GW pharmaceuticals

39TH ANNUAL J.P. MORGAN HEALTHCARE CONFERENCE

Justin Gover, Chief Executive Officer

January 12, 2021

LILLY
Living with Dravet syndrome

Nasdaq: GWPH

Forward-Looking Statements

This presentation contains forward-looking statements that are based on our management's beliefs and assumptions and on information currently available to management. Forward-looking statements include information about our current expectations for future events, including potential results of operations, the timing of clinical trials, the timing of regulatory filings and approvals, the timing and outcomes of regulatory or intellectual property decisions, demand for our commercially available products and products in development and the clinical benefits, safety profile and commercial potential and potential pricing of Sativex®, Epidiolex®, and any product candidates. These forward-looking statements are subject to known and unknown risks, uncertainties, assumptions, including those associated with COVID-19 pandemic, and other factors that could cause our actual results, performance or achievements to be materially different than any future results, performance or achievements expressed or implied by the forward-looking statements. Forward-looking statements represent our management's beliefs and assumptions only as of the date of this presentation. You should read our most recent filings with the Securities and Exchange Commission including our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q, including the Risk Factors set forth therein and the exhibits thereto, and our subsequent filings with the Securities and Exchange Commission, completely and with the understanding that our actual future results may be materially different from what we expect. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.


THE GLOBAL LEADER IN CANNABINOIDS
20+ Years Expertise
Proven Track Record
GW
pharmaceuticals

