

LIST OF VACCINES CURRENTLY IN PREPARATION

The 32 vaccines listed here are classified according to their use or non-use of illicit cell lines, i.e. derived from aborted fetuses.

I — PHARMACEUTICAL COMPANIES USING A CELL LINE DERIVED FROM AN ABORTED FETUS

1. DESIGN STAGE: it includes preparatory experiments and studies on how the vaccine will be produced. The illicit line used is indicated at right.

—*Viral vector vaccines*

- Altimune (USA) (Per.C6)
- Astra Zeneca & University of Oxford (UK, USA) (HEK-293)
- CanSino Biologics, Inc. Beijing Institute of Biotechnology, Academy of Military Medical Sciences, PLA of China (China) (HEK-293)
- Gamaleya Research Institute (Russia) (HEK-293)
- Janssen Research & Development, Inc. Johnson & Johnson (USA) (Per.C6)
- Vaxart (USA) (HEK-293)

—*Protein vaccines*

- Anhui Zhifei Longcom Biopharmaceutical/Institute of Microbiology, Chinese Academy of Sciences (China) (HEK-293T)
- University of Pittsburgh (USA) (HEK-293)

2. PRODUCTION STAGE: it uses the model designed for large-scale production.

—*Viral vector vaccines*

- Altimune (USA) (Per.C6)
- Astra Zeneca University of Oxford (UK, USA) (HEK-293)
- CanSino Biologics, Inc. Beijing Institute of Biotechnology, Academy of Military Medical Sciences, PLA of China (China) (HEK-293)
- Gamaleya Research Institute (Russia) (HEK-293)
- Janssen Research & Development, Inc. Johnson & Johnson (USA) (Per.C6)
- Vaxart (USA) (HEK-293)

—*Protein vaccines*

- University of Pittsburgh (USA) (HEK-293)

3. VACCINE TESTING PHASE IN LABORATORY: it verifies, on cell tissues, the quality of the vaccine.

—*Inactivated vaccine*

- Sinovac Biotech Co., Ltd. (China) (HEK-293)

—*Protein vaccines*

- Anhui Zhifei Longcom Biopharmaceutical/Institute of Microbiology, Chinese Academy of Sciences (China) (HEK-293T)
- Medicago (Canada) (HEK-293)
- Novavax (USA) (HEK-293)

—*ARNm vaccines*

- Moderna, Inc. with the National Institute of Health (USA) (HEK-293)
- Pfizer and BioNTech (USA, Germany) (HEK-293)
- Sanofi Pasteur and Translate Bio (USA, France) (HEK-293)

—*ADN vaccines*

- Inovio Pharmaceuticals (USA) (HEK-293)

**II — PHARMACEUTICAL COMPANIES THAT
DO NOT USE FETAL CELL LINES IN ANY OF THE THREE STAGES**
(as of November 10, 2020, taking into account the stage of development of the vaccines)

—*Live attenuated or inactivated vaccines*

- Beijing Institute of Biological Products/ Sinopharm (China)
- Wuhan Institute of Biological Products/ Sinopharm (China)
- John Paul II Medical Research Institute (USA)

—*Viral vector vaccines*

- Institut Pasteur and Themis and Merck (USA, France)
- Shenzhen Geno-immune Medical Institute (China)
- Merck et IAVI (USA)

—*Protein vaccines*

- Clover Biopharmaceuticals, Inc. (China)
- Sanofi et GSK Protein Sciences (USA, France)
- Sorrento (USA)
- University of Queensland and CSL Ltd. (Australia)

—*ARNm vaccines*

- CureVac (Germany)

—*ADN vaccines*

- Genexine (Korea)
- Symvivo Corporation (Canada)

However, it should be noted that several pharmaceutical companies have not yet completed all stages of the process. In other words, some could still use illicit cells in the stages which remain to be carried out, for example in the test phase.

It should also be noted that the charter of the John Paul II Medical Research Institute (United States) rejects the use of cells from aborted fetuses for their research.

Finally, there are other plans for a vaccine against Covid-19 – about 200 in all – but the present list considers those that are most advanced.