

## **Dermira 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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## 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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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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# Dermira Inc

## COMPANY OVERVIEW

Company Name	Dermira Inc
Parent Company Name	Dermira Inc
Website	http://dermira.com/
Country	US
Number of Drugs in Active Development	5
Number of Inactive Drugs	2
Number of Patents as Owner	3
Number of Patents as Third Party	1
Number of Deals	1
Key Indications	Acne,Psoriasis,Hyperhidrosis,Sebaceous gland disease,Acne vulgaris,Atopic dermatitis,Rosacea,Angina,Brain infarction,Cardiac failure,Coronary artery disease,End stage renal disease,Hearing disorder,Heart disease,Hypertension,Myocardial disease,Neurodegenerative disease,Parkinsons disease,Peripheral vascular disease,Pigment
Key Target-based Actions	Acetylcholine receptor antagonist,5-Lipoxygenase activating protein inhibitor,5-Lipoxygenase inhibitor,Muscarinic receptor antagonist
Key Technologies	Dermatological formulation,Small molecule therapeutic,Crystalline form,Formulation preservation

## COMPANY PROFILE

### SUMMARY

Dermira was established in late 2010 and is focused on the development and commercialization of innovative therapeutics for dermatological disorders.

### ACQUISITIONS & SPIN-OFFS

In October 2011, the company acquired Valocor Therapeutics.

### FINANCIAL

In December 2014, the company was added to the Russell 2000 Index.

In October 2014, the company was to sell 468,750 shares of its common stock, at a price of \$16 each, through a private placement to UCB SA. In October 2014, the company raised approximately \$120.3 million that included proceeds from the IPO and the private placement.

In October 2014, the company priced its initial public offering of 7,812,500 shares of common stock at a price of \$16 each and granted the underwriters a 30-day option to purchase up to an additional 1,171,875 shares. At that time, the shares began trading on the NASDAQ Global Market under the symbol "DERM". Later that month, the offering was completed. At that time, the company raised approximately \$120.3 million that included proceeds from the IPO and the private placement.

In August 2014, the company raised \$51 million in a series C financing.

In June 2013, Dermira raised \$35 million in a series B financing and related transaction.

In October 2011, the company secured \$42 million in a series A financing round.

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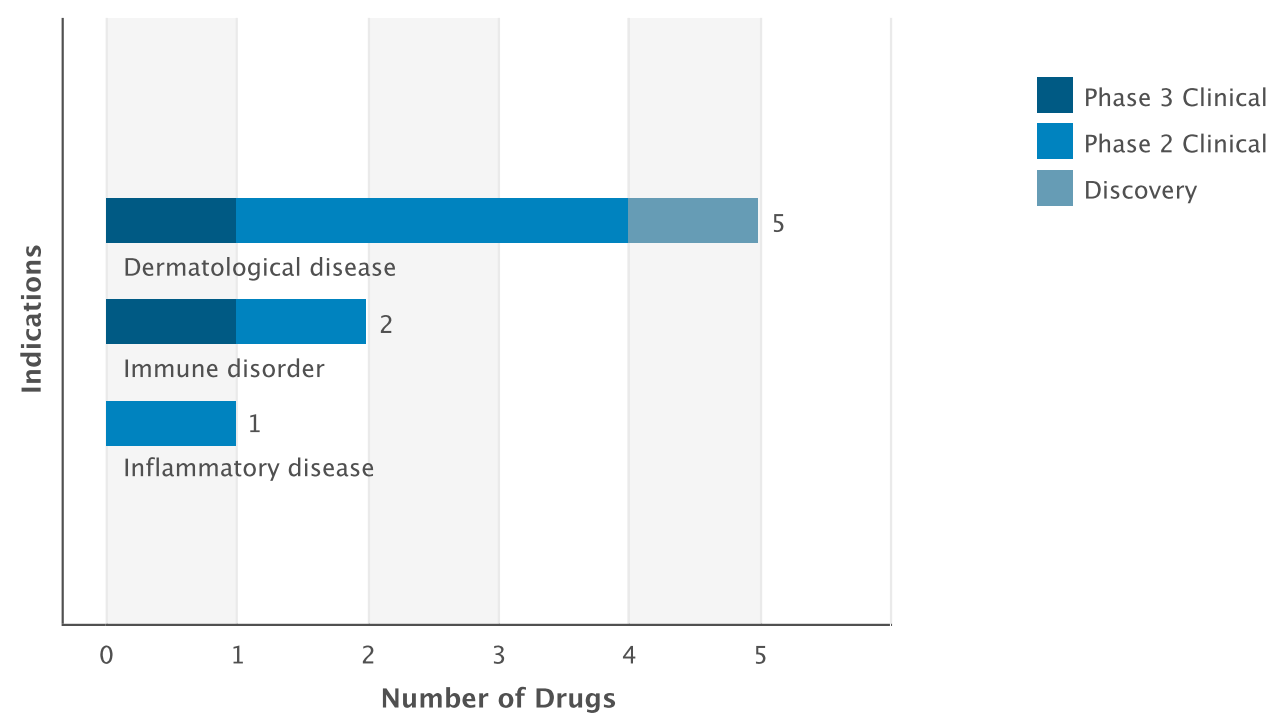


# PRODUCT PORTFOLIO SUMMARY

## DRUGS

### Drugs by Indication

Active Drugs by Indication Chart



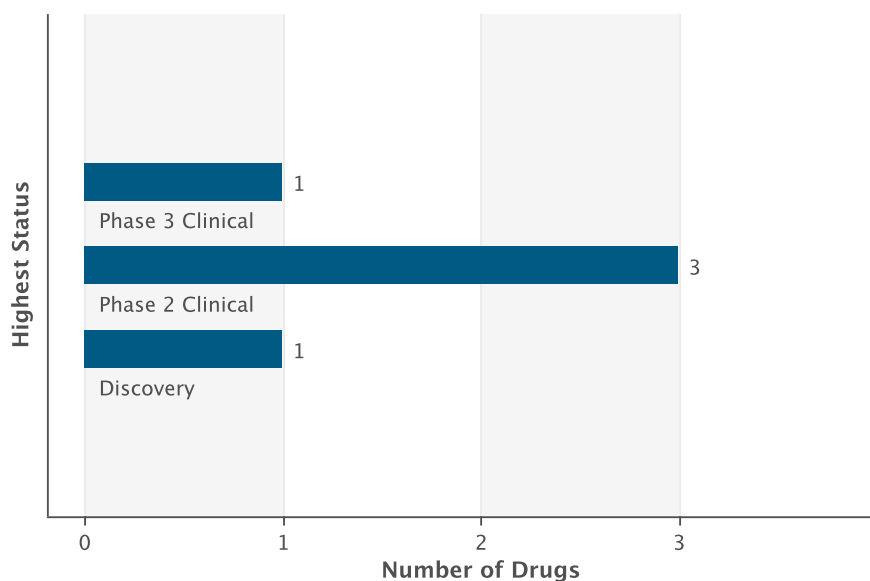
Drugs by Indication Table

Indication	Active	Inactive	Total
Dermatological disease	5	2	7
Immune disorder	2	1	3
Inflammatory disease	1	0	1

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## Drugs by Highest Status

Active Drugs by Highest Status Chart



Drugs by Highest Status Table

Development Status	Number of Drugs
Phase 3 Clinical	1
Phase 2 Clinical	3
Discovery	1
No Development Reported	2

## DEALS

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

## CLINICAL TRIALS

Trials by Condition Studied

Condition Studied	Ongoing	All
Dermatological disease	3	10
Immune disorder	2	4
Inflammatory disease	0	1

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## Trials by Phase

Phase	Ongoing	All
Phase 3	2	2
Phase 2	1	8
Phase 1	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

## PATENTS \*

Indication	As Owner	As Third Party	Total
Cardiovascular disease	0	1	1
Genitourinary disease	0	1	1
Immune disorder	1	0	1
Metabolic disorder	1	0	1
Neurological disease	1	1	2
Otorhinolaryngological disease	1	0	1
Dermatological disease	3	0	3

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

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## PRODUCT PORTFOLIO DRUG PIPELINE DETAIL

