

GW Pharmaceuticals plc



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Note re Forward Looking Statements

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GW Pharma Overview

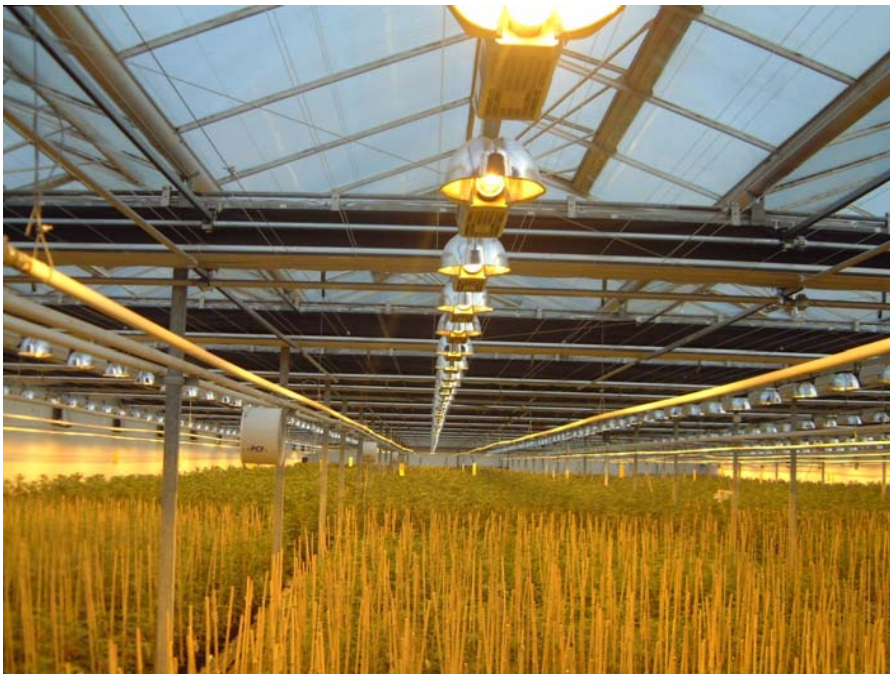
- Develop, manufacture and commercialize cannabinoid therapeutic drugs
- Lead product, Sativex®
 - Proven efficacy in chronic pain and MS symptoms (2,500 patients)
 - Significant market opportunities
 - Three major licensing deals (\$425m milestones plus 20-30% royalty)
 - Marketed in Canada, sold in UK on “named patient” basis
 - Phase IIb/III in US, Phase III in Europe
- Promising pipeline of additional cannabinoid compounds
 - Otsuka collaboration is funding early development in CNS and oncology
- Headquartered in UK
 - 4 sites, including 23,000 sq. ft product development and manufacturing facility
 - 125 employees
- Listed on AIM (London Stock Exchange): GWP
 - \$190mm market capitalization
- Experienced management team and Board

GW's Cannabinoid Medicines













- Cannabis is the unique source of cannabinoid molecules (>70 in the plant)
- Cannabinoids modulate the endocannabinoid system
- Cannabinoid science is a fast emerging area with broad therapeutic applications
- GW has a library of proprietary plant varieties (“chemovars”) with a defined cannabinoid profile, which are extracted and formulated into drug delivery systems
- Sativex focuses on two principal cannabinoids
 - THC, CBD
- GW is researching a large number of cannabinoids, each of which has different effects and applications
 - CBC, CBG, CBN, THCV, CBCV, CBDV, THCA, CBDA.....
- GW has a portfolio of 42 patent families

Distribution & Manufacture Strategy

- Commercial distribution through strategic partnerships and alliances in various geographies
 - Otsuka, Almirall, Bayer
- GW controls production process in UK, in particular raw material
 - Sophisticated horticultural process ensures standardized product characteristics
 - Genetically identical plants
 - International Good Manufacturing Practice (cGMP) at commercial scale