2020 Key Achievements

PROGRESSED

Progressed an active R&D program and robust pipeline

PREPARED

Prepared Nabiximols for US development and submission

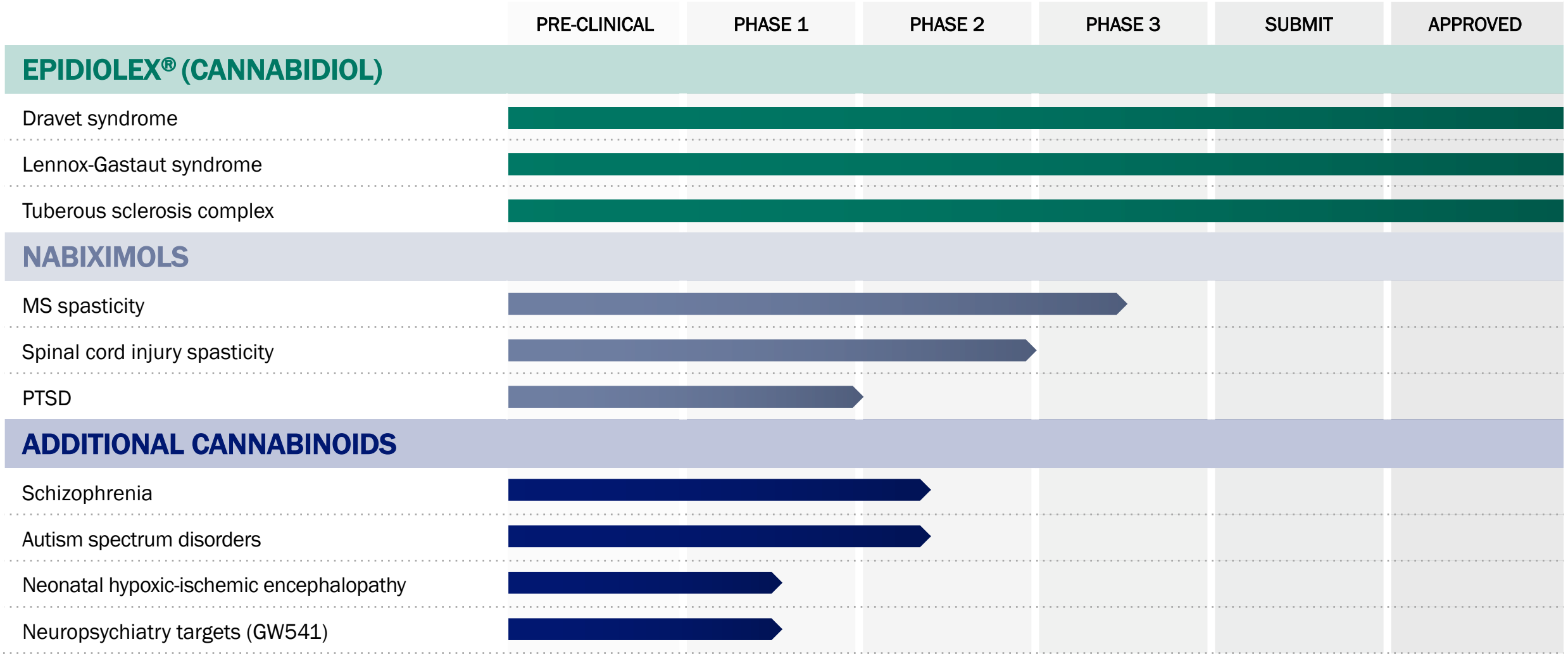
EXPANDED

Expanded indication and achieved commercial success of Epidiolex®

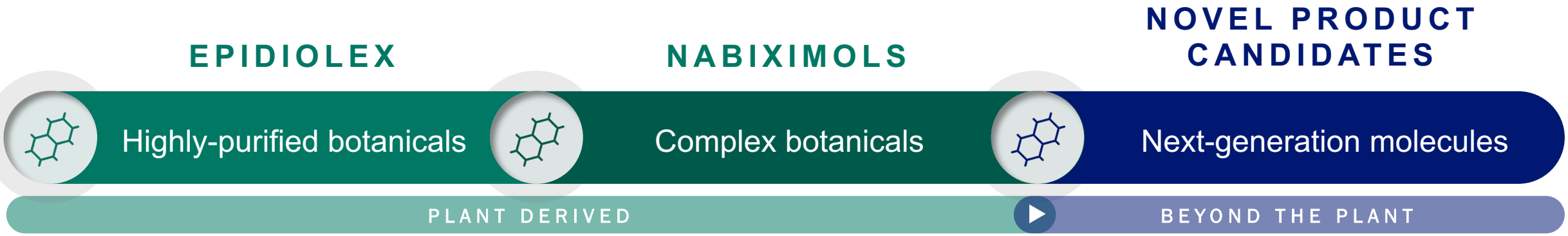
GREW

Grew global reach and established EU market presence

GW's Cannabinoid Platform: A Proprietary Growth Engine



TAKING CANNABINOID LEADERSHIP TO THE NEXT LEVEL

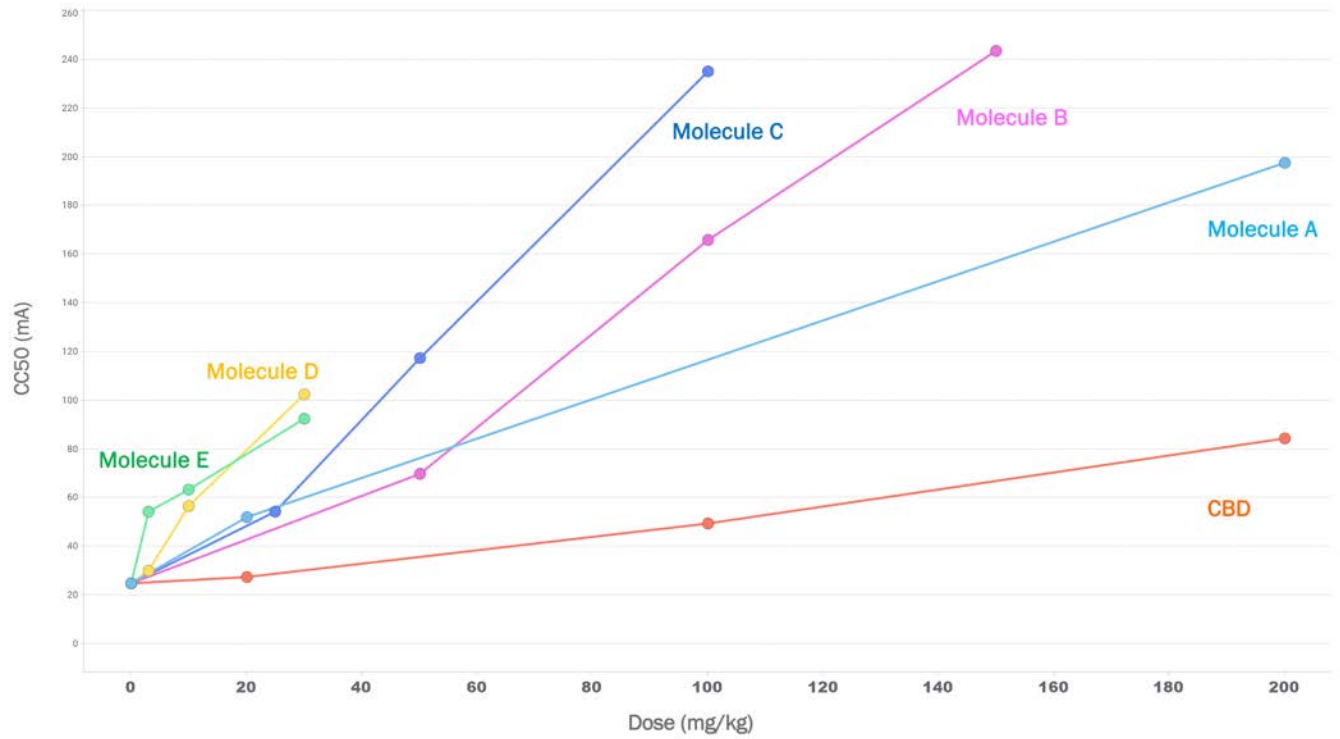


As the leader in cannabinoid science, GW has the greatest scientific understanding of pharmacological effects, unique formulation and drug delivery requirements and related exclusivity of cannabinoids.

Enhanced pharmaceutical properties
Increased potency
Composition of matter IP protection
Preserving cannabinoid efficacy and safety characteristics

First Novel Product Candidate Ready to Enter the Clinic in 2021

Novel product candidates demonstrate improved pharmaceutical and pharmacodynamic (efficacy) properties in relevant seizure model



Multiple new molecules already identified with enhanced pharmaceutical properties, signals of increased potency with patents filed.

- Novel product candidates
- Assess pharmacology
- Physicochemical properties, including solubility
- Metabolic assessment
- Improved efficacy and potency in model of acute generalized seizures

