

Proteon Therapeutics Inc

CORTELLIS COMPANY DETAILED PIPELINE REPORT

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

Publication Date: 19-Jan-2015

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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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

COMPANY OVERVIEW

| | |
|---------------------------------------|--|
| Company Name | Proteon Therapeutics Inc |
| Parent Company Name | Proteon Therapeutics Inc |
| Website | http://www.proteontherapeutics.com/ |
| Country | US |
| Number of Drugs in Active Development | 1 |
| Number of Inactive Drugs | 0 |
| Number of Patents as Owner | 3 |
| Number of Patents as Third Party | 0 |
| Number of Deals | 2 |
| Key Indications | Kidney dialysis, Peripheral vascular disease, Cardiovascular disease, Renal disease, Vasospasm |
| Key Target-based Actions | Elastase stimulator, Elastase modulator |
| Key Technologies | Biological therapeutic, Local formulation unspecified, Recombinant enzyme, Transdermal formulation, Biochemical synthesis, Cell culture technique, Formulation, Freeze drying, Polynucleotide sequence, Protein recombinant, Vector expression |

COMPANY PROFILE

SUMMARY

Proteon Therapeutics Inc, a spin-out of Johns Hopkins University is a privately-held biopharmaceutical company that develops pharmaceuticals for renal and vascular diseases.

IP NEWS

In March 2008, Proteon announced that the EPO had issued WO-0121574 (EP-01220830) which covered the use of elastases (including PRT-201) for dilating arteries and veins.

ACQUISITIONS & SPIN-OFFS

In March 2009, Proteon entered into an agreement offering Novartis an exclusive option to acquire Proteon following the successful completion of a phase II trial of PRT-201 and a secondary right to a global license. The deal would be worth up to \$550 million including an initial acquisition payment plus regulatory milestone payments.

FINANCIAL

In October 2014, the company announced an IPO of 6.11 million shares at \$10.00 each that begun trading on the NASDAQ Global Market under the ticker symbol 'PRTO' from October 22, 2014. The underwriters were granted a 30-day option to purchase up to 916,500 additional shares. At that time, the offering was expected to close on October 27, 2014. In November 2014, the underwriters option to purchase additional shares was closed after the closing of the IPO in October. At that time, the gross proceeds were \$70.3 million including the underwriters option without deduction of underwriting discounts and commissions.

In May 2014, the company raised \$45 million in a series D equity financing including a \$25 million tranche.

In March 2009, Proteon closed a \$38 million series B financing round led by MPM Capital. In May 2009, the company raised an additional \$12 million from a second closing of the series B financing round.

In September 2007, Proteon raised \$12 million from a financing round. The company planned to use the proceeds to fund development of PRT-201.

In March 2006, Proteon raised \$19 million in a series A venture capital round to fund development of its PRT-201 vascular dilation drug.

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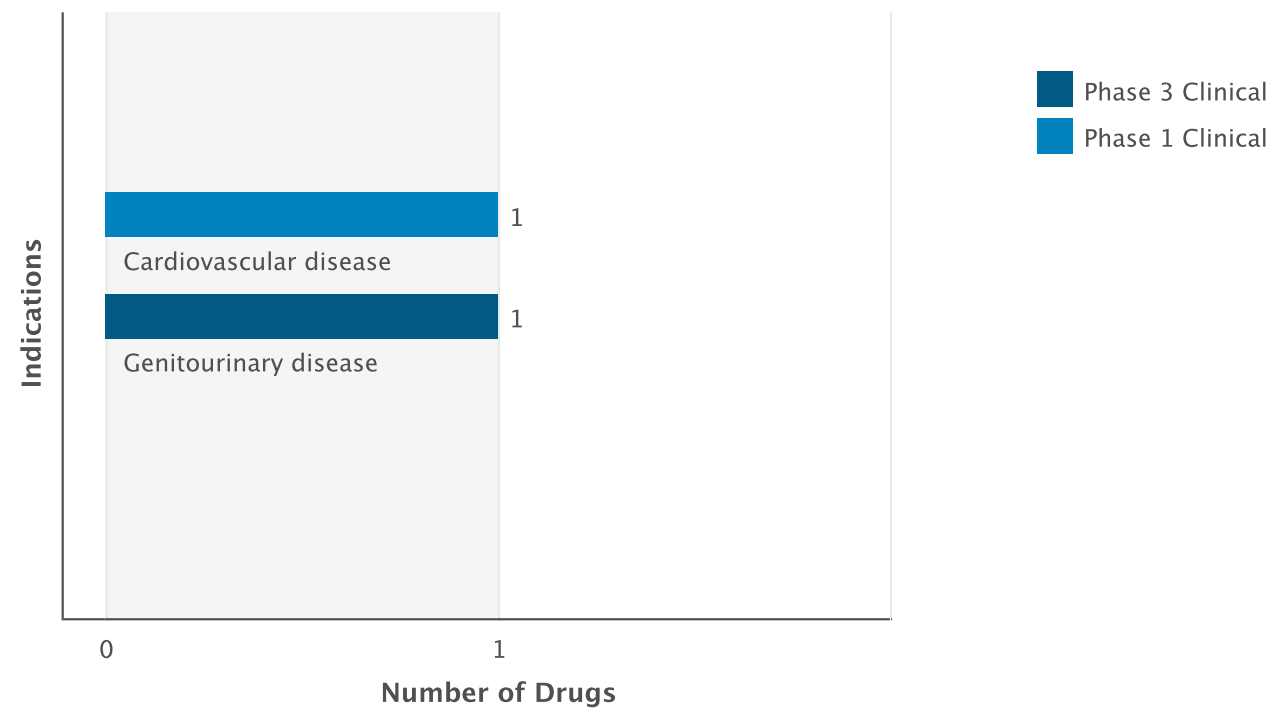