Overview of Sativex Development Status

SATIVEX	INDICATIONS	REGIONS	PHASE I	PHASE II	PHASE III	SUBMIT	APPROVAL
	NEUROPATHIC PAIN IN MS		Phase I: Progress bar 100% Phase II: Progress bar 100% Phase III: Progress bar 75%				
			Phase I: Progress bar 100% Phase II: Progress bar 100% Phase III: Progress bar 100% Submit: Progress bar 100%				
			Phase I: Progress bar 100% Phase II: Progress bar 50%				
		REST OF WORLD	Phase I: Progress bar 100% Phase II: Progress bar 100% Phase III: Progress bar 75%				
SPASTICITY IN MS		Phase I: Progress bar 100% Phase II: Progress bar 100% Phase III: Progress bar 100%					
		Phase I: Progress bar 100% Phase II: Progress bar 100% Phase III: Progress bar 100%					
		Phase I: Progress bar 100% Phase II: Progress bar 50%					
	REST OF WORLD	Phase I: Progress bar 100% Phase II: Progress bar 100% Phase III: Progress bar 100%					
CANCER PAIN		Phase I: Progress bar 100% Phase II: Progress bar 100% Phase III: Progress bar 75%					
		Phase I: Progress bar 100% Phase II: Progress bar 100% Phase III: Progress bar 100% Submit: Progress bar 100%					
		Phase I: Progress bar 100% Phase II: Progress bar 100% Phase III: Progress bar 75%					
	REST OF WORLD	Phase I: Progress bar 100% Phase II: Progress bar 100% Phase III: Progress bar 75%					
NEUROPATHIC PAIN		Phase I: Progress bar 100% Phase II: Progress bar 100%					
		Phase I: Progress bar 100% Phase II: Progress bar 100%					
		Phase I: Progress bar 100% Phase II: Progress bar 50%					
	REST OF WORLD	Phase I: Progress bar 100% Phase II: Progress bar 100%					

Sativex Commercialization Partners

UK / Canada



- Total milestones payable \$65mm (\$16mm received. \$20mm payable on first UK approval)
- ~30% effective royalty
- GW pays development costs

Europe (ex-UK)



- \$24mm signature fee plus milestone payments (total payable \$92mm). \$6-10mm payable on first EU approval
- ~25-30% effective royalty
- GW pays development costs

US

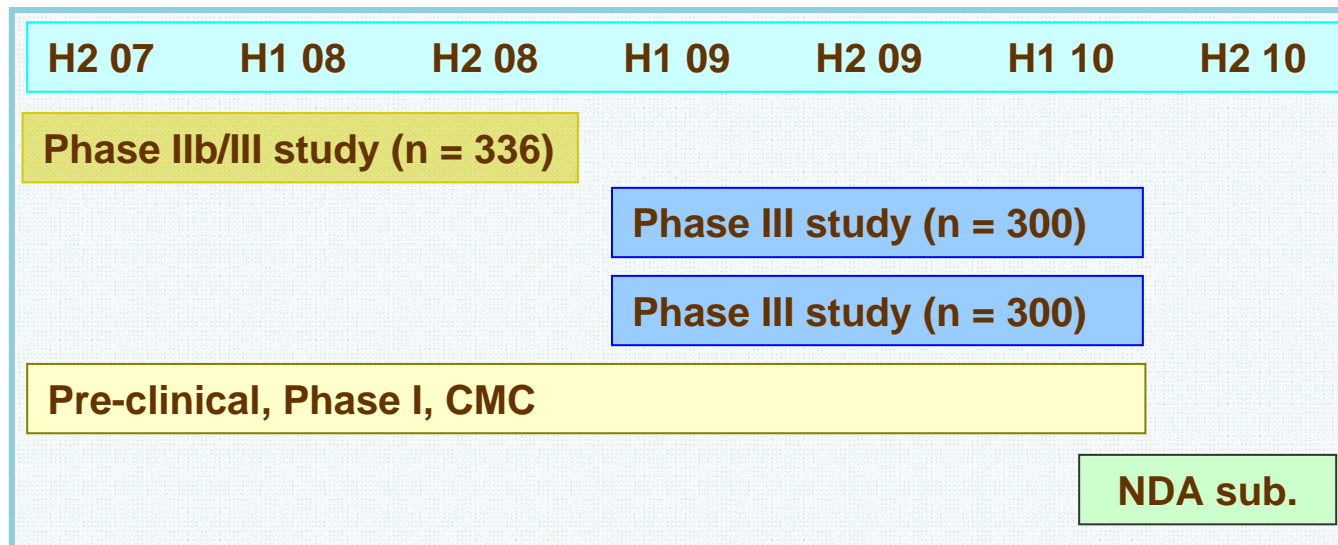


- \$18mm signature fee plus \$255mm milestone payments
- ~20% effective royalty
- Otsuka pays development costs

