LAPaL
THE LONG-ACTING THERAPEUTICS PATENTS AND LICENCES DATABASE

Developed by

mpp

UNIVERSITY OF LIVERPOOL

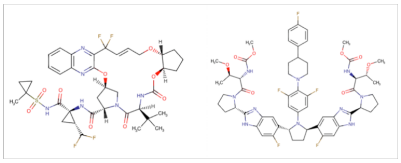
CELT

Supported by

Unitaid
SAVE LIVES FASTER

leap

Coefficient Giving



Glecaprevir and pibrentasvir (G/P)

Developer(s)

AbbVie

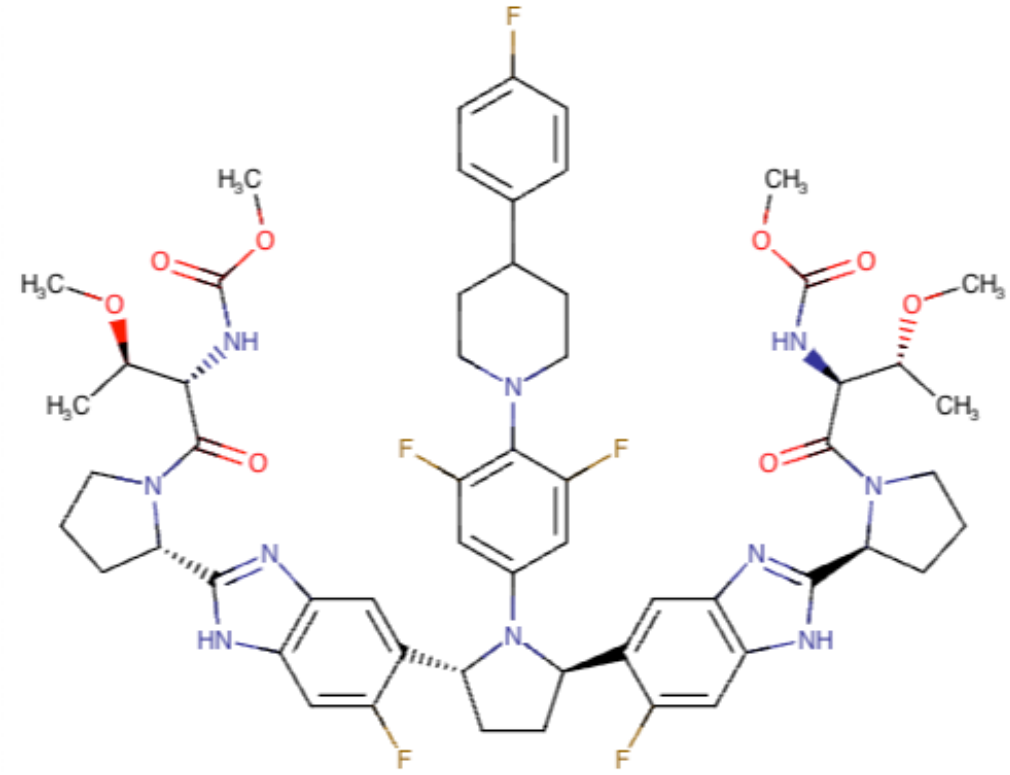
Originator

https://www.abbvie.com/

United States

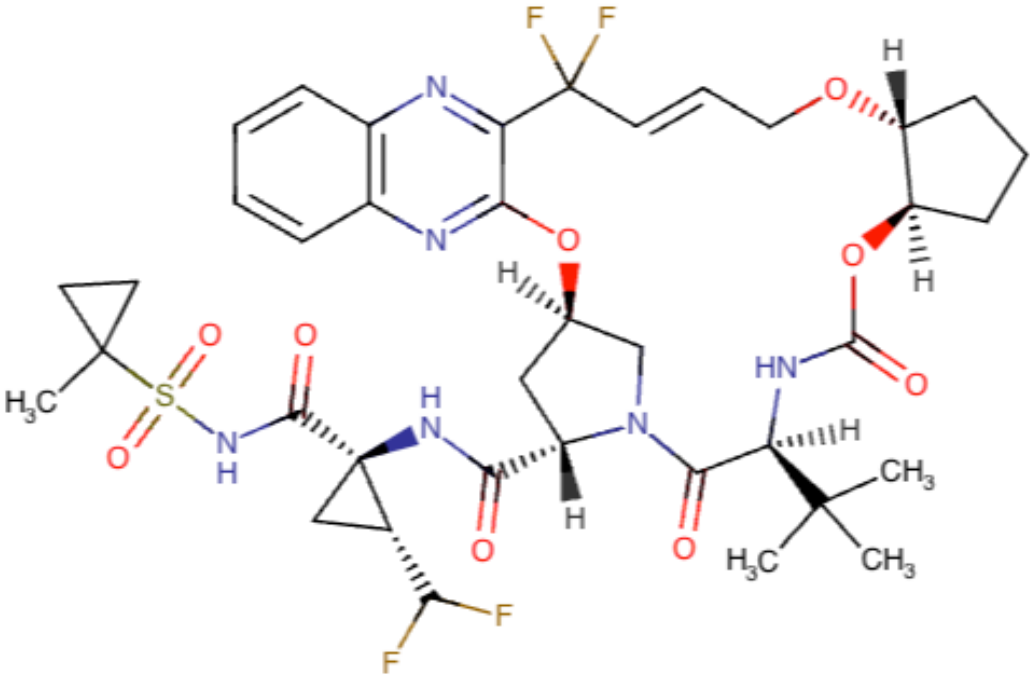
AbbVie Inc. is a global biopharmaceutical company that manufactures and develops innovative medicines as part of a diversified portfolio across several therapeutic categories including immunology, oncology, neuroscience, aesthetics and eyecare. Headquartered in North Chicago, Illinois, AbbVie was founded in 2013 following a successful corporate spin-off from its parent company Abbott Laboratories.

Drug structure



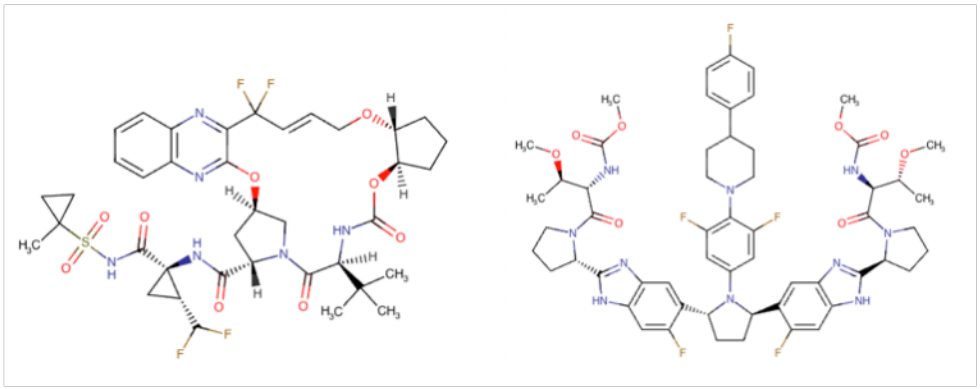
Pibrentasvir Chemical Structure

Sourced from Drugbank



Glecaprevir Chemical Structure

Sourced from Drugbank



Glecaprevir and Pibrentasvir Chemical Structures

Drug information

Associated long-acting platforms

Aqueous drug particle suspension

Administration route

Oral, Intramuscular

Therapeutic area(s)

HCV

Use case(s)

Treatment

Use of drug

Ease of administration

Administered by a nurse
Administered by a specialty health worker

Frequency of administration

Not provided

User acceptance

Not provided

Dosage

Available dose and strength

Not provided

Maximum dose

Not provided

Recommended dosing regimen

Not provided

Additional comments

Not provided

Dosage link(s)

Not provided

Drug information

Drug's link(s)

Not provided

Generic name

Glecaprevir and Pibrentasvir

Brand name

Maviret, Mavyret

Compound type

Small molecule

Drug class/category

Not provided

Summary

Glecaprevir and Pibrentasvir (G/P) is a fixed-dose combination therapy indicated for the treatment of adult patients with chronic hepatitis C virus (HCV) genotypes 1-6 with or without compensated cirrhosis. G/P consists of two pangenotypic direct-acting antiviral agents: (1) Glecaprevir which targets the HCV non-structural viral protein 3/4A (NS3/4A) serine protease, and (2) Pibrentasvir which inhibits the HCV NS5A protein - both of which are essential for viral RNA replication and viron assembly. G/P is postulated to possess advantageous pharmacological properties - including suitable target plasma exposures, half-life duration and aqueous solubility - that could potentially enable the development of a cost-effective long-acting injectable formulation via particle-processing technologies.

