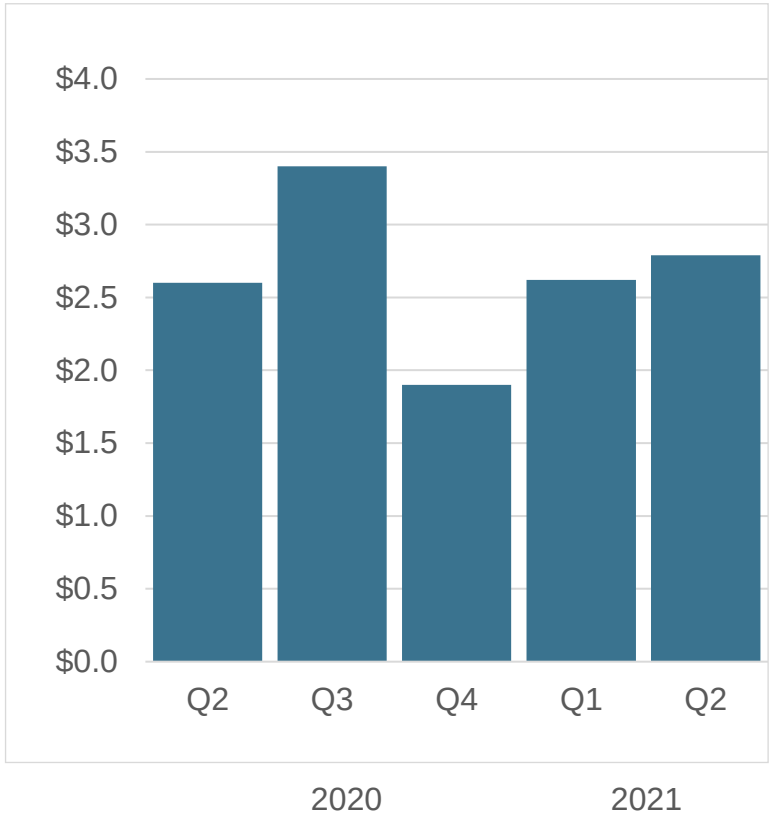
- Increase in market share came as a result of overcoming significant skepticism of the efficacy of the product
- Explained correct HDB dosing and value proposition to interventional cardiologist and pharmacy managers
- Developed partnerships with Key Opinion Leaders who helped drive change

AGGRASTAT Sales Update

Aggrastat Units Per Quarter



Aggrastat Net Revenue By Quarter ($ CAD Millions)



Analysis

- Unit Demand in Q2 2021:
  - 11% higher compared to Q1 2021
  - 31% higher compared to Q2 2020
- Net Revenue in Q2 2021:
  - 6% higher compared to Q1 2021
  - 7% higher compared to Q2 2020
- Overall sales and marketing team has been able to maintain consistent demand

AGGRASTAT 4-Point Strategic Focus

1. New Indications

As a potent IV antiplatelet agent, we believe Aggrastat can be of benefit in other clinical settings, and are investing in new clinical studies to gain new indications, which are larger than the current market

2. New Distribution Platform

In an effort to improve our profitability from efficiencies in distribution, Medicure launched a direct purchase web portal for direct hospital purchasing

3. Marketing

Significant existing user base as well as market potential remains

4. New Clinical Data

Two phase IV clinical studies: SAVI-PCI and FABOLUS-FASTER,[1] recently completed, as well as a phase II study, iSPASM. The SAVI-PCI study evaluated contemporary Aggrastat use in comparison to eptifibatide

[1]Please refer to **IMPORTANT SAFETY INFORMATION** on slide 33

Zypitamag™
(pitavastatin) tablets

Key Information

ZYPITAMAG (pitavastatin)

A New Type of Statin:

- Lowers cholesterol, with some benefits over other statins
- Metabolized differently from most other statins
- Well tolerated with low rates of muscle pain

Acquisition: On September 30, 2019, acquired NDA from Zydus Cadila

ZYPITAMAG® (pitavastatin) Profile

Zypitamag™ (pitavastatin) tablets

Clinical Differentiation

Zypitamag is different from most other statins (minimally processed by CYP enzymes)

Reduced risk of certain drug-drug interactions and drug-food interactions

Well tolerated: low overall rates of muscle pain side effect

Similar efficacy to statins with majority (69%) of market share: atorvastatin and simvastatin