- \$51mm signature fees
- \$376mm milestone payments
- 20-30% effective royalties
- GW exclusive supplier

Sativex in the United States Targeting Cancer Pain

- FDA has granted Phase III IND
- Initial target indication:
 - Treatment of pain in patients with advanced cancer, who experience inadequate analgesia during optimized chronic opioid therapy
- Positive data in completed European trial in 177 cancer pain patients
- All US trials funded by Otsuka
- US development plan aiming for 2010 submission to FDA



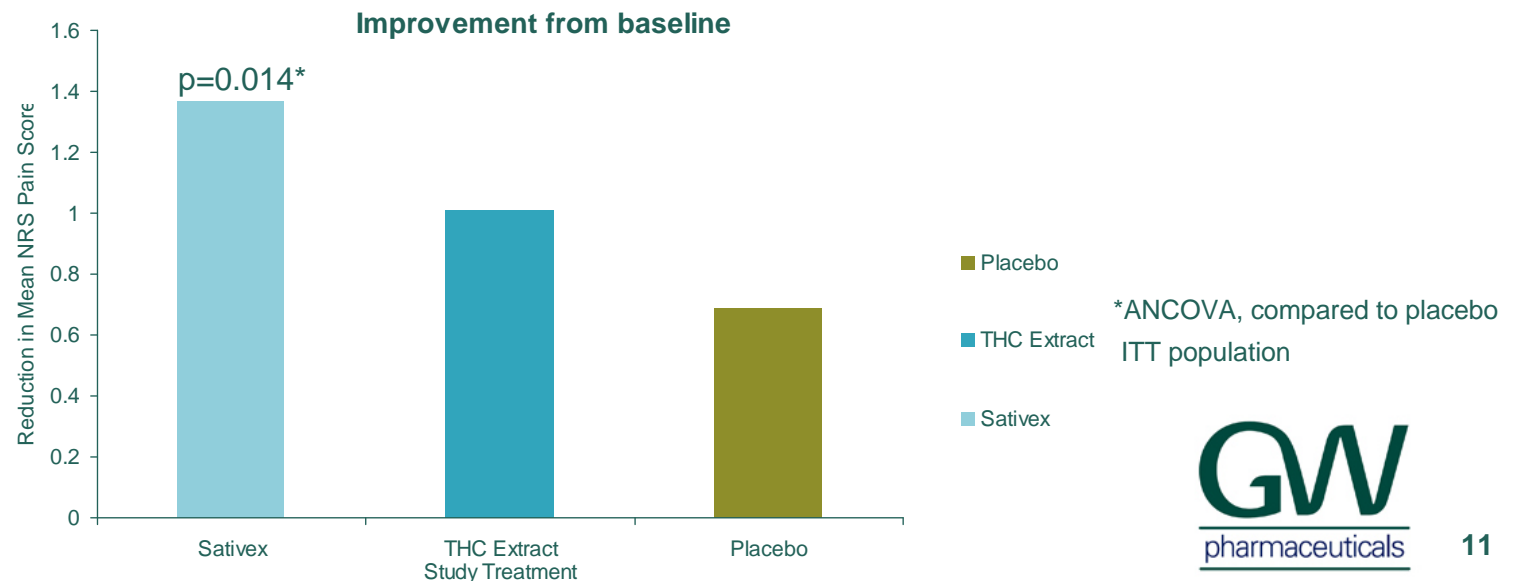
Ongoing US Phase IIb/III Cancer Pain Trial

