

Minerva Neurosciences Inc

COMPANY AND PIPELINE OVERVIEW REPORT

A comprehensive coverage of the company and a summary of the drug pipeline portfolio.

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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i.e. where the development status for the drug(s) is one of the following: No Development Reported, Discontinued, or Withdrawn.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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PLEASE NOTE: the financials section where present in the report includes: Share Information, Stock Performance chart (including the consensus recommendation), and Major Shareholders. Financial Performance presents graphical and tabular data on Worldwide Sales, Operating Income and Net Income over time, together with a Quarterly earnings update. Balance Sheet lists Assets, Liabilities and Stockholders Equity, and Forecasts includes: EPS Forecast and Other Forecasts. The data reported in all sections (except share information and major stock holders) are correct as of the publication date of the report (and not the download date). For share information and major stock holders the data is correct for the date shown with these sections

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Minerva Neurosciences Inc

COMPANY OVERVIEW

| | |
|--|--|
| Company Name | Minerva Neurosciences Inc |
| Parent Company Name | Minerva Neurosciences Inc |
| Website | http://minervaneurosciences.com/ |
| Country | US |
| Number of Drugs in Active Development | 5 |
| Number of Inactive Drugs | 0 |
| Number of Patents as Owner | 4 |
| Number of Patents as Third Party | 0 |
| Number of Deals | 4 |
| Key Indications | Parkinsons disease, Depression, Schizophrenia, Insomnia, Alzheimers disease, Bipolar disorder, Sleep disorder, Anxiety disorder, Attention deficit-disruptive behaviour disorder, Cognitive disorder, Delusion, Drug dependence, Epilepsy, HIV associated dementia, Hallucination, Hyperactivity, Hypomania, Lewy body dementia, Motor |
| Key Target-based Actions | ErbB3 tyrosine kinase receptor modulator, Neuregulin ligand, Orexin 2 receptor antagonist, 5-HT 2a receptor antagonist, Opioid receptor sigma antagonist 2,5-HT 1a receptor antagonist, 5-HT receptor modulator, Acetylcholinesterase inhibitor, Catechol O-methyltransferase inhibitor, Dopamine receptor modulator, ErbB4 tyrosine kinase receptor modulator, Glial fibrillary acidic protein modulator, Neuregulin-1 ligand modulator, Peroxiredoxin 3 modulator, Transgelin 3 modulator, Triosephosphate isomerase 1 modulator, Tubulin beta 3 modulator, Visinin like protein 1 modulator |
| Key Technologies | Peptide, Biological therapeutic, Formulation solid, Small molecule therapeutic, Subcutaneous formulation, Suspension, Systemic formulation unspecified, Antibody, ELISA |

COMPANY PROFILE

SUMMARY

Minerva Neurosciences, formed by the merger of Cyrenaic and SONKEI pharmaceuticals, in November 2013, is focused on the development and commercialization of drugs for the treatment of CNS diseases.

ACQUISITIONS & SPIN-OFFS

In February 2014, Mind-NRG was acquired by Minerva Neurosciences.

FINANCIAL

In March 2015, the company priced a private placement offering of 6,281,661 common stock shares and warrants to purchase up to an aggregate 6,281,661 shares at \$4.81 per share and \$0.125 per warrant. The warrants had an exercise price of \$5.772 per share. Gross proceeds from the offering were expected to be \$31 million and were to be used to fund the clinical development of Minerva's products. At that time, the offering was expected to close on March 18, 2015. Later that month, the offering was closed.

In January 2015, the company entered into a \$15 million debt facility with Oxford Finance LLC and Silicon Valley Bank.

In June 2014, Minerva announced its initial public offering of 5,454,545 shares of its common stock priced at \$6.00 per share and at that time, the underwriters were granted a 30-day option to purchase up to 818,181 additional shares of common stock at the same price. The offering was expected to close on July 07, 2014. In July 2014, the shares began trading on the NASDAQ global market under the symbol "NERV". In July 2014, the IPO was completed. By August 2014, the company had also sold approximately 0.7 million shares in a private placement. The net proceeds from the IPO and private placement were approximately \$29.9 million.