Superior efficacy to pravastatin (10% of statin market)

Target Patient Groups

Of 17 million Americans taking a statin, 5-10% have side effects

Direct competitor Livalo currently has 0.37% of the statin market

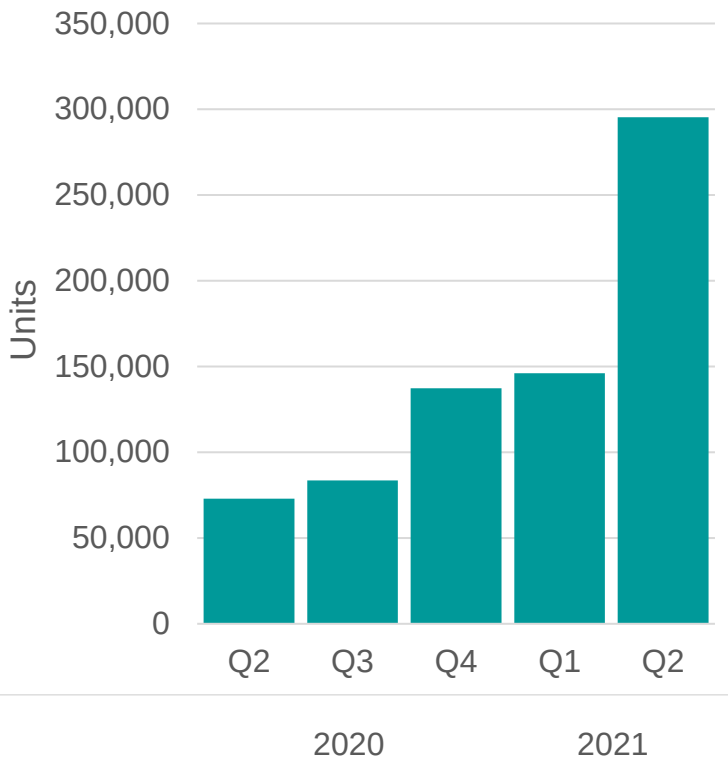
Three main target patient groups are:

- Difficulty tolerating their current statin
- Currently taking Livalo
- Taking multiple medications that can interact with their statin

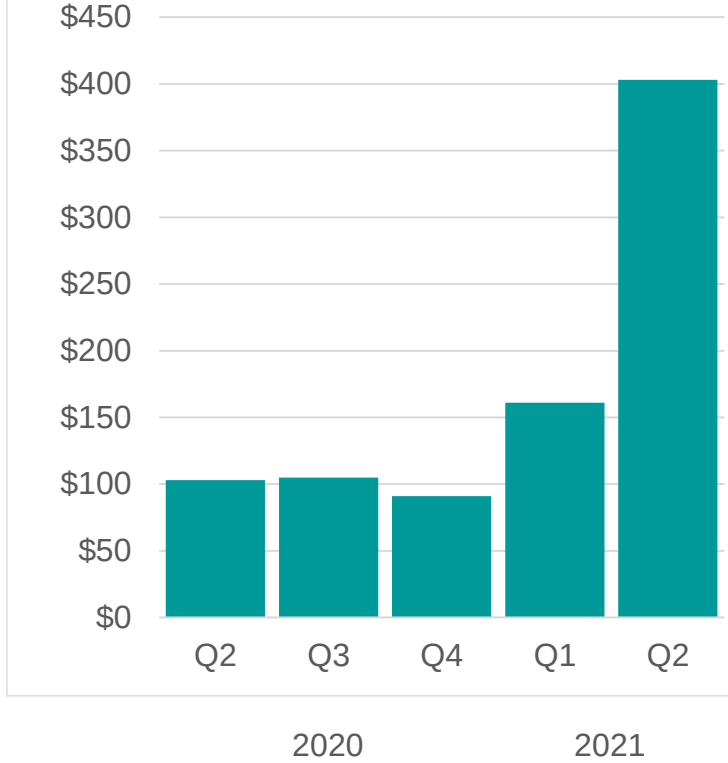
Please refer to **IMPORTANT SAFETY INFORMATION** on slide 34

ZYPITAMAG Sales Update

Zypitamag Unit Demand per Quarter



Zypitamag Net Revenue per Quarter ($ CAD Thousands)



