



Medivir at

Avanza's Företagsdag
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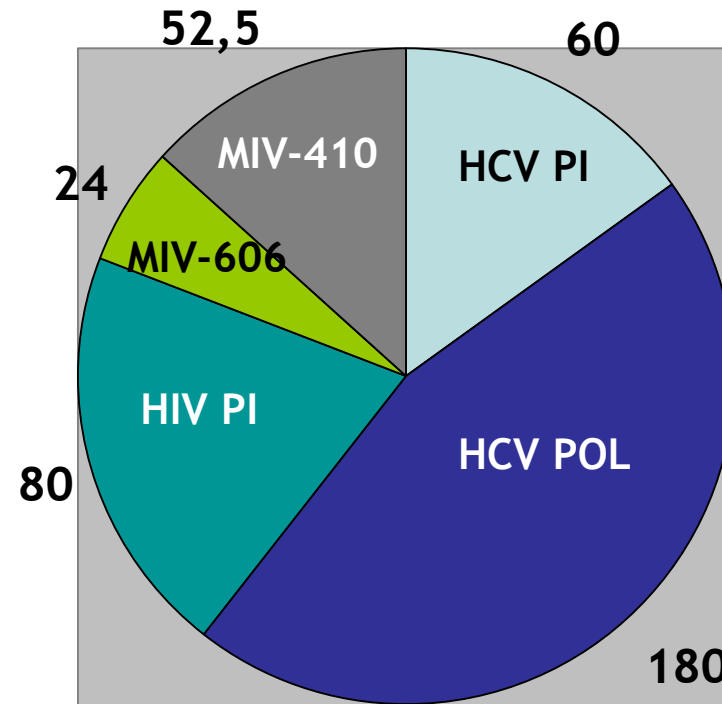


Medivir - Key achievements 2008



- Strong phase IIa data presented for TMC435 (hepatitis C protease inhibitor)
- Our biggest deal ever signed in May with JNJ/Tibotec for hepatitis C polymerase inhibitors (>USD 190m). CD selected yesterday triggered a milestone payment of USD4m
- Applications for approval of Lipsovir (labial herpes) filed and validated in the US and Europe. Approval target date Q3 2009
- Co-promotion deal for GSK products in the Nordic countries
- Strong cash position by end of Q3 (USD 38m)

~USD 400m in remaining milestone payments



- + Royalties on global sales
- + Nordic marketing rights retained
- + All future project expenses covered
- + Research funding in two collaborations

Pipeline December 2008

Prioritized projects

Project	Indication(s)	Partners/ Date of agreement	Terms	Medivir's markets	Explorative phase	Optimization	Preclinical dev.*	Phase I	Phase II	Phase III
Lipsovir® (ME-609)	Labial herpes	In-house			[Green bar spanning all phases]					
TMC435350 (HCV-PI)	Hepatitis C	Tibotec / 2004	EUR 80,5 m + royalties and FTE funding	Nordic region	[Orange bar spanning Explorative phase, Optimization, and Phase I]					
MIV-701 (Cath K)	Osteoporosis, osteoarthritis, bone metastases	In-house			[Orange bar spanning Explorative phase and Optimization]					
Cathepsin K	Osteoporosis, osteoarthritis, bone metastases	In-house			[Orange bar spanning Explorative phase]					
HIV PI	HIV	Tibotec / 2006	EUR 64 m + royalties and FTE funding	Nordic region	[Orange bar spanning Explorative phase]					
HCV POL	Hepatitis C	Tibotec / 2008	EUR 142-272 m + royalties and FTE funding	Nordic region	[Purple bar spanning Explorative phase]					
HCV POL	Hepatitis C	Roche/2003/ inhouse	Undisclosed	Nordic region	[Purple bar spanning Explorative phase]					
COPD PI	COPD	In-house (Hengrui)		World exc. China	[Orange bar spanning Explorative phase]					
Renin	Hypertension	In-house			[Orange bar spanning Explorative phase]					
BACE	Alzheimer's	In-house			[Orange bar spanning Explorative phase]					
Cathepsin S	Rheumatoid arthritis, multiple sclerosis	In-house			[Orange bar spanning Explorative phase]					

Filed for approval

Phase IIb to be initiated

CD selected yesterday

Prioritised preclinical program

■ Protease inhibitor
 ■ Polymerase inhibitor
 ■ Polymerase inhibition/hydrocortisone

* The regulated preclinical development phase.