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

### certolizumab pegol

#### certolizumab pegol SNAPSHOT

<b>Drug Name</b>	certolizumab pegol
<b>Key Synonyms</b>	Cimzia;certolizumab pegol
<b>Originator Company</b>	UCB Celltech
<b>Active Companies</b>	AstraZeneca plc;Dermira Inc;Orient Europharma;Astellas Pharma Inc;NewBridge Pharmaceuticals Ltd;UCB SA;Laboratorios Farmaceuticos Rovi
<b>Inactive Companies</b>	UCB Celltech;Otsuka Pharmaceutical Co Ltd;Pfizer Inc;Pharmacia Corp
<b>Highest Status</b>	Launched
<b>Active Indications</b>	Rheumatoid arthritis;Ulcerative colitis;Psoriatic arthritis;Psoriasis;Juvenile rheumatoid arthritis;Ankylosing spondylitis;Spondylarthritis;Crohns disease
<b>Target-based Actions</b>	TNF alpha ligand inhibitor;TNF antagonist
<b>Other Actions</b>	Anti-inflammatory;TNF binding agent;Systemic antipsoriatic product
<b>Technologies</b>	PEGylated formulation;Biological therapeutic;Subcutaneous formulation;Solution;Freeze drying;Protein recombinant;Monoclonal antibody humanized;Antibody fragment;Protein conjugated
<b>Last Change Date</b>	09-Jun-2015

#### certolizumab pegol DEVELOPMENT PROFILE

##### SUMMARY

UCB SA (formerly Celltech) and Japanese licensee Astellas has developed and launched certolizumab pegol (Cimzia; CDP-870), a recombinant PEGylated anti-TNF-alpha humanized monoclonal antibody fragment for sc administration. The product is indicated in the US for reducing the signs and symptoms of Crohn's disease (CD) and maintaining clinical response in adults with moderately to severely active disease who have had an adequate response to conventional therapy. Certolizumab pegol is also indicated in the US for the treatment of adults with moderately to severely active rheumatoid arthritis (RA), active psoriatic arthritis and ankylosing spondylitis (AS); in the EU for the treatment of adult patients with severe active axial spondyloarthritis (SpA) and adults with severe active AS, including adults without radiographic evidence of AS, who have had an inadequate response to, or are intolerant to nonsteroidal anti-inflammatory drugs (NSAIDs); and in the EU in combination with methotrexate (MTX) for the treatment of moderate to severe active RA in adults inadequately responsive to disease-modifying antirheumatic drugs (DMARDs), including MTX and in combination with MTX, for the treatment of active psoriatic arthritis in adults when the response to previous DMARD therapy has been inadequate. The product is indicated in Japan for RA (including inhibition of progression of bone structural damage) .

In January 2008, certolizumab pegol was first launched for CD in Switzerland. Certolizumab pegol was launched for CD in the US in April 2008. By March 2010, UCB had concluded that certolizumab pegol would not be approvable in Europe for CD. In May 2009, a prefilled syringe formulation was launched in the US for the treatment of CD.

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US launch for RA took place during May 2009; the product was launched for this indication as a prefilled syringe formulation, developed by the company's partnership with OXO . In October 2009, the drug was approved for RA in the EU, and it was launched in Germany and the UK the same month. In March 2013, certolizumab pegol was launched in Japan for adult patients with RA who have had an inadequate response to conventional treatment ; In May 2015, the drug's approval in Japan was broadened from the 'treatment of RA not responding to conventional therapy', to the 'treatment of RA'.

In October 2013, the drug was launched in EU for severe active psoriatic arthritis. In September 2014, certolizumab pegol was launched in the US for the treatment of adults with active psoriatic arthritis..

In October 2013, certolizumab pegol was launched in the US for the treatment of adults with active AS. In the same month, the drug was launched in the EU for axial SpA. In February 2013, UCB filed for US approval of the drug for axial SpA. In July 2013, the FDA's Arthritis Advisory Committee recommended approval; the committee concluded that data demonstrated benefit in patients with axial SpA, including AS, and that the safety profile was sufficient to support approval. In October 2013, the FDA issued a Complete Response Letter regarding the sBLA for axial SpA; UCB would work with the FDA to determine the next steps forward for approval of this indication.

Development in other indications is also ongoing. In January 2015, licensee Dermira began phase III trials in moderate-to-severe chronic plaque psoriasis ; UCB had previously conducted phase II psoriasis studies by March 2006 but had discontinued psoriasis development by January 2010 ; however, following the agreement with Dermira, UCB would file for approval for psoriasis in the US and EU if the phase III trials conducted by Dermira were positive . In October 2010, a phase II trial began in ulcerative colitis (UC). In March 2012, phase III development for juvenile RA began; in July 2014, initial results from phase III development in juvenile idiopathic arthritis were expected in 1H16.

Previous licensee Pharmacia (now Pfizer) had also been investigating certolizumab pegol for its potential for the treatment of congestive heart failure; however, no development has been reported for this indication since March 2001, and all rights were returned to Celltech in December 2003. Former Japanese licensee Otsuka Pharmaceutical was previously developing the product, and in June 2009, the company was preparing a filing in Japan for CD ; however, in January 2012, Otsuka and UCB terminated their collaboration.

In September 2008, the FDA requested manufacturers of TNF-alpha blockers strengthen warnings advising of the risk of opportunistic fungal infections, as cases of histoplasmosis infection were not being consistently recognized in patients taking these medications. In August 2009, the FDA also requested that labeling for anti-TNF drugs be updated to highlight the increased risk of cancer in pediatric patients; the Agency added that the prescribing information should include reports of psoriasis associated with the drug class.

## certolizumab pegol DEVELOPMENT STATUS

### CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Astellas Pharma Inc	Rheumatoid arthritis	Japan	Launched	08-Mar-2013
AstraZeneca plc	Crohns disease	Brazil	Launched	28-Sep-2009
AstraZeneca plc	Rheumatoid arthritis	Brazil	Launched	28-Sep-2009
Laboratorios Farmaceuticos Rovi SA	Rheumatoid arthritis	Spain	Launched	31-Dec-2009
UCB SA	Ankylosing spondylitis	Canada	Launched	31-Dec-2013

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Company	Indication	Country	Development Status	Date
UCB SA	Ankylosing spondylitis	US	Launched	31-Oct-2013
UCB SA	Crohns disease	Switzerland	Launched	31-Jan-2008
UCB SA	Crohns disease	US	Launched	24-Apr-2008
UCB SA	Psoriatic arthritis	EU	Launched	31-Oct-2013
UCB SA	Psoriatic arthritis	US	Launched	30-Sep-2013
UCB SA	Rheumatoid arthritis	Australia	Launched	12-Jan-2011
UCB SA	Rheumatoid arthritis	Canada	Launched	01-Sep-2009
UCB SA	Rheumatoid arthritis	Czech Republic	Launched	
UCB SA	Rheumatoid arthritis	Denmark	Launched	16-Nov-2009
UCB SA	Rheumatoid arthritis	EU	Launched	02-Mar-2010
UCB SA	Rheumatoid arthritis	France	Launched	04-Jan-2010
UCB SA	Rheumatoid arthritis	Germany	Launched	26-Oct-2009
UCB SA	Rheumatoid arthritis	Greece	Launched	
UCB SA	Rheumatoid arthritis	Japan	Launched	08-Mar-2013
UCB SA	Rheumatoid arthritis	Netherlands	Launched	
UCB SA	Rheumatoid arthritis	Norway	Launched	29-Apr-2010
UCB SA	Rheumatoid arthritis	Portugal	Launched	23-Aug-2012
UCB SA	Rheumatoid arthritis	Russian Federation	Launched	27-Oct-2011
UCB SA	Rheumatoid arthritis	Slovakia	Launched	
UCB SA	Rheumatoid arthritis	Sweden	Launched	30-Mar-2010
UCB SA	Rheumatoid arthritis	Switzerland	Launched	12-Jan-2011
UCB SA	Rheumatoid arthritis	UK	Launched	26-Oct-2009
UCB SA	Rheumatoid arthritis	US	Launched	14-May-2009
UCB SA	Spondylarthritis	EU	Launched	31-Oct-2013
UCB SA	Ankylosing spondylitis	Australia	Registered	01-May-2014
UCB SA	Psoriatic arthritis	Australia	Registered	01-May-2014
UCB SA	Rheumatoid arthritis	Estonia	Registered	01-Oct-2009