Analysis

- Unit Demand in Q2 2021:
  - 2x higher compared to Q1 2021
  - 4x higher compared to Q2 2020
- Net Revenue in Q1 2021:
  - 2.5x higher compared to Q1 2021
  - 3.9x higher compared to Q2 2020
- Distribution through Marley Drug has increased sales
- Simplicity in pricing with no need for insurance has resonated with customers

ZYPITAMAG 4-Point Strategic Focus

1. Cash Pay Market

Bypass insurance and prior authorization process for simplicity and certainty of access for both patients and prescribers

2. Direct Consumer Marketing

Marketing directly to consumers, those unhappy with their current statin, and connecting them to telehealth partners or facilitating filling their prescription

3. KOL Engagement

Leading KOLs believe ZYPITAMAG has benefits over other statins, and we want to work with them to spread the word about ZYPITAMAG

4. Specialty Populations

Highlight with prescribers the populations who can benefit from ZYPITAMAG, including people living with HIV, diabetes, and taking multiple medications[1]

[1]Please refer to **IMPORTANT SAFETY INFORMATION** on slide 34

Marley Drug

Key Information

Marley Drug

- Pharmacy located in North Carolina – licensed to ship medications in 49 states, Washington D.C. and Puerto Rico
- Net Revenue in Q2 2021 of $1.87M, compared to $2.1M in Q1 2021
- 30,000 existing customers, with proven success in marketing to consumers based on pricing of generic drugs & focus on cash price without use of insurance
- Opportunity for direct-to-consumer marketing, distribution and improved profit margin for ZYPITAMAG

Why Did Medicure Acquire Marley Drug – A Unique Approach

1. Pharmacy with proven success of focus on cash paying customers, and home delivery to 49 States with revenue and profit from low-cost generic drugs

2. A more efficient distribution and marketing vehicle for ZYPITAMAG – a Branded drug

3. A marketing vehicle for other Branded drugs challenged to get insurance coverage

Factors Driving Americans to Pay Cash for Pharmaceuticals

1 High Deductibles

- More consumers are enrolled in high deductible plans
- Increasing deductibles

2 Under-Insured

- Consumers in between coverage
- Employment affected by COVID-19

3 Not-Covered or Non-Preferred

- High non-preferred co-pay
- Not covered products, formulary exclusions or lifestyle meds

4 High Cost Share

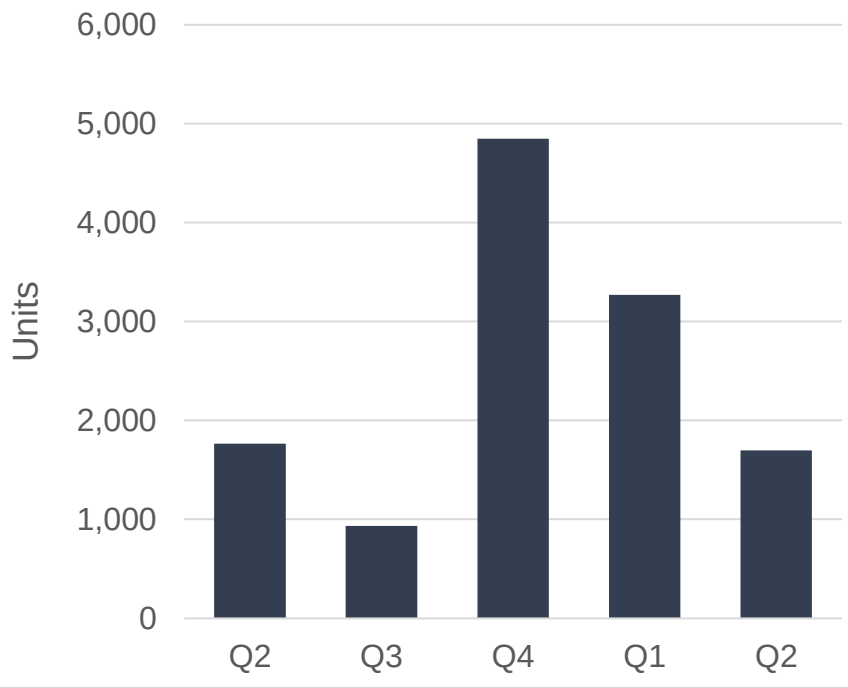
- Maximum out of pocket expense continues to increase