- Primary objective
 - To evaluate the potential role and optimal dose range of Sativex as an adjunct to pre-existing pain medications
- Five-week treatment duration
 - Agreed with FDA
- 40 centers, primarily in the US
 - Lead Investigator, Dr Russell Portenoy, Beth Israel, NYC
- 336 patients
 - Patients divided into 3 dose groups, each of which has a placebo arm

Results Due at End of 2008

European Phase II Cancer Pain Study: Positive Results

- N = 177 (n=60 Sativex, n=58 THC extract, n=59 placebo)
- Treatment resistant patients who continue on existing opioid therapy during study (at stable dose)
 - Mean 120mg morphine per day
- Positive primary endpoint: significant reduction in pain on Sativex vs placebo (p=0.014)
- 43% of Sativex patients achieved at least a 30% reduction in pain (p=0.024)
- THC not significantly different to placebo

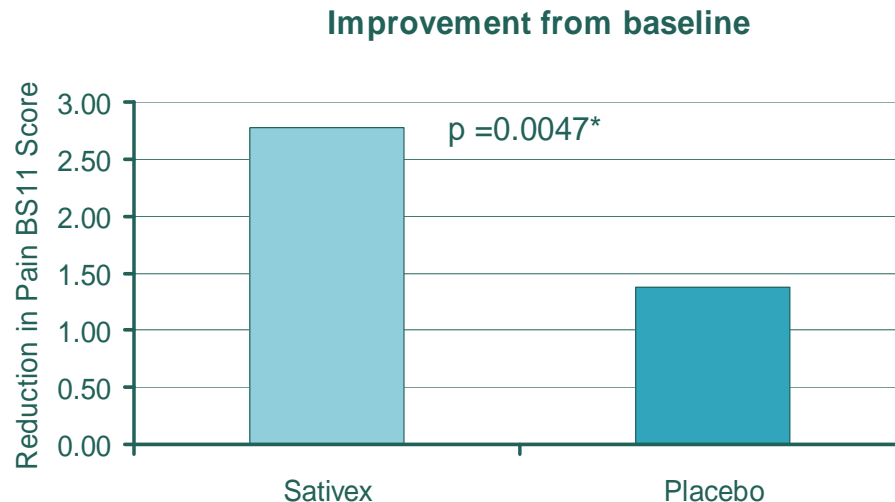


Sativex in Canada

- Initially approved for Neuropathic Pain in MS in mid 2005
- Marketed by Bayer HealthCare
- Approval extended to Cancer Pain in Aug 07
 - Exceptional media pick-up – 21m media impressions
 - First prescription within 2 hours of press release
 - Formal launch January 2008
- Approved under Notice of Compliance with conditions (NOC/c) policy
 - Applies to medicines which address serious unmet needs
 - Further clinical data provided post-approval leads to removal of conditions
- Ongoing Phase III MS Neuropathic Pain trial (results Q1 08) expected to meet requirements to remove conditions for this indication

Completed Sativex Phase III Trial: Central Neuropathic Pain in MS

- Intractable, treatment-resistant patients, who remain on current medication throughout trial
- N=66
- Positive primary endpoint: Sativex significantly superior to placebo in reducing pain ($p=0.005$)
- Sativex significantly improved sleep disturbance ($p=0.003$)
- Patient global Impression of change significantly in favour of Sativex ($p=0.005$)
- Published: Rog et al, Neurology 2005;65:812



