

# **Hyperion Therapeutics Inc**

### **CORTELLIS COMPANY DETAILED PIPELINE REPORT**

A comprehensive coverage of the the company's drug pipeline portfolio including detailed product records.

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## ABOUT CORTELLIS COMPANY DETAILED PIPELINE REPORT

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#### **GLOSSARY**

#### **Number of Drugs in Active Development**

Number of drugs associated with the company or subsidiary that are currently in active development, i.e. the development status for the drug(s) is one of the following: Discovery, Clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched, or Suspended.

### **Number of Inactive Drugs**

Number of drugs associated with the company or subsidiary that are currently classified as inactive, i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.

#### **Number of Patents as Owner**

Number of patents associated with the company where the company is listed as owner; i.e. the relationship type (or way the patent refers to the company) is: Patent Assignee/Owner, Patent owner (not assignee), Licensee for development and marketing, Licensee – marketing only (Distributor), Patent assignee of family member, Inferred assignee.

#### **Number of Patents as Third Party**

Number of patents associated with the company where the company is listed as third party; i.e. the relationship type (or way the patent refers to the company) is: Patent assignee (not owner), Ex-Licensee for development and marketing, Ex-Licensee marketing only (Distributor), Customer of technology, Ex-Customer of technology, Patent opponent or infringer, Affiliate organization of inventor, Owner of underlying technology.

#### Patents summary table

This table represents a summary of the core patent coverage for this company covering Therapeutic EP, US and WO patents since 1990 only.

#### **Number of Deals**

A count of deals where the company or one of its subsidiaries is the primary company.

#### **Key Indications**

Displays top ten key indications for the company and its subsidiaries based on frequency (indications occurring with high and identical frequency are always included, and this may result in more than ten Key Indications being listed). Includes both indications associated with patents where the company is patent owner and indications associated with drugs in active development. A drug is classified as 'active' if it features on a row (or rows) in the current development status table where the status is one of the following: Discovery, Clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched, or Suspended.

#### **Key Target-based Actions**

Displays top ten key target-based actions for the company and its subsidiaries based on frequency (actions occurring with high and identical frequency are always included, and this may result in more than ten Key Target-based Actions being listed). Includes both target-based actions associated with patents where the company patent owner and target-based actions associated with drugs in active development. A drug is classified as 'active' if it features on a row (or rows) in the current development status table where the status is one of the following: Discovery, Clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched, or Suspended. A target-based action is one that is associated with a target.

#### **Key Technologies**

Displays top ten key technologies for the company and its subsidiaries based on frequency (technologies occurring with high and identical frequency are always included, and this may result in more than ten Key Technologies being listed). Includes both key technologies associated with patents where the company relationship is patent owner and key technologies associated with drugs in active development. A drug is classified as 'active' if it features on a row (or rows) in the current development status table where the status is one of the following: Discovery, Clinical, Phase I, Phase II, Phase III, Pre-registration, Registered, Launched, or Suspended.

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## **Hyperion Therapeutics Inc**

### **COMPANY OVERVIEW**

Company Name	Hyperion Therapeutics Inc	
Parent Company Name	Hyperion Therapeutics Inc	
Website	http://www.hyperiontx.com/	
Country	US	
Number of Drugs in Active Development	2	
Number of Inactive Drugs	0	
Number of Patents as Owner	3	
Number of Patents as Third Party	0	
Number of Deals	1	
Key Indications	Hepatic encephalopathy, Hyperammonemia, Uremia	
Key Target-based Actions		
Key Technologies	Prodrug	

### **COMPANY PROFILE**

#### **SUMMARY**

Hyperion Therapeutics Inc focuses on gastrointestinal and hepatology programs and products that address unmet medical needs to improve patient care.

#### **FINANCIAL**

In April 2012, Hyperion filed a registration statement with the SEC for the issual of initial public offering of its common stock; at that time, the offering details were not disclosed; in July 2012, the company priced its initial public offering of 5 million shares of its common stock at \$10 per share. At that time, underwriters were granted 30-day option to purchase up to an additional 750,000 shares of common stock to cover any over-allotments. The offering was expected to close on July 31, 2012; later that month, the offering was completed, with underwriters exercising their overallotment option in full.

In June 2009, Hyperion rasied \$60 million from a series C financing.