5 Coverage Gap

- Medicare Part D ‘donut hole’ or coverage gap leads to patients reaching their limits well before the year ends

SODIUM NITROPRUSSIDE (SNP)

SNP Units per Quarter



Issues

- Generic product, used in-hospital
- IV administration, diluted prior to administration
- Used to rapidly decrease blood pressure in an emergency[1]
- Formulation and fill in a US-facility
- Seeing uptake, however expect only a small contribution to revenue

[1]Please refer to **IMPORTANT SAFETY INFORMATION** on slide 35

Biosimilar Development

Partnership	Takeaway's	Timeline
• License, Manufacture and Supply Agreement with Reliance Life Sciences (RLS) for a cardiovascular biosimilar • The Reliance Group is India's largest private sector enterprise, with annual revenues of $86 billion USD • Exclusive right to market in the US, Canada and Europe • **Potential:** pipeline of subsequent biosimilars	• **Product Profile:** IV cardio product used in-hospital • Would be first cardio biosimilar approved • Biosimilars have reduced risk for competition and improved price stability and margins • Similar target market as for AGGRASTAT and can leverage existing relationships	• Requires a Phase 3 PK/PD study • Analytical assessment of multiple product lots has begun • Developing Phase 3 study in consultation with FDA • Targeting 2025 approval

Development of MC-1 (P5P) for Rare Disease

- PNPO deficiency is a rare pediatric disease, which leads to seizures and is fatal if untreated
- The disease leads to the inability to produce a critical cofactor (P5P) required for normal development
- Currently there is orphan drug status, with no approved treatment
- Medicure is seeking NDA approval for treatment of PNPO using its pharmaceutical product MC-1
- Approval requires a Phase 3 study, which is planned for 2021
- Upon NDA approval, Medicure is eligible for a Priority Review Voucher, which can be redeemed or commercialized

New Cardio Products - Our Target Product Profile

In-Hospital	Urgent care IV products used in hospital = **build on the experience, relationships and success of AGGRASTAT** and direct to customer distribution	Cardio products that can be licensed or acquired with low or no initial investment, and if licensed can be acquired with set milestones	Value
Preventative Therapies	Cardio medications that are taken daily as a preventative therapy = **build on the experience and relationships of ZYPITAMAG** and direct to consumer marketing and distribution	Products that can be marketed and accessed directly to consumers through Marley Drug	Branded Products for Direct-to-Consumer Access

