Medicure Inc.

Investor Presentation

April 27, 2022

MPH:TSXV

Forward Looking Statement

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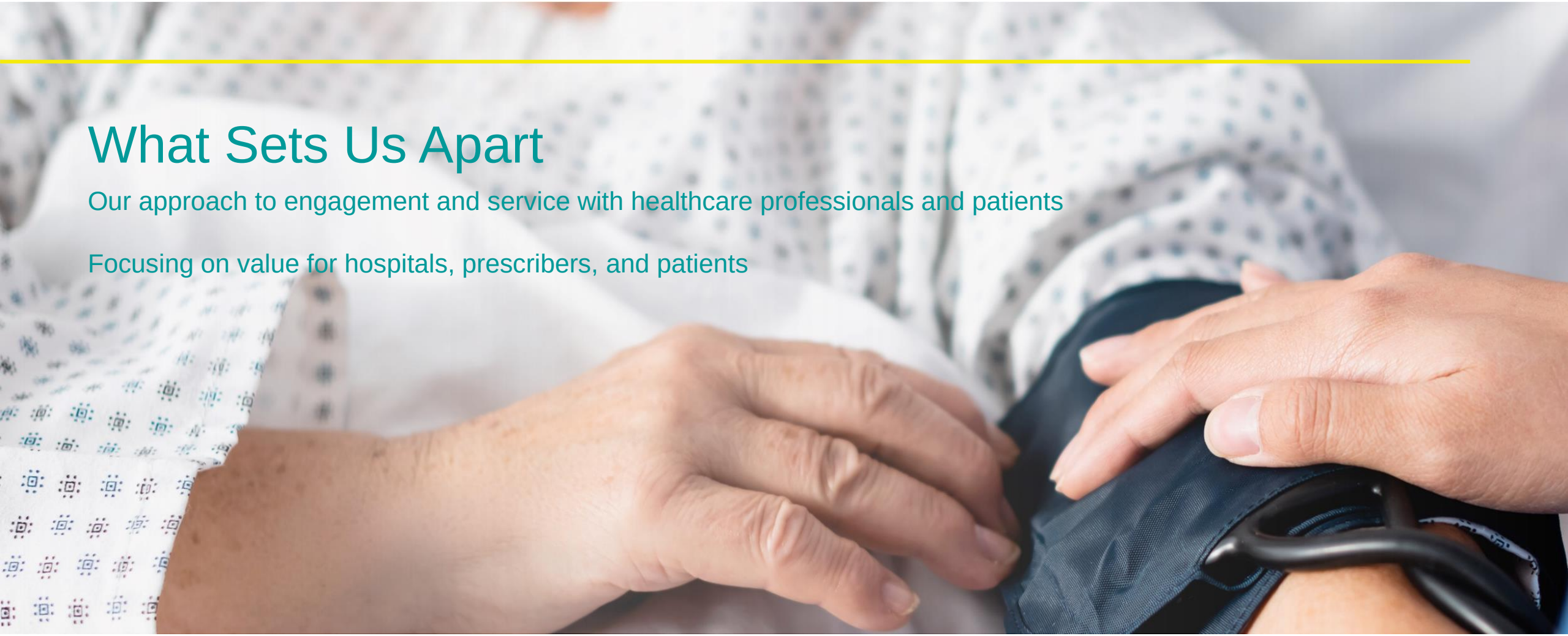
Medicure Inc. undertakes no obligation to update publicly or otherwise revise any forward-looking information as a result of new information, future results or other such factors which affect this information, except as required by law.

Our Vision

We want to be a leading provider of pharmaceutical and healthcare products to U.S. customers

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



What Sets Us Apart

Our approach to engagement and service with healthcare professionals and patients

Focusing on value for hospitals, prescribers, and patients

Medicure’s Acquisition of Marley Drug Pharmacy:

The Industry Game-Changer

Slides 23-26

Our Products and Pipeline

PRODUCT	CATEGORY	DEVELOPMENT / CLINICAL	REGULATORY APPROVAL	APPROVED / MARKETED
AGGRASTAT® (tirofiban hydrochloride) Injection	Hospital IV Injectable	Branded antiplatelet, grew from 2% to 65% market share		
Zypitamag™ (pitavastatin) tablets	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		
NDA	Prescription Consumer	MC-1 for Rare orphan disease		
marley drug™ Marley Drug	Retail Pharmacy for marketing of generic and branded medications			

medicure®

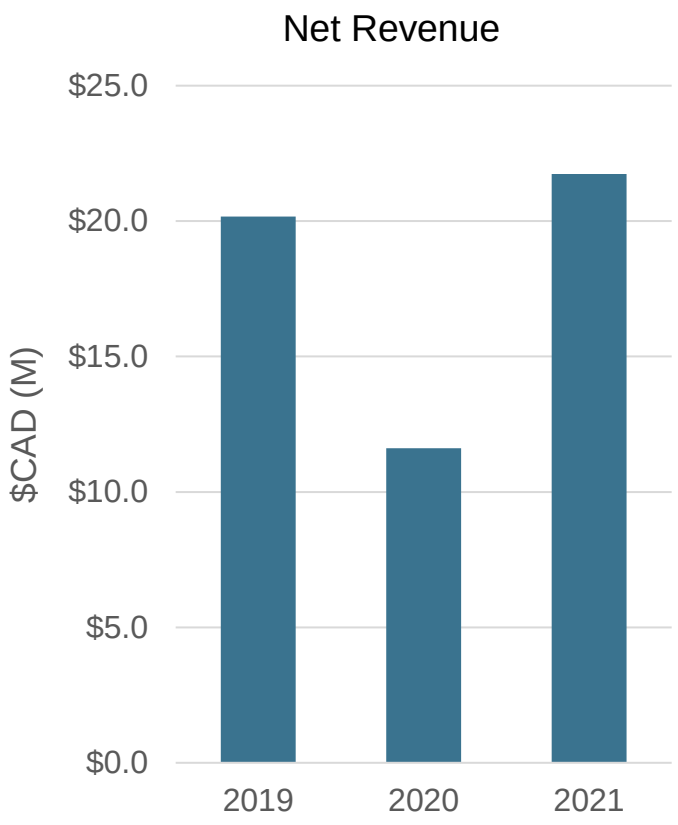
Strategic Approach

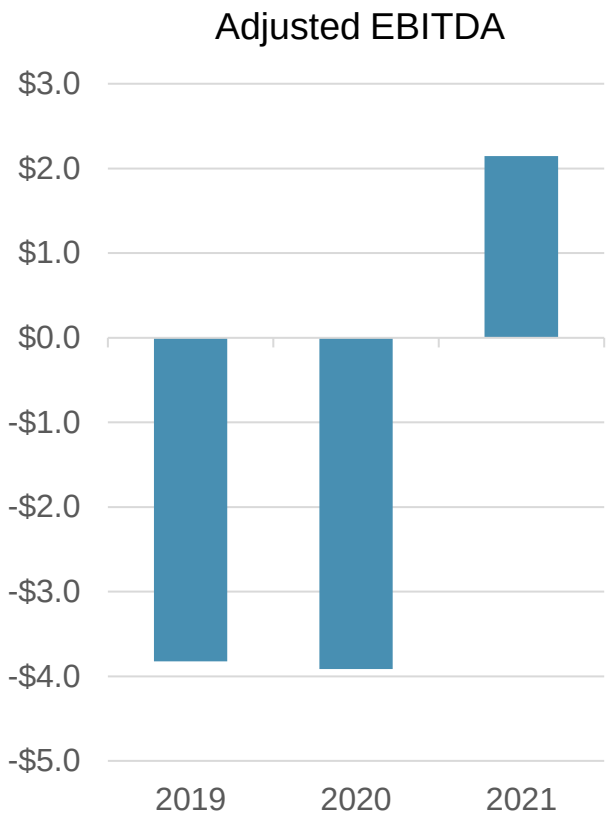
1 **Maintain positive earnings and cash flow through existing products and innovation in direct-to-consumer sales**