*Ancova; ITT population

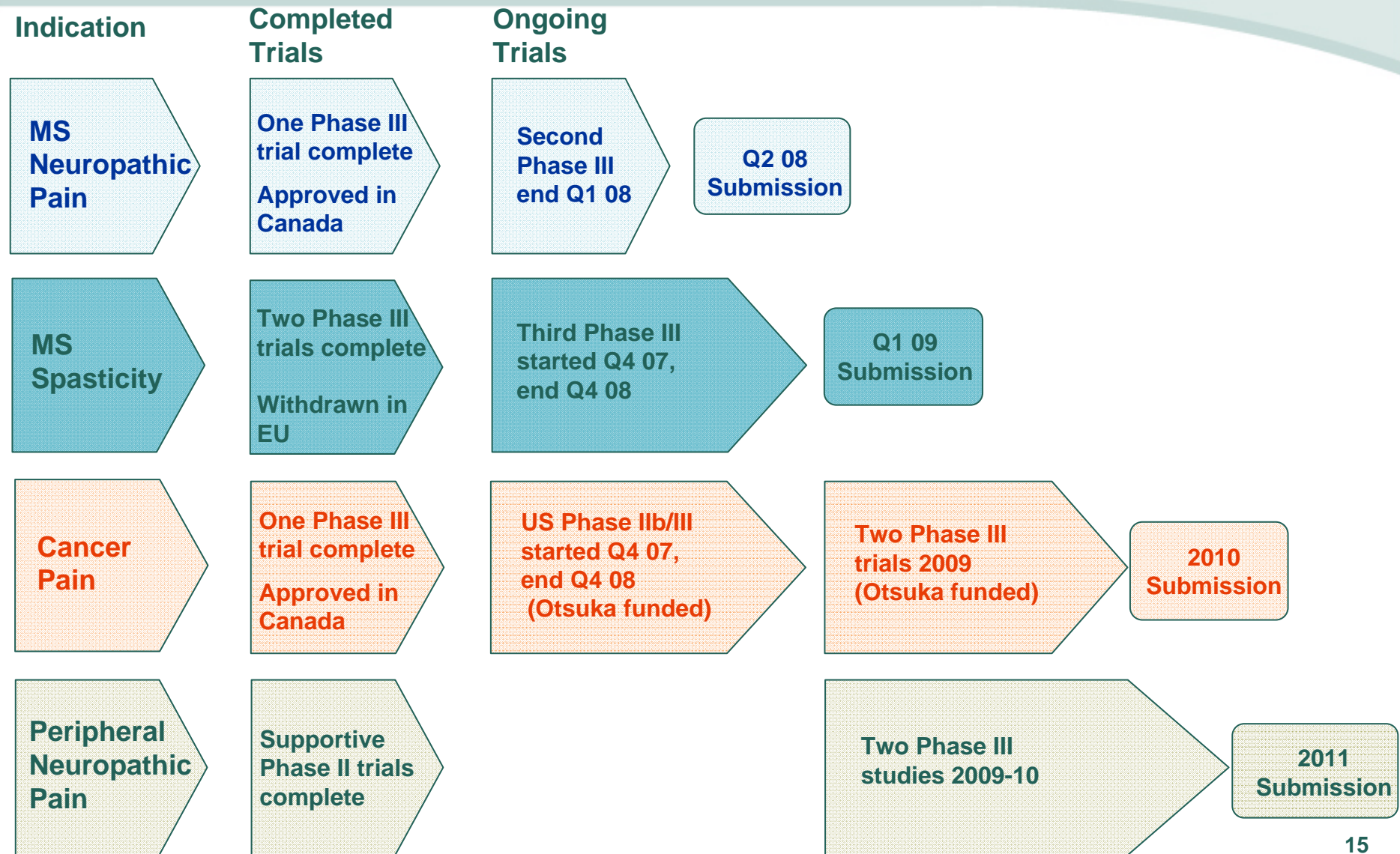
Ongoing Sativex Phase III Trial: MS Neuropathic Pain

- Double-blind placebo controlled study
 - 35 hospital centres in UK, Canada, France, Spain and Czech Republic
- 339 patients recruited
 - Largest GW study to date
 - Largest ever study in MS neuropathic pain
 - All patients have now exited study
- <13% withdrawal rate
 - Significantly lower than previous Sativex studies
- Aim to replicate data from previous positive Phase III trial

