Prelamin A pre peptide as a universal stem cell differentiation signal

Abstract: Disclosed is the use of prelamin A pre peptide and homologues or analogs thereof for the induction of cell differentiation and tissue or organ growth and repair processes. The invention extends to virtually any cell, including both embryonic and non-embryonic stem cells, such as stem cells that are progenitors for a wide variety of cell and tissue types. Also disclosed is the use of prelamin A pre peptide and prelamin A to determine and establish cell morphology and tissue architecture. Treatment of a variety of diseases and conditions, as well as cosmetic, general health, and anti-aging applications are described.
### INTERNATIONAL SEARCH REPORT

**A. CLASSIFICATION OF SUBJECT MATTER**

**IPC:**
- C12N 5/08 (2006.01), 5/00 (2006.01), 5/02 (2006.01); A01N 37/18 (2006.01); A61K 38/00 (2006.01)

**USPC:**
- 514/2; 435/366, 373, 375, 394; 514/2; 435/366, 373, 375, 394

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.: 514/2; 435/366, 373, 375, 394; 514/2; 435/366, 373, 375, 394

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)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
</table>

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

* Special categories of cited documents:
  - "T" - later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
  - "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
  - "Y" - document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
  - "&" - document member of the same patent family

**Date of the actual completion of the international search**

11 June 2008 (11.06.2008)

**Date of mailing of the international search report**

25 JUL 2008

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