Pipeline (continued)

Two active phase II trials

Medivir HIV Franchise AB

Project	Indication(s)	Partners/ Date of agreement	Terms	Medivir's markets	Exploratory phase	Optimization	Preclinical dev. ¹	Phase I	Phase II	Phase III	NDA
Valomaciclovir (MIV-606)	Shingles, herpes virus	Epiphany Biosciences / 2006	24.5 MUSD + royalties. Epiphany shares	Nordic region	█	█	█	█	█		
Alovudine (MIV-310)	HIV	Mefuvir/2007	Royalties	World excl. Asia	█	█	█				
MIV-210	Hepatitis B, HIV	Hainan Noken/2007	7 MUSD + royalties	World excl. China, Taiwan and Macao	█	█	█				
MIV-150	HIV	Population Council/2003		Option on 50% of Western world	█	█	█				
MIV-160	HIV	Mefuvir/2007	Mefuvir shares and royalties	World excl. China, Taiwan and Macao	█	█	█				
MIV-410	HIV, CMV	Presidio/2006	52.25 MUSD + royalties. Presidio shares	Nordic region and UK. Option on Europe	█	█	█				
MIV-170	HIV				█	█	█				

● Polymerase inhibition/hydrocortisone ● Protease inhibitor ● Polymerase inhibitor ¹⁾ The regulated preclinical development phase.

Commercial focus in the coming 6-12 months

LIPSOVIR	<ul style="list-style-type: none">◆ Secure optimal partnership structure for both US & EU
HEPATITIS C	<ul style="list-style-type: none">◆ TMC435: start phase IIb trials◆ HCV-Polymerase inhibitors: Potential start of phase I
CATHEPSIN K	<ul style="list-style-type: none">◆ Select follow-on candidate drug◆ Start partnering process
HIV PI	<ul style="list-style-type: none">◆ Candidate drug selection
Other preclinical	<ul style="list-style-type: none">◆ Initiate partner discussions for at least one program
PHARMA SALES	<ul style="list-style-type: none">◆ Continue selling GSK products in Sweden◆ Secure new co-promotion deals and potential own product(s)

Lipsovir®



Lipsovir® summary

- Topical product for the treatment of recurrent labial herpes (cold sores)
- Active ingredients: 5% acyclovir + 1% hydrocortisone in a proprietary cream formulation
- Hits the virus and the immune reaction
- Phase III program completed, including biggest labial herpes trial ever
- Filed for approval in EU/US October 2008. Approval target date Q3 2009
- First product to prevent cold sores
 - Currently marketed products reduce healing time modestly without preventive effect on emerging lesions

Phase III results: Lipsovir prevents cold sores and shortens episodes

- **Primary endpoint = prevention**

Lipsovir[®] prevents cold sores in 42% of subjects with an emerging lesion

- Lipsovir[®] > vehicle ($p < 0.0001$)
- Lipsovir[®] > acyclovir in our vehicle ($p < 0.014$)

Proportion of subjects with non-ulcerative recurrences

- **Secondary endpoint = episode duration**

- Lipsovir[®] > vehicle on episode duration ($p < 0.05$)
- Lipsovir[®] reduces the healing time by 1.6 days

Time from treatment start until loss of hard crust for an *ulcerative* recurrence and from start of treatment to time of no signs or symptoms for a *non-ulcerative* recurrence



