

BIOLOGICAL INFORMATION PROCESSING METHOD AND DEVICE,
RECORDING MEDIUM AND PROGRAM

ABSTRACT

5 Provided is a biological information processing
method and a device, a recording medium and a program
that are able to predict and control changes in the state
of an organism. The expression level of molecules in an
organism is measured over a specific time interval; the
10 measured time-series data is divided into a periodic
component, an environmental stimulus response component
and a baseline component; constant regions of the time-
series data are identified from variations in the
baseline component or from the amplitude or periodic
15 variations of the periodic component; and causal relation
between the identified constant regions is identified.
The relation between the external environment and
variations in the internal environment is identified and
from the identified causal relation between the constant
20 regions, changes in the state of the organism are
inferred. Further, from the identified relation between
the external environment and variations in the internal
environment, inferring disease onset in the organism is
possible. The molecules can be molecules in the blood or
25 molecules in a culture medium.

Figure 2