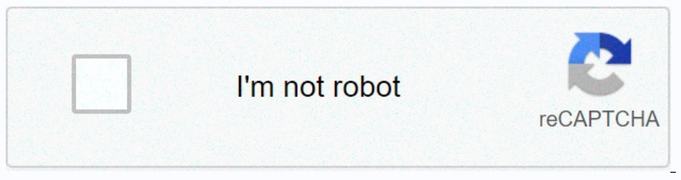

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What is human fibroblast conditioned media

Human Fibroblast Conditioned Media (HFCM) essentially means a Cocktail Growth Factor for your skin. I've written more about the most common GF used in skin care, epidermal growth factor here, so if you're new to the subject head there to catch up. The TL;DR version is that a growth factor is a sequence of medium-length amino acids (= small protein = large peptide) that function as a cellular signaling molecule to stimulate cell growth, proliferation, healing and/or differentiation. Ingredients called Conditioned Media cover not one, but a mixture of growth factors derived from some cells grown in a laboratory. In the EU, ingredients derived from human cells are illegal, so GF products available in the EU usually use a plant source (e.g. barley). In the U.S., human derivative gfs are all OK, and human conditioned media fibroblast is derived, as its name suggests, from human fibroblast cells (vip skin cells for collagen production). Skinmedica company has been a pioneer in the use of GFs in cosmeceutical skin care, and their version of HFCM contains a proprietary blend of growth factors, cytokines and soluble matrix proteins secreted by human neonatal dermal culture fibroblasts during extracellular matrix production (ECM). It claims to be a physiologically balanced mixture of GFs, which are ideal for skin cells to regenerate. Specifically, it contains growth factors that can promote angiogenesis (VEGF and hepatocytes growth factor), modulate inflammation (IL-6 and IL-8) and enhance ECM deposition (TGF-β1 and platelet-A-derived growth factor). Skinmedica has quite convincing research showing that their products containing GFs (TNS line) work and have great anti-aging benefits. Several clinical studies show that TNS Recovery Complex improves the appearance of fine lines, wrinkles, skin tone and texture. The benefits are even greater when GFs are combined with tried and true anti-aging assets, such as antioxidants and retinol. This all sounds very good, however, GFs in skin care are somewhat controversial. As powerful lytogenic (= stimulates cell proliferation) molecules, you should not use them if you have any of the risk factors for high skin cancer or if you have psoriasis. I've written more about the concerns at the EGF. In general, growth factors have increased evidence (both appropriate clinical trials, and some GF products with a following cult) showing that they have great anti-aging benefits. Whether you are comfortable with using human derived ingredients or if you feel against overthe arguments, it's up to you. You are a better safe guy than sorry, daily SPF + retinol is still the gold standard of anti-aging. REQUIREMENTS CONCERNING This application is a division of the U.S. patent application Ser. No. 10/368,045 filed on February 19, 2003, claiming the benefit of us Provisional Patent Application No. 60/416,242 filed on 7, 2002. The content of the above applications is incorporated into this document by reference. FIELD AND FUNDAL OF INVENTION This invention refers to cells of the human foreskin, which are capable of maintaining stem cells in an undifferentiated state in culture. Embryonic stem cells (ES) are derived from the inner cell mass (ICM) of the mammalblasocist (Evans & Kaufman 1981; Martin 1981). These cells are pluripotent thus capable of developing into any type of organ or tissue and even a complete embryo. When grown in suspension, ES cells are aggregated and differentiated into simple embryonic bodies (EBs), however, once grown under appropriate conditions (as described below), true ES cells are capable of proliferating indefinitely in vitro in an undifferentiated state; maintaining a normal cariotype by prolonged culture; and maintaining the potential for differentiation in derivatives of all three embryonic layers of germs (e.g. mesoderm, ectoderm and endoderm). The embryonic stem cells of mice provide a powerful tool for introducing specific genetic changes into the mouse germ line. ES mouse cells combined in chimeras with normal preimplantation embryos and returned to the uterus participate in normal embryonic development (Richards (1994) Cytogenet. Genet cell. 65: 169-171]. The ability of the mouse's ES cells to contribute to the functional germ cells in the chimeras provides a method of introducing site-specific mutations into the mouse lines. For example, with appropriate transfection and selection strategies, homogeneous recombination can be used to obtain ES cell lines with planned changes in specific genes. Genetically modified cells can be used to form chimeras with normal embryos and chimeric animals are recovered. Once ES cells contribute to the germ line to the chemical animal, it is feasible to establish a mouse line for the planned mutation in the next generation. Thus, MOUSE ES cells provide a refined mutagenesis screen, which greatly accelerates the functional genomics of mice and generates mammalian models for development processes and diseases (Mills and Bradley, 2001). Although mouse ES cells facilitate the understanding of development processes and genetic diseases, significant differences between primates and mouse development limit the use of mouse ES cells as a model of human development. Embryos of mice and primates differ significantly in the temporal expression of embryonic genes, would be in the formation of the egg cylinder from the embryonic disc (Kaufman, Atlas of Mouse Development; London; Academic press (1992); in the proposed derivation of early progeny (O'Rahilly and Muller; The stages of development in human beings, Washington; Carnegie Institute in Washington (1987)); in the structure and function of extra-embryo membranes and placenta (Mossman, vertebrate fetal membranes; The new Bruswick; Rutgers (1987); growth factor for development (e.g. haematopoietic system) (Lapidot Lab. An. Sci. 