GW pharmaceuticals

Epidiolex® (cannabidiol) Oral Solution

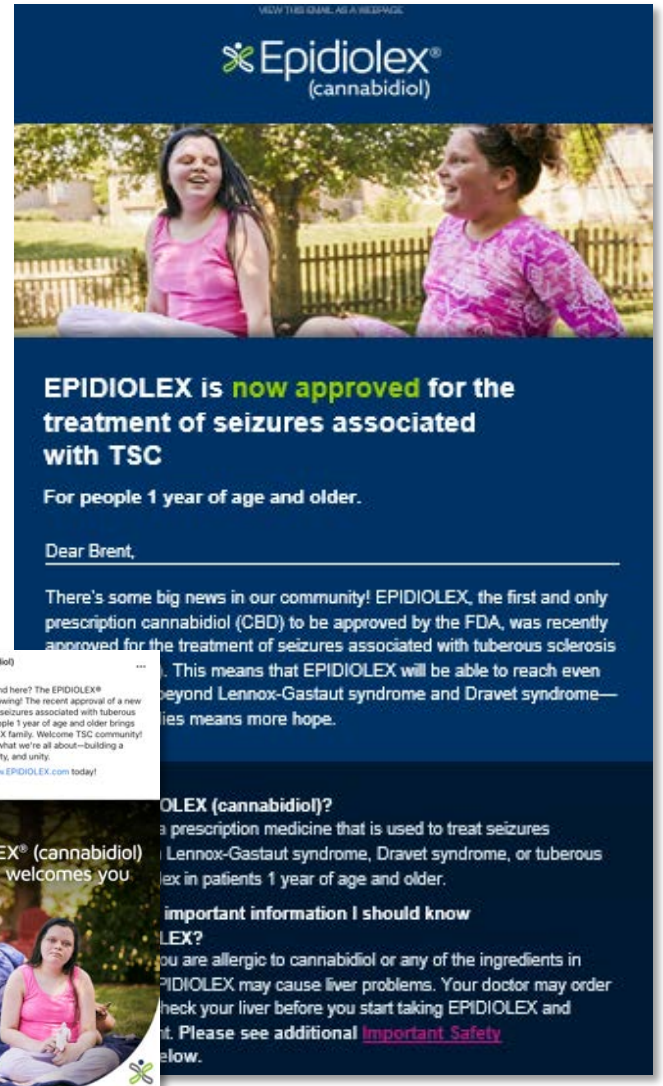
PIPER
Living with Dravet syndrome

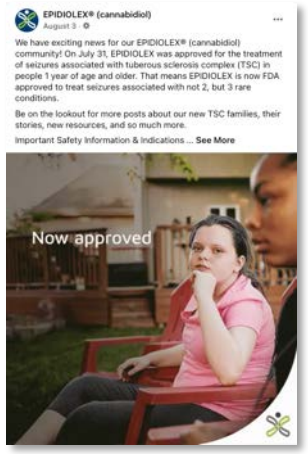
Continued US Commercial Success and Growth

- First FDA-approved plant-derived cannabinoid; new MOA
- Descheduled by DEA
- Indicated to treat seizures associated with LGS, Dravet syndrome and TSC
  - Broad spectrum efficacy demonstrated in 3 approved indications
- Indicated in patients 1 year of age and older
- High level of awareness and intent to prescribe
- Unaudited 2020 Epidiolex global net product sales increased over 70% to $510m (2019: $296m)

Tuberous Sclerosis Complex (TSC) Launch and Opportunity

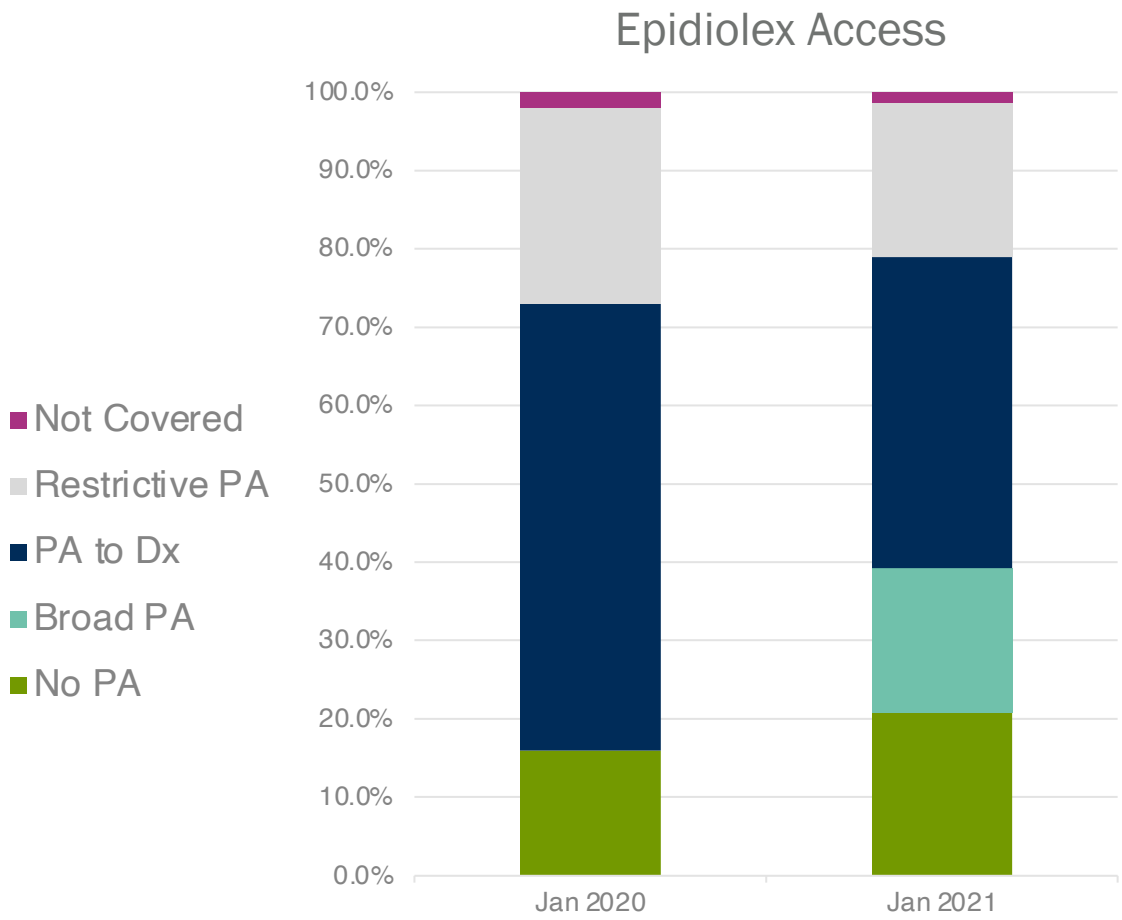
- Approved by FDA in Q3 2020
- TSC represents approx. 30,000 additional indicated patients in US
  - Epilepsy is present in >90% of patients with TSC
  - TSC affects 40-50K in the US
  - >60% of individuals with seizures associated with TSC do not achieve seizure control with standard treatments
  - Leading cause of genetic epilepsy, often occurring in first year of life
- Primary seizure types in TSC are focal and generalized
- EMA submission accepted for review