Investments and Returns to Shareholders

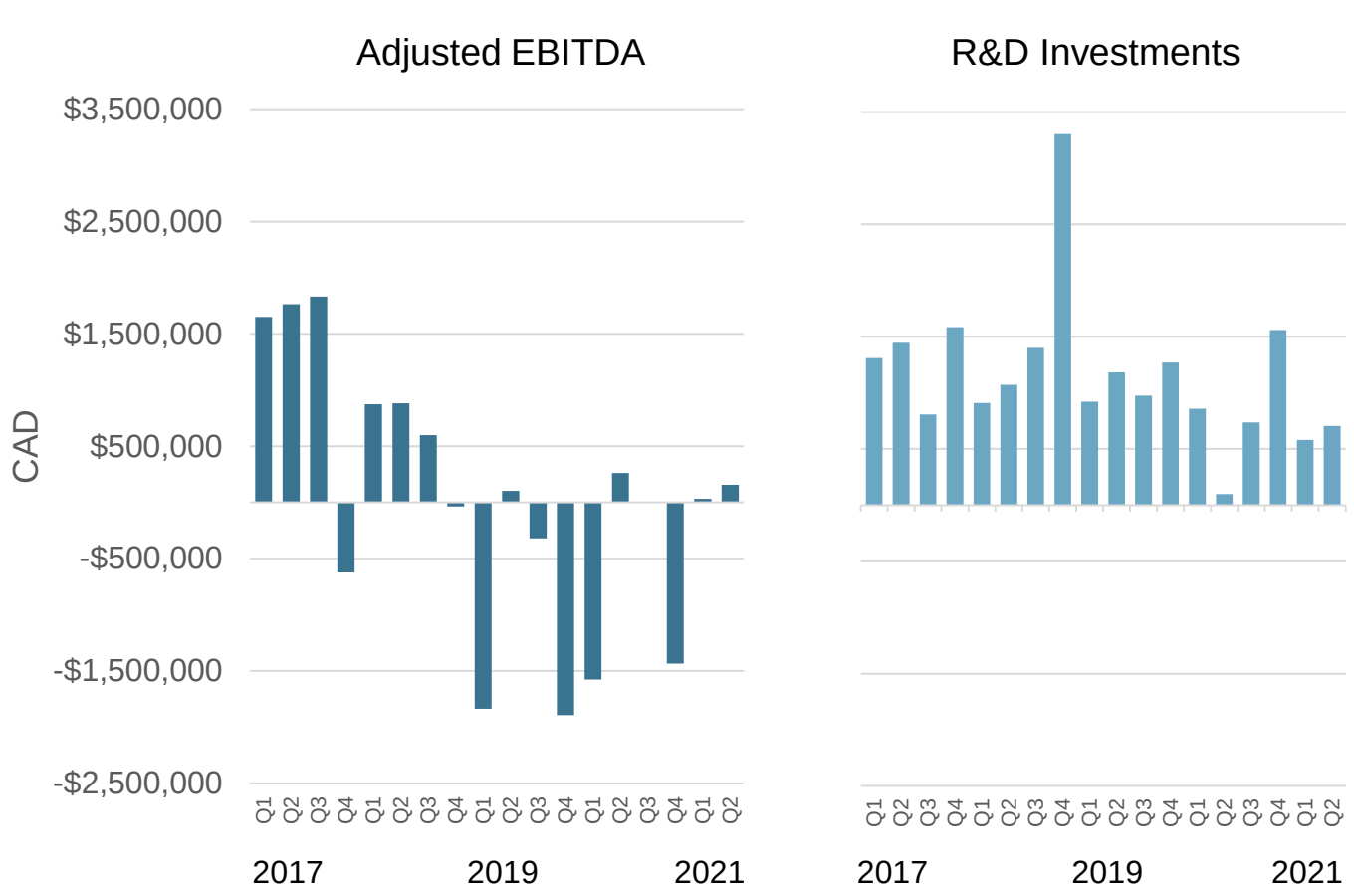
APICORE (2014-2017)	SENSIBLE MEDICAL (2019)	SIB (2019)
• July 2014 – Acquired 5% interest in Apicore with a 3-year option to purchase the remaining shares • December 2016 – Increased ownership to 60% with CDN $60 million loan • July 2017 – Increased ownership to 92% with Apicore funds • November 2017 – Sold Apicore business for in excess of CDN $140 million	• USD $10M investment in Sensible Medical • Markets ReDS device, used to measure lung fluid level in patients with Heart Failure • Medicure held U.S. marketing rights from March 2019 to July 2020 • Rights returned to Sensible because of low margin and long sales cycle, investment remains	• Completed substantial issuer bid (SIB) in 2019 for $26M in cash • Purchased and cancelled 4 million shares at a set price of $6.50 • Returned cash to investors, to reflect Medicure's intent to return value to shareholders

Q2 2021 Financial Results Summary

$ millions CAD	Q2 2021	Q1 2021	Q2 2020
Net Revenue	5.1	4.9	2.7
COGS	2.0	1.9	1.5
Selling Expenses	2.5	2.7	0.97
Net Income (loss)	(0.64)	(1.0)	(1.7)
FX Gain (loss)	(0.17)	(0.21)	0.28
Adjusted EBITDA	0.16	0.031	0.26

Context: Increase in revenue in Q2 2021 due to Marley Drug and sales of ZYPITAMAG, together with an increase in R&D spending led to a small positive EBITDA for the quarter.

EBITDA and R&D Investments



Context for EBITDA and R&D

- Revenue from AGGRASTAT, ZYPITAMAG and Marley Drug in conjunction with reductions in selling expenses has started to reverse the trend in Adjusted EBITDA
- R&D spending has been significant and consistent, investing in future growth
- Marketing spend still high to boost sales

5 Key Takeaways About Medicure

1. Medicure's focus is on cardiovascular pharmaceuticals for the US market
2. Proven success with AGGRASTAT, building sales of ZYPITAMAG with help from Marley Drug subsidiary
3. Pipeline of Cardiovascular Generic, Cardiovascular Biosimilar and MC-1 for Rare Disease
4. Focus on direct consumer sales for growth and profitability
5. We believe in investing in new products and indications, and returning profits to shareholders