43:147-149 (1994)); structure and function of adults (e.g. central nervous system). Thus, to better reflect development differences, ES cells were also generated by primates (Thomson et al., 1995, 1996, 1998). Human ES cells provide an insight into developmental events that cannot be studied directly in the intact human embryo. For example, in the early post-implantation period, knowledge of normal human development is largely limited to the description of a limited number of sectioned embryos and to analogies extracted from the experimental embryology of other species. In addition, screens based on the in vitro differentiation of human ES cells of specific progeny can identify genetic targets, which can be used for the design and configuration of tissue regeneration therapies and teratogen oustor or toxic compounds. For example, Parkinson's disease and juvenile-onset diabetes mellitus, result from the death or dysfunction of one or more cell types. Replacing non-functioning cells using ES cell technology can provide lifelong treatment. In order to keep human ES cells in an undifferentiated state, es culture should be supplemented with factors that maintain cell proliferation, inhibit the differentiation of ES cells and preserve multipotence. Current methods of culture of ES cells include the use of mouse feed cells or the conditioning environment. Other methods aim to ensure an animal-free environment for the growth of human ES cells. Animal-based crops Animal-based crops include layers of mouse feeder supplemented with serum or replacement serum and mouse home matrix supplemented with conditioned medium. Mouse Feeder Layers The most common method of culture of ES cells is based on embryonic mouse fibroblasts (MEF) as a feeder cell layer supplemented with a tissue culture medium containing serum inhibitor or leukemia (LIF) factor that supports the proliferation and pluripotence of ES cells (Thomson et al, 1998; Reubinoff and al 2000). MEF cells are derived from day 12-13 mouse embryos in the environment supplemented with bovine fetal serum. Under these conditions, ES cells can be maintained for many passages in culture, while retaining their phenotypic and functional characteristics. However, unlike mouse ES cells, the presence of exogenously added LIF does not prevent the differentiation of human ES cells. In addition, the use of power cells substantially increases the cost of production and makes it impossible to expand the human cell culture ES. In addition, feeding cells are metabolically inactivated to prevent them from snowing stem cells, so it is necessary to have fresh feed cells for division of human culture ES. Procedures are not yet developed for the complete separation of the components of the feed cells away from embryonic cells prepared in bulk culture. Bulk. the presence of xenogen components in power cells complicates their potential use in human therapy. ES cells can also be grown on MEF under serum-free conditions using serum replacement, supplemented by the basic fibroblastic growth factor (bFGF) (Amit et al., 2000). Under these conditions, the efficiency of ES cell cloning is 4 times higher than in fetal bovine serum. In addition, after 6 months of culture under serum replacement, ES cells still maintain their pluripotence, thus indicating their ability to form teratomas containing all three layers of embryonic germs. Although this system uses better defined culture conditions, the presence of mouse cells in the culture exposes human culture to pathogens that restrict their use in cell therapy. Medium conditioned ES cells can also be grown in a feeder-free environment. Stem cells are grown on a solid surface, such as an extracellular matrix (e.g. Matrige™ or laminin) in the presence of the culture medium. The culture medium used to grow stem cells contains factors that effectively inhibit differentiation and promote their growth, such as MEF and bFGF-conditioned medium. However, this cultivation method is limited by the high costs of both the matrix and the MEF conditional environmental production. In addition, both the matrix and the conditioned environment consist of mouse material, which is practically inconsistent in terms of composition. However, the major disadvantage of all animal-based xenosuport systems mentioned above (e.g. serum and serum replacement MEFs, extracellular matrix and conditioned environment) is that they pose a risk of cross-transfer of animal pathogens to human ES cells, thereby compromising future clinical application. Animal-free crops Animal-free crops provide a pathogen-free environment for es cell growth. These cultures are based on human feeding layers supplemented with human serum or replacement of serum suitable for human stem cell growth. Human Feeder Layer Human ES cells can be grown and maintained using human embryonic fibroblasts or adult uterine epithelial cells. When grown on human food cells, human ES cells exhibit normal cariotypes, exhibit alkaline phosphatase activity, express oct-4 and other surface markers of embryonic cells, including SSEA-3, SSEA-4, TRA-1-60 and GCTM-2, form in vivo teratomas, and retain all key morphological characteristics (Richards et al 2002). However, the major disadvantage of the use of human embryonic fibroblasts or epithelial cells of the adult uterine tube as feeding cells is that both cell lines have a limited ability to pass only 8-10 times, thus limiting the capacity of a prolonged period of GROWTH of ES. For a prolonged period of cultivation, ES cells should be grown on human feed cells from several subjects, leading to increased variability in culture Thus, there is a widely recognised need for an animal-free culture system capable of supporting the proliferation of stem cells into culture for long periods of time, while maintaining their undifferentiated state, free of the above limitations. SUMMARY OF INVENTION In accordance with one aspect of this invention, a cell culture