BIOLOGICAL INFORMATION PROCESSING METHOD AND DEVICE, RECORDING MEDIUM AND PROGRAM

ABSTRACT

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 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 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 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 molecules in a culture medium.

Figure 2