Approval status

Unknown

Regulatory authorities

Unknown

Delivery device(s)

Not provided

Scale-up and manufacturing prospects

Scale-up prospects

Long-acting formulations of Glecaprevir and Pibrentasvir (G/P) are still in the early stages of drug development and therefore manufacturing information is limited with few reported examples. One novel approach currently being pioneered by researchers at Tandem Nano Ltd. utilises a proprietary Solid Drug Nanoparticle (SDN) technology platform to achieve high levels of G/P drug loading (>500mg/mL). Interestingly, pre-clinical pharmacokinetic assessments displayed an apparent difference in the release kinetics of both drugs which could be related to differences in aqueous solubility.

Tentative equipment list for manufacturing

Not provided

Manufacturing

Proposed minimally acceptable characteristics for prospective long-acting G/P formulations include: (1) 12-month shelf life as a powder with no cold chain required, (2) suitable drug volume enabling a one monthly intramuscular injection, (3) manageable injection site reaction, and (4) cost equal or less than the oral therapy equivalent.

Specific analytical instrument required for characterization of formulation

Not provided

Clinical trials

Not provided

Excipients

Proprietary excipients used

Not provided

Novel excipients or existing excipients at a concentration above Inactive Ingredients Database (IID) for the specified route of administration

Not provided

Residual solvents used

Not provided

Patent info

Compound patent families

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Glecaprevir/Pibrentasvir use in HCV (without IFN or RBV) - treatment regimen Expiry date: 2038-02-09 The present invention features interferon-free therapies for the treatment of HCV. Preferably, the treatment is over a shorter duration of treatment, such as no more than 12 weeks. In one aspect, the treatment comprises administering at least two direct acting antiviral agents to a subject with HCV infection, wherein the treatment lasts for 12 weeks and does not include administration of either interferon or ribavirin, and said at least two direct acting antiviral agents comprise (a) Compound 1 or a pharmaceutically acceptable salt thereof and (b) Compound 2 or a pharmaceutically acceptable salt thereof.	CA2994496	Dose/Regimen, Use	Abbvie Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income

Granted		United States of America
Filed		Canada
Not in force	China, Brazil, Mexico, Türkiye, North Macedonia, Albania, Bosnia and Herzegovina, Montenegro, Serbia, Moldova, Republic of, Morocco, Tunisia	Australia, Japan, United States of America, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Spain, Denmark, Monaco, Portugal, Ireland, Finland, Cyprus, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Poland, Iceland, Malta, Norway, San Marino, Croatia, Romania, Latvia, Lithuania, Slovenia

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Glecaprevir/Pibrentasvir solid compositions II Expiry date: 2036-07-18 The present invention features solid pharmaceutical compositions comprising Compound 1 and Compound 2. In one embodiment, the solid pharmaceutical composition includes (1) a first layer which comprises 100 mg Compound 1, as well as a pharmaceutically acceptable hydrophilic polymer and a pharmaceutically acceptable surfactant, all of which are formulated in amorphous solid dispersion; and (2) a second layer which comprises 40 mg Compound 2, as well as a pharmaceutically acceptable hydrophilic polymer and a pharmaceutically acceptable surfactant, all of which are formulated in amorphous solid dispersion.	WO2017015211	Composition	Abbvie Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income
Granted	South Africa, Mongolia	Australia, Canada, Japan, Korea, Republic of, Israel, New Zealand, Panama

Patent status/countries	Low, Low- middle and upper-middle	High income
Filed	Türkiye, North Macedonia, Albania, Bosnia and Herzegovina, Montenegro, Serbia, Ecuador, Guatemala, Thailand	Korea, Republic of, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Spain, Denmark, Monaco, Portugal, Ireland, Finland, Cyprus, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Poland, Iceland, Malta, Norway, San Marino, Croatia, Romania, Latvia, Lithuania, Slovenia, New Zealand, Singapore, Hong Kong
Not in force	World Intellectual Property Organization (WIPO), Brazil, China, Colombia, Philippines, Peru, Dominican Republic, Turkmenistan, Belarus, Tajikistan, Kazakhstan, Egypt, Indonesia, Viet Nam, India, Mexico, Moldova, Republic of, Malaysia, Ukraine	United States of America, World Intellectual Property Organization (WIPO), Costa Rica, Chile, Russian Federation