comprising the cells of the human foreskin is provided, the cells of the human foreskin being able to keep stem cells in an undifferentiated state when co-cultivated with them. According to other characteristics in the preferred embodiments of the invention described below, the cells of the human foreskin are able to form a mono-layer in cell culture. According to other features in the preferred incarnations described, stem cells are of embryonic origin. According to other features in the preferred embodiments described, stem cells are of human origin. According to other characteristics in the preferred embodiments described, cell culture includes a culture medium that includes the replacement of serum and/or serum. According to other features in the preferred embodiments described, the serum is supplied at a concentration of at least 10%. According to other characteristics in the preferred incarnations described, serum replacement is supplied at a concentration of at least 15 %. According to other features in the preferred embodiments described, the serum is the human serum. According to other features in the preferred embodiments described, the serum is supplied at a concentration of 20%. According to other characteristics in the preferred incarnations described, serum replacement is provided at a concentration of 30%. According to another aspect of this invention, there is a method of maintaining stem cells in an undifferentiated state that includes co-cultivation of stem cells with a line of human foreskin feed cells. In accordance with yet another aspect of this invention, a cell culture comprising: (i) stem cells is provided; and (ii) human foreskin cells capable of keeping stem cells in an undifferentiated state. According to other characteristics in the preferred embodiments described, the cell feed line of the human foreskin is prepared by: (a) isolating the cells of the foreskin from the tissue of the foreskin; (b) the cultivation of foreskin cells in a culture medium including serum and/or serum replacement, thereby preparing the human foreskin feed cell line. According to other characteristics in the preferred embodiments described the tissue of the foreskin is obtained from a male individual of 8-14 days. According to other characteristics in the preferred embodiments described the isolation of the foreskin cells from the foreskin tissue is carried out by: (i) chopping foreskin; (ii) dissociation of the tissue of the foreskin resulting from step (i) in According to other characteristics in the preferred embodiments described dissociation of the tissue of the foreskin is carried out by treatment with trypsin. According to other characteristics in the preferred incarnations described, the replacement of serum and/or serum is provided at a concentration of at least 10 %. According to other characteristics in the preferred incarnations described, the replacement of serum and/or serum is provided at a concentration of 15 %. According to the additional characteristics of the preferred embodiments described, the cells of the human foreskin of the culture keep the stem cells in a proliferative state undifferentiated by more than 87 passages. According to yet another aspect of this invention, an appropriate composition is provided for the maintenance of stem cells in an undifferentiated state, the composition comprising the conditioned medium of human foreskin cells. According to other features in the preferred embodiments described the composition below, including a factor selected from the group consisting of a growth factor, an anti oxidant and an amino acid. In accordance with an additional aspect of this invention, a method of producing a suitable conditioned environment

for maintaining stem cells in an undifferentiated state is provided, the method comprising: (a) the cultivation of human foreskin cells in a growing environment under conditions appropriate for the production of the conditioned environment; and (b) the collection of the growing medium in order to produce the appropriate conditioned environment for maintaining stem cells in a non-differentiated state. According to other characteristics of the preferred embodiments described, the method of producing a conditioned environment also includes validation of the ability of the conditioned medium to keep stem cells in an undifferentiated state after stage (b), while validation is carried out by a differentiation test selected from the group consisting of morphology analysis, cariotype analysis and surface marker analysis. This invention successfully addresses the shortcomings of configurations currently known by providing cell cultures and methods of propagating and maintaining stem cells in an undifferentiated state and in an animal-free environment. Unless otherwise defined, all the technical and scientific terms used here have the same meaning as that commonly understood in the art to which this invention belongs. Although methods and materials similar to or equivalent to those described in this document may be used in the practice or testing of this invention, the appropriate methods and materials are described below. In the event of conflict, the patent specifications, including definitions, will control. In addition, materials, methods and examples are only illustrative and are not intended to be limiting. DESCRIPTION SURVEY The file of this patent contains at least one executed in color photography. Copies of this patent with color photography (s) will be provided by the Patent and Trademark Office upon request and payment of the required fee. The invention is described here, for example only, with reference to the accompanying drawings. With reference now specific to drawings in detail, it is pointed out that the details presented are, for example, and for the purpose of an illustrative discussion only of the preferred embodiments of this invention and are presented for the purpose of providing what