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Company	Indication	Country	Development Status	Date
UCB SA	Rheumatoid arthritis	Lithuania	Registered	01-Oct-2009
UCB SA	Spondylarthritis	US	Pre-registration	20-Feb-2013
Dermira Inc	Psoriasis	Canada	Phase 3 Clinical	19-Feb-2015
Dermira Inc	Psoriasis	US	Phase 3 Clinical	08-Jan-2015
UCB SA	Juvenile rheumatoid arthritis	Canada	Phase 3 Clinical	09-Mar-2012
UCB SA	Juvenile rheumatoid arthritis	Mexico	Phase 3 Clinical	09-Mar-2012
UCB SA	Juvenile rheumatoid arthritis	Russian Federation	Phase 3 Clinical	09-Mar-2012
UCB SA	Juvenile rheumatoid arthritis	South America	Phase 3 Clinical	09-Mar-2012
UCB SA	Juvenile rheumatoid arthritis	US	Phase 3 Clinical	09-Mar-2012
UCB SA	Psoriatic arthritis	Argentina	Phase 3 Clinical	15-Mar-2010
UCB SA	Psoriatic arthritis	Canada	Phase 3 Clinical	15-Mar-2010
UCB SA	Psoriatic arthritis	Mexico	Phase 3 Clinical	15-Mar-2010
UCB SA	Rheumatoid arthritis	Chile	Phase 3 Clinical	08-Sep-2005
UCB SA	Rheumatoid arthritis	Israel	Phase 3 Clinical	08-Sep-2005
UCB SA	Spondylarthritis	Canada	Phase 3 Clinical	15-Mar-2010
UCB SA	Spondylarthritis	South America	Phase 3 Clinical	15-Mar-2010
UCB SA	Crohns disease	Japan	Phase 2 Clinical	31-Mar-2006
UCB SA	Psoriasis	US	Phase 2 Clinical	14-Mar-2006
UCB SA	Ulcerative colitis	US	Phase 2 Clinical	31-Oct-2010
Dermira Inc	Psoriasis	Europe	Discovery	31-Mar-2014
NewBridge Pharmaceuticals Ltd	Crohns disease	Africa	Discovery	22-Nov-2012
NewBridge Pharmaceuticals Ltd	Crohns disease	Middle East	Discovery	22-Nov-2012
NewBridge Pharmaceuticals Ltd	Rheumatoid arthritis	Africa	Discovery	22-Nov-2012
NewBridge Pharmaceuticals Ltd	Rheumatoid arthritis	Middle East	Discovery	22-Nov-2012
Orient Europharma	Rheumatoid arthritis	South East Asia	Discovery	14-Oct-2010
UCB SA	Psoriasis	Canada	Discovery	31-Mar-2014
UCB SA	Psoriasis	Europe	Discovery	31-Mar-2014

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Company	Indication	Country	Development Status	Date
UCB SA	Rheumatoid arthritis	China	Discovery	31-Dec-2010
Otsuka Pharmaceutical Co Ltd	Crohns disease	Japan	Discontinued	13-Jan-2012
Otsuka Pharmaceutical Co Ltd	Rheumatoid arthritis	Japan	Discontinued	13-Jan-2012
Otsuka Pharmaceutical Co Ltd	Rheumatoid arthritis	South Korea	Discontinued	13-Jan-2012
Pfizer Inc	Crohns disease	US	Discontinued	01-Dec-2003
Pfizer Inc	Rheumatoid arthritis	US	Discontinued	01-Dec-2003
UCB Celltech	Rheumatoid arthritis	UK	Discontinued	18-May-2004
UCB SA	Crohns disease	EU	Discontinued	21-Mar-2010
UCB Celltech	Cardiac failure	UK	No Development Reported	18-Mar-2003

### certolizumab pegol DRUG NAMES

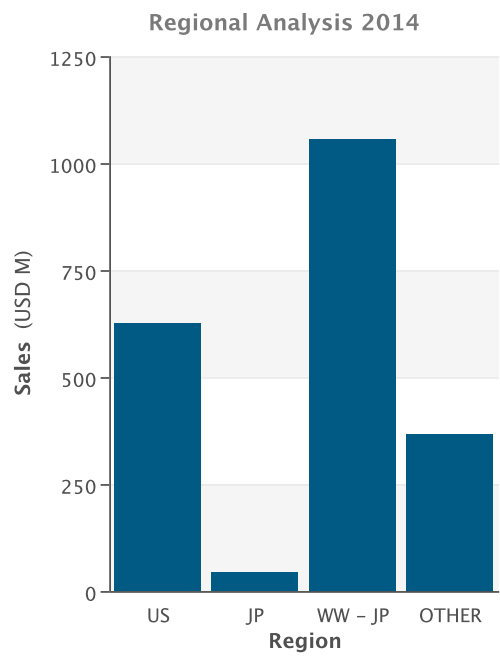
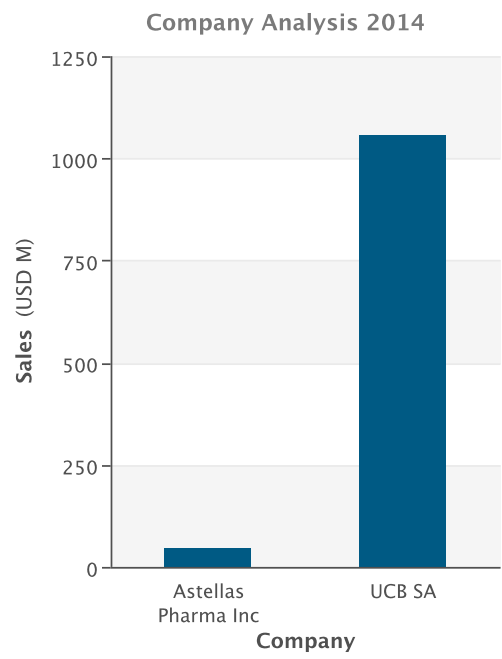
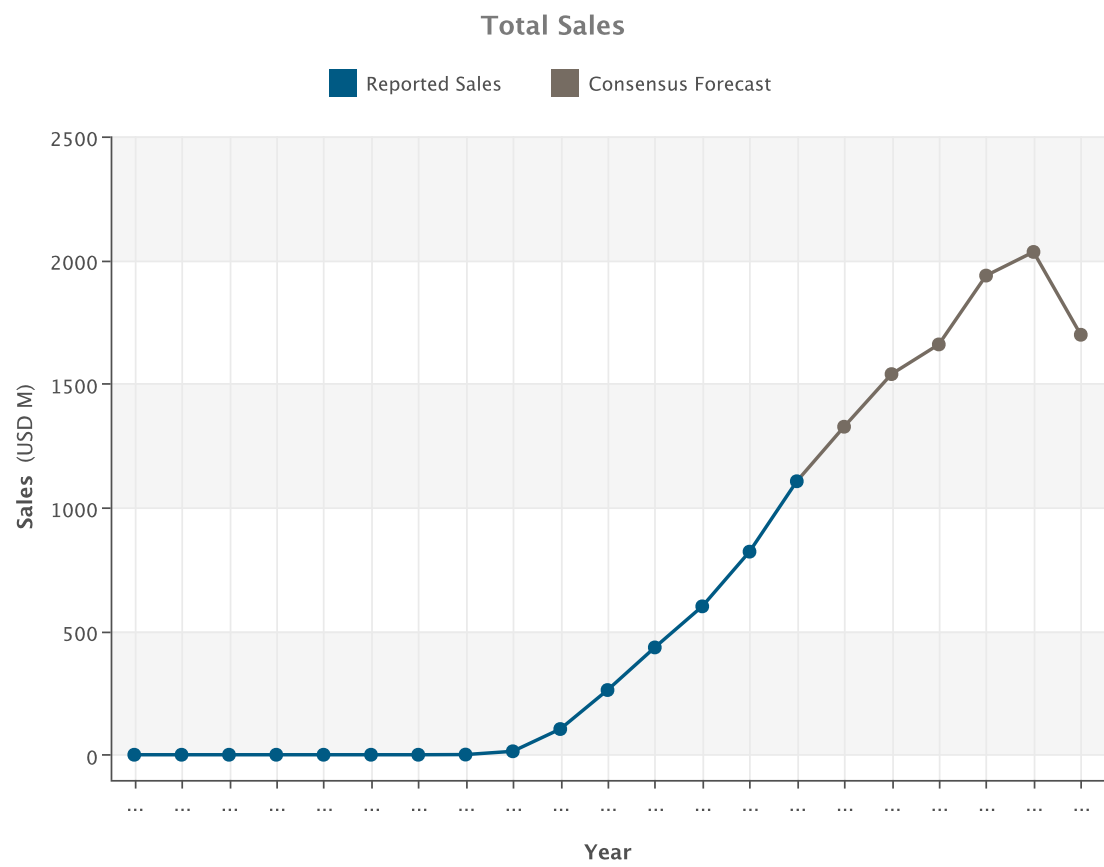
Names	Type
certolizumab pegol	INN
Cimzia	Trade Name
CDP-870	Research Code

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certolizumab pegol SALES AND FORECASTS

CHARTS



## COMMENTARY

### CONSENSUS SALES INFORMATION

Consensus forecast data for UCB SA and Astellas Pharma are presented; UCB would book sales on behalf of licensee Dermira if approved for psoriasis. No Consensus forecast data are currently available for AstraZeneca, Laboratorios Farmaceuticos Rovi (ROVI) or NewBridge, which hold rights in selected regions or for selected indications.

