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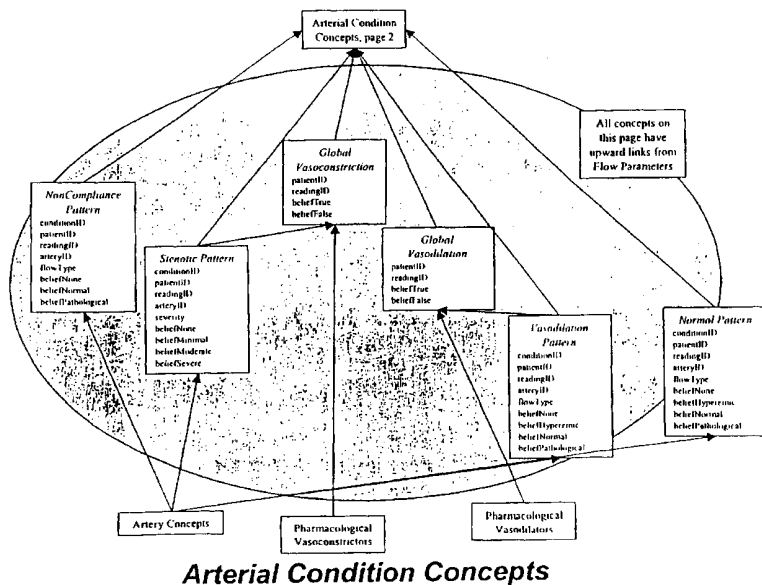
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(54) Title: DECISION SUPPORT SYSTEMS AND METHODS FOR ASSESSING VASCULAR HEALTH



(57) Abstract: System and method for assessing blood flow in blood vessels, for assessing vascular health, for conducting clinical trials, for screening therapeutic interventions for adverse effects, and for assessing the effects of risk factors, therapies and substances, including therapeutic substances, on blood vessels, especially cerebral blood vessels, all achieved by measuring various parameters of blood flow in one or more vessels and analyzing the results in a defined manner. The relevant parameters of blood flow include mean flow velocity, systolic acceleration, and pulsatility index. In one embodiment, an expert system is used to implement the analysis.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06G 7/48, 7/58
US CL : 703/11

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 703/11, 4, 6-7, 9

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EAST, IEEE, Science Server

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X - Y	URSINO et al. A Mathematical Study of Some Biomechanical Factors Affecting the Oscillometric Blood Pressure Measurement. IEEE Trans. Biomedical Engineering. August 1996, Vol. 43, No. 8. sections 2-3.	1-37, 39-40, 43-49. - 38, 41-42, 50.
X - Y	BAUERNSCHMITT et al.. Simulation of Baroreflex in a Pulsatile Mathematical Model of the Human Arterial Circulation. Computers in Cardiology. September 1999. sections 2-3.	1-37, 39-40, 43-49 - 38, 41-42, 50.
Y	US 4,835,690 (GANGAROSA et al.) 30 May 1989, abstract, figures 1-7, col. 4, line 48 to col. 9, line 55.	38, 41-42, 50.

Further documents are listed in the continuation of Box C. See patent family annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer <i>JM</i> HUGH JONES <i>James R. Matthews</i> Telephone No. (703) 305-9704

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International application No.
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CEVENINI et al.. A Neural Network Improves the Classification of High-Risk Intensive Care Patients. 18th Int. IEEE Conf. Engineering in Medicine & Biology Soc.. October 1996. Vol. 5, section 2.	38, 41-42, 50.