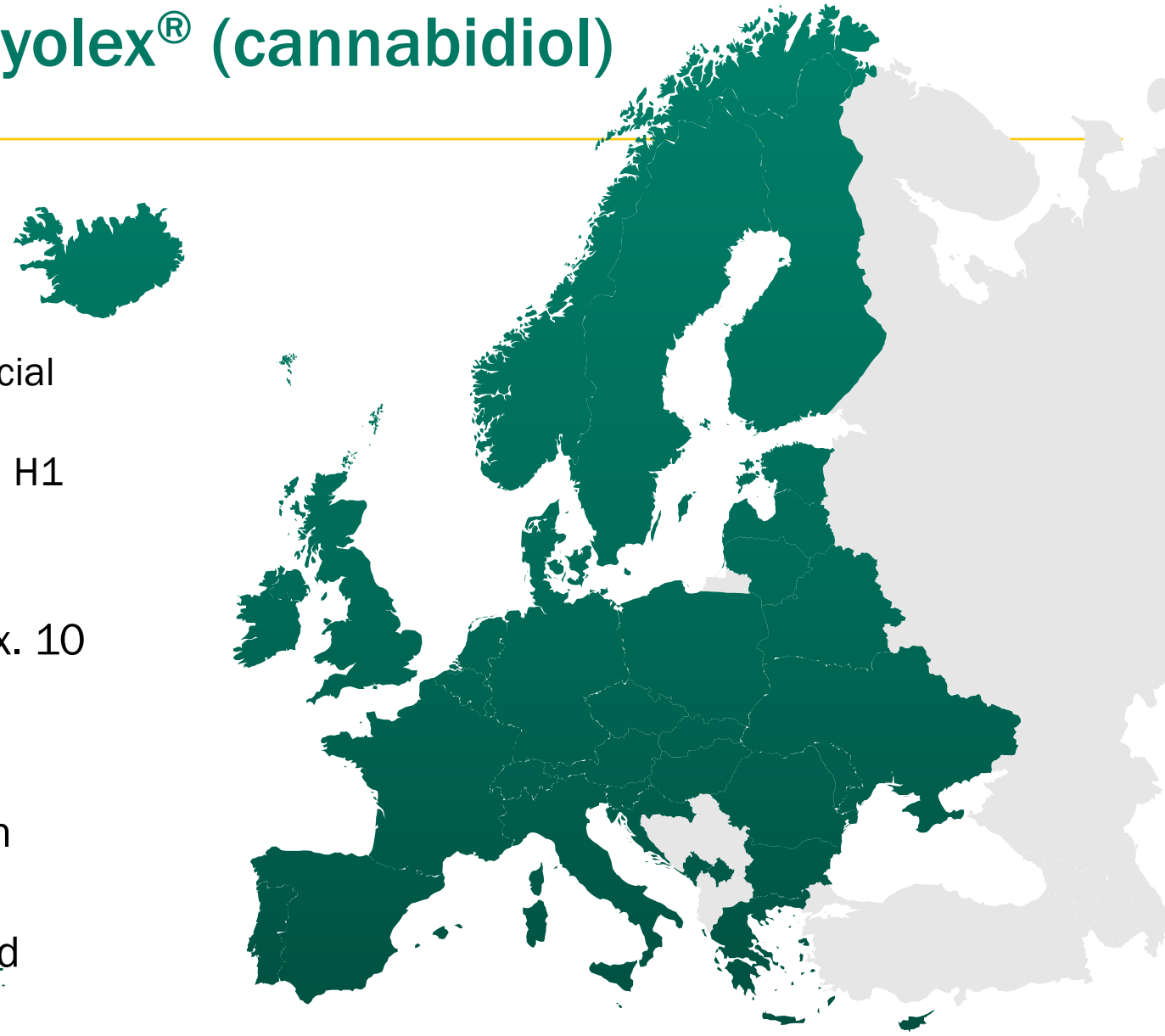
U.S. 2020 Payer Success

- Expanded payer coverage includes 85 million lives with no/broad prior authorization
- In 2020, increased access with payers having no/broad PA from 16% to 39% of US covered lives
- Approximately 2 out of 3 US Medicaid patients have broad access to Epidiolex
  - Medicaid is the largest payer for Epidiolex
- Commercial coverage expanding
  - Express Scripts - Epidiolex is a Preferred brand with lowest brand copay
  - Cigna
  - Others