### REPORTED ANNUAL SALES

Sales for certolizumab pegol (Cimzia) reported by UCB for 2014 were EUR 797.0 million (\$1.059 billion), representing a year-on-year increase of 34.0% on 2013 [1642856]. Sales for certolizumab pegol (Cimzia) reported by Astellas for 2014 were JPY 5.0 billion (\$47.5 million), representing a year-on-year increase of 55.2% on 2013 [1658351].

### REGIONAL DEVELOPMENT AND MARKETING RIGHTS

In March 2001, Celltech and Pharmacia (now Pfizer) signed a worldwide agreement for the codevelopment and copromotion of certolizumab pegol in Japan, the US and major EU markets. Under the agreement, Celltech was to lead the development and fund the majority of development costs for CD, while Pharmacia managed and funded the majority of development for RA and other indications; Celltech had intended development in both CD and RA [469064]. In November 2003, following delays imposed by Pfizer on development in RA, Celltech intended to file certolizumab pegol for CD only initially. At that time, Pfizer planned to postpone further phase III trials in RA pending the results of ongoing studies and wanted to renegotiate the financial terms of its collaboration with Celltech [513129], [400886], [401949], [401925]. In December 2003, Pfizer gave Celltech 90 days notice of termination of its rights to certolizumab pegol. Following termination, all rights and program information reverted to Celltech [515522].

In May 2004, Celltech granted UCB exclusive worldwide development and marketing rights to certolizumab pegol for a number of indications including RA, while retaining all manufacturing rights and all rights for CD [539295]; UCB subsequently acquired Celltech [548223].

In June 2008, Otsuka acquired copromotion rights from UCB in Japan for CD, and copromotion and codevelopment rights for other indications [915126]. In January 2012, Otsuka and UCB terminated their collaboration [1254712]. Later that month, UCB and Astellas entered into an agreement to jointly develop and commercialize certolizumab pegol for RA in Japan; under the agreement, Astellas books all sales [1259355].

In September 2009, UCB entered into an agreement with AstraZeneca to register and commercialize certolizumab pegol in Brazil [1045369].

In December 2009, ROVI and UCB signed an agreement to commercialize certolizumab pegol in Spain; UCB would complete the local approval procedure, maintain marketing authorization and upon approval, copromote the drug [1064475].

In November 2012, UCB and NewBridge Pharmaceuticals entered an exclusive partnership to make certolizumab available in the Middle East and African regions. UCB was to supply the drug, while NewBridge would be responsible for managing local regulatory approval processes, future commercialization, and pharmacovigilance in each of the relevant countries [1342892].

In March 2014, Dermira licensed the exclusive rights to develop the drug for psoriasis in the US, Canada and the EU. Under the collaborative agreement, UCB would seek regulatory approval from the FDA, EMA and Health Canada, Dermira would market Cimzia in the US and Canada upon regulatory approval, and UCB would record sales in the US and Canada. The term of the agreement was valid for 12.5 years

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following the first commercial launch in the US and Canada [1574685], [1646095].

## certolizumab pegol CLINICAL TRIALS

### Trials by Phase and Condition Studied

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
Rheumatoid arthritis											
8	14	7	28	2	5	0	1	4	16	21	64
Crohns disease											
1	4	0	16	1	8	0	1	3	7	5	36
Psoriasis											
0	0	3	3	0	2	0	1	0	0	3	6
Ankylosing spondylitis											
0	0	2	2	0	0	0	0	0	0	2	2
Spondylarthritis											
0	0	1	1	0	0	0	0	1	1	2	2
Juvenile rheumatoid arthritis											
0	0	1	1	0	0	0	0	0	1	1	2
Ulcerative colitis											
0	0	0	0	0	1	0	0	0	1	0	2
Psoriatic arthritis											
0	0	1	1	0	0	0	0	0	0	1	1
Inflammatory bowel disease											
0	0	0	0	0	0	0	0	1	1	1	1
Encephalitis											
0	0	0	0	0	0	0	0	1	1	1	1
Metastatic non small cell lung cancer											
0	0	0	0	0	0	1	1	0	0	1	1

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Spontaneous abortion											
0	0	0	0	0	0	0	0	0	1	0	1
Vascular disease											
0	0	0	0	0	0	0	0	0	1	0	1
Interstitial lung disease											
0	0	0	0	0	0	0	0	0	1	0	1
Cardiac failure											
0	0	0	0	0	0	0	1	0	0	0	1
Synovitis											
0	0	0	1	0	0	0	0	0	0	0	1
Edema											
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											
9	18	13	51	3	16	4	7	8	28	37	120

### 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

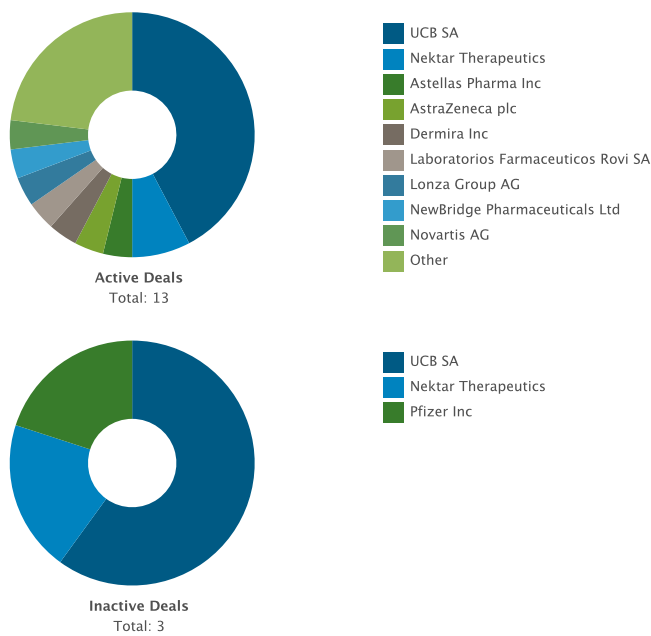
Includes Phase 1, Phase 1a, Phase 1, Phase 1/2 (where enrolment count is under 100 or not specified), Phase 0

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certolizumab pegol DEALS AND PATENTS

DEALS

Deals by Parent Company Chart



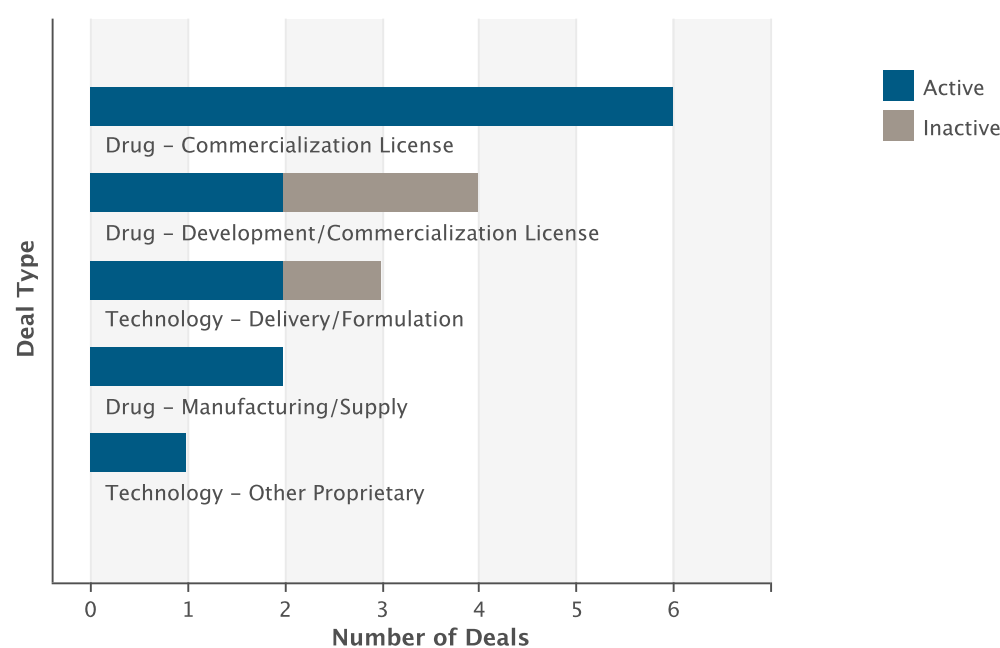
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## Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
UCB SA	7	2	4	2	14
Nektar Therapeutics	2	1	0	0	3
Pfizer Inc	0	0	1	1	2
Dermira Inc	0	0	1	0	1
Orient Europharma	0	0	1	0	1
Astellas Pharma Inc	0	0	1	0	1
XOMA Corp	1	0	0	0	1
Novartis AG	1	0	0	0	1
NewBridge Pharmaceuticals Ltd	0	0	1	0	1
Lonza Group AG	1	0	0	0	1
Laboratorios Farmaceuticos Rovi SA	0	0	1	0	1
Royalty Pharma	0	0	1	0	1
Otsuka Holdings Co Ltd	0	0	1	0	1
OXO	1	0	0	0	1
AstraZeneca plc	0	0	1	0	1