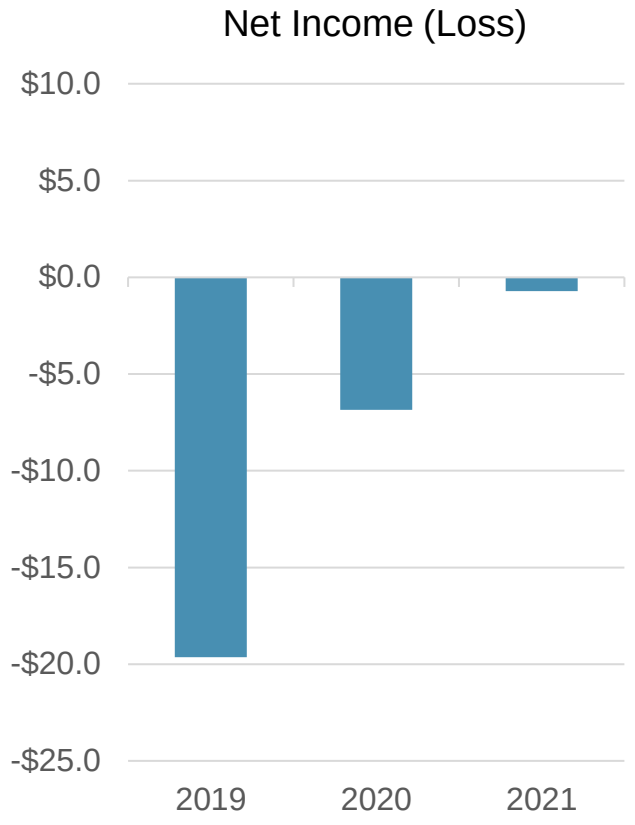
3 **Acquisitions of synergistic companies or cardio products for US market**

2 **Expand product offering through development of high margin IV and solid dose products**

Key Financial Updates from 2021







Key Financial Information

Capital Structure as of April 26, 2022

- Issued Shares 10,251,313
- Fully Diluted Total 10,958,063
- **Share Price** **C$0.83**
- **Market Cap** **C$8.5M**

Financial Highlights

- 2021 Net Revenue $21.7M vs $11.6M in 2020
- 2021 Adj. EBITDA $2.6M vs ($3.9M) in 2020
- Q4 2021 Net Revenue $6.8M
- Q4 2021 Adj. EBITDA $1.6M
- Cash $3.9M – No Debt
- Change to positive EBITDA in every quarter of 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

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

2024
Projected Launch of MC-1 NDA

2022
Projected Launch of Cardio ANDA

2022
Launch of Medicure's E-Commerce Platform

2020
Acquisition of Marley Drug Pharmacy

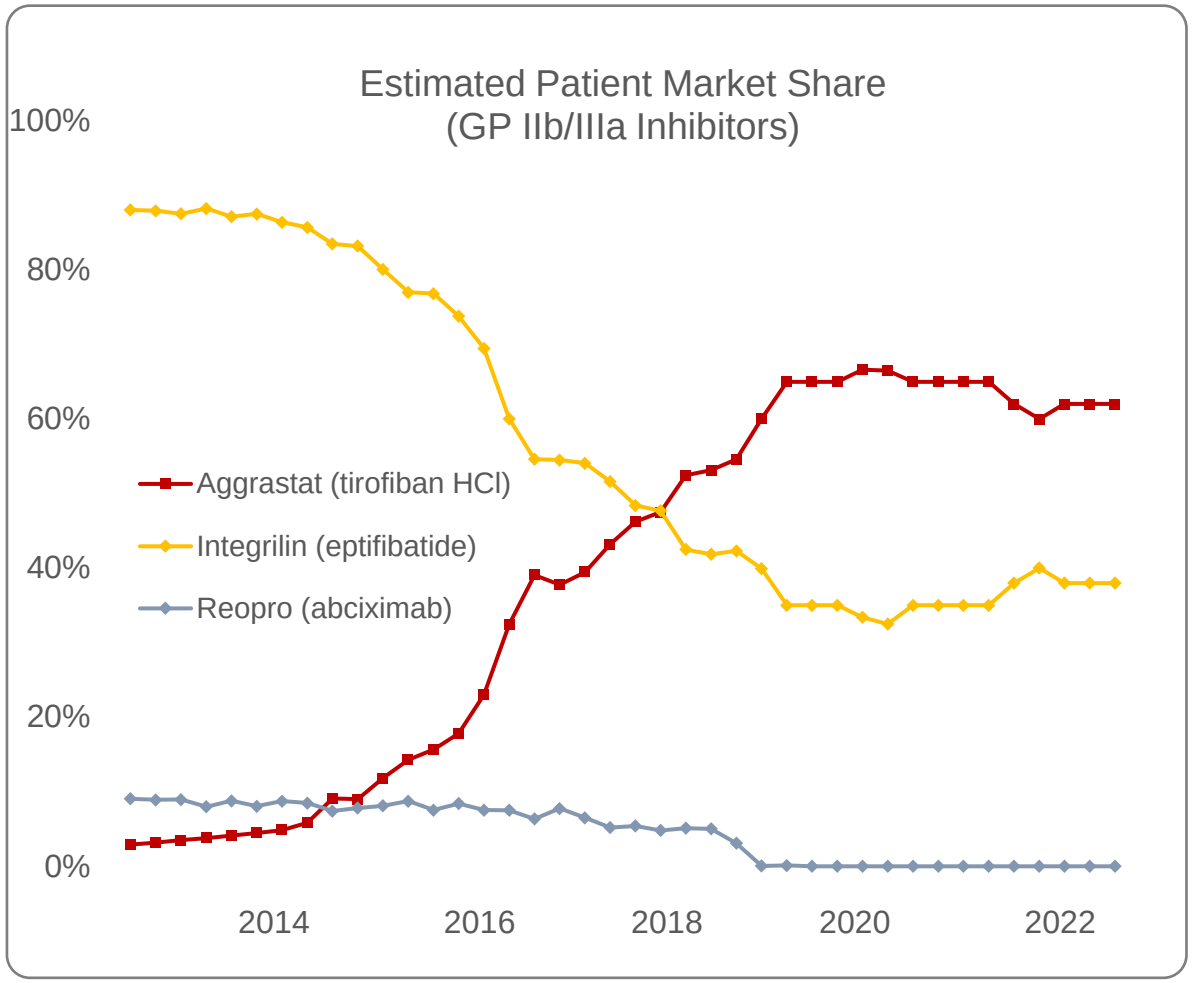
2019
Acquisition of ZYPITAMAG, investment in Sensible Medical, launch of Sodium Nitroprusside, SIB returning $26M to investors

