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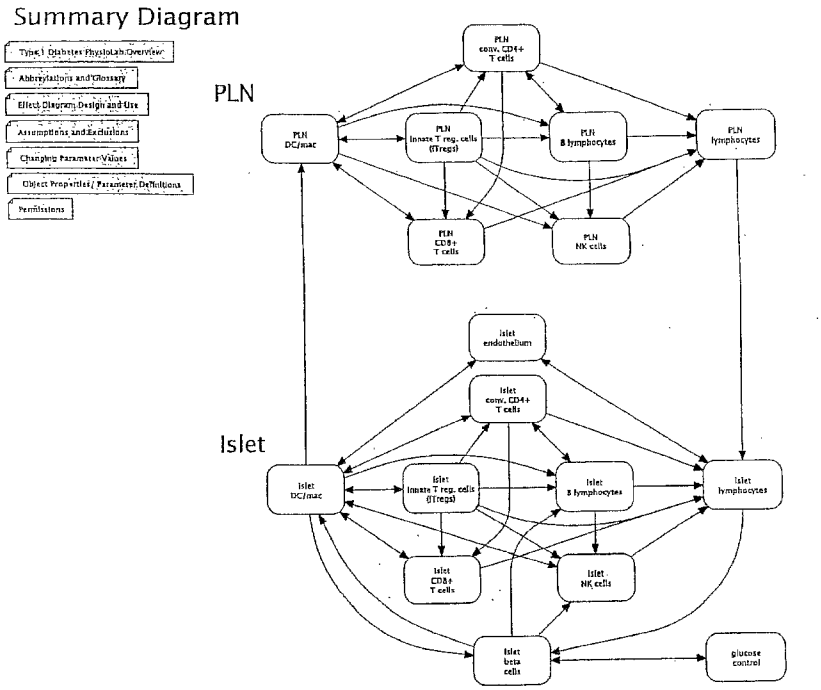
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(54) Title: APPARATUS AND METHOD FOR COMPUTER MODELING TYPE 1 DIABETES



(57) **Abstract:** The invention encompasses novel methods for developing a computer model of type 1 diabetes in a mammal. In particular, the models can include representations of biological processes associated with a pancreatic lymph node and one or more pancreatic islets. Alternatively, the models can include representations of biological processes associated with at least two conditions selected from the group consisting of autoreactive T cell production, autoreactive T cell priming, insulitis and hyperglycemia. The invention also provides methods for developing a computer model of a non-insulin replacement treatment of type 1 diabetes. The invention also encompasses computer models of type 1 diabetes, methods of simulating type 1 diabetes and computer systems for simulating type 1 diabetes and the uses thereof.

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