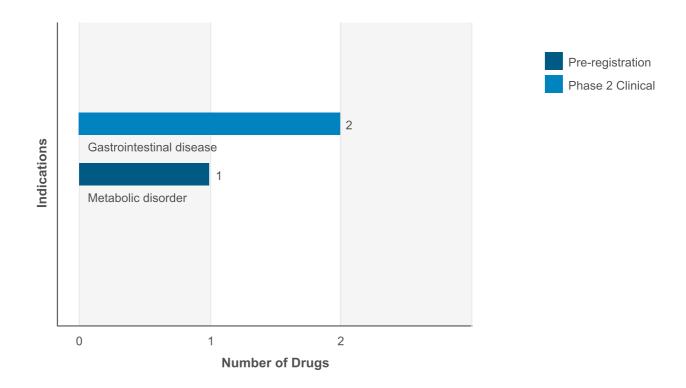
In September 2007, Hyperion raised \$4 million from a series B financing.

## PRODUCT PORTFOLIO SUMMARY

## **DRUGS**

## Drugs by Indication

Active Drugs by Indication Chart

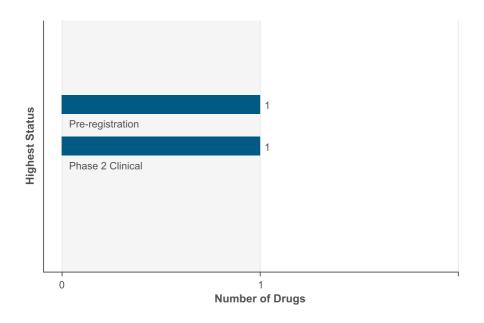


## Drugs by Indication Table

Indication	Active	Inactive	Total
Gastrointestinal disease	2	0	2
Metabolic disorder	1	0	1

### **Drugs by Highest Status**

Active Drugs by Highest Status Chart



## Drugs by Highest Status Table

Development Status	Number of Drugs
Pre-registration	1
Phase 2 Clinical	1

### **DEALS**

Deal Type	Prin	cipal	Par	tner	Total
	Active	Inactive	Active	Inactive	
Drug - Development/Commercialization License	0	0	1	0	1

### **CLINICAL TRIALS**

### Trials by Condition Studied

Condition Studied	Ongoing	All
Metabolic disorder	1	9
Genitourinary disease	1	7
Gastrointestinal disease	1	7
Genetic disorder	0	1



### Trials by Phase

Phase	Ongoing	All
Phase 4	1	1
Phase 3	0	3
Phase 2	0	5
Phase 1	0	4

#### **Phase Definitions**

### Phase 3 Clinical

Includes Phase 3, Phase 3b, Phase 3a, Phase 2/3 (where enrolment count is 300 or over)

#### Phase 2 Clinical

Includes Phase 2, Phase 2a, Phase 2b, Phase 1/2 (where enrolment count is 100 or over), Phase 2/3 (where enrolment count is under 300 or not specified)

#### Phase 1 Clinical

Includes Phase 1, Phase 1a, Phase 1, Phase 1/2 (where enrolment count is under 100 or not specified), Phase 0

#### **PATENTS** \*

Indication	As Owner	As Third Party	Total
Neoplasm	1	0	1
Metabolic disorder	2	0	2
Neurological disease	1	0	1
Degeneration	1	0	1
Genitourinary disease	2	0	2
Gastrointestinal disease	2	0	2
Hematological disease	1	0	1

<sup>\*</sup> This table represents a summary of the core patent coverage for this company covering Therapeutic EP, US and WO patents since 1990 only.

### PRODUCT PORTFOLIO DRUG PIPELINE DETAIL

PLEASE NOTE: Highest status refers to highest development of that drug for one of the active companies

## sodium phenylacetate + sodium benzoate (hyperammonemia), Ucyclyd

#### sodium phenylacetate + sodium benzoate (hyperammonemia), Ucyclyd SNAPSHOT

Drug Name	sodium phenylacetate + sodium benzoate (hyperammonemia), Ucyclyd
Key Synonyms	Ammonul
Originator Company	Ucyclyd Pharma Inc
Active Companies	Hyperion Therapeutics Inc;Ucyclyd Pharma Inc
Inactive Companies	
Highest Status	Launched
Active Indications	Hepatic encephalopathy;Hyperammonemia
Target-based Actions	
Other Actions	Nitrogen metabolism modulator
Technologies	Drug combination;Intravenous formulation;Small molecule therapeutic
Last Change Date	18-Oct-2011

sodium phenylacetate + sodium benzoate (hyperammonemia), Ucyclyd DEVELOPMENT PROFILE