2017
AGGRASTAT becomes #1 in USA, Sale of Apicore for $140M

2013
High Dose Bolus (HDB) dosing for AGGRASTAT approved

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
- Consistently used in more than 1,200 US hospitals

The Story:

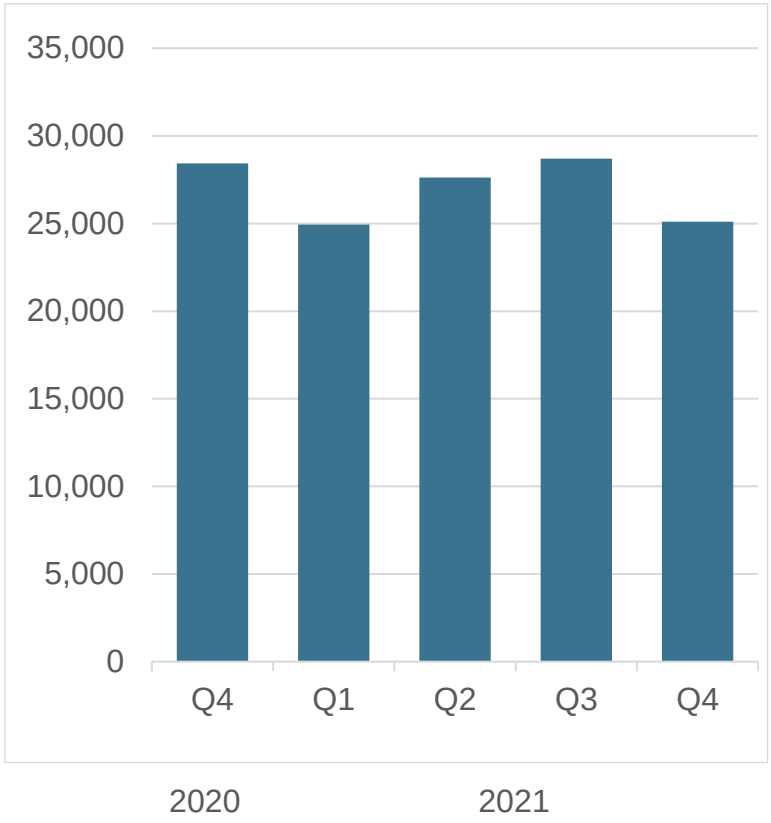
- Increase in market share came as a result of overcoming significant skepticism of the efficacy of the product
- Explained correct HDB dosing and value proposition to interventional cardiologist and pharmacy managers
- Developed partnerships with Key Opinion Leaders who helped drive change