is considered to be the most useful and understandable description of the conceptual principles and aspects of the invention. In that regard, there is no attempt to show the structural details of the invention in detail than is necessary for a fundamental understanding of the invention, the description taken with the drawings which clearly show those qualified in art how several forms of invention can be incorporated into practice. In drawings: FIGS. 1 a-b are photomicrographs representing human ES cells grown on a foreskin feed layer. FIG. 1 a is a photomicrograph of a colony of human ES cells (line I-6) grown for 61 consecutive passages on the feed layers of the foreskin. Note that the colony is organized in a long and elliptical manner. The size bar represents 100 μM. FIG. 1 b is a photomicrograph of individual human ES cells (line I-3) grown for 37 consecutive passages on the feed layers of the foreskin. Note that cells retain their typical morphology of ES cells, i.e. high nucleus-cytoplasm ratio, the presence of nucleols, and intercellular gaps. The size bar represents 38 μM. SMOCHINES 2 a-b are photomicrographs of MEF and foreskin cells grown for 4 days in the presence of 100 μg/ml neomycin. Cell death and the abnormal phenotype of MEF culture (FIG. 2 a, the size bar represents 40 μm) is observed compared to the normal cell phenotype of the F-3 foreskin culture (FIG. 2 b, the size bar represents 100 μm). FIG. 3 a is a photomicrograph showing the G-band metaphase of ES cells (line 1-3) following 29 passages on the feed layers of the foreskin that were grown for 107 passages after their derivation. FIG. 3 b illustrates the analysis of the cariotype of metaphase chromosomes presented in FIG. 3 a. The cariotype has been shown to be 46, XX, which is a normal female, reflecting the fact that ES cells are free from contamination of foreskin cells. SMOCHINES 4 a-c are immunohistochemical micrographs that illustrate the expression of cell embryonic surface markers on HUMAN ES cells, after 57 passages on the feed layers of the foreskin. Dark field images of human ES cells (line 1-6) labelled with specific monoclonal antibodies TRA-1-60 (FIG. 4 a, 5× magnification), SSEA4 are presented 4 b, magnification 20×) and TRA-1-81 (FIG. 4 c, 20× magnification). FIG. 5 illustrates the differentiation stage of two ES I-3 and I-6 cell lines) grown on foreskin feed layers (left (left and in embryoid bodies (EBs) (right band), thus determined by RT-PCR. The equal load and concentration of the arn were probed for the expression of the GAPDH household gene. Figs. 6 a-f are photomicrographs that illustrate the in vivo differentiation to human ES cells that have been grown on the feeding layers of the human foreskin. The hematoxylin-eosine coloured sections of the mucus-secreting cartilage and epithelium in i-3 ES cells are presented, following 20 passages on the feed layers of the foreskin (FIG. 6 a, the size bar represents 50 μM), the cell epithelium containing melanin in cells I-9 ES, following 34 passages on the foreskin feed layers (FIG. 6 b, the size bar represents 25 μM) , calcified cartilage tissue in cells I-3 ES, following 20 passages on the foreskin feed layers (FIG. 6 c , the size bar represents 50 μM), the layered epithelium in cells I-3 ES, following 20 passages on the feed layers of the foreskin (FIG. 6 d, the size bar represents 50 μM), the cross section of the myelininated nerves in the H-9 ES cells, following 34 passages on the foreskin feed layers (FIG. 6 e , the size bar represents 25 μM) and the development of striated muscles in I-6 ES cells following 50 passages on the layers of the foreskin (FIG. 6 f , the size bar represents 10 μM). DESCRIPTION OF Preferred FEATURES This invention is of human foreskin cells, which are capable of maintaining stem cells, would be human embryonic stem cells (ES) in an undifferentiated state. The principles and functioning of the feed cell culture and the methods of co-culture of them with stem cells in accordance with this invention may be better understood with reference to the accompanying drawings and descriptions. Before explaining at least one embodiment of the invention in detail, it must be understood that the invention is not limited in its application to the details set out in the following description or exemplified by Examples. The invention is capable of other embodiments or of being practiced or carried out in different ways. It should also be understood that the phraseology and terminology used in this document are for the purpose of the description and should not be considered as limiting. Embryonic stem cells are derived from the inner cell mass (ICM) of the mammalblasochist. These cells are pluripotent, thus able to differentiate into a variety of somatic cell lines (e.g. hematopoietic cells, neural cells and immune system cells), thus providing a single source of cells that can be used in both research and clinical applications. ES cells have been successfully established from primates (Thomson et al., 1998; Amit et al., 2000), mice (Mills and Bradley, 2001) and other species. ES cells are maintained in an undifferentiated pluripotent state when grown under appropriate conditions, would be in the presence of a supply layer or matrix supplemented with serum or conditioned medium. However, therapeutic therapeutic human ES cells require defined growth conditions, a pathogen-free environment and long growing periods to allow adequate characterisation and genetic manipulation of ES cells. Current methods of culture of human ES cells are animal-based, involving embryonic mouse fibroblasts (MEFs) or matrix derived from mice, such as Matrige™ or laminin supplemented with MEF conditioned medium as layers of supply. Other, more advanced approaches involve the use of human-based food cells, such as the epithelial cells of the human uterine tube. While premiums are primarily limited by a laborious effort involved in the continuous preparation