**TMC435 - a protease inhibitor in
collaboration with Tibotec**

**Presently in the final stage of phase IIa
for genotype 1 naïve patients**

Phase IIb planning has started



Hepatitis C protease - Medivir/Tibotec - J&J program

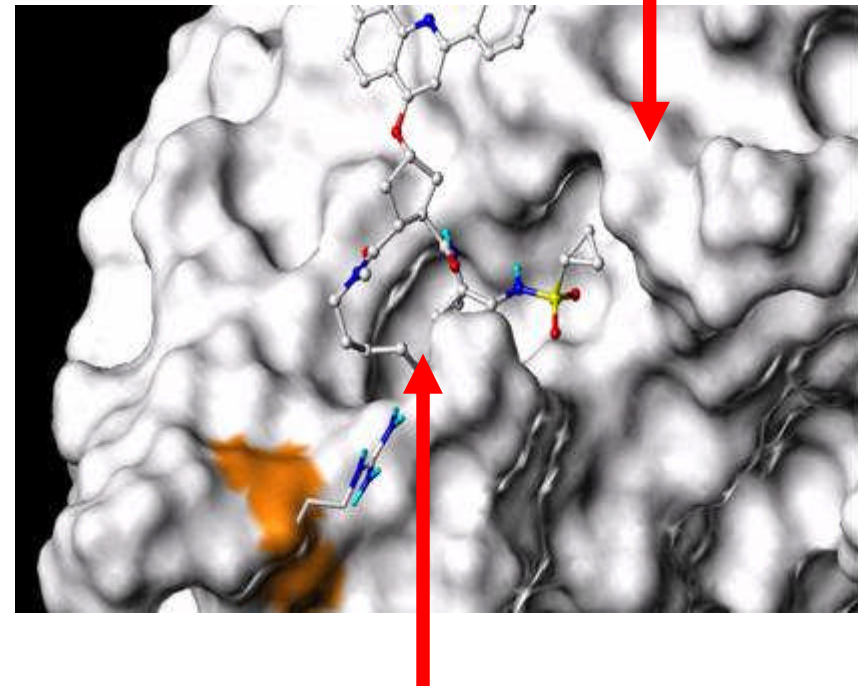
Status

- Planning for phase IIb ongoing
- Phase IIa ongoing
 - Data from 25 and 75 mg dose groups presented in November

Licensing agreement

- Upfront & milestones of EUR 80.5m (EUR 47m remains)
 - + royalties on sales
- All development costs covered by Tibotec
- Nordic rights retained by Medivir

NS3/4A:
Key protease for
virus replication



Enzyme inhibiting compound

TMC435 Phase I trial conclusions

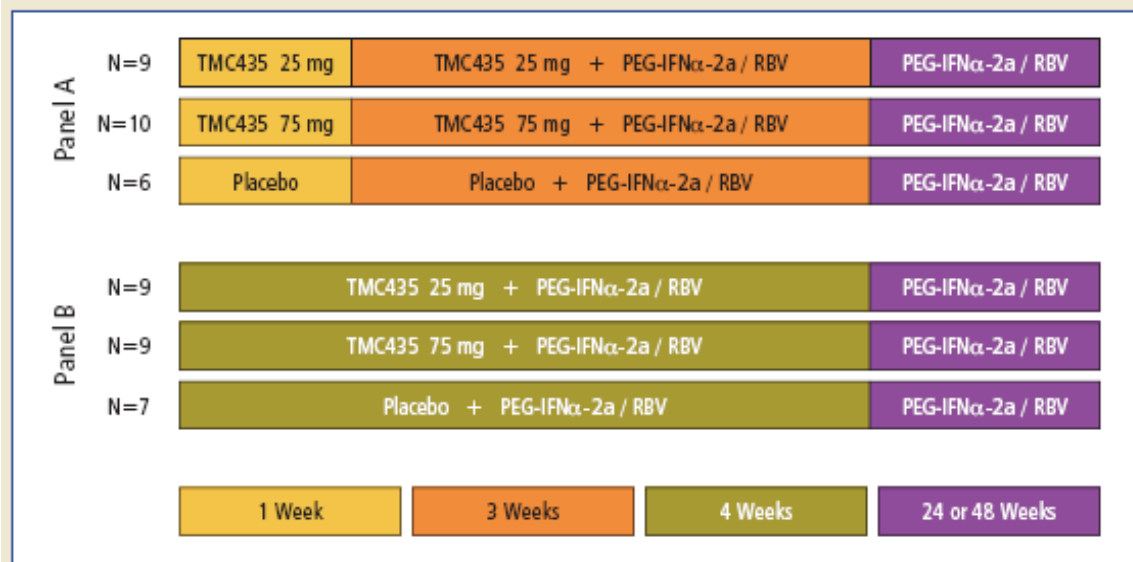
- High potency + favourable PK
 - allow once daily dosing
 - plasma levels far in excess of predicted effect levels in HCV patients
- Five-day treatment with 200 mg once daily resulted in a marked antiviral effect in non-responding HCV G1 patients
- Has been well tolerated in healthy volunteers and HCV patients over 5 days of dosing

