

Immune Design Corp

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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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



TABLE OF CONTENTS

| Company Overview | 5 |
|----------------------------------------|----|
| Company Profile | 6 |
| Product Portfolio Summary | 7 |
| Product Portfolio Drug Pipeline Detail | 10 |
| Phase 2 Clinical | 11 |
| Phase 1 Clinical | 13 |
| Discovery | 32 |



Immune Design Corp

COMPANY OVERVIEW

| Company Name | Immune Design Corp |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Parent Company Name | Immune Design Corp |
| Website | http://www.immunedesign.com/ |
| Country | US |
| Number of Drugs in Active Development | 9 |
| Number of Inactive Drugs | 1 |
| Number of Patents as Owner | 11 |
| Number of Patents as Third Party | 0 |
| Number of Deals | 14 |
| Key Indications | Cancer, HSV-2 infection, Allergy, Influenza virus infection, Merkel cell carcinoma, Solid tumor, Vaccination, Viral infection, Bacterial infection, Fungal infection, Parasitic infection |
| Key Target-based Actions | TLR-4 agonist,T-cell surface glycoprotein CD8 stimulator,Cancer testis antigen NY-ESO-1 inhibitor,Carbonic anhydrase-IX stimulator,Glutamate carboxypeptidase II stimulator,HIV GAG protein stimulator,Hemagglutinin stimulator,Homeobox protein Nkx 3.1 stimulator,Prostate specific antigen stimulator,Prostatic acid phosphatase stimulator,Rev protein stimulator,TLR agonist,Viral envelope glycoprotein stimulator |
| Key Technologies | Biological therapeutic, Parenteral formulation unspecified, Systemic formulation unspecified, Virus recombinant, Gene transfer system viral, Drug combination, Intradermal formulation, Intramuscular formulation, Intratumoral formulation, Antigen |

COMPANY PROFILE

SUMMARY

Immune Design, founded in 2008, aims to develop prophylactic and therapeutic vaccines for infectious diseases, cancer, allergy and autoimmune disorders. The company has identified improved adjuvants and novel technologies targeting and controlling dendritic cells.

In April 2014, the Paris Commercial Court found, among other things, that Henogen SA had breached its contractual obligations to THERAVECTYS by making lentiviral vectors for Immune Design Corp (IDC). In July 2014, THERAVECTYS filed a lawsuit against IDC in the Delaware Court of Chancery, to seek preliminary and permanent injunctive relief, and also monetary damages. THERAVECTYS raised claims of tortious interference with contractual relations, misappropriation of trade secrets, unfair competition and unjust enrichment, by manufacture of lentiviral vectors for IDC by Henogen.

COMPANY LOCATION

The company is headquartered in Seattle, WA.

By October 2013, the company had expanded operations to include a San Francisco office with plans to further expand in the Bay Area.

LICENSING AGREEMENTS

In November 2008, the Immune Design Corp was granted a license to the Infectious Disease Research Institute (IDRI)'s Glycopyranosyl Lipid Adjuvant (GLA) technology, for combination with undisclosed therapeutic vaccine products in a number of indications. IDRI would retain worldwide exclusive rights to develop the technology for products against certain indications, including infectious disease, in the developing world, and would retain rights to develop the technology non-commercially for provision to not-for-profit organizations. Immune Design concurrently established its Global Access Plan, to provide better access to GLA-formulated products for diseases in the developing world.



FINANCIAL

In July 2014, immune design planned to raise \$60 million from an initial offering of 5,000,000 shares, priced at \$12 per share. The company also granted the underwriters a 30-day option to purchase up to 750,000 additional shares of common stock. At that time, the offering was expected to close on July 29, 2014. The shares had begun trading on the NASDAQ Global Market under the symbol "IMDZ". Later in July 2014, the company raised gross proceeds of \$60 million from the closed offering.

In October 2013, the company raised \$49 million in a series C financing which included an upfront investment of \$32.5 million, with an additional investment of \$16.5 million.

In July 2010, Immune Design secured \$32 million in series B financing.

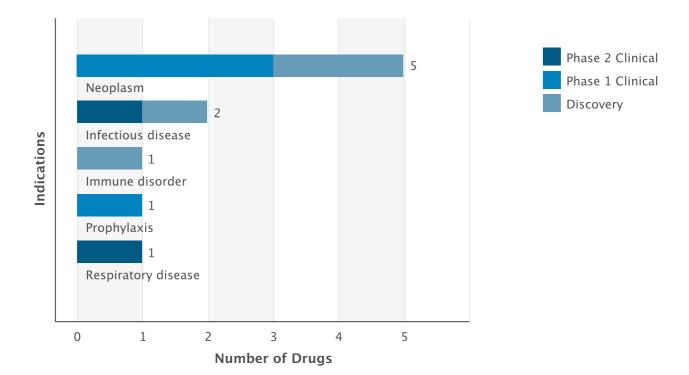
In June 2008, Immune Design raised \$18 million in series A financing.