Results Due Late Q1 2008

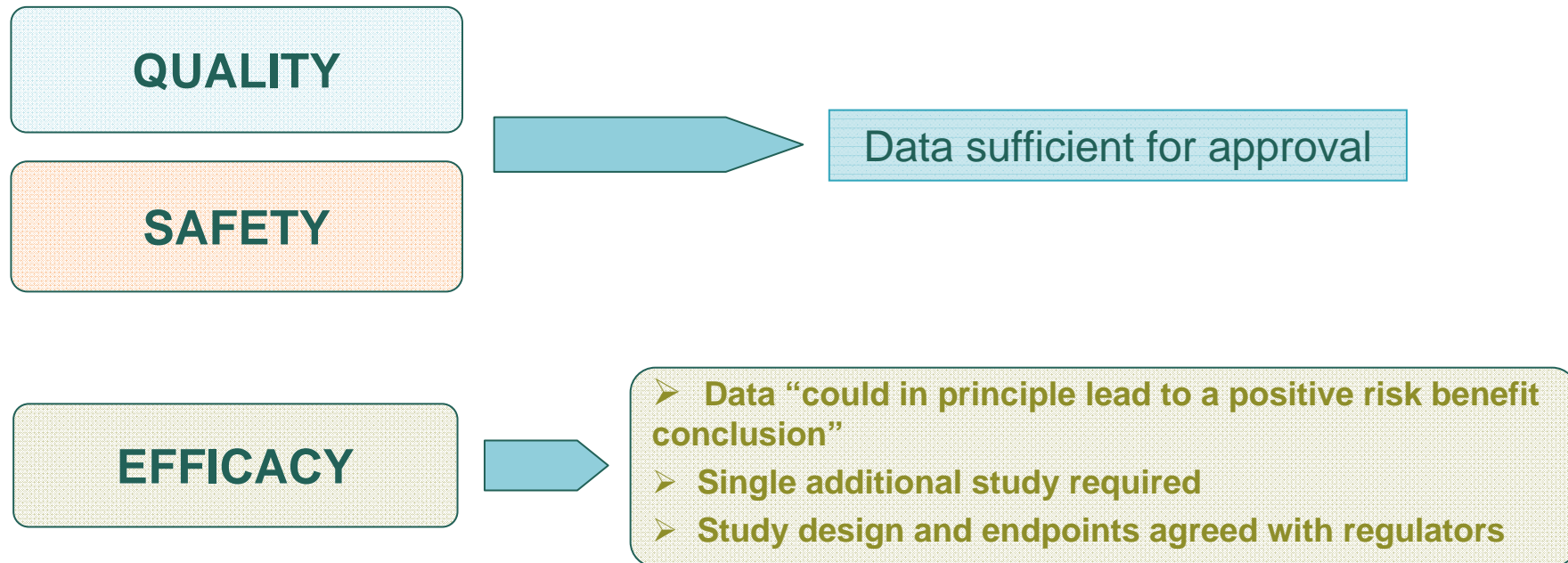
Sativex in Europe: Overview

Four Distinct Regulatory Approval Opportunities



Europe: Sativex MS Spasticity Regulatory Status

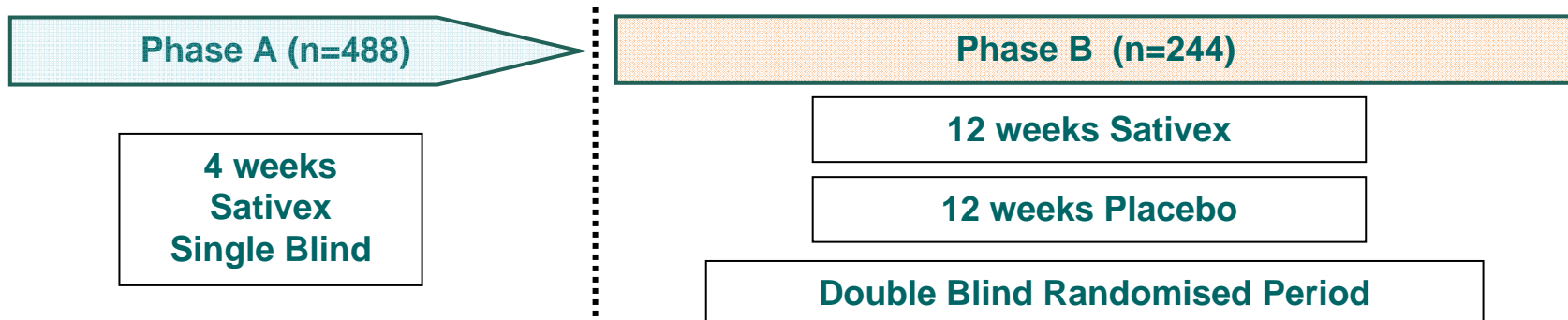
- “Decentralised” submission filed Sept 06, withdrawn Aug 07
 - UK, Spain, Denmark, Netherlands