PRODUCT PORTFOLIO SUMMARY

DRUGS

Drugs by Indication

Active Drugs by Indication Chart



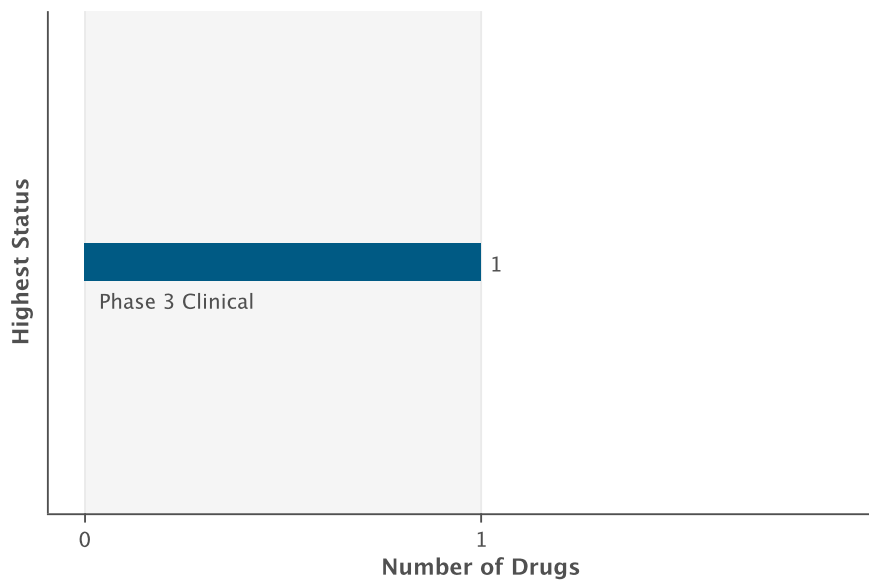
Drugs by Indication Table

| Indication | Active | Inactive | Total |
|------------------------|--------|----------|-------|
| Cardiovascular disease | 1 | 0 | 1 |
| Genitourinary 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 |

DEALS

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

CLINICAL TRIALS

Trials by Condition Studied

| Condition Studied | Ongoing | All |
|------------------------|---------|-----|
| Genitourinary disease | 1 | 3 |
| Cardiovascular disease | 1 | 3 |

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Trials by Phase

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

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 | 4 | 0 | 4 |
| Gastrointestinal disease | 1 | 0 | 1 |
| Genitourinary 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.