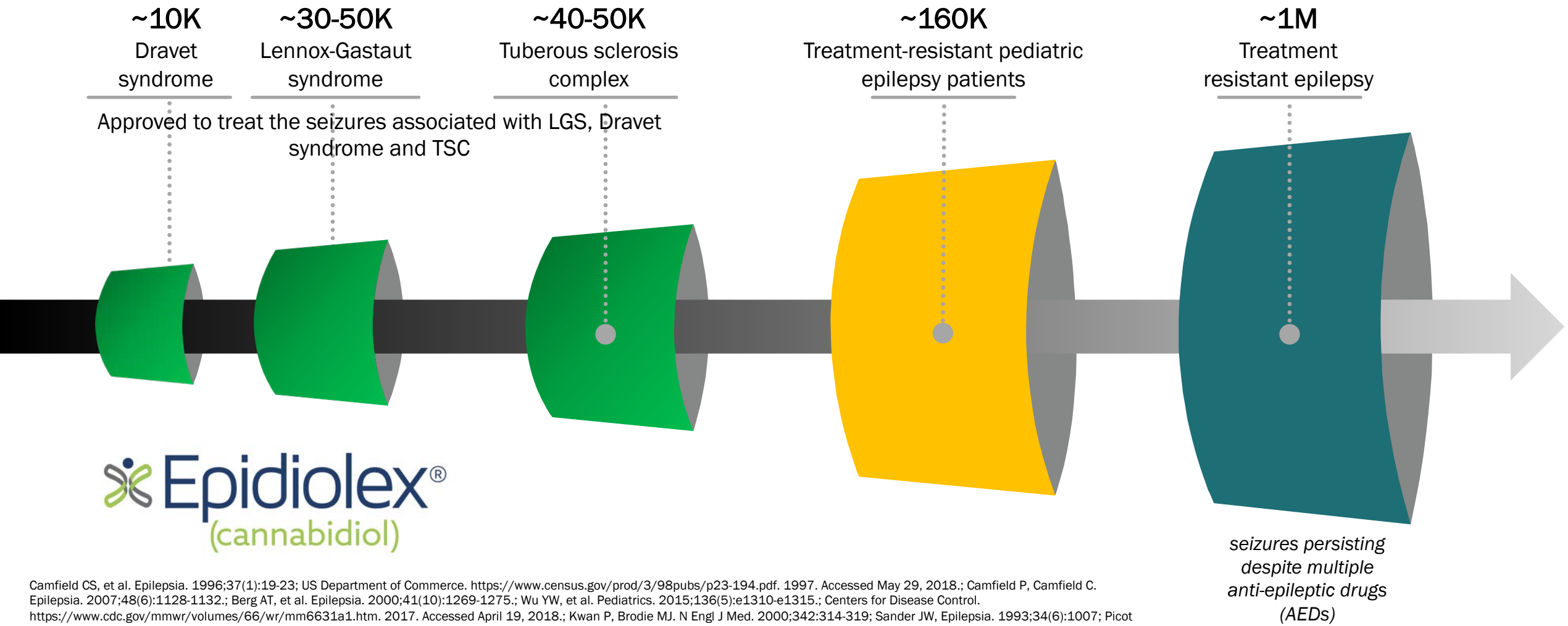


Expanded Global Reach of Epidyolex® (cannabidiol)

- EMA approval in September 2019
- First wave in 5 major markets
  - Germany - commercial launch in Q4 2019
  - UK - positive NICE recommendation with commercial launch in Q1 2020
  - France and Italy – commercial launches expected H1 2021
  - Spain – H1 launch
- Pricing and reimbursement progressing in approx. 10 additional European countries
- EMA TSC approval expected H1 2021
- Approved for use by TGA in Australia in 2020 with reimbursement recommended
- Opened offices in Berlin, Milan, Madrid, Paris and Amsterdam

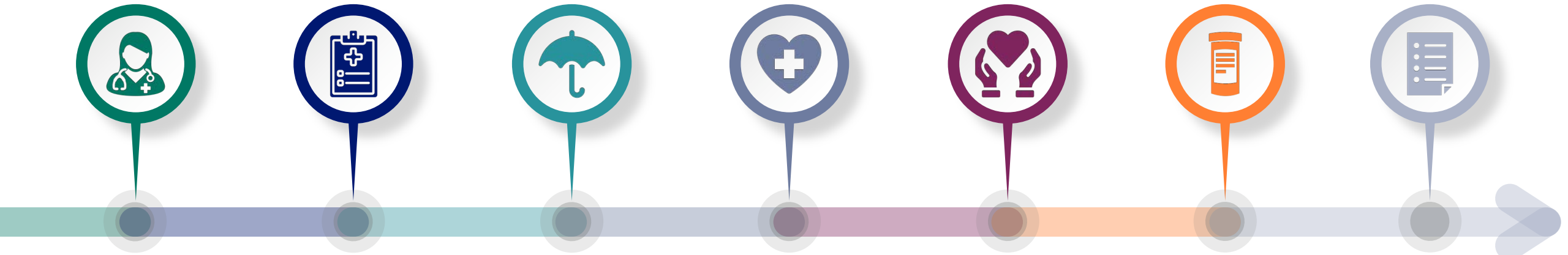


Significant Unmet Need Remains For Further Research



Camfield CS, et al. Epilepsia. 1996;37(1):19-23; US Department of Commerce. https://www.census.gov/prod/3/98pubs/p23-194.pdf. 1997. Accessed May 29, 2018.; Camfield P, Camfield C. Epilepsia. 2007;48(6):1128-1132.; Berg AT, et al. Epilepsia. 2000;41(10):1269-1275.; Wu YW, et al. Pediatrics. 2015;136(5):e1310-e1315.; Centers for Disease Control. https://www.cdc.gov/mmwr/volumes/66/wr/mm6631a1.htm. 2017. Accessed April 19, 2018.; Kwan P, Brodie MJ. N Engl J Med. 2000;342:314-319; Sander JW, Epilepsia. 1993;34(6):1007; Picot et al, 2008 ; Kwan P, Brodie MJ. N Engl J Med. 2000;342:314-319; Kwan P, Brodie MJ, CNS Spectr. 2004;9(2):110; Epilepsy Foundation, https://pediatrics.aappublications.org/content/136/5/e1310.