Route to approval established
Required study commenced Q4 07, results end 08
Conclusions ‘validated’ by subsequent MHRA report

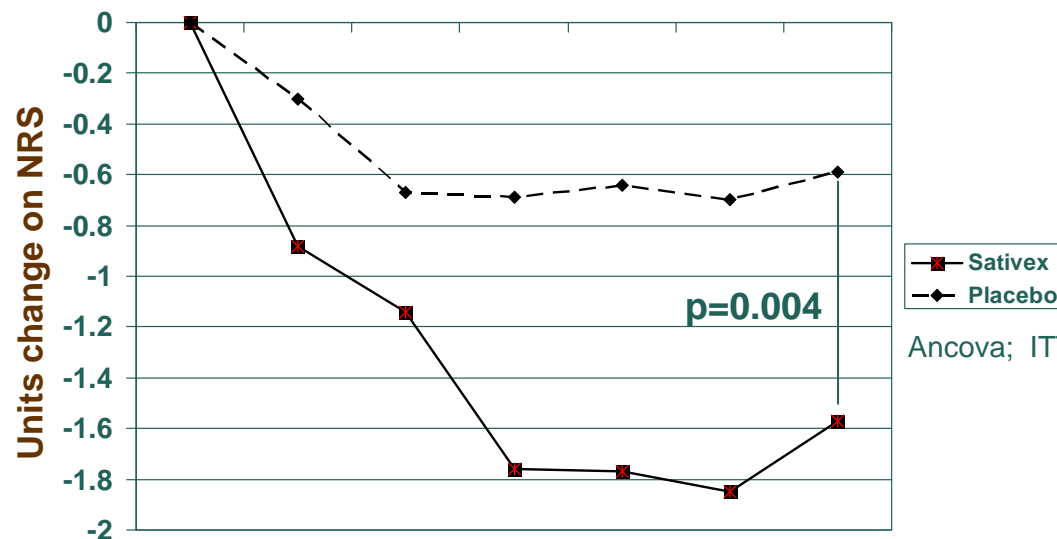
MS Spasticity – Route to EU Approval

- UK regulator, MHRA, published unprecedented Sativex report in Dec 07.
MHRA rationale:
 - “Huge public interest” in Sativex
 - Extent of prescription use of Sativex
- Outstanding efficacy issue to be resolved prior to approval confirmed in report
 - Regulators wish to clarify size of benefit in “responders”
 - “Post hoc” analyses of existing “responders” data show strong results ($p=0.015$)
 - Regulators have asked GW to reconfirm in a prospectively planned study
- New “enriched study” agreed with regulators due to report Q4 08



Peripheral Neuropathic Pain: Example of Completed Phase II Trial

- Peripheral neuropathic pain characterised by allodynia
 - Intractable, treatment-resistant patients, who remain on current medication
 - N=125 (n=63 Sativex, n=62 placebo)
- Positive primary endpoint: significant reduction in pain on Sativex vs placebo (p=0.004)
- Positive secondary endpoints, including sleep disturbance (p=0.001), Pain Disability Index (p=0.003), allodynia (p=0.042)
- Published
 - Nurmikko T, et al. Pain. 2007: doi:10.1016/j.pain.2007.08.028



Ancova; ITT population

GW-Otsuka Cannabinoid Global Research Collaboration

- Signed July 07
 - Otsuka to fund the evaluation of GW cannabinoids as drug candidates within the field of CNS and cancer treatment for an initial 3 year term
- Funding
 - Initial \$9m fund to cover relevant GW operating costs and external collaborations
 - Additional funds committed to specific research activities
- Otsuka to select promising candidates for full clinical development, regulatory approval and global commercialization
- Once selected, Otsuka shall license each product on financial terms to be agreed at the time of selection, to include:
 - Upfront payments, milestones, royalties
 - Otsuka to fund global development