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COMPANY FINANCIALS

SHARE INFORMATION

| | |
|--------------------------------------|-------------------|
| Close Price (USD) | 5.59 |
| Change (USD) | -0.15 (-2.61%) |
| Previous Close Price (USD) | 5.74 |
| Volume | 19,528 |
| 52-Week High (USD) | 10.00 |
| 52-Week Low (USD) | 4.08 |
| Date | 27-Apr-2015 |
| Exchange | NASDAQ(COMPOSITE) |
| Current Number of Shares Outstanding | 18,439,482 |
| Current Market Capitalization | 141,899,361 |
| EPS (Date Reported) | -4.47184 |

STOCK PERFORMANCE

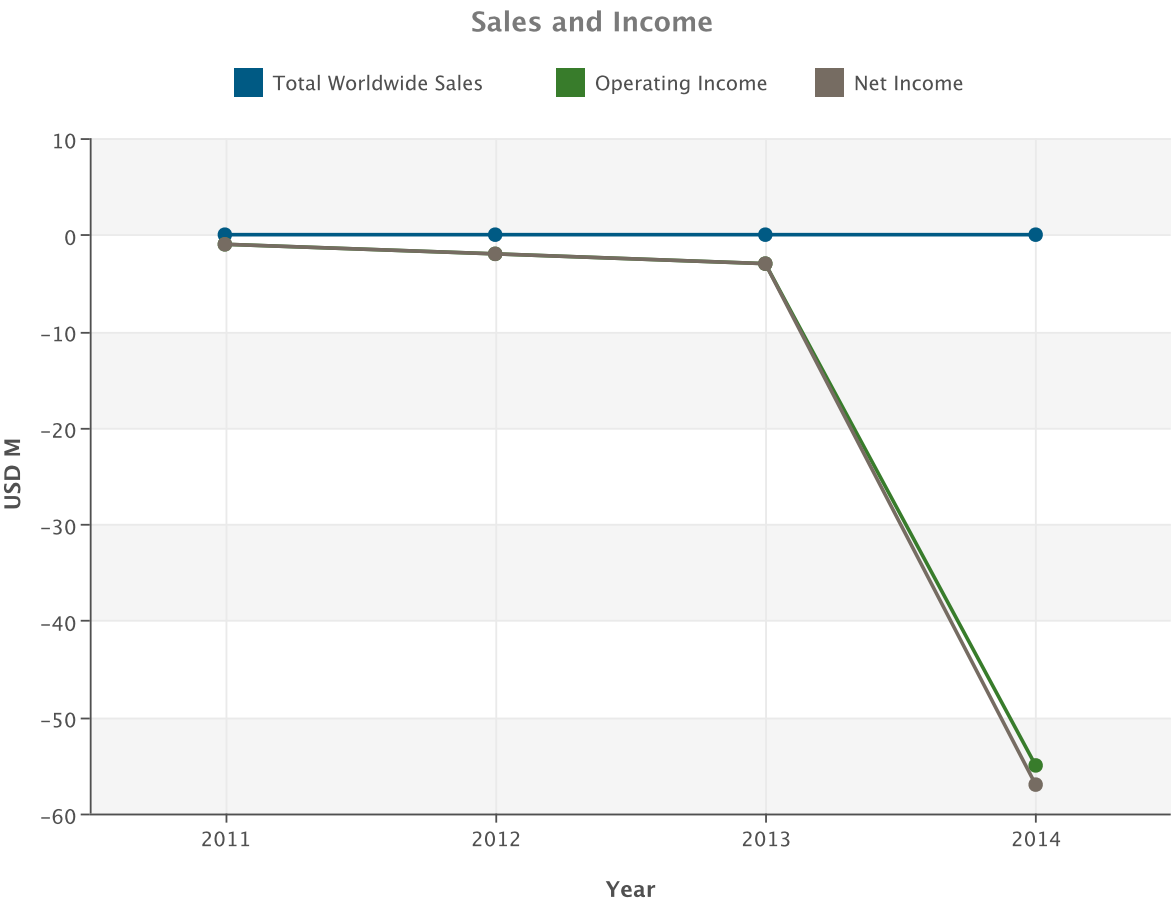


MAJOR SHAREHOLDERS

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| Shareholder | Type | Country | Shares held | % of shares held | Change in holding | % changes in shares held | Date |
|---|-----------------------------------|---------------|-------------|------------------|-------------------|--------------------------|-------------|
| Index Ventures | Venture Capital | Switzerland | 5,285,638 | 21.38 | 0 | 0 | 18-Mar-2015 |
| Care Capital, LLC | Private Equity | United States | 1,662,592 | 6.73 | -2,220,620 | -0.57 | 25-Mar-2015 |
| Fidelity Select Biotechnology Portfolio | Mutual Fund | United States | 1,271,400 | 5.14 | 0 | 0 | 28-Feb-2015 |
| Cormorant Asset Management LLC | Hedge Fund | United States | 1,216,303 | 4.92 | 1,041,303 | 5.95 | 13-Mar-2015 |
| Fidelity Advisor Biotechnology Fund | Mutual Fund | United States | 228,600 | 0.92 | 0 | 0 | 28-Feb-2015 |
| The Vanguard Group, Inc. | Investment Advisor | United States | 48,895 | 0.2 | 47,321 | 30.06 | 31-Mar-2015 |
| Vanguard Extended Market Index Fund | Mutual Fund | United States | 26,063 | 0.11 | 24,489 | 15.56 | 28-Feb-2015 |
| Fidelity Spartan Extended Market Index Fund | Mutual Fund | United States | 24,020 | 0.1 | 0 | 0 | 28-Feb-2015 |
| Vanguard Total Stock Market Index Fund | Mutual Fund | United States | 22,832 | 0.09 | 22,832 | 1 | 31-Mar-2015 |