Please refer to **IMPORTANT SAFETY INFORMATION** on slide 33

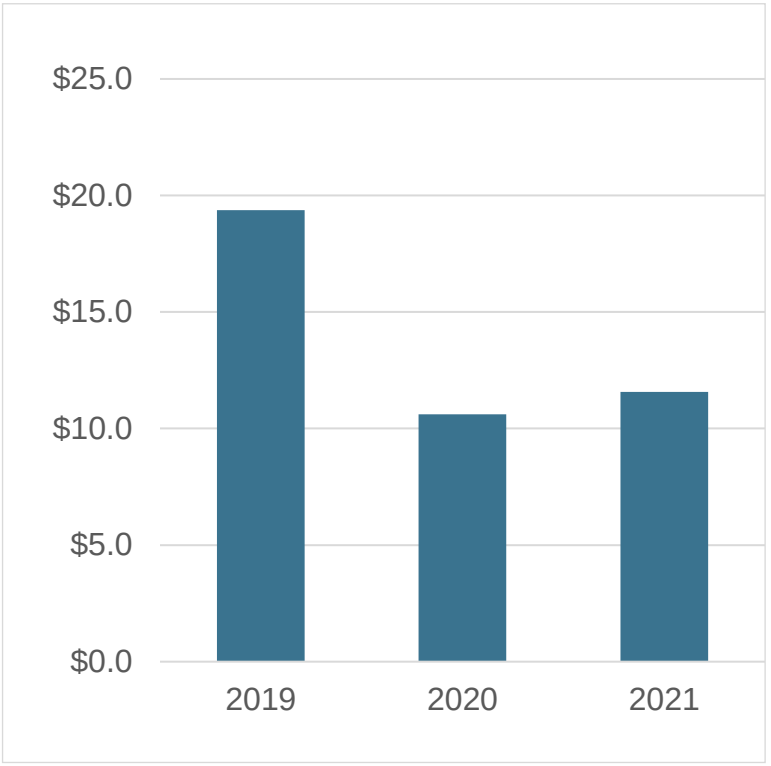
AGGRASTAT Sales Update

AGGRASTAT® (tirofiban hydrochloride) Injection

Aggrastat Units Per Quarter



Aggrastat Net Revenue By Year ($ CAD Millions)



Analysis

- Unit Demand in Q4 2021:
  - 12% lower compared to Q3 2021
  - 11% lower compared to Q4 2020
- Net Revenue in 2021:
  - 9% higher compared to 2020
  - 40% lower compared to 2021
- Overall sales and marketing team has been able to maintain consistent demand from 2020, with improvements in contract management

SAVI-PCI Study Met Its Primary Endpoint

AGGRASTAT® (tirofiban hydrochloride) Injection

Randomized clinical study evaluating AGGRASTAT (short and long infusions) compared to INTEGRILIN® (eptifibatide)

Variable, n (%)	AGGRASTAT® Short infusion n=209	AGGRASTAT® Long infusion n=124	Integrilin® Long infusion n=202
Death	0 (0.0%)	0 (0.0%)	1 (0.5%)
uTVR	1 (0.5%)	1 (0.8%)	0 (0.0%)
REPLACE-2 major bleeding	0 (0.0%)	4 (3.2%)	1 (0.5%)
Periprocedural myonecrosis*	69 (34.2%)	45 (36.6%)	60 (30.9%)
Primary outcome*	69 (34.2%)	48 (39.0%)	60 (30.9%)

These results fill a gap in clinical evidence and provide an exciting development to bolster the contemporary use of AGGRASTAT

Please refer to **IMPORTANT SAFETY INFORMATION** on slide 33

Strategic Approach for AGGRASTAT

AGGRASTAT® (tirofiban hydrochloride) Injection

LEVERAGE KOL SUPPORT

1 Market use of AGGRASTAT through Key Opinion Leaders

NEW CLINICAL DATA

2 Market new clinical data from SAVI-PCI

ZYPITAMAG® (pitavastatin) Profile

Key Information

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

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:

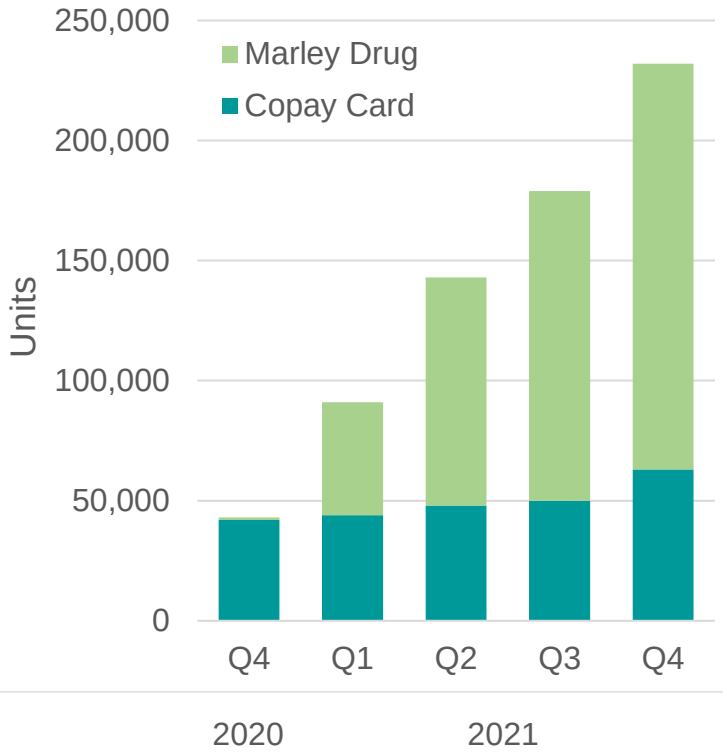
- Difficulty tolerating their current statin
- Currently taking Livalo
- Taking multiple medications that can interact with their statin

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

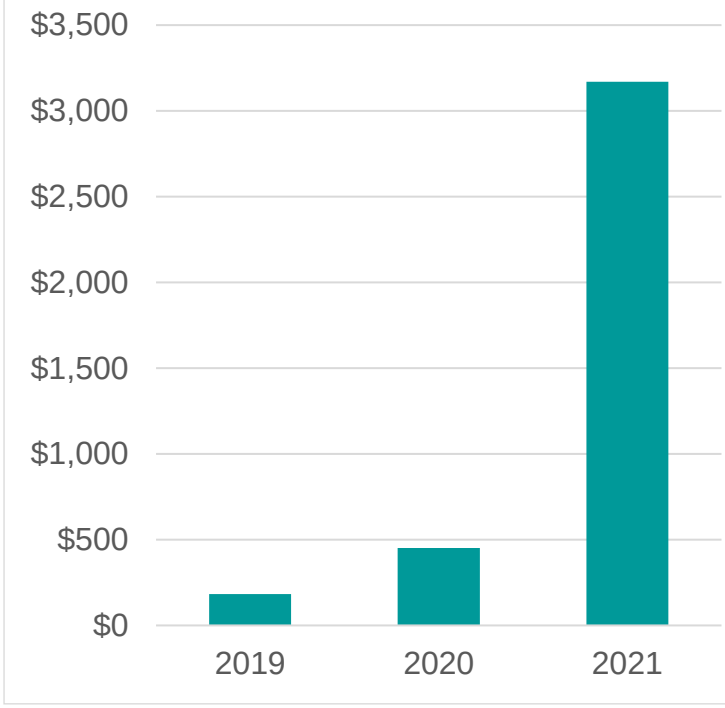
ZYPITAMAG Sales Update

Zypitamag™ (pitavastatin) tablets

Zypitamag Units Dispensed per Quarter*



Zypitamag Net Revenue per Quarter ($ CAD Thousands)



Analysis

- Units dispensed via Marley Drug and Copay Cards in Q4 2021:
  - 29% higher compared to Q3 2021
  - 5x higher compared to Q4 2020
- Net Revenue in 2021:
  - 7x higher compared to 2020
  - 17x higher compared to 2019
- Lower returns and fees to wholesalers, reduced fees to pharmacy benefit managers, and improvement in fill rate via Marley Drug

*Not captured here are sales to government covered recipients (e.g. VA and Medicare Part D)

Marketing Focus

Zypitamag™ (pitavastatin) tablets

ACCESSIBILITY

1 Simplicity in pricing without need for insurance, filled via Marley Drug

DIFFERENTIATE

2 Metabolized differently from other statins and well tolerated

Customer Quotes

Zypitamag™ (pitavastatin) tablets

"ZYPITAMAG just works for me. And, it's affordable"

"The best lipid levels I have had in treating cholesterol... I have not had any side effects"