Epidiolex 2021: Building a Blockbuster



BUILD

Build on positive physician experiences to increase prescribing to appropriate patients

ACCELERATE

Accelerate adoption across a broader prescriber base

DRIVE

Continue expanded payer access momentum

IMPROVE

Continue to improve the patient Epidiolex experience

INCREASE

Increase penetration in the long-term care segment

EXECUTE

Execute on the TSC label expansion

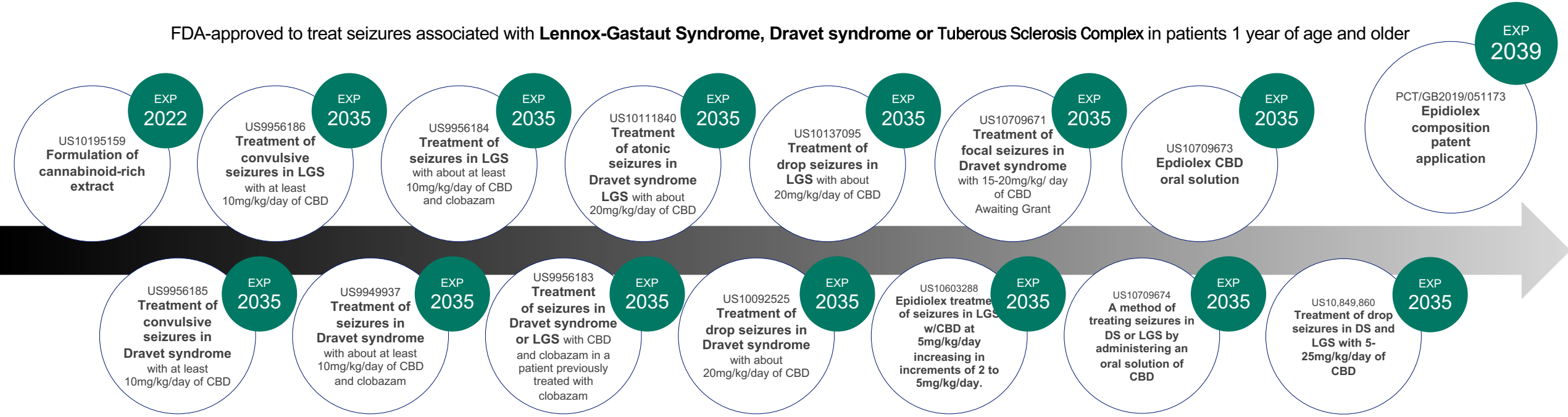
DEVELOP

Further indication development

Epidiolex® Patent Portfolio to 2035 Aligns with Indication

Epidiolex® (cannabidiol)

FDA-approved to treat seizures associated with **Lennox-Gastaut Syndrome, Dravet syndrome or** Tuberous Sclerosis Complex in patients 1 year of age and older



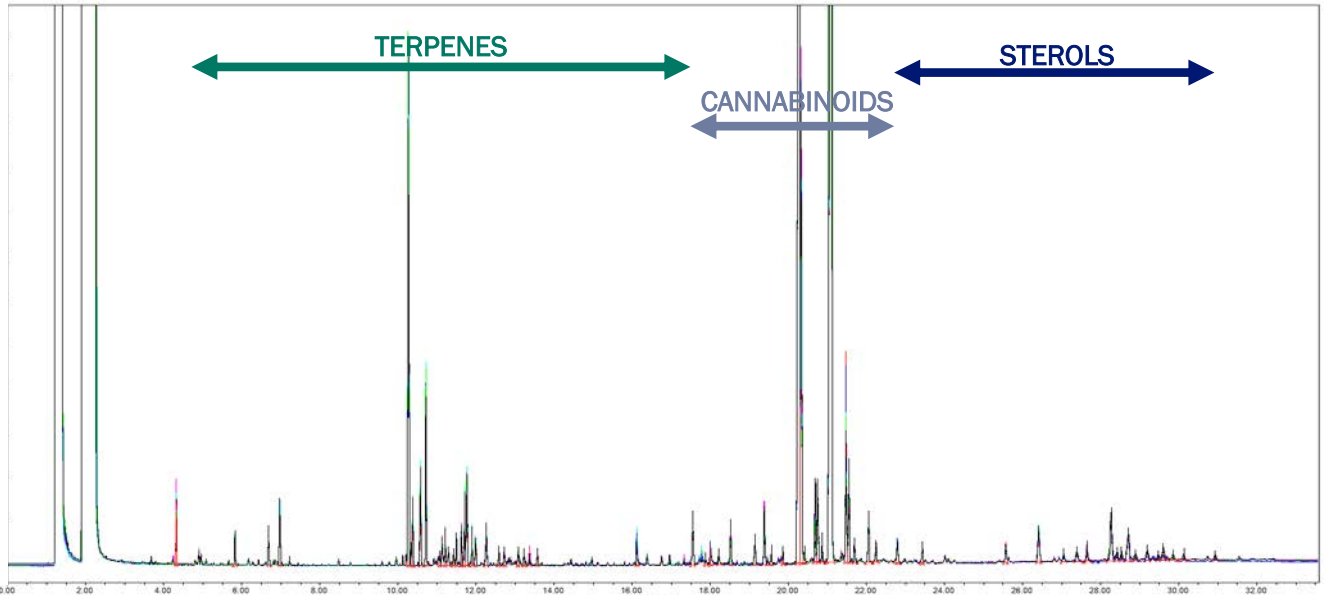
14 Orange Book-listed patents to date plus composition, TSC, and use patents in prosecution plus additional applications planned

Nabiximols

Nabiximols: Next US Commercial Opportunity

- Derived from the whole cannabis plant containing a clinically proven, balanced dose of THC and CBD along with other cannabinoid and non-cannabinoid plant components
- Approved in >25 countries outside the US as Sativex® for the treatment of spasticity due to multiple sclerosis (MS); sold via marketing partners
- Near-term, reduced US risk opportunity in MS Spasticity
  - Positive efficacy, safety and abuse/diversion data
  - US pivotal clinical program now recruiting
- Broad potential in spasticity beyond MS
- Strong exclusivity due to complex botanical formulation
- US commercial rights owned by GW