of fresh feeding layers and unwanted exposure of human culture to xenogenic components that restrict their future use in therapy, the latter are limited by a shortened culture period leading to heterogeneous cultures. While reducing the current invention to practice, current inventors have found that human foreskin cells are capable of supporting human stem cells in culture, while maintaining all characteristics of ES cells, including pluripotence, immortality, undifferentiated proliferation capacity and normal cariotype. Previous attempts to cultivate human es cells in the presence of a human feed layer involved the use of differentiated human ES cells in fibroblast-like cells (Us Pat. Appl. No. 20020072117). However, it will be estimated that these feed cells were originally grown on embryonic mouse fibroblasts, which could have introduced animal pathogens into human CULTURE ES. In addition, these human feed cells are characterized by a relatively long doubling time and a limited culture period of 7-10 passages that limit their use as a feeder layer. In stark contrast, the cells of the human foreskin in this invention provide an animal-free environment, are characterized by a short doubling time, cultivation periods of at least 42 passages and, as described below, are capable of keeping ES cells in a pluripotent and undifferentiated state for at least 87 passages (see Example 1 of the Examples section below). As such, the cells of the human foreskin in this invention provide for the first time a pathogen-free and homogeneous environment for the cultivation of human ES cells. Thus, according to one aspect of this invention, a cell culture comprising human foreskin cells is provided, which are capable of keeping stem cells in an undifferentiated state when co-cultivated with them. After use in this document, the expression stem cells refer to cells that are able to differentiate into other cell types that have a special and specialized function (e.g. cells) or remain in an undifferentiated state, hereinafter referred to as pluripotent stem cells. Unlimited examples of stem cells are hematopoietic stem cells obtained from a person's bone marrow tissue in any or from the umbilical cord blood of a newborn person, embryonic stem cells (ES) obtained from embryonic tissue formed after gestation (e.g. blastochist) or embryonic germ cells (EG) obtained from the genital tissue of a fetus at any time during gestation, preferably before 10 weeks of gestation. Further description of stem cells is provided below. The preferred stem cells according to this aspect of this invention are human stem cells. It will be considered that non-differentiated stem cells have a distinct morphology, which is clearly distinguishable from differentiated cells of embryonic or adult origin by art-qualified. Typically, non-differentiated stem cells have high nuclear/cytoplasmic ratios, prominent nucleoli and the formation of compact colonies with poorly perceptible cellular junctions. The additional characteristics of non-differentiated stem cells are described below. After described in example 1 of the examples section below, the cells of the human foreskin in this invention are obtained from a human foreskin tissue (e.g. skin tissue covering the penis of the gland; the foreskin penis) of a male individual, preferably from an individual male 8-14 days. The tissue of the foreskin is first chopped by scissors and then dissociated to single cells. The clamps of the foreskin cells can be dissociated by any known means in art, including physical de-capture or enzymatic digestion using, for example, Tripsin. The foreskin cells of this invention are re-suspended in tissue culture medium supplemented with serum or serum-replacement. Serum can be of any source, including bovine fetal serum, human serum or serum replacement. Preferably, human serum or serum replacement is used to provide an animal-free environment for foreskin feeding cells. Culture medium, serum, and serum replacement can be obtained from any commercial supplier of tissue culture products, examples include Gibco-Invitrogen Corporation (Grand Island, N.Y. USA), Sigma (St. Louis Mo., USA) and ATCC (Manassas, Va. USA). Replacement of the serum or serum used by this invention for the cultivation of foreskin feeding cells is provided at a concentration range of 1% to 40%, more preferably, 5% to 35%, more preferably, 10% to 30%, most preferably 20% to 30%. According to the currently preferred embodiments of this invention, human serum is supplied at a concentration of 20% and serum replacement is ensured at a concentration of 30% (see example 1 of the Examples section). After illustrated in the following examples section, the human foreskin feed cells in this invention are capable of forming monolayers when attached to a solid phase, be a tissue culture plate (Dugdale and Siddall (1969) J. Med. Lab. Technol. 26: 31-5). This characteristic of the human foreskin feed cells in this invention makes these cells very suitable for can be used as a layer of feeder cells on which stem cells can proliferate while maintaining their non-differentiated characteristics. After being used here, the expression layer of feed cells refers to a monolayer of cells, usually from a type of tissue, which provides a suitable surface for attachment and growth of cells (e.g. stem cells) of a second type of tissue. It will be considered that the human foreskin cells of this invention may be modified (e.g. genetically) to include additional characteristics that provide a culture advantage. For example, human foreskin cells can be genetically modified (stable or transiently transformed) to express drug resistance genes for one or more antibiotics or marker genes that can be used for immunoisolation. Examples of marker genes include, but are not limited to, green fluorescent proteins, β-galactosidase and cellular surface antigens. The following is described in Example 1 of the