| TFS Capital LLC | Investment Advisor/ Hedge Fund | United States | 5,185 | 0.02 | 5,185 | 1 | 31-Jan-2015 |
| TFS Market Neutral Fund | Mutual Fund | United States | 5,185 | 0.02 | 5,185 | 1 | 31-Jan-2015 |
| Fidelity NASDAQ Composite Index Fund | Mutual Fund | United States | 3,949 | 0.02 | 0 | 0 | 28-Feb-2015 |
| AXA/Lord Abbett Micro Cap Portfolio | Mutual Fund | United States | 820 | 0 | 0 | 0 | 28-Feb-2015 |

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| | 2011 | 2012 | 2013 | 2014 | |
|--------------------------|-----------|-----------|-----------|------------|--|
| Sales (USD M) | 0 | 0 | 0 | 0 | |
| Operating Income (USD M) | -1.127891 | -1.581016 | -3.160979 | -54.870431 | |
| Net Income (USD M) | -1.122714 | -1.581955 | -3.262005 | -56.901439 | |

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Quarterly earnings update

| Period | Sales (USD M) | Operating Income (USD M) | Net Income (USD M) |
|---------|---------------|--------------------------|--------------------|
| 2014 Q4 | 0 | -7.445917 | -7.442162 |
| 2014 Q3 | 0 | -27.151351 | -27.155197 |
| 2014 Q2 | 0 | -17.649835 | -19.365662 |
| 2014 Q1 | 0 | -2.623328 | -2.938418 |
| 2013 Q4 | 0 | -2.02839 | -2.126529 |
| 2013 Q2 | 0 | -0.378787 | -0.375953 |
| 2013 Q1 | 0 | -0.27133 | -0.27133 |
| 2012 Q4 | 0 | -0.2944 | -0.296152 |

BALANCE SHEET

Assets (USD M)

| | 2011 | 2012 | 2013 | 2014 |
|-------------------------------------|----------|----------|-----------|-----------|
| Cash & Short Term Investments | 0.208857 | 0.200314 | 1.818317 | 18.580716 |
| Inventories - Total | 0 | 0 | 0 | 0 |
| Current Assets - Total | 0.243173 | 0.209309 | 1.819169 | 19.337695 |
| Property, Plant And Equipment - Net | | 0 | 0.003232 | 0.043446 |
| Other Assets - Total | 0 | 0 | 27.352385 | 49.069399 |
| Total Assets | 0.243173 | 0.209309 | 29.174786 | 68.45054 |