"I personally tried multiple statins and had intolerable side effects. Because ZYPITAMAG is metabolized differently, it's a statin I can take"

"With ZYPITAMAG - my cholesterol levels are down and I haven't experienced any leg pain"

These are stock photos representing actual testimonials. Personal experiences with ZYPITAMAG may differ. ZYPITAMAG like all statins, can cause side effects, see Slide 34

Strategic Approach

Zypitamag™ (pitavastatin) tablets

SALES TEAM

1 We have a talented sales team meeting with healthcare providers to share the benefits and accessibility of ZYPITAMAG

CONSUMER MARKETING

2 Market the benefits of ZYPITAMAG and how it is different from other statins

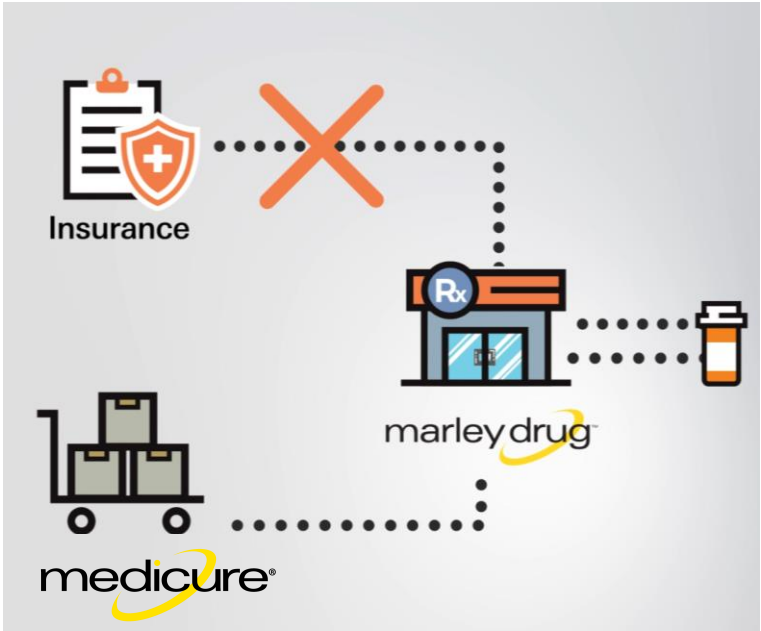
Marley Drug Pharmacy Subsidiary

- A US pharmacy licensed to ship medications to all 50 states, Washington D.C. and Puerto Rico
- Net Revenue in Q4 2021 of $1.33M, for a total of $6.94M in 2021
- Thousands of existing customers and proven success in marketing 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

What this provides to Medicure

1. A more efficient distribution and marketing vehicle for ZYPITAMAG – a Branded drug
2. A marketing vehicle for other Branded drugs challenged to get insurance coverage
3. Saves on high fees to wholesalers and pharmacy benefit managers