PRODUCT PORTFOLIO SUMMARY

DRUGS

Drugs by Indication

Active Drugs by Indication Chart



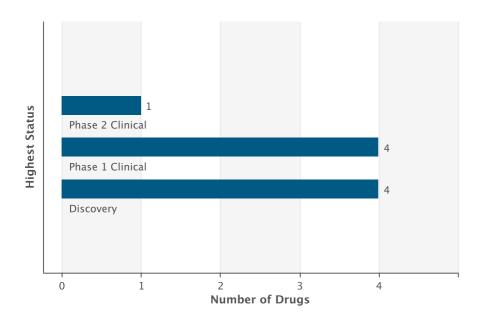


Drugs by Indication Table

| Indication | Active | Inactive | Total |
|---------------------|--------|----------|-------|
| Neoplasm | 5 | 0 | 5 |
| Infectious disease | 2 | 1 | 3 |
| Prophylaxis | 1 | 1 | 2 |
| Respiratory disease | 1 | 1 | 2 |
| Immune disorder | 1 | 0 | 1 |

Drugs by Highest Status

Active Drugs by Highest Status Chart



Drugs by Highest Status Table

| Development Status | Number of Drugs |
|-------------------------|-----------------|
| Phase 2 Clinical | 1 |
| Phase 1 Clinical | 4 |
| Discovery | 4 |
| No Development Reported | 1 |



DEALS

| Deal Type | Prin | cipal | Par | tner | Total |
|----------------------------------------------|--------|----------|--------|----------|-------|
| | Active | Inactive | Active | Inactive | |
| Drug - Development Services | 0 | 0 | 6 | 0 | 6 |
| Technology - Other Proprietary | 2 | 0 | 0 | 0 | 2 |
| Technology - Delivery/Formulation | 1 | 0 | 1 | 0 | 2 |
| Drug - Development/Commercialization License | 4 | 0 | 0 | 0 | 4 |

CLINICAL TRIALS

Trials by Condition Studied

| Condition Studied | Ongoing | All |
|---------------------------|---------|-----|
| Neoplasm | 3 | 4 |
| Genitourinary disease | 1 | 1 |
| Endocrine disease | 1 | 1 |
| Dermatological disease | 0 | 1 |
| Respiratory disease | 1 | 1 |
| Gynecology and obstetrics | 1 | 1 |

Trials by Phase

| Phase | Ongoing | All |
|---------|---------|-----|
| Phase 2 | 0 | 1 |
| Phase 1 | 3 | 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 Clinica

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 |
|-----------------|----------|----------------|-------|
| Immune disorder | 4 | 0 | 4 |
| Neoplasm | 7 | 0 | 7 |



| Respiratory disease | 3 | 0 | 3 |
|--------------------------------|----|---|----|
| Infectious disease | 11 | 0 | 11 |
| Inflammatory disease | 1 | 0 | 1 |
| Otorhinolaryngological disease | 1 | 0 | 1 |

^{*} 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

therapeutic vaccine (GLA adjuvanted, pandemic influenza), Immune Design/Medicago

therapeutic vaccine (GLA adjuvanted, pandemic influenza), Immune Design/Medicago SNAPSHOT

| Drug Name | therapeutic vaccine (GLA adjuvanted, pandemic influenza), Immune Design/Medicago |
|----------------------|----------------------------------------------------------------------------------|
| Key Synonyms | |
| Originator Company | Immune Design Corp |
| Active Companies | Medicago Inc;Immune Design Corp |
| Inactive Companies | |
| Highest Status | Phase 2 Clinical |
| Active Indications | Influenza virus infection |
| Target-based Actions | TLR-4 agonist |
| Other Actions | Antiviral;Therapeutic vaccine |
| Technologies | Systemic formulation unspecified;Biological therapeutic |
| Last Change Date | 13-Nov-2013 |

therapeutic vaccine (GLA adjuvanted, pandemic influenza), Immune Design/Medicago DEVELOPMENT PROFILE

SUMMARY

Immune Design, in collaboration with Medicago, is developing a therapeutic vaccine, comprised of an influenza antigen with glucopyranosyl lipid A (GLA) adjuvant, a small molecule toll-like receptor 4 (TLR-4) agonist, for the potential treatment of pandemic influenza. In September 2013, the vaccine was listed as being in phase II development .

therapeutic vaccine (GLA adjuvanted, pandemic influenza), Immune Design/Medicago DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

| Company | Indication | Country | Development Status | Date |
|--------------------|---------------------------|---------|---------------------------|-------------|
| Immune Design Corp | Influenza virus infection | US | Phase 2 Clinical | 27-Sep-2013 |
| Medicago Inc | Influenza virus infection | US | Phase 2 Clinical | 27-Sep-2013 |