Liabilities (USD M)

| | 2011 | 2012 | 2013 | 2014 |
|---|----------|---------|----------|-----------|
| Accounts Payable | | 0 | 0.522981 | 0.641813 |
| Short Term Debt & Current Portion Of Long Term Debt | 0 | 0 | 0.05827 | 0 |
| Current Liabilities - Total | 0.130004 | 0.19029 | 1.406583 | 3.509491 |
| Long Term Debt | 0 | 0 | 0 | 0 |
| Deferred Taxes | | 0 | 7.5886 | 13.43376 |
| Other Liabilities | 0 | 0 | 0 | 0.007694 |
| Total Liabilities | 0.130004 | 0.19029 | 8.995183 | 16.950945 |

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Stockholders Equity (USD M)

| | 2011 | 2012 | 2013 | 2014 | |
|--|----------|----------|-----------|----------|--|
| Minority Interest | 0 | 0 | 0 | 0 | |
| Preferred Stock | 0 | 0 | 0 | 0 | |
| Common Stock | 0.00112 | 0.000356 | 0.000611 | 0.001844 | |
| Treasury Stock | 0 | 0 | | | |
| Total Liabilities & Shareholders' Equity | 0.243173 | 0.209309 | 29.174786 | 68.45054 | |

FORECASTS

EPS Forecast

| Year ending | Current Forecast | 1 month ago | 3 months ago |
|-------------|------------------|-------------|--------------|
| 31-Dec-2015 | -1.89 | -1.96 | -1.96 |
| 31-Dec-2016 | -1.66 | -2.57 | -2.57 |
| 31-Dec-2017 | -1.27 | -2.49 | -2.49 |

Other Forecasts

| Year ending | DPS | CPS | Pretax | Sales |
|-------------|-----|-----|--------|-------|
| 31-Dec-2015 | | | -41.34 | 0 |
| 31-Dec-2016 | | | -46.68 | 8.33 |
| 31-Dec-2017 | | | -44.31 | 15 |

SUBSIDIARY COMPANIES

| Names |
|----------|
| Mind-NRG |

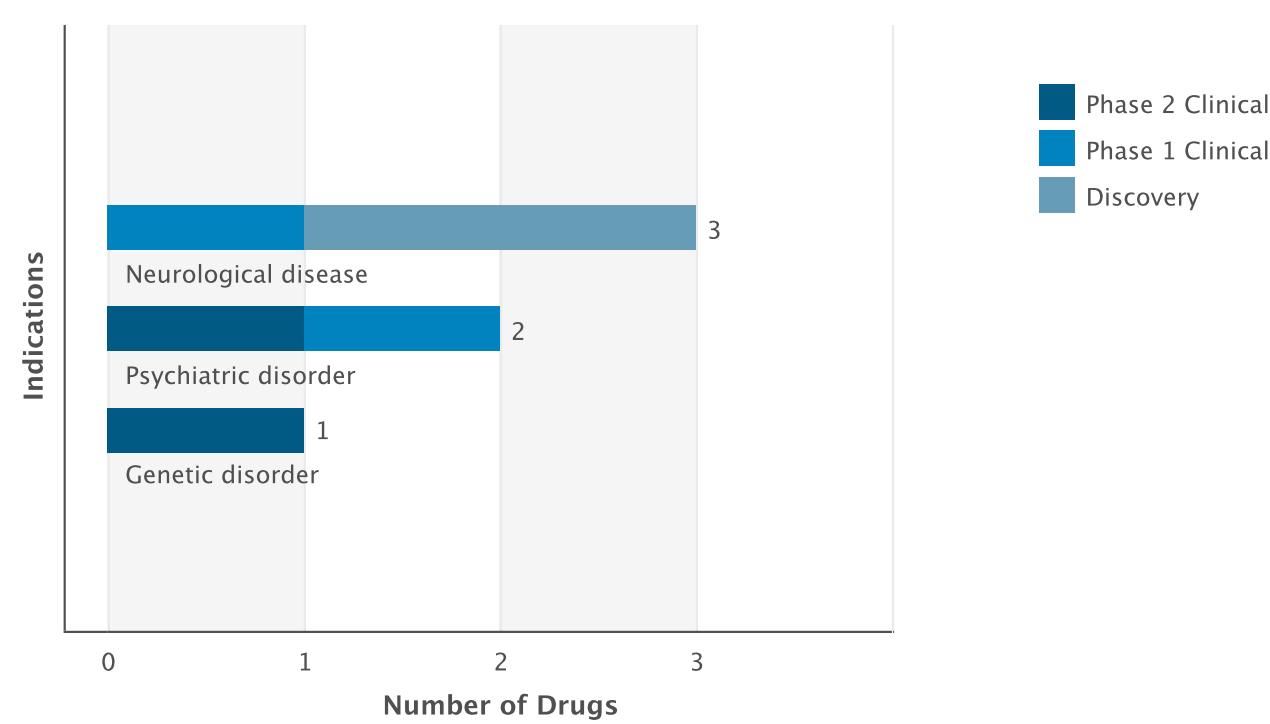
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PRODUCT PORTFOLIO SUMMARY