Following Examples section, the human foreskin of this invention possesses a natural resistance to at least one type of antibiotic, a characteristic that further improves their applicability in culture. Human foreskin cells in this invention can also be genetically modified to secrete factors that support stem cell growth in an undifferentiated state. Such factors include, but are not limited to, the basic fibroblast growth factor (bFFF), interleukin 6 (IL-6) and leukaemia inhibitor (LIF) cytokine families, and reverse transcriptase telummerates (TERT) at a high level (US Pat. Appl. No. 20020072117 and WO 99/20741). Genetic manipulation of human foreskin cells in this invention can be performed using methods of molecular cloning and genetic engineering, which are well known by one qualified in art. In short, any of the genes described below or their active portions may be cloned in construction by mammalian expressions containing promoter sequences that allow expression in the cells of the foreskin, such as the promoter of CMV [Artuc et al., Exp. Dermatol. 1995, 4:317-21]. Examples of appropriate construction include, but are not limited to, pcDNA3, pcDNA3.1 (+/−), pGL3, PzeoSV2 (+/−), pDisplay, pef/myc/cyto, pCMV/myc/cito, each of which is commercially available from Invitrogen Co. (www.invitrogen.com), or the pSH expression vector that allows for a regulated polychelotide expression in human foreskin cells (Ventura and Villa, 1993, Biochem. Biofize. Common. 192: 867-9]. Examples of retroviral vectors and packaging systems are those sold by Clontech, San Diego, Calif., USA, including Retro-X pLNCX and pLXSN vectors, which allow cloning in multiple cloning sites, and the transgenre is transcribed from the CMV promoter. Derivative vectors Mo-MulV are also included, would be pBabe, where the transgenes will be transcribed from the promoter 5′LTR. It is mentioned here and illustrated in the following section, the human foreskin feed cells in this invention are capable of keeping ES cells in an undifferentiated state when co-cultivated with them. Thus, according to another aspect of this invention, a method of keeping stem cells in an undifferentiated state is provided. The method is carried out by co-culture of stem cells with human foreskin cells of this invention described in this herezinabove. Stem cells can be obtained using well-known methods of cell culture. For example, human embryonic stem cells can be isolated from human blastocytes. Human blastochists are usually obtained from human preimplantation embryos in vivo or from in vitro fertilized embryos (IVF). Alternatively, a single-cellhuman embryo can be extended to the blastochist stage. For the isolation of human ES cells, the pellucida area is removed from the blastochist, and the inner cell mass (ICM) is isolated by immunosurgery, in which the trophectoderm cells are lysed and removed from the ICM intact by mild pipetation. ICM is then plated in a tissue culture balloon containing the appropriate environment that allows its growth. After 9 to 15 days, the ICM-derived growth is dissociated into the cmonths either by mechanical dissociation or by enzyme degradation, and the cells are then replated on a culture medium of fresh tissues. Colonies demonstrating undifferentiated morphology are individually selected by micropipette, mechanically dissociated in agglomerations and replated. The resulting ES cells are then divided routinely every 1-2 weeks. For more details on methods of preparation of human ES cells, see Thomson et al., [U.S. Pat. No. 5,843,780; Science 282: 1145, 1998; Curr. Top. Dev. Biol. 38: 133, 1998; Proc. Natl. Acad. Sci. USA 92: 7844, 1995]; Bongso et al., [Hum Reprod 4: 706, 1989]; Gardner et al., [Fertil. Sterile. 69: 84, 1998]. It will be considered that commercially available stem cells may also be used with this aspect of this invention. Human ES cells can be purchased from the NIH human embryonic stem cell registry (<http: escr.nih.gov=>). Unlimited examples of commercially available embryonic stem cell lines are BG01, BG02, BG03, BG04, CY12, CY30, CY92, CY10, TE03, and TE32. Stem cells used by this invention may also be derived from human embryonic germ (EG) cells. Human EG cells are prepared from primordial germ cells obtained from human fetuses of about 8-11 weeks of gestation using laboratory techniques known to anyone qualified in the arts. The genital ridges are dissociated and cut into small pieces, which are subsequently disaggregated into cells by mechanical dissociation. EG cells are then grown in culture of tissues with the appropriate environment. Cells are grown with daily environmental replacement until cell morphology is observed consistent with EG cells, usually after 7-30 days </http:> </http:> 1-4 passages. For further details on methods of preparation of human cells EG see Shamblott et al., [Proc. Natl. Acad. Sci. USA 95: 13726, 1998] and Us Pat No. 6,090,622. It will be assessed that ES cells can also be obtained from other species, including mice (Mills and Bradley, 2001), golden hamster [Doetschman et al., 1988, Dev Biol. 127: 224-7], rat [Iannaccone et al., 1994, Dev Biol. 163: 288-92] rabbit [Giles et al. 1993, Mol Reprod Dev. 36: 130-8; Graves & Moreadith, 1993, Mol Reprod Dev. 1993, 36: 424-33), several species of domestic animals [Notariani et al., 1991, J Reprod Fertil Suppl. 43: 255-60; Wheeler 1994, Reprod Fertil Dev. 6: 563-8; Mitalipova et al., 2001, Cloning. 3: 59-67] and non-human primate species (monkey Rhesus and marmoset) (Thomson et al., 1995, Proc Natl Acad Sci USA. 92: 7844-8; Thomson et al., 1996, Biol Reprod. 