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Glecaprevir/Pibrentasvir solid compositions I Expiry date: 2036-06-24 The present invention features solid pharmaceutical compositions comprising Compound 1 and Compound 2. In one embodiment, the solid pharmaceutical composition includes (1) a first layer which comprises 100 mg Compound 1, as well as a pharmaceutically acceptable hydrophilic polymer and a pharmaceutically acceptable surfactant, all of which are formulated in amorphous solid dispersion; and (2) a second layer which comprises 40 mg Compound 2, as well as a pharmaceutically acceptable hydrophilic polymer and a pharmaceutically acceptable surfactant, all of which are formulated in amorphous solid dispersion.	WO2016210273	Composition	Abbvie Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income
Granted	Mexico, South Africa, Mongolia, Malaysia, Colombia	Australia, Israel, Japan, Korea, Republic of, United States of America, Panama, New Zealand

Patent status/countries	Low, Low- middle and upper-middle	High income
Filed	Brazil, Türkiye, India, Ecuador, Guatemala, Thailand, Albania, North Macedonia, Serbia, Bosnia and Herzegovina, Montenegro	Canada, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Spain, Denmark, Monaco, Portugal, Ireland, Finland, Cyprus, Bulgaria, Czechia, Estonia, Slovakia, Hungary, New Zealand, Singapore, Hong Kong, Iceland, Norway, Poland, Romania, San Marino, Croatia, Latvia, Lithuania, Malta, Slovenia
Not in force	World Intellectual Property Organization (WIPO), Philippines, China, Dominican Republic, Peru, Turkmenistan, Belarus, Tajikistan, Kazakhstan, Azerbaijan, Kyrgyzstan, Armenia, Egypt, Indonesia, Viet Nam, Ukraine	Japan, United States of America, World Intellectual Property Organization (WIPO), Chile, Costa Rica, Russian Federation

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Glecaprevir crystal forms Expiry date: 2035-06-05 The present invention features crystalline forms of Compound I. In one embodiment, a crystalline form of Compound I has characteristic peaks in the PXRD pattern as shown in any one of Figures 1-4.	WO2015188045	Polymorphs	Abbvie Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income
Granted	Mexico	United States of America, Australia
Filed	Türkiye, North Macedonia, Albania, Serbia	Canada, Japan, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Spain, Denmark, Monaco, Portugal, Ireland, Finland, Cyprus, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Poland, Iceland, Malta, Norway, San Marino, Croatia, Romania, Latvia, Lithuania, Slovenia
Not in force	World Intellectual Property Organization (WIPO), Türkiye, North Macedonia, Albania, Bosnia and Herzegovina, Montenegro, Serbia, Morocco, China	Australia, Japan, World Intellectual Property Organization (WIPO), Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Spain, Denmark, Monaco, Portugal, Ireland, Finland, Cyprus, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Poland, Iceland, Malta, Norway, San Marino, Croatia, Romania, Latvia, Lithuania, Slovenia

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Pibrentasvir crystal forms Expiry date: 2035-05-08 The present invention features crystalline forms of Compound I. In one embodiment, a crystalline form of Compound I has characteristic peaks in the PXRD pattern as shown in one of Figures 1-10.	WO2015171993	Polymorphs	Abbvie Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income
Granted	Mexico	Australia, Japan, United States of America
Filed	Albania, Serbia, Türkiye, North Macedonia	Canada, Liechtenstein, Italy, Norway, Malta, Denmark, Belgium, United Kingdom, Greece, Netherlands, Hungary, Croatia, Switzerland, Spain, San Marino, Slovenia, Austria, Romania, Iceland, Cyprus, Finland, France, Bulgaria, Slovakia, Poland, Latvia, Ireland, Estonia, Germany, Luxembourg, Portugal, Czechia, Lithuania, Monaco, Sweden, United States of America
Not in force	World Intellectual Property Organization (WIPO), China, Morocco, Albania, Serbia, Bosnia and Herzegovina, Montenegro, Türkiye, North Macedonia, Mexico	World Intellectual Property Organization (WIPO), Australia, Liechtenstein, Italy, Norway, Malta, Denmark, Belgium, United Kingdom, Greece, Netherlands, Hungary, Croatia, Switzerland, Spain, San Marino, Slovenia, Austria, Romania, Iceland, Cyprus, Finland, France, Bulgaria, Slovakia, Poland, Latvia, Ireland, Estonia, Germany, Luxembourg, Portugal, Czechia, Lithuania, Monaco, Sweden, Japan