Nabiximols — Reproducible Fingerprint, 5 Batches Overlaid

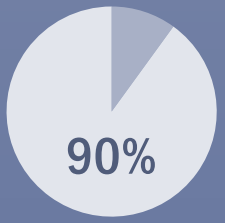


MS Spasticity Market (US)

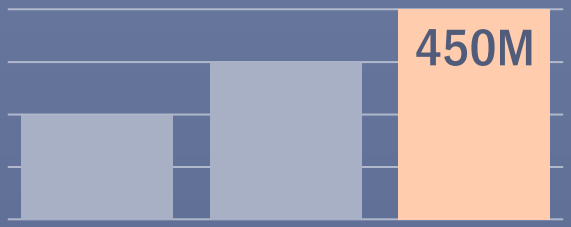
- Spasticity occurs in up to 84% of MS patients [1]
- Despite current treatment, 1/3 live with uncontrolled spasticity [2]
- No new oral anti-spasticity medicines approved in over 20 years; MS disease modifying treatments have not shown evidence of helping to relieve symptoms
- Spasticity significantly impacts daily function — reduced mobility and inability to perform daily tasks, including walking and driving [3]
- 26–50% of MS patients are self-medicating with cannabis [4]

NABIXIMOLS OPPORTUNITY IN MS SPASTICITY

Strong physician and patient enthusiasm for product use [5]



90% of physicians and patients highly to moderately interested [5]



US market potential estimated to be ~$450 million

Sources:
1.) Rizzo M, Hadjimichael O, Preiningerova J, Vollmer T. Prevalence and treatment of spasticity reported by multiple sclerosis patients. Multiple Sclerosis Journal. 2004;10(5):589-595.
2) Pozzilli C. Advances in the management of multiple sclerosis spasticity: experiences from recent studies and everyday clinical practice. Expert review of neurotherapeutics. 2013;13(12 Suppl):49-54. Mult Scler. 2004 Oct; 10(5):589-95.
3.) Bethoux F, Marrie RA. A cross-sectional study of the impact of spasticity on daily activities in multiple sclerosis. The Patient-Patient-Centered Outcomes Research. 2016;9(6):537-546.
4.) 2014 NARCOMS survey, Rizzo et al. Mult Scler 2004, Rizzo et al. Mult Scler 2004; Braley et al. Mult Scler J Exp Transl Clin 2020.
5.) Clearview MS Spasticity Landscape Assessment August 2019

Nabiximols: Demonstrated Efficacy in MS Spasticity

	STUDY 1, Colin *et al*	STUDY 2, Novotna *et al*	STUDY 3, Markova *et al*
STUDY DESIGN	6 Week, Double-blind, Randomized Parallel Group Study	Enriched Randomized Withdrawal Study Design	Enriched Study Design
SAMPLE SIZE	N = 189	Part A: N = 572 Part B: N= 241	Part A: N = 191 Part B: N= 106
PRIMARY ENDPOINTS	**Primary: NRS-spasticity (mean change)** **Key secondary:** NRS–spasticity (responder) Ashworth scale, spasms	**Primary: NRS-spasticity (mean change)** **Key secondary:** NRS–spasticity (responder) spasms, modified Ashworth scale (mAS)	**Primary: NRS spasticity (responder)** **Key secondary:** NRS-spasticity (mean change), modified Ashworth scale
PRIMARY ENDPOINT P-VALUE	P=0.048	P=0.0002	P<0.0001

Collin, et al. Eur J Neurol 2007; 14:290-96

Novotna, et al. Eur J Neurol 2011; 18(9):1122-31

Markova, et al. Int J Neursci 2019; 129(2): 119-128

Agreed Path Forward With The FDA

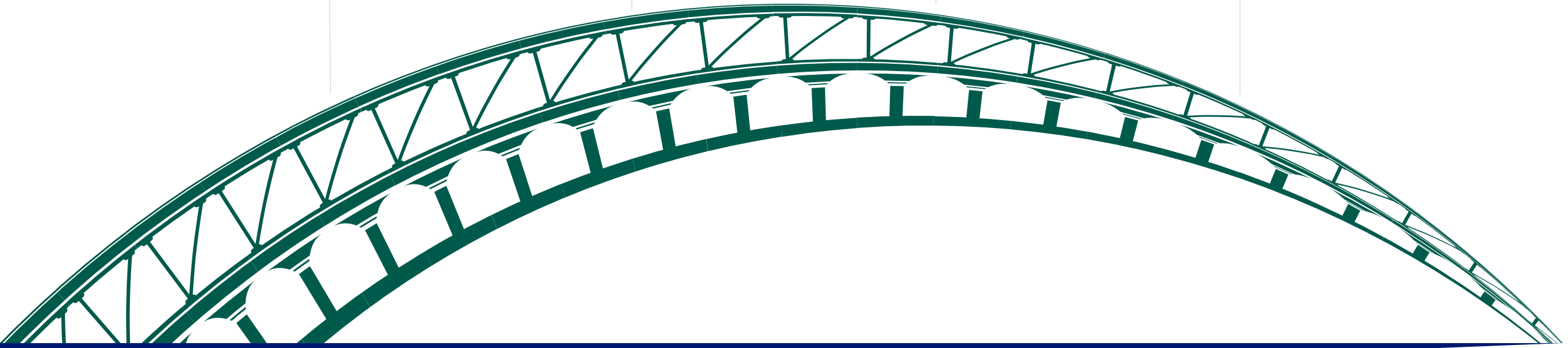
EUROPEAN EFFICACY TRIALS PRESENTED TO FDA