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Deals by Type Chart



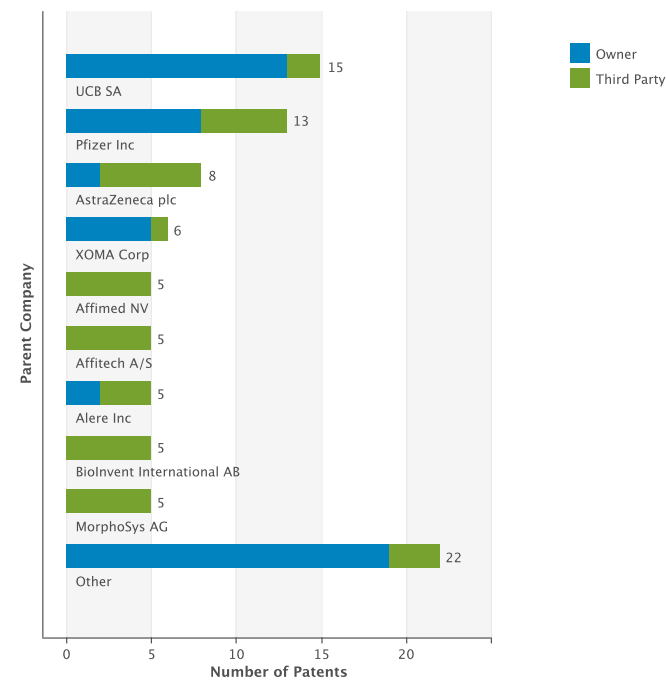
Deals by Type Table

Deal Type	Active	Inactive	Total
Drug - Commercialization License	6	0	6
Drug - Development/Commercialization License	2	2	4
Technology - Delivery/Formulation	2	1	3
Drug - Manufacturing/Supply	2	0	2
Technology - Other Proprietary	1	0	1

PATENTS

Patents by Parent Company Chart

Chart displayed by Owner/Third Party



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## Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
UCB SA	13	2	15
Pfizer Inc	8	5	13
AstraZeneca plc	2	6	8
XOMA Corp	5	1	6
BioInvent International AB	0	5	5
MorphoSys AG	0	5	5
Nestle SA	5	0	5
Alere Inc	2	3	5
Affimed NV	0	5	5
Affitech A/S	0	5	5
Verenium Corp	0	5	5
Takeda Pharmaceutical Co Ltd	3	1	4
Dyax Corp	0	4	4
Roche Holding AG	2	2	3
Novartis AG	1	2	3
Bristol-Myers Squibb Co	0	2	2
Eli Lilly & Co	0	2	2
Merck & Co Inc	0	2	2
Medical Research Council (MRC)	0	2	2
Alexion Pharmaceuticals Inc	1	2	2
Boehringer Ingelheim Corp	1	1	2
Biogen Inc	1	1	2
Otsuka Holdings Co Ltd	1	0	1
Life Technologies Corp	0	1	1
OXO	0	1	1
Universite de Nantes	0	1	1

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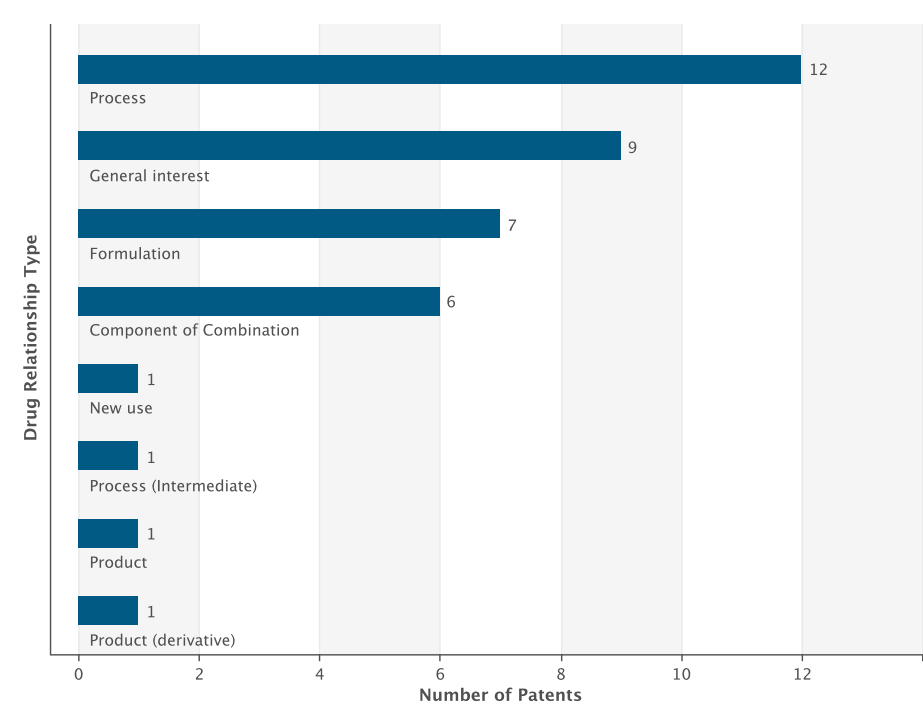


Royalty Pharma	1	0	1
FUJIFILM Holdings Corp	0	1	1
TACT IP LLC	1	0	1
Astellas Pharma Inc	1	0	1
Sanofi	0	1	1
Institute for Neurological Research	0	1	1
The University Health Network	1	0	1
GlaxoSmithKline plc	0	1	1
Dompe Group	0	1	1
Seattle Genetics Inc	1	0	1
Imperial College London	1	0	1
Oregon Health Sciences University	1	0	1
Laboratorios Farmaceuticos Rovi SA	1	0	1
Unilever	0	1	1
PDL BioPharma Inc	1	1	1
Mochida Pharmaceutical Co Ltd	1	0	1
Merck KGaA	0	1	1
Johnson Matthey plc	1	0	1
Johnson & Johnson	0	1	1
INSERM	1	0	1
E I DuPont de Nemours & Co	0	1	1
BioTransplant Inc	0	1	1
Bayer AG	0	1	1
Biotest AG	0	1	1
University of Oxford	1	0	1

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Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
Process	12
General interest	9
Formulation	7
Component of Combination	6
Product	1
Product (derivative)	1
New use	1
Process (Intermediate)	1

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## DRM-02

### DRM-02 SNAPSHOT

Drug Name	DRM-02
Key Synonyms	
Originator Company	Valocor Therapeutics Ltd
Active Companies	Dermira Inc
Inactive Companies	Valocor Therapeutics Ltd
Highest Status	Phase 2 Clinical
Active Indications	Rosacea;Atopic dermatitis;Psoriasis
Target-based Actions	PDE 4 inhibitor;Integrin-linked kinase inhibitor
Other Actions	Dermatological agent
Technologies	Dermatological formulation;Small molecule therapeutic
Last Change Date	28-May-2015

### DRM-02 DEVELOPMENT PROFILE

#### SUMMARY

Dermira, following its acquisition of Valocor, is developing DRM-02 (formerly VAL-002, QLT-418, QLT-0418), a Th-2 type small-molecule kinase and PDE4 inhibitor and a lead from series of integrin-linked kinase (ILK) inhibitors, for the potential topical treatment of chronic inflammatory skin diseases including atopic dermatitis, rosacea and plaque psoriasis, . In October 2013, three phase II trials were initiated to assess the effectiveness of DRM-02 in the treatment of atopic dermatitis, rosacea and plaque psoriasis, respectively, ; in February 2014, enrollment was completed in all the three phase IIa trials. In May 2015, development was ongoing.