TMC435: Data presented at AASLD November 2008

1. Safety data from 25 and 75 mg once daily groups in phase 2a study Opera-1
 - Study is still on-going
 - 200 mg once daily evaluated in treatment naïve patients completed
 - Several doses evaluated in treatment experienced HCV G1 patients
2. PK data from same patient groups in Opera-1
3. In-vitro characterization of inhibitory activity on proteases from genotype 1 to 6

Opera-1: Design of Study, 1st cohort (25 and 75 mg once daily or placebo)

Figure 3: Overview of Study Design of cohort 1 of OPERA-1 trial in treatment-naïve patients.



PegIFN α -2a (180 μ g SC weekly): Pegasys[®]

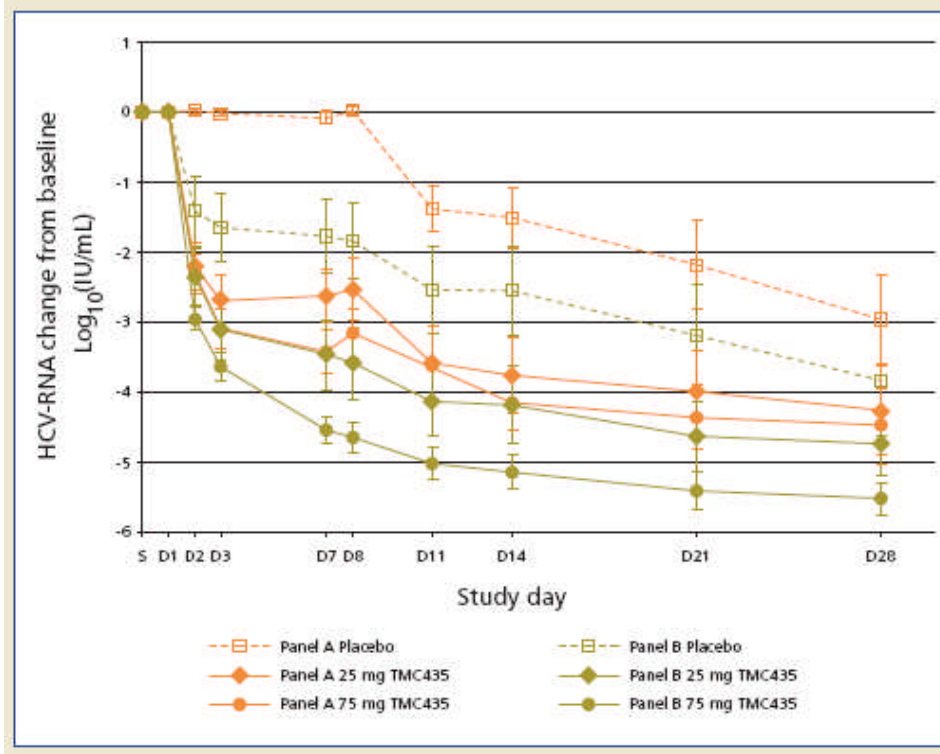
RBV (1000 to 1200 mg daily): Copegus[®]