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Glecaprevir/Pibrentasvir use in HCV (without IFN or RBV) II Expiry date: 2035-04-01 The present invention features interferon-free therapies for the treatment of HCV. Preferably, the treatment is over a shorter duration of treatment, such as no more than 12 weeks. In one aspect, the treatment comprises administering at least two direct acting antiviral agents to a subject with HCV infection, wherein the treatment lasts for 12 weeks and does not include administration of either interferon or ribavirin, and said at least two direct acting antiviral agents comprise (a) Compound 1 or a pharmaceutically acceptable salt thereof and (b) Compound 2 or a pharmaceutically acceptable salt thereof.	WO2015153793	Use	Abbvie Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income
Granted	Mexico	Australia, Japan, United States of America
Filed	China, Albania, North Macedonia, Serbia, Türkiye	Canada, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Finland, Hungary, Iceland, Ireland, Norway, Poland, Portugal, Romania, San Marino, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Latvia, Lithuania, Malta, Monaco, Slovakia, Slovenia, Spain

Patent status/countries	Low, Low- middle and upper-middle	High income
Not in force	World Intellectual Property Organization (WIPO), China, Bosnia and Herzegovina, Montenegro, Brazil	Australia, Japan, United States of America, World Intellectual Property Organization (WIPO)

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Glecaprevir/Pibrentasvir and RBV use in HCV (without IFN) II Expiry date: 2035-04-01 The present invention features interferon-free therapies for the treatment of HCV. Preferably, the treatment is over a shorter duration of treatment, such as no more than 12 weeks. In one aspect, the treatment comprises administering at least two direct acting antiviral agents and ribavirin to a subject with HCV infection, wherein the treatment lasts for 12 weeks and does not include administration of interferon, and said at least two direct acting antiviral agents comprise (a) Compound 1 or a pharmaceutically acceptable salt thereof and (b) Compound 2 or a pharmaceutically acceptable salt thereof.	WO2015153792	Use	Abbvie Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income
Granted		
Filed		Taiwan, Province of China

Patent status/countries	Low, Low- middle and upper-middle	High income
Not in force	World Intellectual Property Organization (WIPO), China, Mexico, Albania, North Macedonia, Serbia, Türkiye, Bosnia and Herzegovina, Montenegro	Australia, Canada, Japan, United States of America, World Intellectual Property Organization (WIPO), Belgium, Germany, France, Finland, Greece, Hungary, Iceland, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Romania, San Marino, Austria, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Glecaprevir/Pibrentasvir use in HCV (without IFN or RBV) Expiry date: 2034-03-14 The present invention features interferon- and ribavirin-free therapies for the treatment of HCV. Preferably, the treatment is over a shorter duration of treatment, such as no more than 12 weeks. In one aspect, the treatment comprises administering at least two direct acting antiviral agents without interferon and ribavirin to a subject with HCV infection, wherein the treatment lasts for 12 weeks, and said at least two direct acting antiviral agents comprise (a) Compound 1 or a pharmaceutically acceptable salt thereof and (b) Compound 2 or a pharmaceutically acceptable salt thereof.	WO2014152514	Use	Abbvie Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income
Granted	Brazil, Mexico, Serbia, South Africa, Turkmenistan, Belarus, Tajikistan, Kazakhstan, Azerbaijan, Kyrgyzstan, Armenia, Türkiye, North Macedonia, Albania	Canada, Australia, Cyprus, Denmark, Spain, Israel, Japan, Korea, Republic of, New Zealand, Poland, Portugal, Slovenia, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, Russian Federation, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Monaco, Ireland, Finland, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Iceland, Malta, Norway, San Marino, Croatia, Romania, Latvia, Lithuania

Patent status/countries	Low, Low- middle and upper-middle	High income
Filed	Serbia, Türkiye, North Macedonia, Albania	Cyprus, Denmark, Spain, Hong Kong, Korea, Republic of, Poland, Portugal, Singapore, Slovenia, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Monaco, Ireland, Finland, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Iceland, Malta, Norway, San Marino, Croatia, Romania, Latvia, Lithuania
Not in force	World Intellectual Property Organization (WIPO), China, Mexico, Serbia, Turkmenistan, Belarus, Tajikistan, Kazakhstan, Azerbaijan, Kyrgyzstan, Armenia, Türkiye, North Macedonia, Albania, Bosnia and Herzegovina, Montenegro	Cyprus, Denmark, Spain, Japan, Poland, Portugal, Slovenia, Taiwan, Province of China, United States of America, World Intellectual Property Organization (WIPO), Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, Russian Federation, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Monaco, Ireland, Finland, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Iceland, Malta, Norway, San Marino, Croatia, Romania, Latvia, Lithuania

