



**Amphora BAC MiniPrep**

High Purity BAC DNA Isolation Simple and Elegant to Use  
[www.empbiotech.com](http://www.empbiotech.com)



**Natural Healthy Skin**

Skip the Skin Care Lie & Get Healthy Skin Naturally - Free!  
[www.MyPureRadiance.com](http://www.MyPureRadiance.com)

Anuncios Google

Home [Mumbai](#) [India](#) [World](#) [Money](#) [Sport](#) [Entertainment](#) [Opinion](#) [Speak Up](#) [Health](#) [Lifestyle](#) **Sci/Tech** [Academy](#) [Gallery](#) [Blogs](#) [E-Paper](#)

 

[Advanced Search](#)

[Home](#) > [Sci/Tech](#) > [Report](#)

## Artificial human skin created

ANI

Wednesday, April 21, 2010 12:33 IST

**Washington, DC:** University of Granada researchers have created artificial human skin by tissular engineering basing on agarose-fibrin biomaterial.

Email  
 Print  
 Share

**Advanced materials**

Scaffolds, microspheres, films,etc Developers of medical devices  
[www.metisbiomaterials.com](http://www.metisbiomaterials.com)

**Hotels Alhama de Granada**

Compare hotels and save up to 75%! Save time, book at Booking.com  
[www.booking.com/Alhama-de-Granada](http://www.booking.com/Alhama-de-Granada)



Anuncios Google

The artificial skin was grafted onto mice, and optimal development, maturation and functionality results were obtained. This pioneering finding will allow the clinical use of human skin and its use in many laboratory tests on biological tissues - which, additionally, would avoid the use of laboratory animals. Further, this finding could be useful in developing new treatment approaches for dermatological pathologies.

This research was conducted by José María Jiménez Rodríguez, from the Tissular Engineering Research group of the Department of Histology of the University of Granada, and coordinated by professors Miguel Alaminos Mingorance, Antonio Campos Muñoz and José Miguel Labrador Molina.

Researchers from the University of Granada firstly selected the cells that would be employed in generating artificial skin. Then, they analysed the evolution of the in-vitro culture and, finally, they performed a quality control of the tissues grafted onto nude mice. To this purpose, several immunofluorescence microscopy techniques had to be developed. These techniques allowed researchers to evaluate such factors as cell proliferation, the presence of differentiating morphological markers, the expression of cytokeratin, involucrine and filaggrin, angiogenesis and artificial skin development into the recipient organism.

To make this assay, researchers obtained human skin from small biopsies belonging to patients following surgery at the Plastic Surgery Service of the University Hospital Virgen de las Nieves in Granada.

To create artificial human skin, human fibrin from plasma of healthy donors was used. Researchers then added tranexamic acid -to prevent fibrinolysis-, and calcium chloride to precipitate fibrin coagulation, and 0.1 percent aragose. These artificial-skin substitutes were grafted on the back of the nude mice, with the purpose of observing its evolution in vivo. The equivalent skin substitutes were analysed by transmission and scanning light and electron microscopy and immunofluorescence.

The skin created in the laboratory showed adequate biocompatibility rates with the recipient and no rejection, dehiscence or infection was registered. Additionally, the skin of all animals used in the study started to show granulation after six days from implantation. Within the following twenty days, cicatrization was complete.

Double click an English word for Macmillan Dictionary definition

digg reddit google Facebook MySpace delicious **2** retweet

**More in Sci/Tech >>**

- [Shorter mums have unhealthier children in developing countries](#)
- [Artificial human skin created](#)
- [IISc will show astronauts art of space walking](#)
- [New technology to give Internet advertising a boost](#)
- [Voice analysis could enable early detection of Parkinson's disease](#)

**Advanced materials**

Scaffolds, microspheres, films,etc Developers of medical devices  
[www.metisbiomaterials.com](http://www.metisbiomaterials.com)

**GLP histology services**

UK-based CRO, specialists in safety studies/toxicology, est. 25 years  
[www.propath.co.uk](http://www.propath.co.uk)

**Hotels Alhama de Granada**

Compare hotels and save up to 75%! Save time, book at Booking.com  
[www.booking.com/Alhama-de-Granada](http://www.booking.com/Alhama-de-Granada)



Anuncios Google

**Popular >>**

**Sci/Tech >>**

1. [Cat can recognize a face faster than supercomputer](#)
2. [Icelandic volcanic eruption unlikely to have global effects](#)
3. [Isro's GSLV-D3 mission fails as rocket deviates from path](#)
4. [Awesome power of supermassive black holes revealed](#)
5. [This social networking site is clicking well](#)

**Other sections >>**

1. [Twilight among "most challenged" books of 2009](#)
2. [Jennifer Aniston appears almost naked on beach for perfume ad](#)
3. [Nasa images show Icelandic volcanic ash moving into Germany](#)
4. [India has more cellphones than toilets, says UN report](#)
5. [Kim Kardashian regrets baring all for Playboy](#)

**Gallery >>**



**Charity night**

Several Mumbai industrialists and corporation heads stepped out in style to support the global NGO Room to Read, which focuses on literacy and gender equality in education.



**For men only!**

Karan Johar and Varun Bahl launched their menswear collection where the duo seemed to have used lots of happy colours.

**Newsletter >>**

Get daily news in your inbox and read it at your convenience.