SoC treatment for 24 or 48 weeks at the discretion of the investigator

Opera-1 (cohort 1): Antiviral efficacy (1)

- Strong dose dependent, antiviral effect, which was more pronounced with 4-weeks triple therapy
- No viral breakthrough observed with 4-week triple therapy with 25 and 75 mg TMC435
- Largest viral load reduction observed in the 75 mg OD:
-5.5 \log_{10} IU/mL

Figure 5: Mean HCV-RNA change per treatment arm from baseline to Day 28



Opera-1 (cohort 1): Antiviral efficacy (2)

Table 3: Mean HCV RNA changes from baseline and number of patients with HCV RNA levels below lower limit of quantification (LLQ) and detection (LLD) per treatment arm.

Dose/Treatment	Time point (Day)	Mean HCV-RNA change (Log ₁₀ IU/mL)	< LLQ n/N <25 IU/mL	< LLD n/N <10 IU/mL
Panel A Placebo	7	-0.08	0/6	0/6
Panel A TMC435 25 mg	7	-2.63	1/9	0/9
Panel A TMC435 75 mg	7	-3.43	0/9	0/9
Panel B Placebo	7	-1.77	0/6	0/6
	14	-2.56	0/6	0/6
	28	-3.83	3/6	2/6
Panel B TMC435 25 mg	7	-3.47	1/9	0/9
	14	-4.19	3/9	1/9
	28	-4.74	6/9	3/9
Panel B TMC435 75 mg	7	-4.55	1/9	0/9
	14	-5.15	7/9	3/9
	28	-5.52	9/9	8/9

RVR of 89%

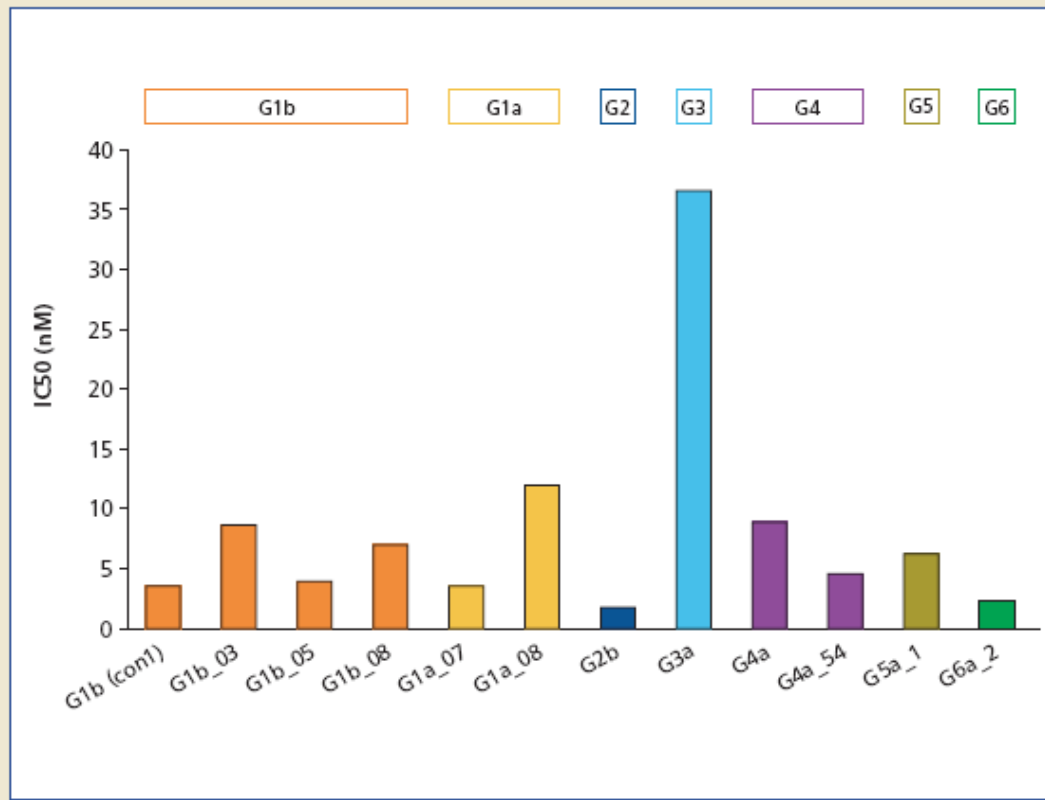
HCV RNA levels were assessed with Roche COBAS Taq Man HCV/HPS assay v2 with an LLQ of 25 IU/mL and an LLD of ~10 IU/mL. To calculate mean HCV RNA values, results below LLQ are imputed with 24 IU/mL and values below LLD with 9 IU/mL.

