

Influenza Therapeutic Landscape

Phase 1

Phase 2

Phase 3

Market

Viral Targets

Host Targets

Atriva
ATR-002
MEK inhibitor

Fab'entech
Equine
Polyclonal H5

SAREPTA
Radavirsen
Antisense RNA

VIR
VIR-2482
Prophylactic mAb

FEBICO
Far East Bio Tec. Co., Ltd
遠東生技
Apomivir
Spirulina extract

CELLTRION
CT-P27
2 HA Anti-stem
mAbs

The University of Hong Kong
Flufenamic
acid (FFA)
NSAID

phs Pharmstandard
Arbidol
Umifenovir
fusion inhibitor

M2 Inhibitors
Forest Pharmaceuticals, Inc.
Flumadine
(Rimantadine)

DAIICHI-SANKYO
Inavir
(Laninamivir)
(Japan only)

Autoimmune Technologies
Flufirvitide-3
HA inhibitor

以岭药业
YILING PHARMACEUTICAL
KT07
herb mix

MedImmune
MEDI8852
HA Anti-stem
mAb

FUJIFILM
Favipiravir
Polymerase
inhibitor

ENDO PHARMACEUTICALS
Symmetrel
(Amantadine)

BioCRYST
Rapivab
(Peramivir)

Visterra
VIS-410
HA Anti-stem
mAb

ZSP1273
Polymerase
inhibitor

Janssen
Pimodivir
PB2 inhibitor

PA Inhibitor
Roche **SHIONOGI**
Xofluza
(Baloxavir)

gsk GlaxoSmithKline
Relenza
(Zanamivir)

Roche
Tamiflu
(Oseltamivir)

Gemmus PHARMA
GP1001
Anti-inflammatory
agent

pulmatrix
PUR003
cationic airway
lining
modulator

Karyopharm
Verdinexor
Nuclear export
inhibitor

HEMISPHERE
BIOPHARMA, INC.
Alferon LDO
INF- α 3

Beth Israel Deaconess Medical Center
Atorvastatin

CSPC
Baicalein
Anti-inflammatory

The University of Hong Kong
Celecoxib

Centre Hospitalier Régional
Diltiazem

ANSUN
FLUDASE
Sialidase

VENTALEON
LASAG
acetylsalicylic
acid

Romark Laboratories, L.C.
Nitazoxanide

emergo therapeutics
Norketotifen
Anti-histamine

Other
Inhaled
IV
Oral

Updated Jan 2020

Phase 1

- ATR-002 – MEK inhibitor, EudraCT 2019-000784-25, <https://www.atriva-therapeutics.com/pipeline>
- FBF001 - ClinicalTrials.gov Identifier: NCT02295813
- PUR003 - ClinicalTrials.gov Identifier: NCT00947687
- Radavirsen - ClinicalTrials.gov Identifier: NCT01747148, Beigel 2018 Br J Clin Pharmacol 84:25 (phase 1 publication)
- Verdinexor - ClinicalTrials.gov Identifier: NCT02431364, Perwitasari 2016 PLoS ONE 11:e0167221 (animal data)
- VIR-2482 – ClinicalTrials.gov Identifier: NCT04033406, testing IM delivery

Phase 2

- Alferon LDO - ClinicalTrials.gov Identifier: NCT01146535
- Baicalein – Clinicaltrials.gov Identifier: NCT03830684
- Apomivir - ClinicalTrials.gov Identifier: NCT01677689
- Atorvastatin - ClinicalTrials.gov Identifier: NCT02056340 – has results, looks ok, not publication as of 12-2019
- CTP27 - ClinicalTrials.gov Identifier: NCT03511066
- Etilefrine, Diltiazem - ClinicalTrials.gov Identifier: NCT03212716
- Fludase - ClinicalTrials.gov Identifier: NCT00527865 (phase 1); ClinicalTrials.gov Identifier: NCT01740063 (phase 2)
- Flufenamic acid - ClinicalTrials.gov Identifier: NCT03238612
- Flufirvitide-3 - ClinicalTrials.gov Identifier: NCT01313962, ClinicalTrials.gov Identifier: NCT01990846
- KT07 - ClinicalTrials.gov Identifier: NCT02867358
- LASAG – Scheuch 2018 Emerging Microbes & Infections. 7:1-8, DOI: 10.1038/s41426-018-0023-3
- MEDI8852: clinicaltrials.gov identifier: NCT03903718
- Norketotifen: clinicaltrials.gov identifier: NCT04043923
- TCN-032 - ClinicalTrials.gov Identifier: NCT01390025 (phase 1), ClinicalTrials.gov Identifier: NCT01719874 (phase 2)
- VIS-410 - ClinicalTrials.gov Identifier: NCT02045472 (phase 1, Wollacott 2016 EBioMedicine 5:147); ClinicalTrials.gov Identifier: NCT02468115 (challenge study); ClinicalTrials.gov Identifier: NCT02989194 (phase 2 acute, uncomplicated study); ClinicalTrials.gov Identifier: NCT03040141 (phase 2 hospital study)
- XC221 - ClinicalTrials.gov Identifier: NCT03459391 (phase 1); ClinicalTrials.gov Identifier: NCT03455491 (phase 2) – phase 2 results not good, removed from landscape Dec. 2019
- ZSP1273 - ClinicalTrials.gov Identifier: NCT03679143 (phase 1); clinicaltrials.gov identifier: NCT04024137 (phase 2)

Phase 3

- Arbidol: Clinicaltrials.gov identifier: NCT03787459
- Celecoxib - ClinicalTrials.gov Identifier: NCT02108366
- Favipiravir - ClinicalTrials.gov Identifier: NCT02026349 (phase 3 completed), ClinicalTrials.gov Identifier: NCT02008344 (phase 3 completed), ClinicalTrials.gov Identifier: NCT03394209 (phase 2 in hospitalized patients)
- Nitazoxanide - ClinicalTrials.gov Identifier: NCT02612922 (phase 3 completed), ClinicalTrials.gov Identifier: NCT01610245 (phase 3 completed), ClinicalTrials.gov Identifier: NCT03336619 (phase 3 ongoing)
- Pimodivir - ClinicalTrials.gov Identifier: NCT03376321 (phase 3 hospital); ClinicalTrials.gov Identifier: NCT03381196 (phase 3 in outpatients at high risk of influenza complications)