DRUGS

Drugs by Indication

Active Drugs by Indication Chart



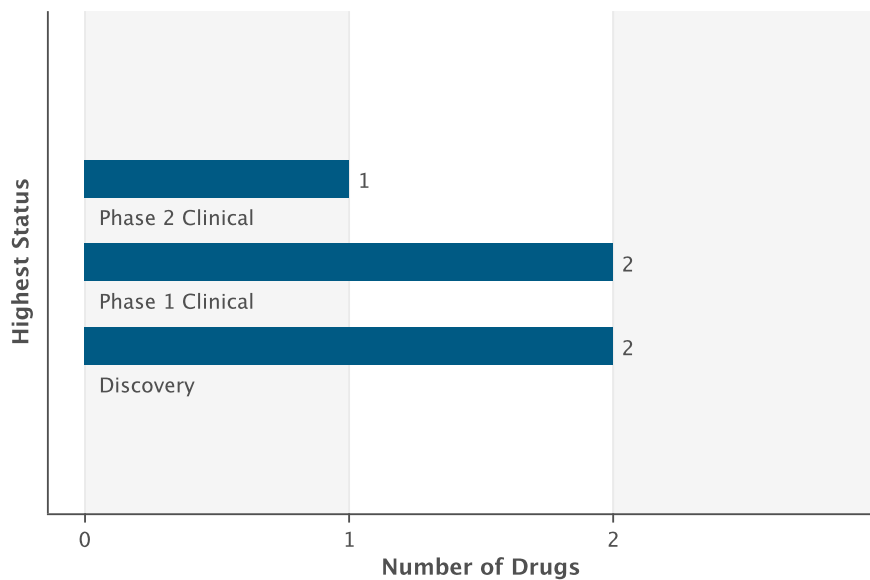
Drugs by Indication Table

| Indication | Active | Inactive | Total |
|----------------------|--------|----------|-------|
| Psychiatric disorder | 2 | 1 | 3 |
| Neurological disease | 3 | 0 | 3 |
| Genetic disorder | 1 | 1 | 2 |
| Degeneration | 0 | 1 | 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 2 Clinical | 1 |
| Phase 1 Clinical | 2 |
| Discovery | 2 |

DEALS

| Deal Type | Principal | | Partner | | Total |
|--|-----------|----------|---------|----------|-------|
| | Active | Inactive | Active | Inactive | |
| Drug - Development/Commercialization License | 1 | 0 | 3 | 0 | 4 |

CLINICAL TRIALS

Trials by Condition Studied

| Condition Studied | Ongoing | All |
|----------------------|---------|-----|
| Psychiatric disorder | 0 | 2 |
| Genetic disorder | 0 | 1 |