GW-Otsuka Research Collaboration

- Expanding the Pipeline

GW Drug Candidates

- CBD
- CBC
- CBG
- CBN
- THCA
- CBDA
- THCV
- CBDV

Therapeutic Targets

- Schizophrenia
- Bipolar disorder
- Anxiety
- Depression
- Epilepsy
- Opiate/cannabinoid synergies
- Cancer treatment

- Utilising GW's international network of leading cannabinoid scientists, including:
 - Prof Roger Pertwee (*GW Director of Pharmacology, Aberdeen University*)
 - Prof Raphael Mechoulam (*Founder of cannabinoid science, Hebrew University*)
 - Prof Vincenzo di Marzo (*Naples*)

In-House Pipeline Development: Metabolic syndrome

THCV is a neutral antagonist at CB1 receptor

→ allows maintenance of background activity of CB receptors

- Toxicology indicates no safety concerns to date
- Phase I study completed with no tolerability issues at relevant doses
- In several models of diabetes, cannabinoid pharmacology findings include:
 - reduces fasting insulin
 - reduces leptin
 - reduces % body fat
 - increases energy expenditure
 - reduces total cholesterol
 - increases HDL (good) cholesterol
- Multiple patent filings made

Features of Type 2 diabetes, with obesity and hyperlipidemia are favourably affected by THCV

Phase IIa study planned for 2008

Consolidated Profit and Loss Account

Year ended 30 September	2007 \$m	2006 \$m
Revenue – Product sales – UK and Canada	2.2	1.1
– Product sales - Spain	-	1.6
– Signature fees	2.7	1.3
– Development & approval fees	1.5	-
– Research and development fees	5.0	-
Revenue – Total	11.4	4.0

Gross Profit	10.8	3.4
R&D expenditure: GW-funded	(25.0)	(26.2)
R&D expenditure: Otsuka-funded	(5.0)	-
G & A	(6.4)	(7.0)
Share-based payment	(2.2)	(2.6)
Operating loss	(27.8)	(32.4)

Loss before tax	(25.9)	(30.5)
Tax credit	4.0	4.0
Loss after tax	(21.9)	(26.5)

Based on £1.00 = \$2.00.

Cash Flow

Year ended 30 September	2007 \$m	2006 \$m
Operating Loss	(27.8)	(32.4)
Up front development fees received	18.0	21.6
Spanish tax refund	2.5	-
Other working capital movement	4.4	4.3
Operating outflow	(2.9)	(6.5)
Interest received	2.0	1.8
R&D Tax credit	4.0	3.4
Capital Expenditure	(1.0)	(1.2)
Equity – options/share placing	0.1	16.2
Increase in Cash	2.2	13.7

Cash balance – 30th September	42.0	39.8
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Based on £1.00 = \$2.00.

2008 Newsflow

- **Clinical trials**

- Results of MS Neuropathic Pain Phase III trial Q1 08
- Results of Phase III MS Spasticity trial Q4 08
- Results first US cancer pain Phase II/III clinical trial End 08
- Start of Phase II metabolic programme (THCV) H2 08
- Peer review publication of clinical results

- **Regulatory**

- New Zealand approval H2 08
- Resubmission in Europe (MS Pain Q2 08 / MS Spasticity Q1 09)
- Submissions in other countries Q2 08 / Q1 09
- Canadian MS pain approval - unconditional End 08

- **Research**

- Progress of CNS and oncology Otsuka collaboration
- Further metabolic syndrome research
- Publication of pre-clinical metabolic findings

Summary

- GW has a lead position in cannabinoids, a new class of medicine with broad therapeutic potential
- Sativex has significant market potential, is validated by three major licensing agreements, and also supported by strong clinical data
- Sativex is close to approval in four distinct target indications
 - Fully funded US development plan for cancer pain
 - Two short term EU regulatory approval opportunities in MS
- Otsuka agreements signed in 2007 introduce major new value drivers:
 - Sativex US opportunity
 - CNS/Oncology cannabinoid pipeline
- Further pipeline expansion underway in metabolic disease
- Important newsflow expected in 2008

GW Pharmaceuticals plc