#### **SUMMARY**

Ucyclyd Pharma has developed and launched Ammonul, a combination of sodium phenylacetate + sodium benzoate, as an ammonia scavenger for the iv treatment of hyperammonemia. Licensee Hyperion Therapeutics is developing the drug for the potential treatment of hepatic encephalopathy. In December 2007, Hyperion began a phase II trial in patients with hepatic encephalopathy which was expected to be completed in February 2009.

sodium phenylacetate + sodium benzoate (hyperammonemia), Ucyclyd DEVELOPMENT STATUS

### **CURRENT DEVELOPMENT STATUS**

Company	Indication	Country	<b>Development Status</b>	Date
Ucyclyd Pharma Inc	Hyperammonemia	US	Launched	28-Aug-2007
Hyperion Therapeutics Inc	Hepatic encephalopathy	US	Phase 2 Clinical	31-Dec-2007

sodium phenylacetate + sodium benzoate (hyperammonemia), Ucyclyd CHEMICAL STRUCTURES

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CAC Degister, Number		Confidence Level
CAS Registry Number:		Confidence Level:
		2
	0 Na+	0 Na+
Name		Туре
Ammonul		Trade Name

Name	Туре
Ammonul	Trade Name
sodium phenylacetate + sodium benzoate	

CAS Registry Number:	Confidence Level:
65-85-0	2
00-00-0	
	o 
	ОН
	J
~	
N	1-
Name	Туре
benzoic acid	

CAS Registry Number:	Confidence Level:
103-82-2	2
	ОН
Name	Туре
phenylacetic acid	



## sodium phenylacetate + sodium benzoate (hyperammonemia), Ucyclyd DRUG NAMES

Names	Type
sodium phenylacetate + sodium benzoate (hyperammonemia), Ucyclyd	
sodium phenylacetate + sodium benzoate	
Ammonul	Trade Name

### sodium phenylacetate + sodium benzoate (hyperammonemia), Ucyclyd CLINICAL TRIALS

### Trials by Phase and Condition Studied

	se 4 lical		se 3 nical		se 2 nical	Phase 1 Clinical				Pha Unspe		То	tal
On- going	All	On- going	All	On- going	All	On- going	All	On- going	All	On- going	All		
Hepatic encephalopathy													
0	0	0	0	0	1	0	0	0	0	0	1		

### Total Trials by Phase and Status

	se 4 nical		ise 3 nical		hase 2 Phase linical Clinica			Phase Unspecified		Total	
On- going	All	On- going	All	On- going	All	On- going	All	On- going	All	On- going	All
Total by	Total by Phase and Status										
0	0	0	0	0	1	0	0	0	0	0	1

#### **Phase Definitions**

### Phase 3 Clinical

Includes Phase 3, Phase 3b, Phase 3a, Phase 2/3 (where enrolment count is 300 or over)

#### Phase 2 Clinical

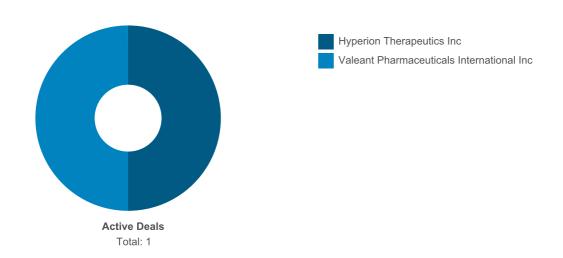
Includes Phase 2, Phase 2a, Phase 2b, Phase 1/2 (where enrolment count is 100 or over), Phase 2/3 (where enrolment count is under 300 or not specified)

### Phase 1 Clinical

Includes Phase 1, Phase 1a, Phase 1, Phase 1/2 (where enrolment count is under 100 or not specified), Phase 0

DEALS

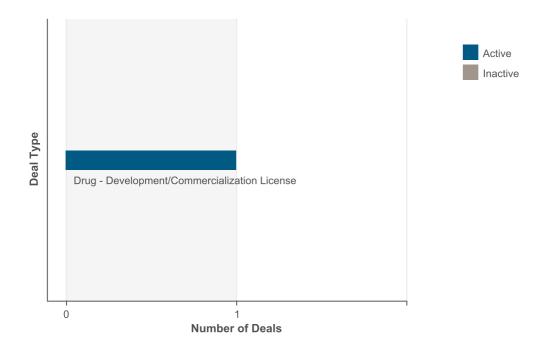
Deals by Parent Company Chart



### **Deals by Parent Company Table**

Company Name	Principal Active Inactive		Partner Active Inactive		Total
Hyperion Therapeutics Inc	0	0	1	0	1
Valeant Pharmaceuticals International Inc	1	0	0	0	1