Further Information

Visit our Websites
Medicure.com
AggrastatHDB.com
Zypitamag.com
Marleydrug.com

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1.888.435.2220 (Ext. 228)

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Twitter.com/MedicureInc
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Contact a Product Specialist
1.800.509.0544

Important AGGRASTAT Safety Information

Indication: AGGRASTAT is indicated to reduce the rate of thrombotic cardiovascular events (combined endpoint of death, myocardial infarction, or refractory ischemia/repeat cardiac procedure) in patients with non-ST elevation acute coronary syndrome (NSTE-ACS).

Dosage and Administration:
High-Dose Bolus Regimen: Administer intravenously ***25 mcg/kg within 5 minutes and then 0.15 mcg/kg/min for up to 18 hours***.
In patients with CrCl ≤60 mL/min, give 25 mcg/kg within 5 minutes and then 0.075 mcg/kg/min for up to 18 hours

Contraindications: Known hypersensitivity to any component of AGGRASTAT; History of thrombocytopenia with prior exposure to AGGRASTAT; Active internal bleeding, or history of bleeding diathesis, major surgical procedure or severe physical trauma within previous month

Warnings and Precautions: AGGRASTAT can cause serious bleeding. If bleeding cannot be controlled discontinue AGGRASTAT; Thrombocytopenia: Discontinue AGGRASTAT and heparin

Adverse Reactions: Bleeding is the most commonly reported adverse reaction

For additional information, refer to Full Prescribing Information

Important ZYPITAMAG Safety Information

IMPORTANT SAFETY INFORMATION FOR ZYPITAMAG (pitavastatin)

INDICATIONS & USAGE

Drug therapy should be one component of multiple-risk-factor intervention in individuals who require modifications of their lipid profile. Lipid-altering agents should be used in addition to a diet restricted in saturated fat and cholesterol only when the response to diet and other nonpharmacological measures has been inadequate.

Primary Hyperlipidemia and Mixed Dyslipidemia: ZYPITAMAG is indicated as an adjunctive therapy to diet to reduce elevated total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), apolipoprotein B (Apo B), triglycerides (TG), and to increase HDL-C in adult patients with primary hyperlipidemia or mixed dyslipidemia. **Limitations of Use:** Doses of ZYPITAMAG greater than 4 mg once daily were associated with an increased risk for severe myopathy in premarketing clinical studies. Do not exceed 4 mg once daily dosing of ZYPITAMAG. The effect of ZYPITAMAG on cardiovascular morbidity and mortality has not been determined. ZYPITAMAG has not been studied in Fredrickson Type I, III, and V dyslipidemias.

CONTRAINDICATIONS: ZYPITAMAG is contraindicated in patients with a known hypersensitivity to product components, in patients with active liver disease (which may include unexplained persistent elevations in hepatic transaminase levels), in women who are pregnant or may become pregnant, in nursing mothers, or in co-administration with cyclosporine.

WARNINGS & PRECAUTIONS

Skeletal Muscle Effects: Cases of myopathy and rhabdomyolysis with acute renal failure secondary to myoglobinuria have been reported with HMG-CoA reductase inhibitors, including pitavastatin.

These risks can occur at any dose level, but increase in a dose-dependent manner, with advanced age (≥ 65 years), renal impairment, and inadequately treated hypothyroidism; administer with caution in these patients, or when used concomitantly with fibrates or lipid-modifying doses of niacin, or colchicine. Avoid concomitant administration with gemfibrozil.

Advise patients to promptly report unexplained and/or persistent muscle pain, tenderness, or weakness, particularly if accompanied by malaise or fever; discontinue ZYPITAMAG.

If muscle signs and symptoms persist after discontinuation, this may be a sign of immune-mediated necrotizing myopathy (IMNM), an autoimmune myopathy associated with statin use, requiring immediate medical attention. IMNM is characterized by proximal muscle weakness and elevated serum creatine kinase, which persist despite discontinuation of statin treatment; muscle biopsy showing necrotizing myopathy without significant inflammation; improvement with immunosuppressive agents.