Opera-1 (cohort 1): Conclusions

- TMC435 25 and 75 mg once daily in combination with SoC (PegINF α -2a / RBV) demonstrated dose-dependent potent antiviral efficacy and a favorable safety profile when dosed up to 28 days in treatment naïve HCV genotype 1 patients
- 4 weeks of triple therapy with 75 mg TMC435 once daily resulted in a viral load reduction of $-5.5 \log_{10}$ IU/mL and 8 of 9 (89%) patients with undetectable virus
- There were no Tx discontinuations during 28 days of TMC435 dosing

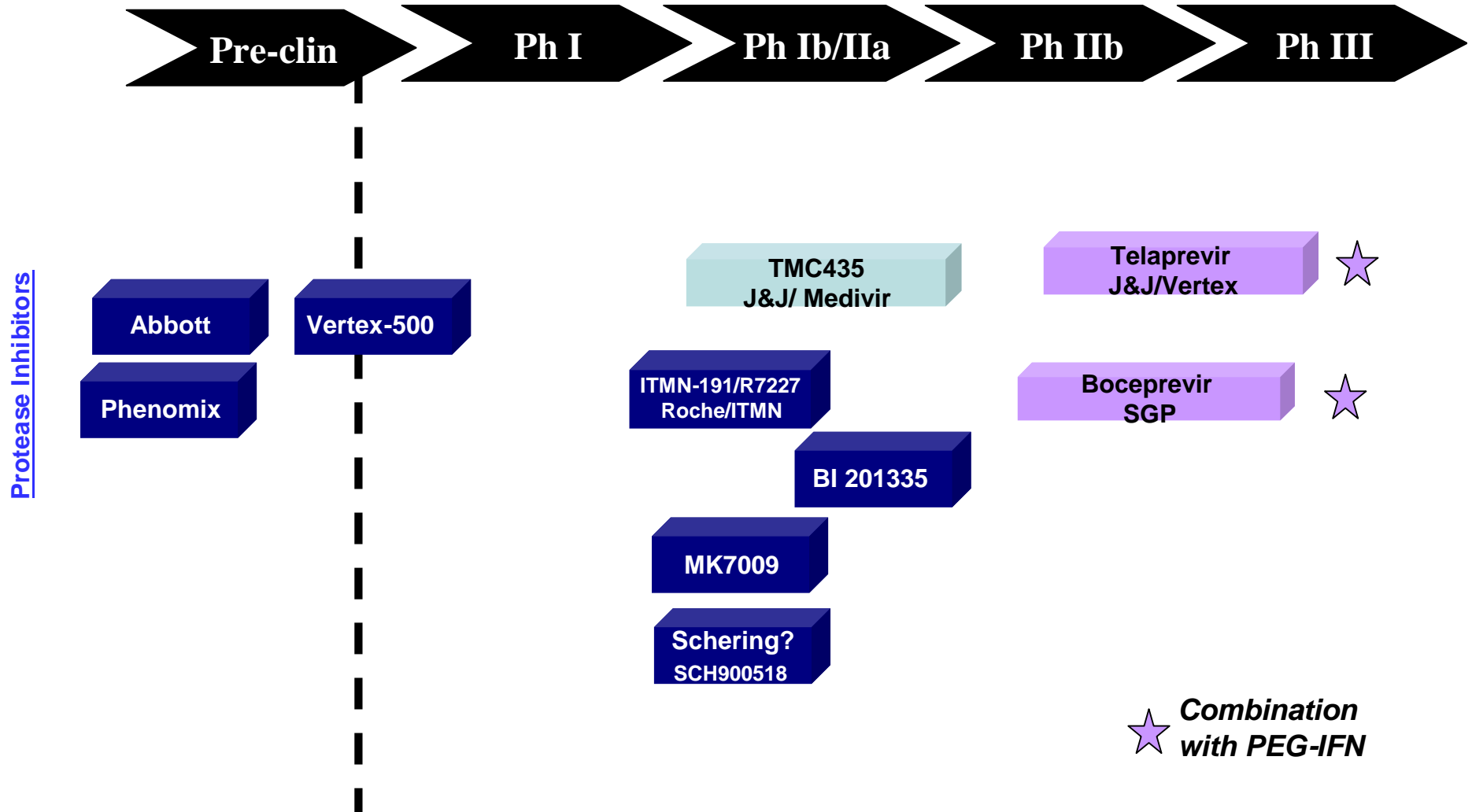
In-vitro inhibition of genotype 1 to 6 proteases