This program was previously described as VAL-003. However, the company used the research code VAL-003 to describe a drug for vitiligo.

### DRM-02 DEVELOPMENT STATUS

#### CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Dermira Inc	Atopic dermatitis	Canada	Phase 2 Clinical	31-Oct-2013
Dermira Inc	Psoriasis	Canada	Phase 2 Clinical	31-Oct-2013
Dermira Inc	Rosacea	Canada	Phase 2 Clinical	31-Oct-2013

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## DRM-02 DRUG NAMES

Names	Type
integrin-linked kinase inhibitors (skin disorders), Dermira	
integrin-linked kinase inhibitors (skin disorders), Valocor	
VAL-002	Research Code
ILK inhibitors (skin disorders), Dermira	
DRM-02	Research Code
QLT-418	Research Code
QLT-0418	Research Code
ILK inhibitors (skin disorders), Valocor	

## DRM-02 CLINICAL TRIALS

### Trials by Phase and Condition Studied

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
Psoriasis											
0	0	0	0	0	1	0	0	0	0	0	1
Rosacea											
0	0	0	0	0	1	0	0	0	0	0	1
Atopic dermatitis											
0	0	0	0	0	1	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											
0	0	0	0	0	3	0	0	0	0	0	3

### Phase Definitions

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**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

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## DRM-01

### DRM-01 SNAPSHOT

Drug Name	DRM-01
Key Synonyms	
Originator Company	Valocor Therapeutics Ltd
Active Companies	Dermira Inc
Inactive Companies	Valocor Therapeutics Ltd
Highest Status	Phase 2 Clinical
Active Indications	Acne;Sebaceous gland disease;Acne vulgaris
Target-based Actions	Acetyl CoA carboxylase inhibitor
Other Actions	Anti-inflammatory
Technologies	Dermatological formulation;Prodrug;Small molecule therapeutic
Last Change Date	10-Jun-2015

### DRM-01 DEVELOPMENT PROFILE

#### SUMMARY

Dermira, following its acquisition of Valocor Therapeutics, is developing DRM-01 (previously VAL-001; DRM-01B), a topical sebum inhibitor and prodrug for an acetyl-CoA carboxylase inhibitor, for the potential treatment of acne including acne vulgaris and sebaceous gland hyperactivity,. In August 2013, a phase I/II study was initiated in healthy volunteers with acne vulgaris ; in November 2014, results were reported. In April 2015, a phase IIb trial was initiated in the US and Canada in patients with moderate-to-severe facial acne vulgaris. Topline data from the trial were expected in the first half of 2016. At that time, the company was planning to include both adult and adolescent patients in phase III trial.

### DRM-01 DEVELOPMENT STATUS

#### CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Dermira Inc	Acne vulgaris	Canada	Phase 2 Clinical	31-Aug-2013
Dermira Inc	Acne vulgaris	US	Phase 2 Clinical	09-Apr-2015
Dermira Inc	Acne	US	Discovery	20-Oct-2011
Dermira Inc	Sebaceous gland disease	US	Discovery	20-Oct-2011

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## DRM-01 DRUG NAMES

Names	Type
sebum inhibitor (topical, acne), Valocor Therapeutics	
VAL-001, Valocor	Research Code
DRM-01B	Research Code
DRM-01	Research Code
sebum inhibitor (topical, acne), Dermira	

## DRM-01 CLINICAL TRIALS

### Trials by Phase and Condition Studied

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
Acne vulgaris											
0	0	0	0	1	2	0	0	0	0	1	2

### 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											
0	0	0	0	1	2	0	0	0	0	1	2

### 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

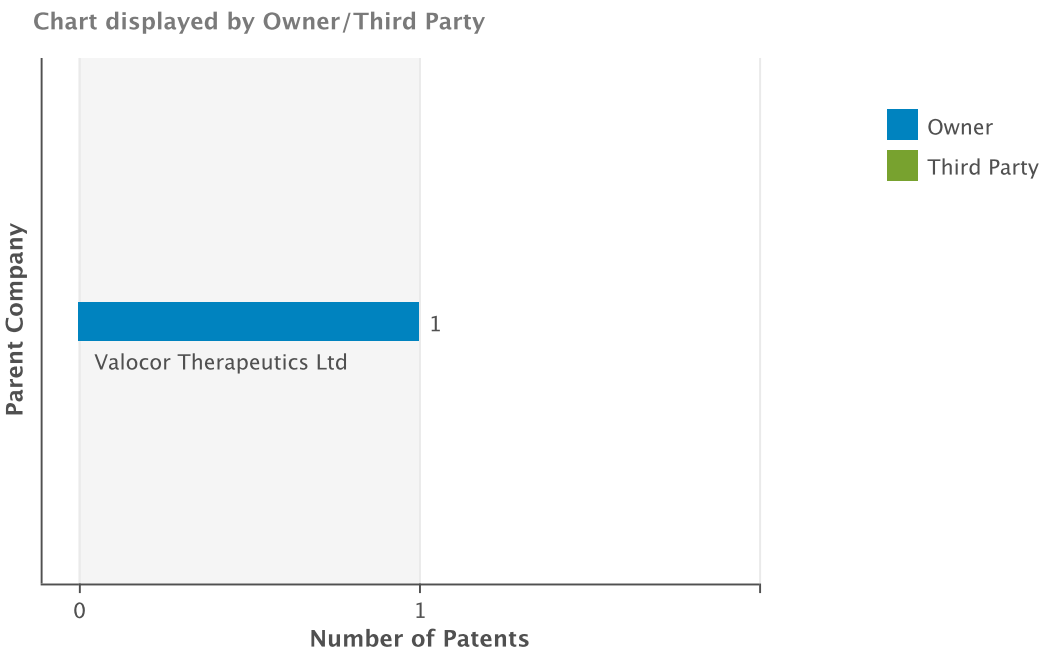
Includes Phase 1, Phase 1a, Phase 1, Phase 1/2 (where enrolment count is under 100 or not specified), Phase 0

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PATENTS

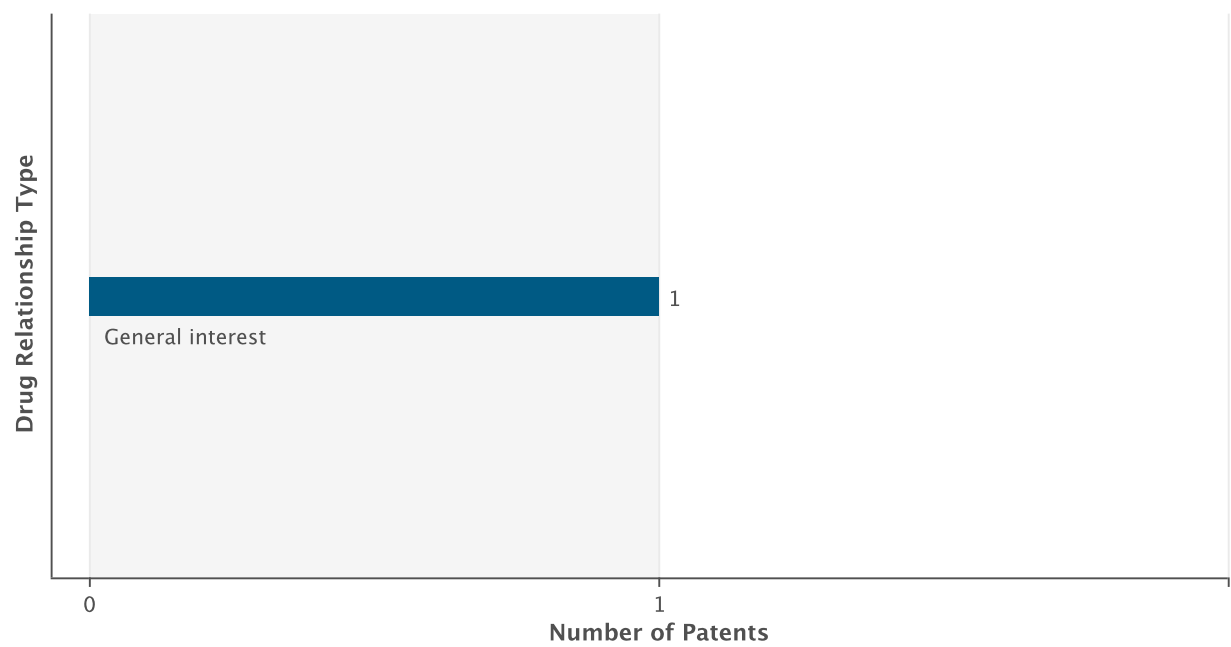
Patents by Parent Company Chart



Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
Valocor Therapeutics Ltd	1	0	1

Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
General interest	1

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## DRM-04B

### DRM-04B SNAPSHOT

Drug Name	DRM-04B
Key Synonyms	
Originator Company	Dermira Inc
Active Companies	Dermira Inc
Inactive Companies	
Highest Status	Phase 2 Clinical
Active Indications	Hyperhidrosis
Target-based Actions	Acetylcholine receptor antagonist
Other Actions	
Technologies	Dermatological formulation;Small molecule therapeutic
Last Change Date	06-Feb-2015

### DRM-04B DEVELOPMENT PROFILE

#### SUMMARY

Dermira is developing DRM-04B (DRM-04), an anticholinergic, for the potential topical treatment of axillary hyperhidrosis. In November 2013, a phase II trial was initiated. In February 2014, patient enrollment was ongoing ; in November 2014, results were reported. In April 2014, another phase II trial was initiated ; in February 2015, data were reported. At that time, the company planned to initiate a phase III trial in the second half of 2015.

### DRM-04B DEVELOPMENT STATUS

#### CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Dermira Inc	Hyperhidrosis	US	Phase 2 Clinical	30-Nov-2013

### DRM-04B DRUG NAMES

Names	Type
DRM-04B	Research Code
DRM-04	Research Code

### DRM-04B CLINICAL TRIALS

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### Trials by Phase and Condition Studied

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
Hyperhidrosis											
0	0	0	0	0	2	0	0	0	0	0	2

### 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											
0	0	0	0	0	2	0	0	0	0	0	2

### 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

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## lemuteporfin

### lemuteporfin SNAPSHOT

Drug Name	lemuteporfin
Key Synonyms	lemuteporfin
Originator Company	QLT Inc
Active Companies	Dermira Inc
Inactive Companies	Valocor Therapeutics Ltd;QLT Inc
Highest Status	Discovery
Active Indications	Acne
Target-based Actions	
Other Actions	Anticancer;Photosensitizer;Systemic antipsoriatic product;Immunomodulator
Technologies	Dermatological formulation;Small molecule therapeutic;Intravenous formulation
Last Change Date	29-May-2015

### lemuteporfin DEVELOPMENT PROFILE

#### SUMMARY

Dermira, following its acquisition of Valocor Therapeutics (which had been spun-out from QLT), is investigating lemuteporfin (QLT-0074, DRM-05), a benzoporphyrin-derived chlorin-like photosensitizer, as a potential topical photodynamic therapy for acne,. In December 2011, a phase I/II trial began; in July 2013, the trial was completed however, in May 2015, the drug was listed as being in preclinical development for acne.

Previously, QLT had been developing the compound and by January 2008, proof-of-concept clinical studies for moderate to severe acne had begun. However, in July 2008, the company announced it had re-evaluated the continuation of development of the drug based on interim results of a phase I/II study of an iv formulation, and was halting development of the drug for the treatment of acne. QLT was previously developing lemuteporfin for the potential treatment of androgenic alopecia, benign prostate hyperplasia (BPH), various immune disorders and cancer . However, no development has been reported for the immune disorders since mid-2000 and for cancer since 2005 ; development for androgenic alopecia was halted during 2004. By September 2005, a phase IIb trial in BPH was underway ; however in February 2006, the trial had failed to meet its primary efficacy objective at 3 months. At that time, the company said that the data did not support phase III trials, and it planned to complete data analysis of the trial in order to determine the best path forward ; no further development was reported for this indication.

### lemuteporfin DEVELOPMENT STATUS

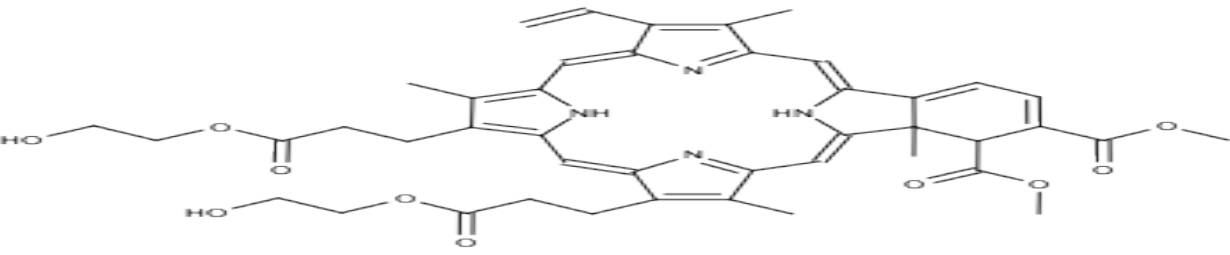
#### CURRENT DEVELOPMENT STATUS

Company	Indication	Country	Development Status	Date
Dermira Inc	Acne	US	Discovery	28-May-2015

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Company	Indication	Country	Development Status	Date
QLT Inc	Acne	Canada	Discontinued	26-Jul-2008
QLT Inc	Alopecia	Canada	Discontinued	31-Dec-2004
QLT Inc	Cancer	Canada	No Development Reported	17-Jan-2008
QLT Inc	Prostate hyperplasia	Argentina	No Development Reported	17-Jan-2008
QLT Inc	Prostate hyperplasia	Canada	No Development Reported	17-Jan-2008
QLT Inc	Prostate hyperplasia	US	No Development Reported	17-Jan-2008
QLT Inc	Psoriasis	Canada	No Development Reported	01-Jan-2002
QLT Inc	Psoriatic arthritis	Canada	No Development Reported	01-Jan-2002
QLT Inc	Rheumatoid arthritis	Canada	No Development Reported	01-Jan-2002

### lemuteporfin CHEMICAL STRUCTURES

CAS Registry Number:	Confidence Level:
215808-49-4	1
	
Name	Type
lemuteporfin	INN; USAN
QLT-0074	Research Code
A-EA 6	Research Code

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## lemuteporfin DRUG NAMES

Names	Type
DRM-05	Research Code
QLT-00748	Research Code
third generation photosensitizers, QLT/Valocor	
A-EA 6	Research Code
immunomodulator, QLT/Valocor	
lemuteporfin	INN, USAN
QLT-0074	Research Code

## lemuteporfin CLINICAL TRIALS

### Trials by Phase and Condition Studied

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
Prostate hyperplasia											
0	0	0	0	0	1	0	2	0	0	0	3
Alopecia											
0	0	0	0	0	1	0	0	0	0	0	1
Acne											
0	0	0	0	0	1	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											
0	0	0	0	0	3	0	3	0	0	0	6

### Phase Definitions

#### Phase 3 Clinical

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

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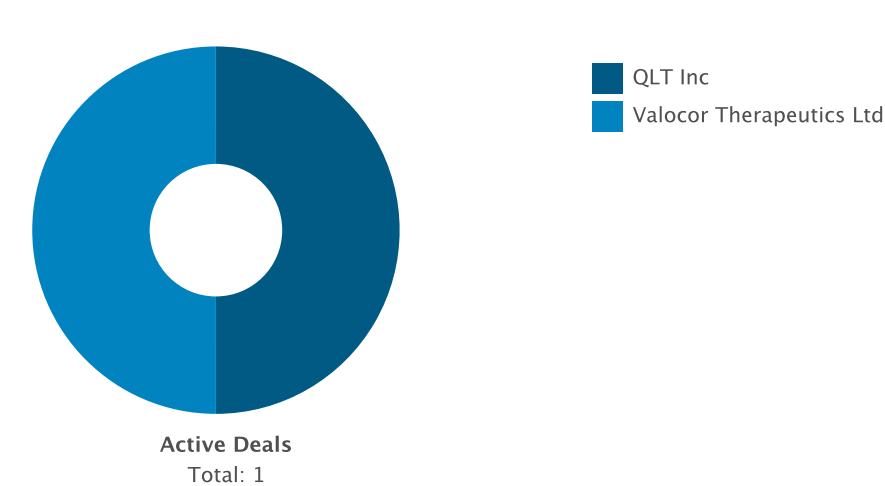
**Phase 2 Clinical**  
Includes Phase 2, Phase 2a, Phase 2b, Phase 1/2 (where enrolment count is 100 or over), Phase 2/3 (where enrolment count is under 300 or not specified)