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Glecaprevir/Pibrentasvir and RBV use in HCV (without IFN) Expiry date: 2034-03-14 The present invention features interferon -free therapies for the treatment of HCV. Preferably, the treatment is over a shorter duration of treatment, such as no more than 12 weeks. In one aspect, the treatment comprises administering at least two direct acting antiviral agents and ribavirin to a subject with HCV infection, wherein the treatment lasts for 12 weeks and does not include administration of interferon, and said at least two direct acting antiviral agents comprise (a) Compound 1 and (b) Compound 2 or a pharmaceutically acceptable salt thereof as disclosed in the description.	WO2014152635	Use	Abbvie Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income
Granted	Serbia, South Africa	Israel, Korea, Republic of
Filed		Canada, Denmark, Spain, Hong Kong, Croatia, Israel, Poland, Portugal, Singapore, Slovenia, Taiwan, Province of China, Norway, Cyprus, San Marino

Patent status/countries	Low, Low- middle and upper-middle	High income
Not in force	World Intellectual Property Organization (WIPO), Brazil, China, Mexico, Serbia, Turkmenistan, Belarus, Tajikistan, Kazakhstan, Azerbaijan, Kyrgyzstan, Armenia, Türkiye, North Macedonia, Albania, Bosnia and Herzegovina, Montenegro	Australia, Denmark, Spain, Hong Kong, Croatia, Japan, New Zealand, Poland, Portugal, Slovenia, Taiwan, Province of China, United States of America, World Intellectual Property Organization (WIPO), Russian Federation, Norway, Cyprus, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Monaco, Ireland, Finland, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Iceland, Malta, San Marino, Romania, Latvia, Lithuania

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Pibrentasvir use in HCV Expiry date: 2033-09-17 Pan-genotypic HCV inhibitors are described. This invention also relates to methods of using these inhibitors to treat HCV infection.	WO2014047039	Use	Abbvie Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income
Granted	Brazil, Mexico, South Africa, Türkiye, North Macedonia, Albania, Bosnia and Herzegovina, Montenegro, Serbia	Australia, Japan, New Zealand, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Spain, Denmark, Monaco, Portugal, Ireland, Finland, Cyprus, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Poland, Iceland, Malta, Norway, San Marino, Croatia, Romania, Latvia, Lithuania, Slovenia
Filed	Türkiye, North Macedonia, Albania, Serbia	Canada, Hong Kong, Singapore, Taiwan, Province of China, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Spain, Denmark, Monaco, Portugal, Ireland, Finland, Cyprus, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Poland, Iceland, Malta, Norway, San Marino, Croatia, Romania, Latvia, Lithuania, Slovenia
Not in force	World Intellectual Property Organization (WIPO), China, Mexico, Bosnia and Herzegovina, Montenegro	Japan, United States of America, World Intellectual Property Organization (WIPO), Russian Federation

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Direct-acting antiviral (DAA) combinations without IFN or RBV Expiry date: 2032-10-19 The present invention features interferon- and ribavirin-free therapies for the treatment of HCV. Preferably, the treatment is over a shorter duration of treatment, such as no more than 12 weeks. In one aspect, the therapies comprise administering at least two direct acting antiviral agents without interferon and ribavirin to a subject with HCV infection. For example, the therapies comprise administering to a subject an effective amounts of therapeutic agent 1 (ABT) or therapeutic agent 2 (=ABT-333) or therapeutic agent 3 (=ABT-072) or therapeutic agent 4 (ABT), and an inhibitor of cytochrome P450 (e.g., ritonavir).	WO2013059638	Combination	Abbvie Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income
Granted	Philippines, South Africa	United States of America
Filed		Switzerland, Germany, Denmark, Spain, Hong Kong, Israel, Singapore, Taiwan, Province of China, Cyprus

Patent status/countries	Low, Low- middle and upper-middle	High income
Not in force	Argentina, China, Dominican Republic, Mexico, Albania, North Macedonia, Serbia, Türkiye, Armenia, Azerbaijan, Belarus, Kyrgyzstan, Kazakhstan, Tajikistan, Turkmenistan, Philippines, World Intellectual Property Organization (WIPO), Brazil, Bosnia and Herzegovina, Montenegro	Canada, Australia, Switzerland, Chile, Germany, Denmark, Spain, United Kingdom, Japan, Portugal, Sweden, Taiwan, Province of China, United States of America, Uruguay, Austria, Belgium, Bulgaria, Cyprus, Czechia, Estonia, Finland, France, Greece, Croatia, Hungary, Ireland, Iceland, Italy, Liechtenstein, Lithuania, Luxembourg, Latvia, Monaco, Malta, Netherlands, Norway, Poland, Romania, Slovenia, Slovakia, San Marino, Russian Federation, New Zealand, World Intellectual Property Organization (WIPO)