## **Deals by Type Chart**



## **Deals by Type Table**

Deal Type	Active	Inactive	Total
Drug - Development/Commercialization License	1	0	1

## glycerol phenylbutyrate

#### glycerol phenylbutyrate SNAPSHOT

Drug Name	glycerol phenylbutyrate
Key Synonyms	glycerol phenylbutyrate;Ravicti
Originator Company	Ucyclyd Pharma Inc
Active Companies	Hyperion Therapeutics Inc
Inactive Companies	Ucyclyd Pharma Inc
Highest Status	Pre-registration
Active Indications	Hyperammonemia;Hepatic encephalopathy
Target-based Actions	
Other Actions	Nitrogen metabolism modulator
Technologies	Prodrug;Oral formulation;Oral liquid formulation;Small molecule therapeutic
Last Change Date	08-Dec-2012

### glycerol phenylbutyrate DEVELOPMENT PROFILE

#### **SUMMARY**

Hyperion Therapeutics, under license from Ucyclyd Pharma, has developed Ravicti, an oral liquid formulation of ammonia-scavenging glycerol phenylbutyrate (HPN-100, glyceryl tri-(4-phenylbutyrate), GT4P), a prodrug of phenylbutyrate (pre-prodrug of phenylacetate), for the potential treatment of urea cycle disorders (UCD) and hepatic encephalopathy (HE),. By March 2012, an NDA for use of drug as an adjunctive therapy for chronic management of urea cycle disorders was under review by the FDA. The PDUFA date was set for October 23, 2012; in September 2012, the FDA extended the PDUFA date to January 23, 2013. In October 2009, a US phase III trial for UCD began. In October 2009, a phase II trial was initiated for hepatic encephalopathy in the US and Eastern Europe; in June 2012, data were reported.

#### glycerol phenylbutyrate DEVELOPMENT STATUS

#### **CURRENT DEVELOPMENT STATUS**

Company	Indication	Country	<b>Development Status</b>	Date
Hyperion Therapeutics Inc	Hyperammonemia	US	Pre-registration	22-Mar-2012
Hyperion Therapeutics Inc	Hepatic encephalopathy	Eastern Europe	Phase 2 Clinical	03-Dec-2009
Hyperion Therapeutics Inc	Hepatic encephalopathy	US	Phase 2 Clinical	08-Oct-2009
Ucyclyd Pharma Inc	Hepatic encephalopathy	US	Discontinued	28-Aug-2007
Ucyclyd Pharma Inc	Hyperammonemia	US	Discontinued	28-Aug-2007



## glycerol phenylbutyrate CHEMICAL STRUCTURES

CAS Registry Number:	Confidence Level:
611168-24-2	2
Name	Туре
glycerol phenylbutyrate	INN; USAN
GT4P	Research Code
HPN-100	Research Code
glyceryl tri-(4-phenylbutyrate)	

## glycerol phenylbutyrate DRUG NAMES

Names	Туре
HPN-100	Research Code
glyceryl tri-(4-phenylbutyrate)	
glycerol phenylbutyrate	INN, USAN
GT4P	Research Code
Ravicti	Trade Name

## glycerol phenylbutyrate CLINICAL TRIALS

### Trials by Phase and Condition Studied

	Phase 4 Phase 3 Clinical Clinical		Phase 2 Clinical		Phase 1 Clinical		Phase Unspecified		Total		
On- going	All	On- going	All	On- going	All	On- going	All	On- going	All	On- going	All
Uremia											
1	1	0	1	0	2	0	3	0	0	1	7



Hepatic encephalopathy											
1	1	0	0	0	2	0	3	0	0	1	6
Hyperam	Hyperammonemia										
1	1	0	0	0	2	0	2	0	0	1	5
Liver cirrhosis											
0	0	0	0	0	1	0	0	0	0	0	1
Genetic	Genetic disorder										
0	0	0	1	0	0	0	0	0	0	0	1
Metabolic disorder											
0	0	0	1	0	0	0	0	0	0	0	1

## Total Trials by Phase and Status

Phase 4 Clinical		Phase 3 Clinical		Phase 2 Clinical		Phase 1 Clinical		Phase Unspecified		Total	
On- going	All	On- going	All	On- going	All	On- going	All	On- going	All	On- going	All
Total by Phase and Status											
1	1	0	3	0	4	0	4	0	0	1	12