55: 254-9). Once obtained, stem cells are co-cultivated with human foreskin cells in this invention. Co-cultivation may be carried out using any culture medium, serum or replacement serum, including the examples provided in this medium. Preferably, the culture medium is complemented by factors that promote stem cell growth. Examples include, but are not limited to amino acids, growth factors, such as those described hereinabove, antibiotics and the like. Stem cells are plated on the foreskin cells in a density that promotes cell survival and proliferation, but limits differentiation. Typically, a planting density is used between about 15,000 cells/cm2 and about 50,000 cells/cm2. It will be appreciated that although single-cell suspensions of stem cells are usually sown, small groups can also be used. To this end, enzyme digestion ends before the stem cells completely disperse and the cells are triturated with a pipette, so that agglomerations (i.e. 10-200 cells) are formed. However, measures are taken to avoid large clusters that cause cell differentiation. Preferably, the cells of the human foreskin of this invention are suppressed by irradiation or treatment with an anti-mitotic agent, would be mitomycin C, to prevent them from growing stem cells. When co-culture, stem cell growth is monitored to determine their state of differentiation. Several approaches, including, for example, morphological determination can be used to determine cell differentiation. After described here, a number of morphological characteristics characterize undifferentiated stem cells. These include high nuclear/cytoplasmic ratios, prominent nucleoli and the formation of compact colonies with poorly perceptible cellular junctions (see example 1 of the Examples section). Alternatively, cellular differentiation can be when examining cellular or tissue-specific markers, which are known to indicate differentiation. For example, ES primate cells may express one or more embryonic antigens specific to the stage of the 3 and 4, after shown in example 2 of the Examples section, which follows. The differentiation of human ES cells in vitro leads to the loss of these markers and increased expression of others, such as α-fetoprotein, NF-68 kDa, α-cardiac, Glut 2 and albumin, as shown in example 3 of the following examples section. Tissue/cell-specific markers can be detected using immunological techniques known in art (Thomson et al., 1998). Examples include, but are not limited to, flow cytometry for membrane-bound markers, immunohistochemistry of extracellular and intracellular markers, and enzymatic immunotest, for secreted molecular markers. Differentiation markers can also be detected at the mRNA level, such as reverse-PCR transcription, using marker-specific primers (see example 3 in the Examples section). For example, Oct-4 and TERT can be detected by RT-PCR. Another approach for determining the differentiation of ES cells is carried out by measurements of the activity of alkaline phosphatase. Non-differentiated human ES cells have alkaline phosphatase activity, which can be detected by fixing cells with 4% paraformaldehyde and developing with the Vector Red substrate kit according to the manufacturer's instructions (Vector Laboratories, Burlingame, Calif., USA). The ability of ES cells to differentiate in cells of all three germ levels (e.g. multipotence) can also be used to monitor the differentiation of ES cells. The pluripotence of ES cells can be confirmed by injecting cells into SCID mice (Evans M J and Kaufman M (1983). Multi-potential cells grown directly from normal mouse embryos. Cancer Surv. 2: 185-208], which at injection form teratomas. Teratomas are fixed using 4% paraformaldehyde and histologically examined for the three germ layers (e.g. endoderm, mesoderm and ectoderm). Alternatively, the pluripotence of the stem cells of this invention may be determined by their ability to form embryonic bodies, as described in Example 3 of the Examples section, which follows. In addition to monitoring a differentiation state, stem cells are often also monitored for cariotype to check cytological euploidity, in which all chromosomes are present and are not detectable during cultivation. Cultured stem cells can be cariotiate using a standard Giemsa staining and compared with the published cariotypes of the corresponding species. After illustrated in example 2 of the Examples section below, stem cells grown according to the teachings of this aspect of this invention retain a normal cariotype following 47 passages of feed cells in the foreskin that support the ability of the current culture methodology to support cell growth culture. Co-cultivation by this invention can also be carried out by increasing stem cells on a synthetic matrix supplemented by a conditioned environment derived from the foreskin. A conditioned human foreskin environment refers to an environment with the secreted factors of the foreskin present in the culture of the foreskin after a certain period of culture, which are sufficient factors to keep stem cells in the culture. The synthetic matrix can replace the need for feed cells because it contains extracellular components to which stem cells can attach and provide staungitate adequate culture substrate. Particularly suitable are the components of the extracellular matrix, such as those derived from the basement membrane or which may form part of the receptor-ligand couplings of the adhesion molecule. A commercial preparation is available from Becton Dickenson under the name Matrigel™, and can be obtained in a low growth factor formula. Both formulations are effective. Matrigel™ is a soluble preparation from Engelbreth-Holm-Swarm tumor cells that gels at room temperature to form a reconstituted basement membrane. Other components of the extracellular matrix and mixtures of components are suitable as an alternative. Depending on the type of cell that proliferates, it may include laminin, fibronectin, proteoglycan, entactin, heparan sulfate and similar elements, alone or in various combinations. Preferably, the proteins of the recombinant extracellular matrix are used for the cultivation of human stem cells. The conditioned environment of human foreskin cells is produced by cultivating human foreskin cells in a growing environment under