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Pibrentasvir compound II Expiry date: 2032-02-24 Compounds effective in inhibiting replication of Hepatitis C virus ("HCV") are described. This invention also relates to processes of making such compounds, compositions comprising such compounds, and methods of using such compounds to treat HCV infection.	WO2012116257	Compound	Abbvie Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income
Granted	China, Mexico	Taiwan, Province of China, Spain, Germany, France, United Kingdom, Italy
Filed		Spain
Not in force	World Intellectual Property Organization (WIPO), Türkiye, North Macedonia, Albania, Bosnia and Herzegovina, Montenegro, Serbia	Canada, Japan, United States of America, World Intellectual Property Organization (WIPO), Belgium, Luxembourg, Netherlands, Switzerland, Sweden, Austria, Liechtenstein, Greece, Denmark, Monaco, Portugal, Ireland, Finland, Cyprus, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Poland, Iceland, Malta, Norway, San Marino, Croatia, Romania, Latvia, Lithuania, Slovenia

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Pibrentasvir compound Expiry date: 2031-10-12 Compounds effective in inhibiting replication of Hepatitis C virus (HCV) are described. This invention also relates to processes of making such compounds, compositions comprising such compounds, and methods of using such compounds to treat HCV infection.	WO2012051361	Compound	Abbott Laboratories	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income
Granted	Colombia, Argentina, China, Dominican Republic, Turkmenistan, Belarus, Tajikistan, Kazakhstan, Azerbaijan, Kyrgyzstan, Armenia, Moldova, Republic of, Ecuador, Türkiye, North Macedonia, Albania, Bosnia and Herzegovina, Montenegro, Serbia, Mexico, Peru, Ukraine, Bolivia (Plurinational State of), Indonesia, Malaysia, Paraguay, Philippines, Viet Nam, South Africa, Guatemala, Brazil	United States of America, Australia, Chile, Japan, Korea, Republic of, New Zealand, Singapore, Taiwan, Province of China, Uruguay, Denmark, Spain, Portugal, Slovenia, Canada, Israel, Hong Kong, Russian Federation, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Monaco, Ireland, Finland, Cyprus, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Poland, Iceland, Malta, Norway, Croatia, Romania, Latvia, Lithuania, Panama

Patent status/countries	Low, Low- middle and upper-middle	High income
Filed	Ecuador, Türkiye, North Macedonia, Albania, Bosnia and Herzegovina, Montenegro, Serbia, India, Pakistan, Paraguay, Thailand, Venezuela (Bolivarian Republic of), Guatemala	Denmark, Spain, Portugal, Slovenia, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Monaco, Ireland, Finland, Cyprus, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Poland, Iceland, Malta, Norway, San Marino, Croatia, Romania, Latvia, Lithuania, Bahrain, Kuwait, Qatar, Saudi Arabia, Oman, United Arab Emirates
Not in force	World Intellectual Property Organization (WIPO), Argentina, China, Turkmenistan, Belarus, Tajikistan, Kazakhstan, Azerbaijan, Kyrgyzstan, Armenia, Moldova, Republic of, Türkiye, North Macedonia, Albania, Bosnia and Herzegovina, Montenegro, Serbia, Mexico, Peru, Egypt, Mongolia, Viet Nam	United States of America, World Intellectual Property Organization (WIPO), Chile, Costa Rica, New Zealand, Uruguay, Denmark, Spain, Portugal, Slovenia, Canada, Russian Federation, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Monaco, Ireland, Finland, Cyprus, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Poland, Iceland, Malta, Norway, San Marino, Croatia, Romania, Latvia, Lithuania

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Patent informations

Patent description	Representative patent	Categories	Patent holder	Licence with MPP	Patent source
Glecaprevir compound Expiry date: 2031-09-20 The present invention discloses compounds of Formula (I) or pharmaceutically acceptable salts, esters, or prodrugs thereof: Formula (I) which inhibit serine protease activity, particularly the activity of hepatitis C virus (HCV) NS3-NS4A protease. Consequently, the compounds of the present invention interfere with the life cycle of the hepatitis C virus and are also useful as antiviral agents. The present invention further relates to pharmaceutical compositions comprising the aforementioned compounds for administration to a subject suffering from HCV infection. The invention also relates to methods of treating an HCV infection in a subject by administering a pharmaceutical composition comprising the compounds of the present invention.	WO2012040167	Compound	Enanta Pharmaceuticals, Inc	Yes	