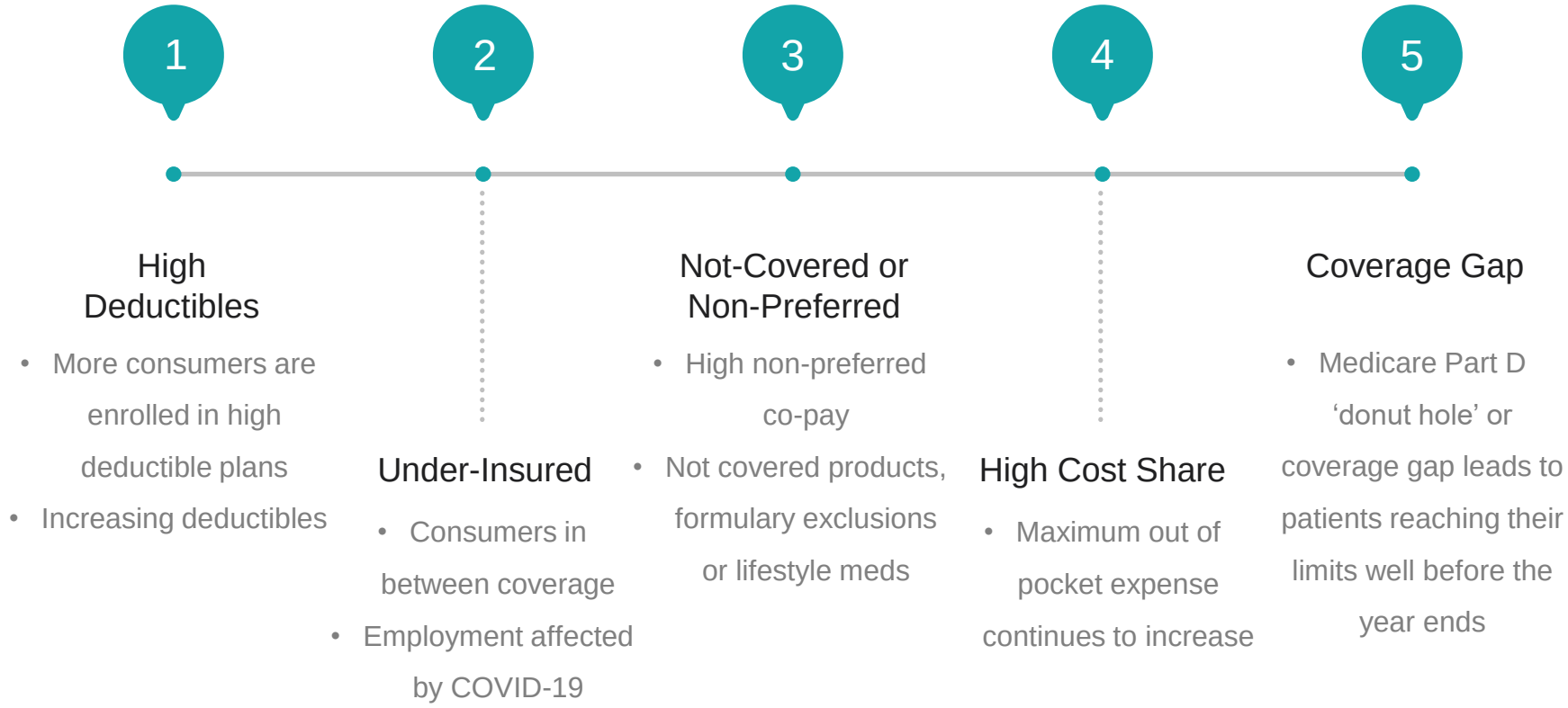


What this provides Consumers

- Low cost generic medications and direct access to Medicure's branded consumer products
- Home delivery, with no added pharmacy fees targeting cash paying customers, which is a growing market

Reasons Why Americans Pay Cash for Medications

Factors Driving Americans to Pay Cash for Pharmaceuticals



E-Commerce Platform and Go Forward Plans

CONSUMER MARKETING

1 **Meet the demand of Americans who want to purchase medications online with a seamless purchase experience**

BUSINESS DEVELOPMENT

2 **We are exploring opportunities that align with our goals**

Development of MC-1 for Rare Pediatric 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 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 to start in late 2022

New Products - Our Target Product Profile

In-Hospital	**Build on the experience, relationships and success of AGGRASTAT**	Products that can be licensed or acquired with low or no initial investment, and if licensed can be acquired with set milestones	Growth Opportunity
Primary Care	**Build on the experience, relationships and success of ZYPITAMAG**	Products that can be marketed and accessed directly to consumers through Marley Drug	Branded Products for Direct-to-Consumer Access

Previous 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, and still hold the investment • 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

Q4 2021 Financial Results Summary

$ millions CAD	Q4 2021	Q3 2021	Q4 2020
Net Revenue	6.8	4.9	2.4
COGS	3.0	2.0	2.1
Selling Expenses	2.4	2.6	1.4
Net Income (loss)	1.9	(0.95)	(4.3)
FX Gain (loss)	0.43	(0.22)	(0.44)
Adjusted EBITDA	1.6	0.28	(1.4)

Context: Growth in Net Revenue from sales of ZYPITAMAG and AGGRASTAT, with Marley Drug Net Revenue and higher Cost of Goods, led to a positive EBITDA for the quarter.

5 Key Takeaways About Medicure

1. Medicure’s focus is on pharmaceuticals and healthcare products for the US market

2. Proven success with AGGRASTAT, building sales of ZYPITAMAG

3. Focus on direct consumer sales for growth and profitability through Marley Drug subsidiary

4. Pipeline of products including MC-1 for Rare Disease

5. We believe in innovation and returning profits to shareholders

Further Information

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

Investor Relations
ir@medicure.com
1.888.435.2220 (Ext. 228)

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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