### **Phase Definitions**

#### Phase 3 Clinical

Includes Phase 3, Phase 3b, Phase 3a, Phase 2/3 (where enrolment count is 300 or over)

#### Phase 2 Clinical

Includes Phase 2, Phase 2a, Phase 2b, Phase 1/2 (where enrolment count is 100 or over), Phase 2/3 (where enrolment count is under 300 or not specified)

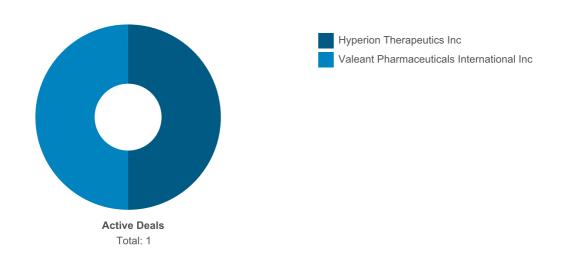
#### Phase 1 Clinical

Includes Phase 1, Phase 1a, Phase 1, Phase 1/2 (where enrolment count is under 100 or not specified), Phase 0

## glycerol phenylbutyrate DEALS AND PATENTS

DEALS

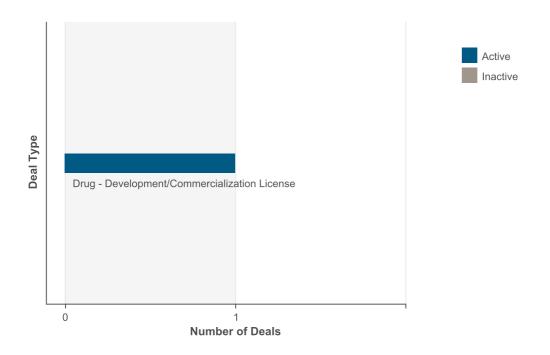
Deals by Parent Company Chart



### **Deals by Parent Company Table**

Company Name	Prir	ncipal	Partner		Total
	Active	Inactive	Active	Inactive	
Hyperion Therapeutics Inc	0	0	1	0	1
Valeant Pharmaceuticals International Inc	1	0	0	0	1

## **Deals by Type Chart**



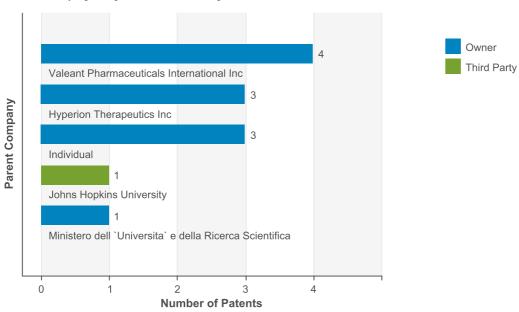
## **Deals by Type Table**

Deal Type	Active	Inactive	Total
Drug - Development/Commercialization License	1	0	1

#### **PATENTS**

### **Patents by Parent Company Chart**

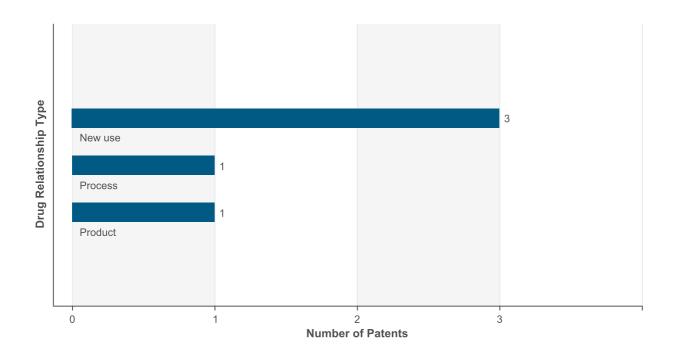
Chart displayed by Owner/Third Party



## **Patents by Parent Company Table**

Company Name	As Owner	As Third Party	Total
Valeant Pharmaceuticals International Inc	4	0	4
Individual	3	0	3
Hyperion Therapeutics Inc	3	0	3
Ministero dell `Universita` e della Ricerca Scientifica	1	0	1
Johns Hopkins University	0	1	1

## **Patents by Drug Relationship Type Chart**



## **Patents by Drug Relationship Type Table**

Drug Relationship	Total
New use	3
Process	1
Product	1

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