ZYPITAMAG should be discontinued if markedly elevated creatine kinase levels occur or myopathy is diagnosed or suspected. ZYPITAMAG should also be temporarily withheld in any patient with an acute, serious condition suggestive of myopathy or predisposing to the development of renal failure secondary to rhabdomyolysis (e.g., sepsis, hypotension, dehydration, major surgery, trauma, severe metabolic, endocrine, and electrolyte disorders, or uncontrolled seizures).

Liver Enzyme Abnormalities:

Persistent elevation in hepatic transaminases can occur. Check liver enzymes before initiating therapy and if signs or symptoms of liver injury occur; advise patients to report fatigue, anorexia, right upper abdominal discomfort, dark urine or jaundice.

Fatal and non-fatal hepatic failure can occur. Interrupt ZYPITAMAG if serious liver injury with clinical symptoms and/or hyperbilirubinemia or jaundice occurs. If an alternate etiology is not found do not restart ZYPITAMAG.

Use ZYPITAMAG with caution in patients who consume substantial quantities of alcohol and/or have a history of chronic liver disease. Do not use ZYPITAMAG if patient has active liver disease, which may include unexplained persistent transaminase elevations.

Endocrine Function: Increases in HbA1c and fasting serum glucose levels have been reported.

COMMON ADVERSE REACTIONS: myalgia, back pain, diarrhea, constipation and pain in extremity (rate ≥ 2% in at least one marketed dose). This is not a complete list of all reported adverse events.

For additional information, refer to full Prescribing Information

Important Sodium Nitroprusside Safety Information

IMPORTANT SAFETY INFORMATION for Sodium Nitroprusside Injection

WARNING - EXCESSIVE HYPOTENSION; Sodium Nitroprusside can cause precipitous decreases in blood pressure. In patients not properly monitored, these decreases can lead to irreversible ischemic injuries or death. Use only with continuous blood pressure monitoring.

WARNING - CYANIDE TOXICITY: Except when used briefly or at low (<2 mcg/kg/min) infusion rates, sodium nitroprusside gives rise to important quantities of cyanide ions, which can reach toxic, potentially lethal levels. The usual dose rate is 0.5-10 mcg/kg/min, but infusion at the maximum dose rate should never last more than 10 minutes. If blood pressure has not been adequately controlled after 10 minutes of infusion at the maximum rate, administration should be terminated immediately.

CONTRAINDICATIONS: sodium nitroprusside should not be used

in the treatment of diseases with compensatory hypertension, where the primary hemodynamic lesion is aortic coarctation or arteriovenous shunting.

to produce hypotension during surgery in patients with known inadequate cerebral circulation or in moribund patients (A.S.A. Class 5E) coming to emergency surgery.

in patients with congenital (Leber's) optic atrophy or with tobacco amblyopia.

for the treatment of acute congestive heart failure associated with reduced peripheral vascular resistance.

PRECAUTIONS

Can cause increases in intracranial pressure. Use with extreme caution in patients whose intracranial pressure is already elevated.

Patients with hepatic dysfunction are more susceptible to cyanide toxicity.

If possible, correct pre-existing anemia and hypovolemia prior to administration when sodium nitroprusside is used for controlled hypotension during anesthesia. Use extreme caution in patients who are poor surgical risks (A.S.A. Class 4 and 4E).

The cyanide-level assay is technically difficult and cyanide levels in body fluids other than packed red blood cells are difficult to interpret. Cyanide toxicity will lead to lactic acidosis and venous hyperoxemia, but these findings may not be present until an hour or more after the cyanide capacity of the body's red-cell mass has been exhausted.

The hypotensive effect is augmented by that of most other hypotensive drugs including ganglionic blocking agents, negative inotropic agents, and inhaled anesthetics.

Use during pregnancy only when there is no appropriate alternative for a particular patient as cyanide toxicity may be fatal to the fetus.

No information about the presence of sodium nitroprusside in human milk, the effects on the breastfed infant, or the effects on milk production.

ADVERSE REACTIONS

Excessive hypotension, cyanide toxicity, methemoglobinemia, thiocyanate toxicity, bradycardia, electrocardiographic changes, tachycardia, rash, hypothyroidism, ileus, decreased platelet aggregation, flushing, increased intracranial pressure, venous streaking and irritation at the infusion site.

You are encouraged to report negative side effects of prescription drugs to the FDA. Call 1-800-FDA-1088 or Visit www.fda.gov/medwatch.