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

lemuteporfin DEALS AND PATENTS

DEALS

Deals by Parent Company Chart

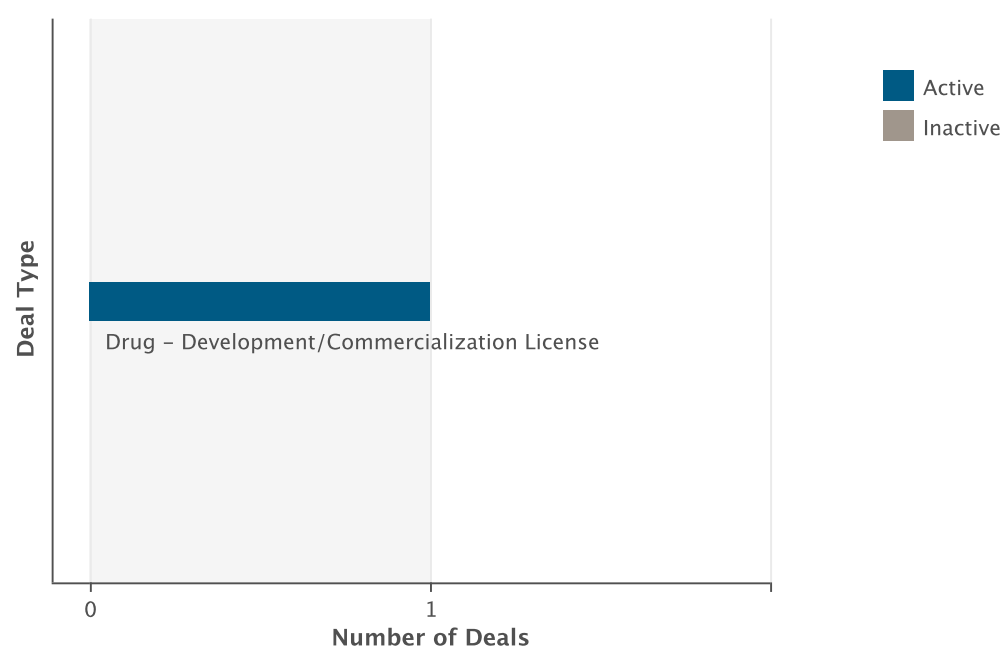


Deals by Parent Company Table

Company Name	Principal		Partner		Total
	Active	Inactive	Active	Inactive	
Valocor Therapeutics Ltd	0	0	1	0	1
QLT Inc	1	0	0	0	1

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Deals by Type Chart



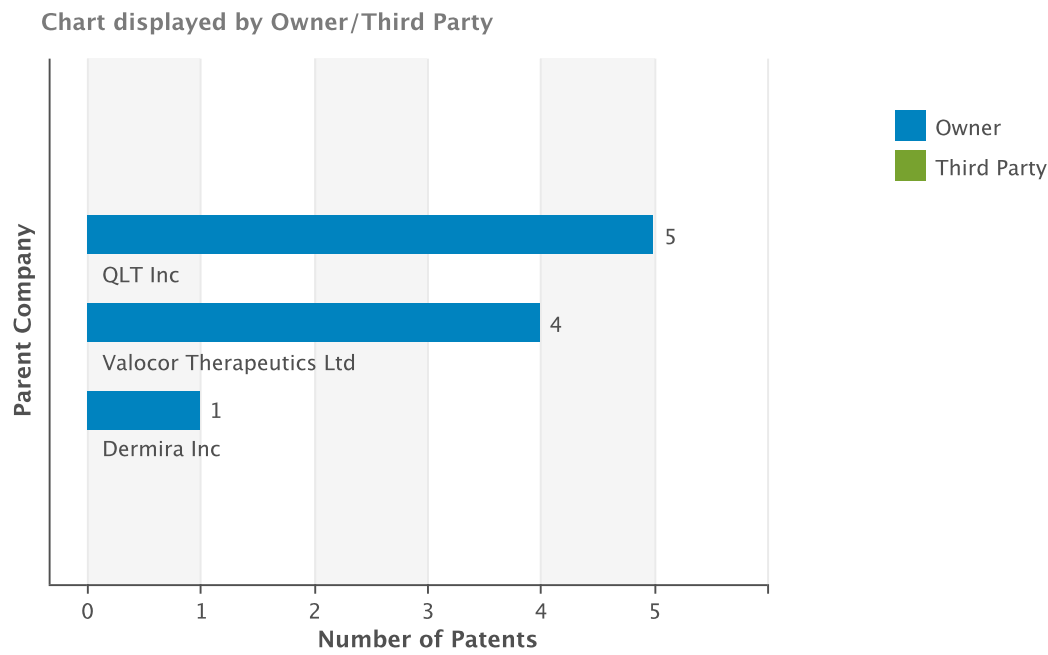
Deals by Type Table

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

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PATENTS

Patents by Parent Company Chart

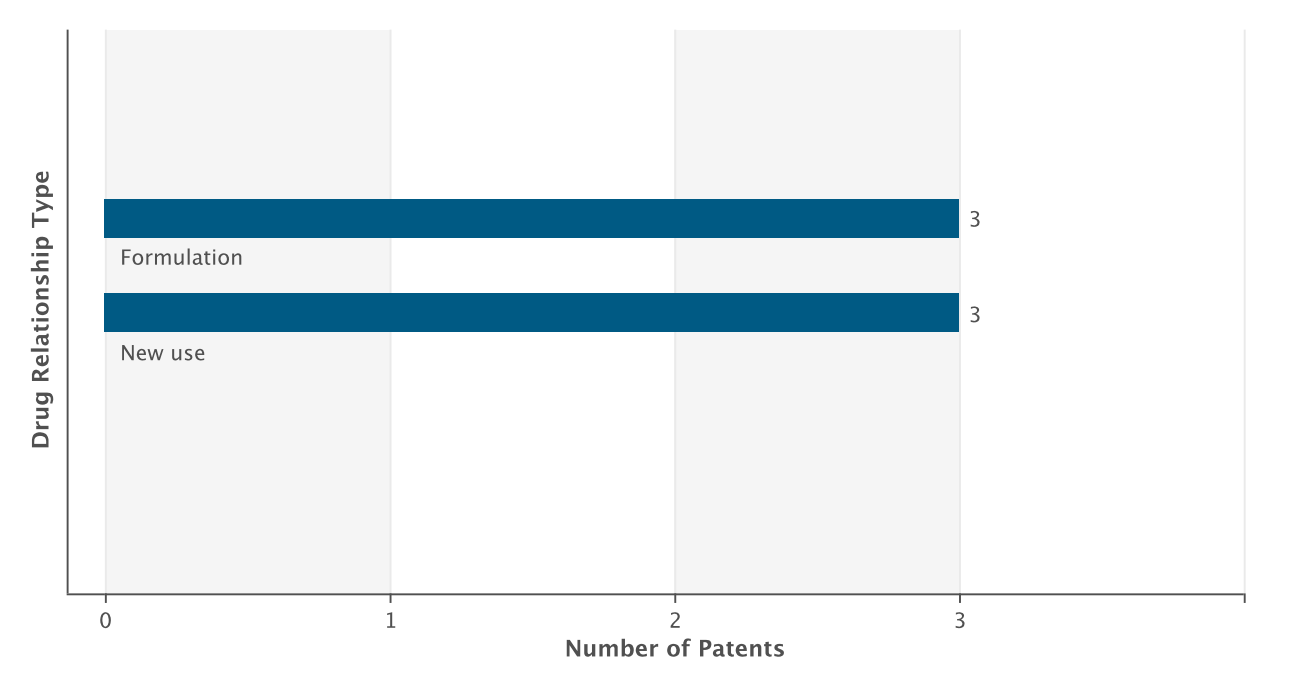


Patents by Parent Company Table

Company Name	As Owner	As Third Party	Total
QLT Inc	5	0	5
Valocor Therapeutics Ltd	4	0	4
Dermira Inc	1	0	1

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Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

Drug Relationship	Total
Formulation	3
New use	3

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