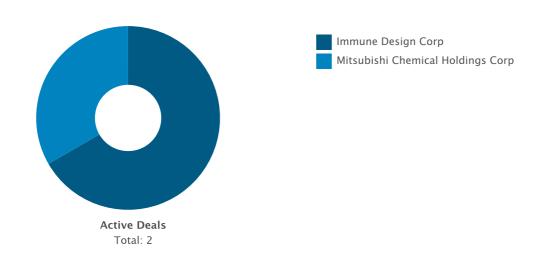
therapeutic vaccine (GLA adjuvanted, pandemic influenza), Immune Design/Medicago DRUG NAMES

| Names | Туре |
|----------------------------------------------------------------------------------|------|
| GLA-SE + influenza antigen (pandemic influenza), Immune Design | |
| therapeutic vaccine (GLA adjuvanted, pandemic influenza), Immune Design/Medicago | |
| therapeutic vaccine (GLA adjuvanted, pandemic influenza), Immune Design | |

therapeutic vaccine (GLA adjuvanted, pandemic influenza), Immune Design/Medicago DEALS AND PATENTS

DEALS

Deals by Parent Company Chart

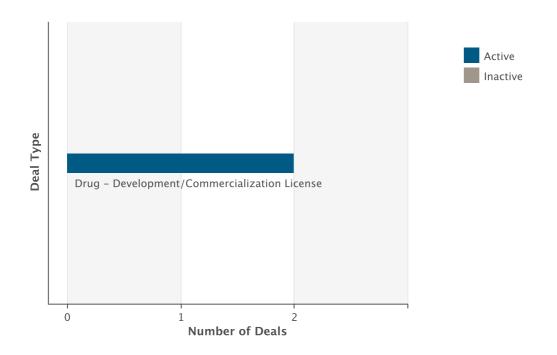


Deals by Parent Company Table

| Company Name | Principal Active Inactive | | Partner Active Inactive | | Total |
|-----------------------------------|---------------------------|---|-------------------------|---|-------|
| Immune Design Corp | 2 | 0 | 0 | 0 | 2 |
| Mitsubishi Chemical Holdings Corp | 0 | 0 | 1 | 0 | 1 |



Deals by Type Chart



Deals by Type Table

| Deal Type | Active | Inactive | Total |
|----------------------------------------------|--------|----------|-------|
| Drug - Development/Commercialization License | 2 | 0 | 2 |



glucopyranosyl lipid A adjuvant, Immune Design Corp

glucopyranosyl lipid A adjuvant, Immune Design Corp SNAPSHOT

| Drug Name | glucopyranosyl lipid A adjuvant, Immune Design Corp |
|----------------------|-------------------------------------------------------------|
| Key Synonyms | |
| Originator Company | Infectious Disease Research Institute |
| Active Companies | Immune Design Corp |
| Inactive Companies | Infectious Disease Research Institute |
| Highest Status | Phase 1 Clinical |
| Active Indications | Vaccination |
| Target-based Actions | TLR-4 agonist |
| Other Actions | Immunostimulant;Adjuvant |
| Technologies | Systemic formulation unspecified;Small molecule therapeutic |
| Last Change Date | 13-Apr-2014 |

glucopyranosyl lipid A adjuvant, Immune Design Corp DEVELOPMENT PROFILE

SUMMARY

Immune Design Corp, under license licensed from Infectious Disease Research Institute, is developing a glucopyranosyl lipid A (GLA) adjuvant, a small molecule toll-like receptor 4 (TLR-4) agonist, which stimulates TH1 cytokine production to enhance an immune response, to be used in combination with vaccines,. In July 2011, a phase I trial was initiated. In February 2013, development was ongoing. In April 2014, a proof-of-concept trial assessing the intratumoral injection of GLA in patients with merkel cell carcinoma (MCC) was planned.

MedImmune and Sanofi are investigating vaccines comprising Immune Design's GLA adjuvant for the potential treatment of infections and allergy respectively.

glucopyranosyl lipid A adjuvant, Immune Design Corp DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

| Company | Indication | Country | Development Status | Date |
|------------------------------------------|-------------|---------|---------------------------|-------------|
| Immune Design Corp | Vaccination | US | Phase 1 Clinical | 31-Jul-2011 |
| Infectious Disease Research Institute | Vaccination | US | Discontinued | 20-Nov-2008 |



glucopyranosyl lipid A adjuvant, Immune Design Corp DRUG NAMES

| Names | Туре |
|-------------------------------------------------------------------------|---------------|
| glycopyranosyl lipid adjuvant, Infectious Disease Research Institute | |
| GLA-AF | Research Code |
| glucopyranosyl lipid adjuvant, Medlmmune | |
| glycopyranosyl lipid adjuvant, Immune Design Corp | |
| GLA-SE | Research Code |
| glucopyranosyl lipid A adjuvant, Immune Design Corp | |
| glucopyranosyl lipid adjuvant, Infectious Disease Research Institute | |

glucopyranosyl lipid A adjuvant, Immune Design Corp CLINICAL TRIALS

Trials by Phase and Condition Studied

| | se 4 lical | | se 3 nical | | se 2 nical | | se 1 nical | Pha Unspe | | То | tal |
|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|-----|--------------|-----|
| On- going | All | On- going | All | On- going | All | On- going | All | On- going | All | On- going | All |
| Hookwor | m infectior | า | | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 2 |
| Sarcoma | | | | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |

Total Trials by Phase and Status

| | se 4 nical | | se 3 nical | | se 2 nical | | se 1 nical | | ase ecified | То | tal |
|---------------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|----------------|--------------|-----|
| 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 | 0 | 4 | 8 | 0 | 1 | 4 | 9 |

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)

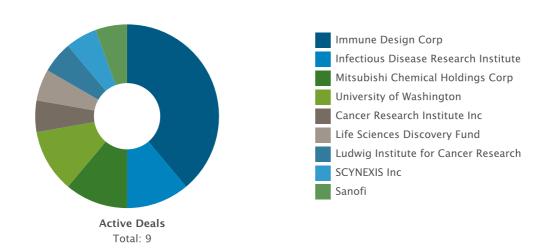
Phase 1 Clinical



glucopyranosyl lipid A adjuvant, Immune Design Corp DEALS AND PATENTS

DEALS

Deals by Parent Company Chart

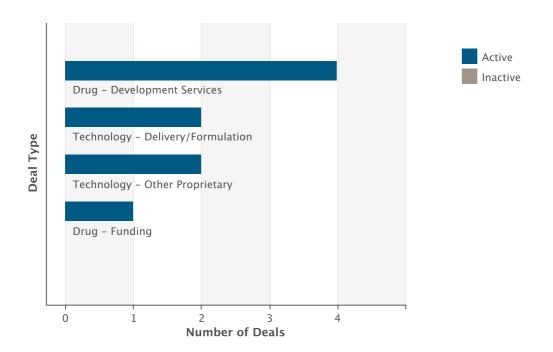


Deals by Parent Company Table

| Company Name | | icipal Inactive | | tner Inactive | Total |
|---------------------------------------|---|--------------------|---|------------------|-------|
| Immune Design Corp | 2 | 0 | 5 | 0 | 7 |
| Mitsubishi Chemical Holdings Corp | 1 | 0 | 1 | 0 | 2 |
| Infectious Disease Research Institute | 1 | 0 | 1 | 0 | 2 |
| University of Washington | 2 | 0 | 0 | 0 | 2 |
| Life Sciences Discovery Fund | 0 | 0 | 1 | 0 | 1 |
| Sanofi | 0 | 0 | 1 | 0 | 1 |
| Ludwig Institute for Cancer Research | 1 | 0 | 0 | 0 | 1 |
| SCYNEXIS Inc | 1 | 0 | 0 | 0 | 1 |
| Cancer Research Institute Inc | 1 | 0 | 0 | 0 | 1 |



Deals by Type Chart



Deals by Type Table

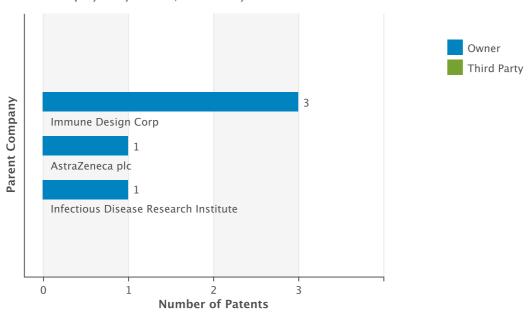
| Deal Type | Active | Inactive | Total |
|-----------------------------------|--------|----------|-------|
| Drug - Development Services | 4 | 0 | 4 |
| Technology - Other Proprietary | 2 | 0 | 2 |
| Technology - Delivery/Formulation | 2 | 0 | 2 |
| Drug - Funding | 1 | 0 | 1 |



PATENTS

Patents by Parent Company Chart

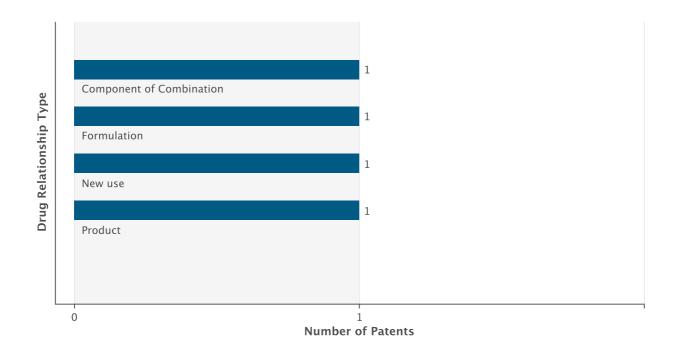
Chart displayed by Owner/Third Party



Patents by Parent Company Table

| Company Name | As Owner | As Third Party | Total |
|---------------------------------------|----------|----------------|-------|
| Immune Design Corp | 3 | 0 | 3 |
| AstraZeneca plc | 1 | 0 | 1 |
| Infectious Disease Research Institute | 1 | 0 | 1 |

Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

| Drug Relationship | Total |
|--------------------------|-------|
| Formulation | 1 |
| Product | 1 |
| Component of Combination | 1 |
| New use | 1 |



LV-305

LV-305 SNAPSHOT

| Drug Name | LV-305 |
|----------------------|-----------------------------------------------------------------------------------------------------|
| Key Synonyms | |
| Originator Company | Immune Design Corp |
| Active Companies | Immune Design Corp |
| Inactive Companies | |
| Highest Status | Phase 1 Clinical |
| Active Indications | Cancer |
| Target-based Actions | Cancer testis antigen NY-ESO-1 inhibitor;T-cell surface glycoprotein CD8 stimulator |
| Other Actions | Anticancer;Therapeutic vaccine;Retrovirus based gene therapy |
| Technologies | Virus recombinant;Biological therapeutic;Parenteral formulation unspecified;Intradermal formulation |
| Last Change Date | 06-Jun-2014 |

LV-305 DEVELOPMENT PROFILE

SUMMARY

Immune Design is developing LV-305 (ID-LV305), a vaccine based on ID-LV (presumed to be DC-NILV), an integration-defective dendritic cell-targeted lentiviral vector acting by producing CD8 T cell responses and expresses three undisclosed tumor antigens, which target NY-ESO-1 antigen, developed from DCVex lentiviral vector platform, for the potential treatment of cancer including prostate cancer,,... In April 2014, a phase I trial was initiated.

The company is also investigating LV-305, in combination with G-305 for solid tumors.

LV-305 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

| Company | Indication | Country | Development Status | Date |
|--------------------|------------|---------|---------------------------|-------------|
| Immune Design Corp | Cancer | US | Phase 1 Clinical | 25-Apr-2014 |
| | | | | |



LV-305 DRUG NAMES

| Names | Туре |
|---------------------------------------------|---------------|
| DC-NILV-based cancer vaccine, Immune Design | |
| ID-LV305 | Research Code |
| ID-LV based cancer vaccine, Immune Design | |
| LV-305 | Research Code |

LV-305 CLINICAL TRIALS

Trials by Phase and Condition Studied

| | se 4 nical | | se 3 nical | 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 |
| Metastasis | | | | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |

Total Trials by Phase and Status

| | 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 |
| Total by Phase and Status | | | | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 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)

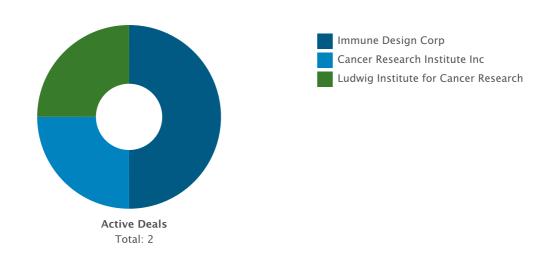
Phase 1 Clinical

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

LV-305 DEALS AND PATENTS

DEALS

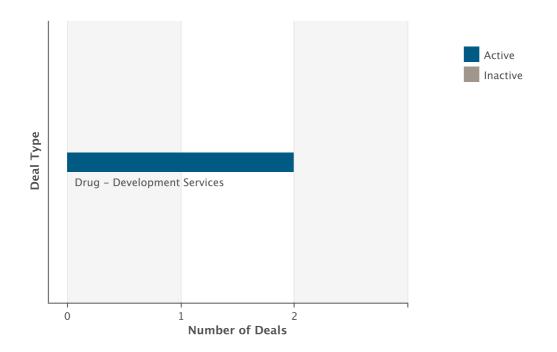
Deals by Parent Company Chart



Deals by Parent Company Table

| Company Name | | cipal Inactive | | tner Inactive | Total |
|--------------------------------------|---|--------------------------|---|------------------|-------|
| Immune Design Corp | 0 | 0 | 2 | 0 | 2 |
| Ludwig Institute for Cancer Research | 1 | 0 | 0 | 0 | 1 |
| Cancer Research Institute Inc | 1 | 0 | 0 | 0 | 1 |

Deals by Type Chart



Deals by Type Table

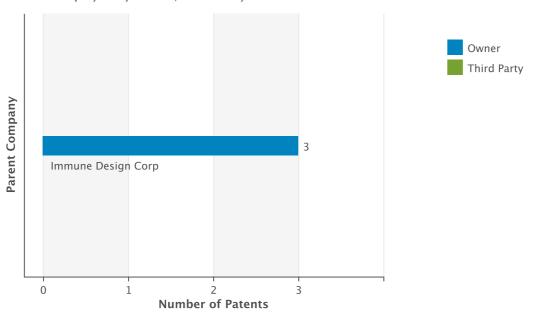
| Deal Type | Active | Inactive | Total |
|-----------------------------|--------|----------|-------|
| Drug - Development Services | 2 | 0 | 2 |