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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

PRT-201

PRT-201 SNAPSHOT

| | |
|-----------------------------|---|
| Drug Name | PRT-201 |
| Key Synonyms | vonapanitase |
| Originator Company | Proteon Therapeutics Inc |
| Active Companies | Proteon Therapeutics Inc |
| Inactive Companies | |
| Highest Status | Phase 3 Clinical |
| Active Indications | Peripheral vascular disease;Kidney dialysis |
| Target-based Actions | Elastase stimulator |
| Other Actions | Vasodilator |
| Technologies | Transdermal formulation;Biological therapeutic;Local formulation unspecified;Recombinant enzyme |
| Last Change Date | 09-Jan-2015 |

PRT-201 DEVELOPMENT PROFILE

SUMMARY

Proteon Therapeutics is developing PRT-201 (PROT-201; vonapanitase), a recombinant human type I pancreatic elastase produced in *Pichia pastoris*, for local topical use as a vasodilator to modify the extracellular matrix to potentially improve outcomes from hemodialysis and peripheral artery disease (PAD),,,,. In July 2014, the first patient was treated in a phase III trial in patients, immediately after radiocephalic arteriovenous fistula (AVF) creation with chronic kidney disease (CKD). In October 2012, a phase I study was initiated in patients with PAD ; in July 2014, enrollment was ongoing ; in January 2015, data were expected to be reported in the second half of 2015.

PRT-201 DEVELOPMENT STATUS

CURRENT DEVELOPMENT STATUS

| Company | Indication | Country | Development Status | Date |
|--------------------------|-----------------------------|---------|--------------------|-------------|
| Proteon Therapeutics Inc | Kidney dialysis | US | Phase 3 Clinical | 17-Jul-2014 |
| Proteon Therapeutics Inc | Peripheral vascular disease | US | Phase 1 Clinical | 15-Oct-2012 |
| Proteon Therapeutics Inc | Kidney dialysis | EU | Discovery | 05-Nov-2013 |

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PRT-201 DRUG NAMES

| Names | Type |
|--|---------------|
| PRT-201 | Research Code |
| PROT-201 | Research Code |
| vasodilation agent (vascular surgery, hemodialysis), Proteon | |
| vonapanitase | PINN |

PRT-201 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 |
| Peripheral arterial occlusive disease | | | | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| Renal disease | | | | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| Peripheral vascular disease | | | | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| End stage renal disease | | | | | | | | | | | |
| 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 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 | 1 | 1 | 0 | 1 | 1 | 3 | 0 | 0 | 2 | 5 |

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)

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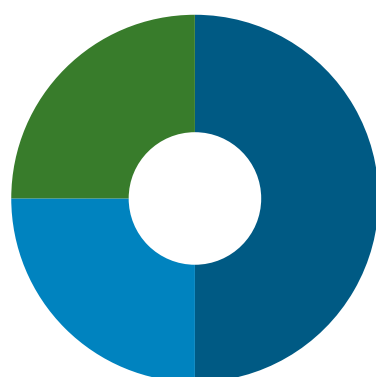
Phase 1 Clinical

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

PRT-201 DEALS AND PATENTS

DEALS

Deals by Parent Company Chart



Deals by Parent Company Table

| Company Name | Principal | | Partner | | Total |
|--------------------------|-----------|----------|---------|----------|-------|
| | Active | Inactive | Active | Inactive | |
| Proteon Therapeutics Inc | 1 | 0 | 1 | 0 | 2 |
| Novartis AG | 0 | 0 | 1 | 0 | 1 |
| QSV Biologics | 1 | 0 | 0 | 0 | 1 |