Figure 3: Inhibition of NS3 protease by TMC435 determined in a biochemical protease assay.



TMC435 is a potent inhibitor of NS3/4A protease from genotype 1 to 6, with IC₅₀ values below 13 nM for all except genotype 3A (37 nM)

HCV PI Competitive landscape





In collaboration with
Tibotec Pharmaceuticals

HCV Polymerase

Existing HCV polymerase compounds



Hepatitis C Polymerase - Medivir/J&J program

Status

- CD selected yesterday, triggered a milestone of € 2.6m
- Partnership with Tibotec / Johnson & Johnson since May 15 2008

Process

- Jointly develop Medivir's existing HCV polymerase NS5B inhibitors from preclinical towards clinical development, and screening of Medivir polymerase library's for HCV

Patents

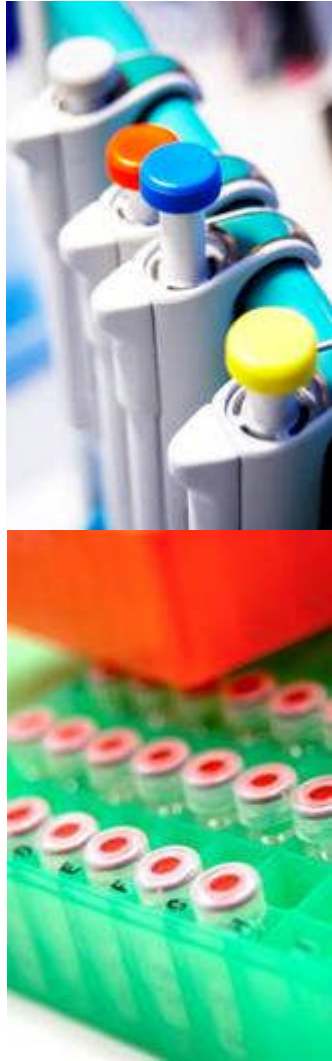
- Extensive and non-limiting IP

Licensing agreement

- Upfront & milestones of € 147m + royalties on sales for one product reaching market.
- Additional € 130m for second compound and indication reaching market + royalties on sales. Will be based on screening of Medivir nucleoside library's
- FTE Funding
- All development costs covered by JNJ
- Nordic rights retained by Medivir



Medivir - Project summary 2008



- Strong phase IIa data presented for TMC435 in HCV patients
 - Phase IIb will soon start
- The hepatitis C polymerase collaboration with JNJ/Tibotec in preclinical development phase towards clinical trials
- Applications for approval of Lipsovir® (labial herpes) filed and validated in the US and Europe. Approval target date Q3 2009