PATENTS

Patents by Parent Company Chart

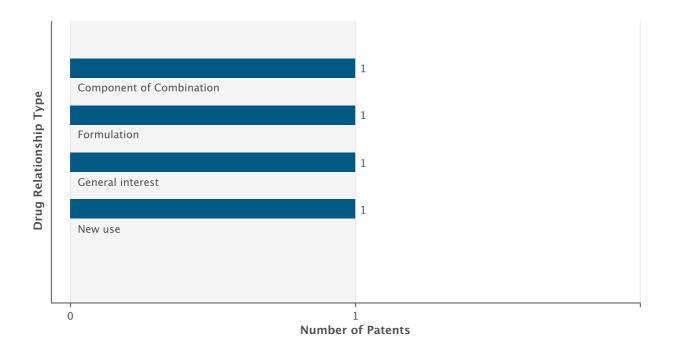
Chart displayed by Owner/Third Party



Patents by Parent Company Table

| Company Name | As Owner | As Third Party | Total |
|--------------------|----------|----------------|-------|
| Immune Design Corp | 3 | 0 | 3 |

Patents by Drug Relationship Type Chart





Patents by Drug Relationship Type Table

| Drug Relationship | Total |
|--------------------------|-------|
| General interest | 1 |
| New use | 1 |
| Formulation | 1 |
| Component of Combination | 1 |



ID-G100

ID-G100 SNAPSHOT

| Drug Name | ID-G100 |
|----------------------|-------------------------------------------------|
| Key Synonyms | |
| Originator Company | Immune Design Corp |
| Active Companies | Immune Design Corp |
| Inactive Companies | |
| Highest Status | Phase 1 Clinical |
| Active Indications | Merkel cell carcinoma |
| Target-based Actions | TLR-4 agonist |
| Other Actions | Therapeutic vaccine;Anticancer |
| Technologies | Intratumoral formulation;Biological therapeutic |
| Last Change Date | 28-Jan-2014 |

ID-G100 DEVELOPMENT PROFILE

SUMMARY

Immune Design is developing a vaccine, ID-G100 (G-MCC1), that includes glucopyranosyl lipid A, a toll-like receptor (TLR)-4 agonist, developed using company's GLAAS platform, for the potential intratumoral injection treatment of Merkel cell carcinoma (MCC). In January 2014, a phase I study was initiated, and at that time, the study was expected to complete in January 2017.

ID-G100 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

| Company | Indication | Country | Development Status | Date |
|--------------------|-----------------------|---------|---------------------------|-------------|
| Immune Design Corp | Merkel cell carcinoma | US | Phase 1 Clinical | 14-Jan-2014 |
| | | | | |

ID-G100 DRUG NAMES

| Names | Туре |
|-------------------------------------------------------------|---------------|
| ID-G100 | Research Code |
| G-MCC1 | Research Code |
| TLR-4 agonist (GLAAS, merkel cell carcinoma), Immune Design | |



ID-G100 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 |
| Merkel cell carcinoma | | | | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |

Total Trials by Phase and Status

| | se 4 nical | | se 3 nical | | se 2 nical | | se 1 nical | | ase ecified | То | tal |
|---------------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|----------------|--------------|-----|
| 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 | 0 | 1 | 1 | 0 | 0 | 1 | 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)

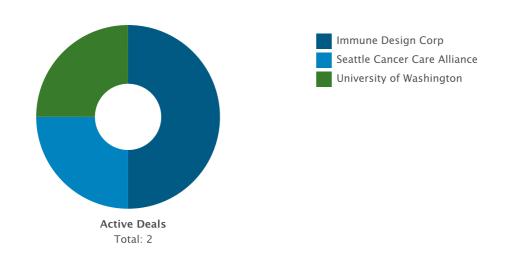
Phase 1 Clinical

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

ID-G100 DEALS AND PATENTS

DEALS

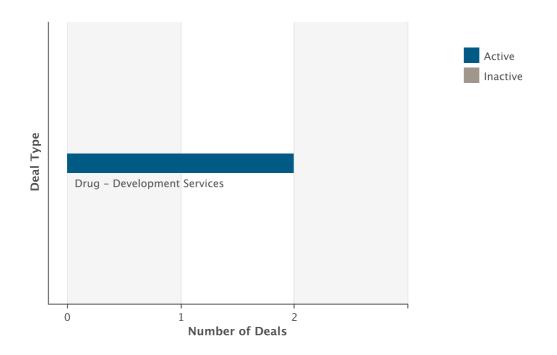
Deals by Parent Company Chart



Deals by Parent Company Table

| Company Name | Principal Active Inactive | | Partner Active Inactive | | Total |
|------------------------------|---------------------------|---|-------------------------|---|-------|
| Immune Design Corp | 0 | 0 | 2 | 0 | 2 |
| University of Washington | 1 | 0 | 0 | 0 | 1 |
| Seattle Cancer Care Alliance | 1 | 0 | 0 | 0 | 1 |