Patent status

Patent status/countries	Low, Low- middle and upper-middle	High income

Granted	Argentina, Brazil, China, Colombia, Dominican Republic, Turkmenistan, Belarus, Tajikistan, Kazakhstan, Azerbaijan, Kyrgyzstan, Armenia, Moldova, Republic of, Ecuador, Türkiye, North Macedonia, Albania, Serbia, Guatemala, Mexico, Peru, South Africa, India, Bolivia (Plurinational State of), Paraguay, Mongolia, Philippines, Malaysia, Pakistan, Indonesia, Ukraine	Canada, Australia, Cyprus, Denmark, Spain, Hong Kong, Croatia, Israel, Japan, Korea, Republic of, New Zealand, Portugal, Singapore, Slovenia, San Marino, United States of America, Chile, Costa Rica, Russian Federation, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Monaco, Ireland, Finland, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Poland, Iceland, Malta, Norway, Romania, Latvia, Lithuania, Uruguay, Panama, Bahrain, Kuwait, Qatar, Saudi Arabia, Oman, United Arab Emirates, Macao
Filed	Argentina, Viet Nam, Venezuela (Bolivarian Republic of), Thailand	Cyprus, Denmark, Spain, Croatia, Portugal, Slovenia, San Marino, Taiwan, Province of China, Luxembourg, Netherlands, Hungary, Poland, Norway, Lithuania, Bahrain, Kuwait, Qatar, Saudi Arabia, Oman, United Arab Emirates
Not in force	World Intellectual Property Organization (WIPO), Argentina, Colombia, Dominican Republic, Ecuador, Türkiye, North Macedonia, Albania, Bosnia and Herzegovina, Montenegro, Serbia, Guatemala, India, Egypt, Malaysia, Indonesia	Australia, Cyprus, Denmark, Spain, Croatia, Japan, Korea, Republic of, Portugal, Slovenia, San Marino, United States of America, World Intellectual Property Organization (WIPO), Costa Rica, Belgium, Germany, France, Luxembourg, Netherlands, Switzerland, United Kingdom, Sweden, Italy, Austria, Liechtenstein, Greece, Monaco, Ireland, Finland, Bulgaria, Czechia, Estonia, Slovakia, Hungary, Poland, Iceland, Malta, Norway, Romania, Latvia, Lithuania, Uruguay, Bahrain, Kuwait, Qatar, Saudi Arabia, Oman, United Arab Emirates

MPP Licence(s)

MPP licence on Glecaprevir/Pibrentasvir (G/P)

https://medicinespatentpool.org/licence-post/glecaprevir-pibrentasvir-g-p/

Supporting material

Publications

Thomas DL, Owen A, Kiser JJ. Prospects for Long-Acting Treatments for Hepatitis C. Clin Infect Dis. 2022 Nov 21;75(Suppl 4):S525-S529. doi: 10.1093/cid/ciac715. PMID: 36410380; PMCID: PMC9678383.

In 2019, more than 4 years after the widespread availability of safe, oral, curative treatments, an estimated 58 million people were living with hepatitis C virus infections (PLWHC). Additional tools may enable those not yet reached to be treated. One such tool could be long-acting parenteral formulations of HCV treatments, which may allow PLWHC to be diagnosed and cured in a single encounter. Although existing highly effective oral medications might be formulated as long-acting parenteral treatments, pharmacological, regulatory, patent, and medical challenges have to be overcome; this requires the concerted efforts of PLWHC, researchers, funding agencies, industry, the World Health Organization, and other stakeholders.

Additional documents

No documents were uploaded

Useful links

- Developing Long-Acting Cures to Accelerate the End of Hepatitis C: Interview with Dr. Dave Thomas
- LEAP Conference 2023 - Update from LONGEVITY Presentation

Access principles

Collaborate for development

Consider on a case by case basis, collaborating on developing long acting products with potential significant public health impact, especially for low- and middle-income countries (LMICs), utilising the referred to long-acting technology

Not provided

Share technical information for match-making assessment

Provide necessary technical information to a potential partner, under confidentiality agreement, to enable preliminary assessment of whether specific medicines of public health importance in LMICs might be compatible with the referred to long-acting technology to achieve a public health benefit

Not provided

Work with MPP to expand access in LMICs

In the event that a product using the referred to long-acting technology is successfully developed, the technology IP holder(s) will work with the Medicines Patent Pool towards putting in place the most appropriate strategy for timely and affordable access in low and middle-income countries, including through licensing

Not provided

Comment & Information

Not provided