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Deals by Type Chart

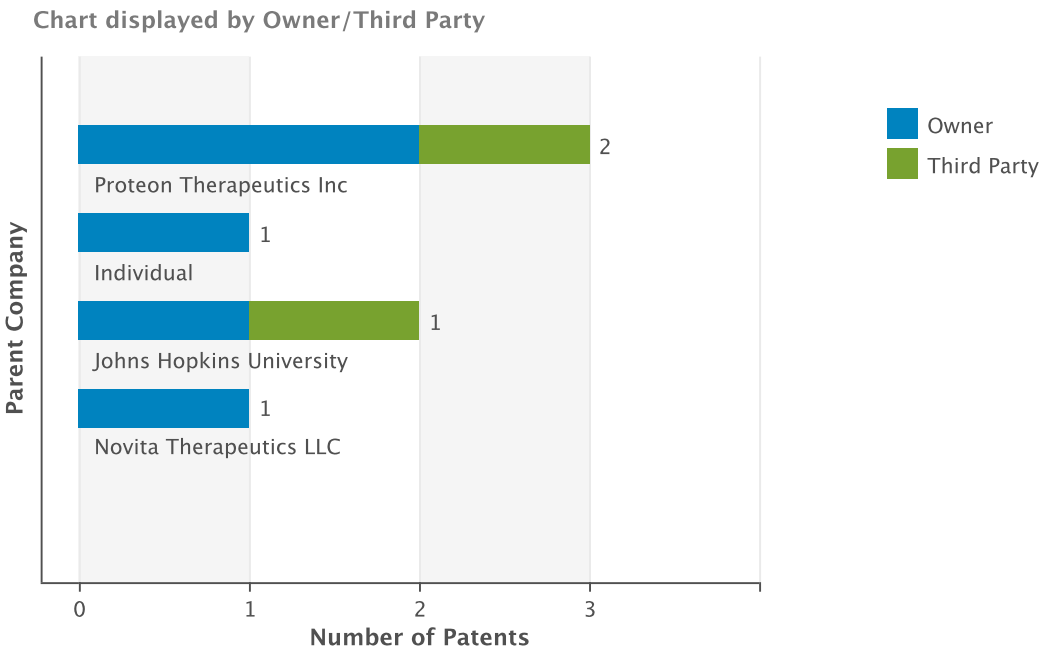


Deals by Type Table

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

PATENTS

Patents by Parent Company Chart

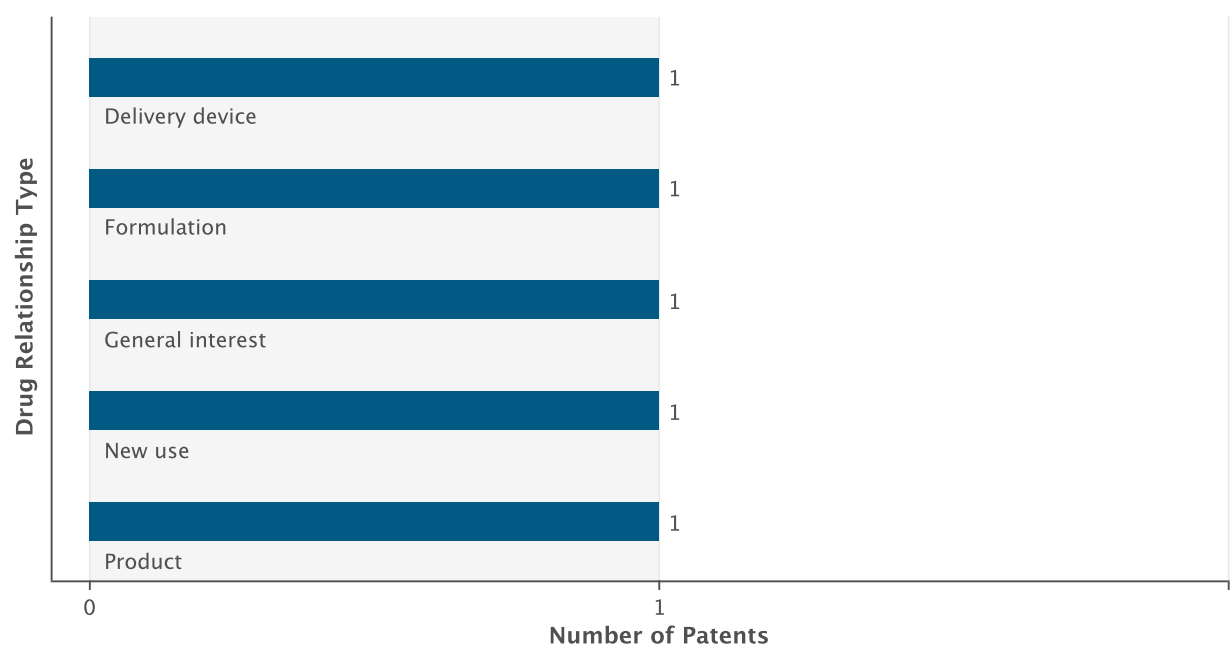


Patents by Parent Company Table

| Company Name | As Owner | As Third Party | Total |
|--------------------------|----------|----------------|-------|
| Proteon Therapeutics Inc | 2 | 1 | 2 |
| Novita Therapeutics LLC | 1 | 0 | 1 |
| Johns Hopkins University | 1 | 1 | 1 |
| Individual | 1 | 0 | 1 |

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Patents by Drug Relationship Type Chart



Patents by Drug Relationship Type Table

| Drug Relationship | Total |
|-------------------|-------|
| Product | 1 |
| General interest | 1 |
| Formulation | 1 |
| New use | 1 |
| Delivery device | 1 |

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