Deals by Type Chart



Deals by Type Table

| Deal Type | Active | Inactive | Total |
|-----------------------------|--------|----------|-------|
| Drug - Development Services | 2 | 0 | 2 |

G-305

G-305 SNAPSHOT

| Drug Name | G-305 |
|----------------------|--------------------------------------------------|
| Key Synonyms | |
| Originator Company | Immune Design Corp |
| Active Companies | Immune Design Corp |
| Inactive Companies | |
| Highest Status | Phase 1 Clinical |
| Active Indications | Cancer |
| Target-based Actions | TLR-4 agonist |
| Other Actions | Anticancer;Therapeutic vaccine |
| Technologies | Intramuscular formulation;Biological therapeutic |
| Last Change Date | 28-Feb-2014 |

G-305 DEVELOPMENT PROFILE

SUMMARY

Immune Design is developing G-305 (ID-G305; IDC-G305), a therapeutic vaccine comprising multiple melanoma antigens and glucopyranosyl lipid A adjuvant (GLA), a small molecule toll-like receptor 4 agonist, for the potential treatment of cancer including melanoma,. In November 2013, a phase I trial was initiated in the US.

The company is also investigating G-305, in combination with LV-305, for solid tumors.

G-305 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

| Company | Indication | Country | Development Status | Date |
|--------------------|------------|---------|---------------------------|-------------|
| Immune Design Corp | Cancer | US | Phase 1 Clinical | 30-Nov-2013 |

G-305 DRUG NAMES

| Names | Туре |
|-------------------------------------------------------------|---------------|
| ID-G305 | Research Code |
| GLA-SE + melanoma antigens (cancer), Immune Design | |
| G-305 | Research Code |
| IDC-G305 | Research Code |
| therapeutic vaccine (GLA adjuvanted, cancer), Immune Design | |

G-305 CLINICAL TRIALS

Trials by Phase and Condition Studied

| | se 4 nical | | se 3 nical | | se 2 nical | | se 1 nical | | ase ecified | То | tal |
|--------------|---------------|---------------|---------------|--------------|---------------|--------------|---------------|--------------|----------------|--------------|-----|
| On- going | All | On- going | All | On- going | All | On- going | All | On- going | All | On- going | All |
| Metastat | ic non sma | all cell lung | cancer | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| Renal ce | II carcinon | na | | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| Ovary tu | mor | | | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| Metastasis | | | | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |

Total Trials by Phase and Status

| | se 4 nical | | se 3 nical | | se 2 nical | | se 1 nical | | ase ecified | То | tal |
|--------------|---------------------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|----------------|--------------|-----|
| 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 | 0 | 1 | 1 | 0 | 0 | 1 | 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



IDC-G103

IDC-G103 SNAPSHOT

| Drug Name | IDC-G103 |
|----------------------|-----------------------------------------------------------|
| Key Synonyms | |
| Originator Company | Immune Design Corp |
| Active Companies | Immune Design Corp |
| Inactive Companies | |
| Highest Status | Discovery |
| Active Indications | HSV-2 infection |
| Target-based Actions | TLR-4 agonist |
| Other Actions | Therapeutic vaccine;Antiviral |
| Technologies | Biological therapeutic;Parenteral formulation unspecified |
| Last Change Date | 22-Apr-2014 |

IDC-G103 DEVELOPMENT PROFILE

SUMMARY

IDC-G103 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

| Company | Indication | Country | Development Status | Date |
|--------------------|-----------------|---------|---------------------------|-------------|
| Immune Design Corp | HSV-2 infection | US | Discovery | 31-Dec-2009 |
| | | | | |

IDC-G103 DRUG NAMES

| Names | Туре |
|------------------------------------------------------------------------|---------------|
| IDC-G103 | Research Code |
| herpes simplex 2 virus vaccine (GLA adjuvanted), Immune Design Corp | |



LV-305 + G-305

LV-305 + G-305 SNAPSHOT

| Drug Name | LV-305 + G-305 |
|----------------------|----------------------------------------------------------------------------------------------|
| Key Synonyms | |
| Originator Company | Immune Design Corp |
| Active Companies | Immune Design Corp |
| Inactive Companies | |
| Highest Status | Discovery |
| Active Indications | Solid tumor |
| Target-based Actions | TLR-4 agonist;T-cell surface glycoprotein CD8 stimulator |
| Other Actions | Retrovirus based gene therapy;Therapeutic vaccine;Anticancer |
| Technologies | Drug combination;Virus recombinant;Biological therapeutic;Parenteral formulation unspecified |
| Last Change Date | 06-Jun-2014 |