DATA HARMONIZED TO NDA REQUIREMENTS

BRIDGE FROM NRS TO PROXIMATE SPASTICITY ENDPOINT

EXECUTE MULTIPLE PIVOTAL TRIALS: FIVE SHOTS ON GOAL

DISCUSS EXPANDING INDICATION



Five Phase 3 Studies; NDA Filing on First Positive Readout

Sample Size	Design	Endpoint	Start	Target data readout
52	3-week treatment period, placebo-controlled cross-over	Muscle Tone (LLMT-6)	Dec 2020	2021
190	3-week treatment period, placebo-controlled cross-over	Muscle Tone (LLMT-6)	Q1 2021	2022
36	Pre-post dose in prescribed responders, placebo-controlled cross-over	Muscle Tone (LLMT-6)	Q1 2021	2021/2022
446	Double-blind, parallel, placebo controlled, 12-week treatment period	Spasm frequency	Oct 2020	2022
227 randomized	Part A: 4-week run-in to identify responders; Part B: 12-week double-blind, parallel, placebo-controlled randomized withdrawal	Spasm frequency	H1 2021	2022/3

Opportunity to Achieve Broad Spasticity Label As Well as Other Lifecycle Opportunities

- Broader spasticity population
  - >3M U.S. patients including spinal cord injury, post-stroke, ALS, traumatic brain injury, cerebral palsy

- Spasticity associated with Spinal Cord Injury (SCI)
  - Approx. 250K chronic SCI patients (~65%) suffer from spasticity
  - Likely single pivotal trial required
  - Sales potential ~$350M

- Post Traumatic Stress Disorder (PTSD)
  - Impacting ~11.7M people with ~55% diagnosed
  - Anxiety is one of the top 3 reasons for self-medication with cannabis
  - Nabiximols offers potential to reduce sleep disturbance symptoms, anxiety and irritability

Sources: DiPiro. Spinal Cord. 2018; McGuire. Spasticity: Diagnosis and Management, 2011; Nicholson. Muscle Nerve. 2018; AANS Website; UpToDate; Physician Interviews; ClearView Analysis. Goldstein. Soc Psychiatry Psychiatr Epidemiol 2016; Kessler. Arch Gen Psychiatry. 2012; Kessler. Arch Gen Psychiatry. 2005; UpToDate; Physician Interviews; ClearView Analysis

Corporate Information

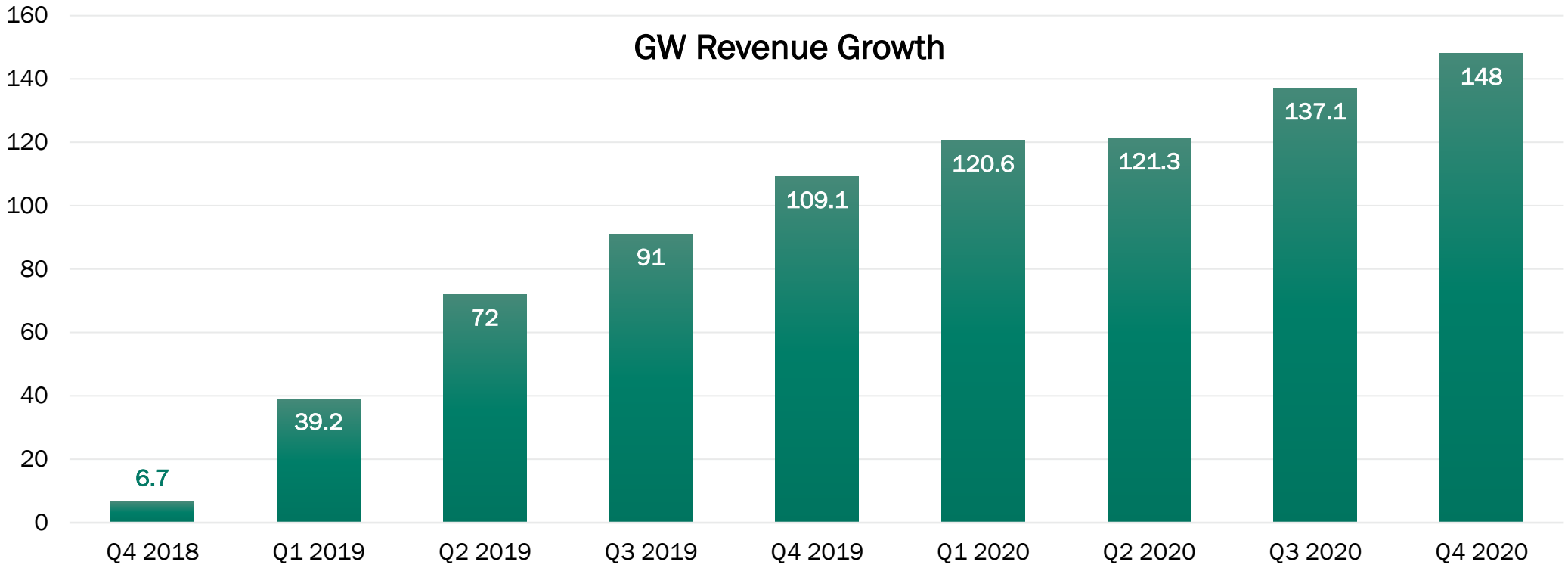
Q4 Results and Key Financial Data (Unaudited)

$148M
Q4 2020
net revenue

$486M
Cash at
December 31, 2020

$530M–550M
FY 2020 R&D and
SG&A expense guidance

$20M–25M
FY 2020 capital
expense guidance



2021 Key Priorities

GROW

Grow Commercial Success of Epidiolex®

PREPARE

Prepare Nabiximols for approval and commercial launch

ADVANCE

Advance R&D Program and Robust Pipeline

EXPAND

Expand Global Reach of products and pipeline

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THANK YOU!

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