BLUEPRINT—A BLUEPRINT of Haematopoietic Epigenomes

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Research Areas

Basic Research

At a Glance

- Status: **Active Consortium**
- Year Launched: **2011**
- Initiating Organization: **European Commission Seventh Framework Programme (FP7)**
- Initiator Type: **Government**
- Location: **Europe**

Abstract

BLUEPRINT, a new large-scale research project, will lead to targeted diagnostics, new treatments, and preventive measures for specific diseases in individual patients—an approach known as personalized medicine. BLUEPRINT is the European cornerstone of an international research cooperation effort—the International Human Epigenome Consortium (IHEC)—bringing together organizations and researchers from across the globe.

Mission

The BLUEPRINT consortium has been formed to further the understanding of how genes are activated or repressed in both healthy and diseased human cells. BLUEPRINT will focus on distinct types of haematopoietic cells from healthy individuals and on their malignant leukemic counterparts. It aims to generate at least 100 reference epigenomes and study them to advance and exploit knowledge of the underlying biological processes and mechanisms in health and disease. This aim feeds into IHEC's overall objective. Reference epigenomes will be generated by state-of-the-art technologies from highly purified cells for a comprehensive set of epigenetic marks in accordance with quality standards set by

IHEC.

This resource-generating activity will be complemented by hypothesis-driven research into blood-based diseases, including common leukemias and autoimmune disease (Type 1 diabetes), by discovery and validation of epigenetic markers for diagnostic use and by epigenetic target identification. Because epigenetic changes are reversible, they can be targets for the development of novel and more individualized medical treatments.

The involvement of innovative companies will energize epigenomic research in the private sector by the development of smart technologies for better diagnostic tests and by the identification of new targets for compounds. Thus the results of the BLUEPRINT project may lead to targeted diagnostics, new treatments, and preventive measures for specific diseases in individual patients—an approach known as personalized medicine.

Consortium History

October 1, 2011: The BLUEPRINT consortium was launched.

Financing

The European Commission’s Seventh Framework Programme is funding €29 million of the total €39 million project cost.

Data Sharing

The Blueprint Data Access Committee will consider applications for access to data sets stored in the European Genome-phenome Archive (EGA) when authorized to do so by the BLUEPRINT consortium and the holders of the original consent documents. Access to data will be granted to qualified researchers for appropriate use. A qualified researcher refers to a scientist who is employed, or a student enrolled at, or legitimately affiliated with, an academic, nonprofit, or government institution, or a commercial company.

Access to data will be granted to researchers for appropriate use and will be governed by the provisions laid out in the associated informed consent for each cohort or collection and by the terms contained in the Data Access Agreement.

The Blueprint Data Access Committee is concerned only with access to the data stored within the EGA from the Blueprint Consortium. Access is conditional upon availability of samples and/or data and signed agreement by the researcher(s) and the responsible employing institution to abide by policies related to publication, data disposal, ethical approval, and confidentiality.

Links/Social Media Feed

Homepage	http://www.blueprint-epigenome.eu/

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