LV-305 + G-305 DEVELOPMENT PROFILE

SUMMARY

Immune Design is investigating CMB-305 (ID-CMB305), a vaccine consisting of LV-305, a vaccine based on integration-defective dendritic cell-targeted lentiviral vector which acts by producing CD8 T cell responses that expresses three undisclosed tumor antigens, and G-305, a therapeutic vaccine comprising multiple melanoma antigens and glucopyranosyl lipid A adjuvant (GLA) which stimulates toll-like receptor 4, for the potential treatment of solid tumor. In September 2013, the vaccine was listed as being under IND phase. In October 2013, the company was planning to initiate clinical trials. In June 2014, a phase I trial was expected to start by the end of 2014.

LV-305 + G-305 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

| Company | Indication | Country | Development Status | Date |
|--------------------|-------------|---------|---------------------------|-------------|
| Immune Design Corp | Solid tumor | US | Discovery | 27-Sep-2013 |
| | | | | |



LV-305 + G-305 DRUG NAMES

| Names | Туре |
|----------------|---------------|
| CMB-305 | Research Code |
| LV-305 + G-305 | |
| ID-CMB305 | Research Code |



checkpoint inhibitors (LV-305 +/-GLA, cancer), Immune Design

checkpoint inhibitors (LV-305 +/-GLA, cancer), Immune Design SNAPSHOT

| Drug Name | checkpoint inhibitors (LV-305 +/-GLA, cancer), Immune Design |
|----------------------|--------------------------------------------------------------------------------------|
| Key Synonyms | |
| Originator Company | Immune Design Corp |
| Active Companies | Immune Design Corp |
| Inactive Companies | |
| Highest Status | Discovery |
| Active Indications | Cancer |
| Target-based Actions | TLR-4 agonist |
| Other Actions | Retrovirus based gene therapy;Therapeutic vaccine;Immunostimulant;Anticancer |
| Technologies | Biological therapeutic;Parenteral formulation unspecified;Gene transfer system viral |
| Last Change Date | 28-Jul-2014 |

checkpoint inhibitors (LV-305 +/-GLA, cancer), Immune Design DEVELOPMENT PROFILE

SUMMARY

checkpoint inhibitors (LV-305 +/-GLA, cancer), Immune Design DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

| Company | Indication | Country | Development Status | Date |
|--------------------|------------|---------|---------------------------|-------------|
| Immune Design Corp | Cancer | US | Discovery | 30-Nov-2012 |
| | | | | |

checkpoint inhibitors (LV-305 +/-GLA, cancer), Immune Design DRUG NAMES

| Names | Type |
|--------------------------------------------------------------------|------|
| checkpoint inhibitors (LV-305 +/-GLA, cancer), Immune Design | |
| therapeutic vaccines (ID-LV + GLA adjuvant, cancer), Immune Design | |



therapeutic vaccine (GLA adjuvanted, allergy), Sanofi/Immune Design

therapeutic vaccine (GLA adjuvanted, allergy), Sanofi/Immune Design SNAPSHOT

| Drug Name | therapeutic vaccine (GLA adjuvanted, allergy), Sanofi/Immune Design |
|----------------------|---------------------------------------------------------------------|
| Key Synonyms | |
| Originator Company | Immune Design Corp |
| Active Companies | Immune Design Corp;Sanofi |
| Inactive Companies | |
| Highest Status | Discovery |
| Active Indications | Allergy |
| Target-based Actions | TLR-4 agonist |
| Other Actions | Therapeutic vaccine;Immunomodulator |
| Technologies | Systemic formulation unspecified;Biological therapeutic |
| Last Change Date | 18-Apr-2014 |

therapeutic vaccine (GLA adjuvanted, allergy), Sanofi/Immune Design DEVELOPMENT PROFILE

SUMMARY

Immune Design, in collaboration with Sanofi, is investigating a therapeutic vaccine adjuvanted with glucopyranosyl lipid A (GLA), a small molecule toll-like receptor 4 (TLR-4) agonist, for the potential treatment of allergy. In April 2014, the vaccine was in IND.

therapeutic vaccine (GLA adjuvanted, allergy), Sanofi/Immune Design DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

| Company | Indication | Country | Development Status | Date |
|--------------------|------------|---------|---------------------------|-------------|
| Immune Design Corp | Allergy | US | Discovery | 26-Oct-2011 |
| Sanofi | Allergy | France | Discovery | 26-Oct-2011 |

therapeutic vaccine (GLA adjuvanted, allergy), Sanofi/Immune Design DRUG NAMES

| Names | Туре |
|------------------------------------------------------------------------|------|
| therapeutic vaccine (GLA adjuvanted, allergy), Sanofi/Immune Design | |



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