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Trials by Phase

| Phase | Ongoing | All |
|---------------------|---------|-----|
| Phase 2 | 0 | 1 |
| Phase 1 | 0 | 2 |
| Phase not specified | 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 | 1 | 0 | 1 |
| Growth disorder | 1 | 0 | 1 |
| Degeneration | 2 | 0 | 2 |
| Immune disorder | 1 | 0 | 1 |
| Psychiatric disorder | 4 | 0 | 4 |
| Genetic disorder | 3 | 0 | 3 |
| Neurological disease | 4 | 0 | 4 |
| Injury | 1 | 0 | 1 |
| Toxicity and intoxication | 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 DRUGS

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

MIN-101

| | |
|-----------------------------|---|
| Drug Name | MIN-101 |
| Key Synonyms | |
| Originator Company | Mitsubishi Chemical Holdings Corp |
| Active Companies | Minerva Neurosciences Inc |
| Inactive Companies | Mitsubishi Chemical Holdings Corp |
| Highest Status | Phase 2 Clinical |
| Active Indications | Schizophrenia |
| Target-based Actions | 5-HT 2a receptor antagonist, Opioid receptor sigma antagonist 2 |
| Other Actions | Antipsychotic |
| Technologies | Oral formulation, Small molecule therapeutic |
| Last Change Date | 27-Mar-2015 |

MIN-117

| | |
|-----------------------------|---|
| Drug Name | MIN-117 |
| Key Synonyms | |
| Originator Company | Mitsubishi Pharma Corp |
| Active Companies | Minerva Neurosciences Inc |
| Inactive Companies | Mitsubishi Tanabe Pharma Corp, Sonkei Pharmaceuticals Inc, Mitsubishi Pharma Corp |
| Highest Status | Phase 1 Clinical |
| Active Indications | Depression |
| Target-based Actions | 5-HT 1a receptor antagonist |
| Other Actions | 5-HT uptake inhibitor, Antidepressant |
| Technologies | Systemic formulation unspecified, Small molecule therapeutic |
| Last Change Date | 27-Mar-2015 |

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MIN-202

| | |
|-----------------------------|---|
| Drug Name | MIN-202 |
| Key Synonyms | |
| Originator Company | Minerva Neurosciences Inc |
| Active Companies | Minerva Neurosciences Inc, Janssen Pharmaceutica NV |
| Inactive Companies | |
| Highest Status | Phase 1 Clinical |
| Active Indications | Insomnia |
| Target-based Actions | Orexin 2 receptor antagonist |
| Other Actions | |
| Technologies | Systemic formulation unspecified, Suspension, Small molecule therapeutic, Formulation solid |
| Last Change Date | 27-Mar-2015 |

MIN-301

| | |
|-----------------------------|--|
| Drug Name | MIN-301 |
| Key Synonyms | |
| Originator Company | ProteoSys AG |
| Active Companies | Minerva Neurosciences Inc |
| Inactive Companies | Mind-NRG, ProteoSys AG |
| Highest Status | Discovery |
| Active Indications | Parkinsons disease |
| Target-based Actions | Neuregulin ligand, Erbb3 tyrosine kinase receptor modulator, Erbb4 tyrosine kinase receptor stimulator |
| Other Actions | Antiparkinsonian, Nootropic agent, Neuroprotectant |
| Technologies | Injectable formulation, Biological therapeutic, Parenteral formulation unspecified, Peptide |
| Last Change Date | 27-Mar-2015 |

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MIN-301 analog (sc, Parkinsons disease), Minerva Neurosciences

| | |
|-----------------------------|--|
| Drug Name | MIN-301 analog (sc, Parkinsons disease), Minerva Neurosciences |
| Key Synonyms | |
| Originator Company | Minerva Neurosciences Inc |
| Active Companies | Minerva Neurosciences Inc |
| Inactive Companies | |
| Highest Status | Discovery |
| Active Indications | Parkinsons disease |
| Target-based Actions | ErbB3 tyrosine kinase receptor modulator, Neuregulin ligand |
| Other Actions | Nootropic agent, Antiparkinsonian |
| Technologies | Subcutaneous formulation, Biological therapeutic, Peptide |
| Last Change Date | 06-Jan-2015 |

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