conditions suitable for the production of the conditioned environment. The growth medium can be any growth medium suitable for the growth of the cells of the foreskin of this invention, as described in hereinabove. The growth medium can be supplemented with nutritional factors, such as amino acids (e.g. L-glutamine), antioxidants (e.g. beta-mercaptoethanol) and growth factors, which benefit from the growth of stem cells in an undifferentiated state. Serum and serum substitutes shall be added to the effective concentration ranges described in hereinabove. Cells are grown in the growing environment for a sufficient period of time to allow adequate accumulation of secreted factors to support the proliferation of stem cells in an undifferentiated state. Usually, the environment is conditioned by culture for 24 hours at 37° C. However, the culture period can be scaled by assessing the effect of the conditioned environment on the growth and differentiation of stem cells (as described in this sense and in example 1). According to the currently known embodiments of this aspect of this invention, the environment is conditioned for 4 hours. The selection of the crop apparatus for environmental conditioning is based on the scale and purpose of the conditioned environment. Large-scale production preferably involves the use of dedicated devices. Continuous cell culture systems are reviewed in (2000) Genetic Eng. News 20:10. After the accumulation of appropriate factors in the environment, the growth medium (i.e. the conditioned environment) is separated from the cells of the human foreskin and collected. It will be appreciated that the cells of the human foreskin can be repeatedly condition other batches of media for additional growing periods, provided that the cells retain their ability to condition the environment. Preferably, the conditioned medium is filtered sterile before use. The conditional environment of this invention can be applied directly to stem cells or extracted to concentrate the effective factor, such as the filtration of the bone. For future use, the conditioned medium is preferably kept frozen at −80° C. The ability of the conditional environment of this invention to keep stem cells in an undifferentiated state is evaluated as described below. This is described here and in Example 1 of the Examples below section, new feed cells derived from the foreskin of this invention provide an excellent substitute for previous art feed cells, as they can be kept in culture for long periods of time of at least 42 passages (ATCC Catalogue) and provide a complete environment free of pathogens for stem cell cultivation. When grown for a long time on a constant food layer without pathogens, HUMAN ES cells become more attractive for clinical research and human therapy. Human ES cells grown in accordance with the teachings of this invention may be used for several commercial and research applications. Cultured human ES cells can be differentiated into restricted development line cells or terminally differentiated cells. Stem cell differentiation can be initiated by allowing excessive growth of non-differentiated human ES cells in the suspension culture that form embryoid bodies or by plating ES cells under conditions that promote differentiation in a certain way. These conditions may include the withdrawal or addition of nutrients, growth factors or cytokines to the environment, changes in oxygen pressure or changes in substrate on the surface of the crop. Human cultured ES cells obtained by this invention can also be used to prepare a relatively cDNA library that is relatively uncontaminated with CDNA from the feed cells. MRNA is prepared by standard techniques from ES cells and is transcribed inversely to form cDNA. The cDNA preparation may be decreased with nuleotides from embryonic fibroblasts and other cells of undesirable specificity to produce a low cdna library through known techniques in art. Human ES cells grown in accordance with the teachings of this invention can be used to check factors (such as small-molecule drugs, peptides, polynuletids and the like) or conditions (such as growing conditions or manipulation) that affect stem cell characteristics. For example, the increase affecting substances, toxins or potential can be tested by adding them to the culture medium. Additional objects, advantages, and new features of this invention will become apparent for a common qualification in the art of examples, which are not intended to be limiting. In addition, each of the different embodiments and aspects of this invention, as defined below, is further delineated and so is supported in the applications section below finds experimental support in the following examples. EXEMPLE The following examples are now referred to, which, together with the descriptions above, illustrate the invention in a way that does not limit. In general, the nomenclature used in this document and the laboratory procedures used in this invention include molecular, biochemical, microbiological and recombinant DNA techniques. Such techniques are well explained in the literature. See, for example, Molecular Cloning: a Sambrook et al. laboratory manual, (1989); Volumes Current Protocols in Molecular Biology I-III Ausubel, R.M., ed. (1994); Ausubel et al., Current Protocols in Molecular Biology, John Wiley and Sons, Baltimore, Md. (1989); Perbal, A Practical Guide to Molecular Cloning, John Wiley & Sons, New York (1988); Watson et al., Recombinant DNA, Scientific American Books, New York; Birren et al. (eds) Genome Analysis: A Laboratory Manual Series, Vol. 1-4, Cold Spring Harbor Laboratory Press, New York (1998); the methodologies provided in the United States of Bed No. 4,683,202; 4,801,531; 5,192,659 and 5,272,057; Cell biology: a laboratory manual, volumes I-III Cellis, J. E., ed. (1994); Animal cell culture – a basic technique manual of Freshney, Wiley-Liss, N.Y. (1994), 3rd edition; Volumes Current Protocols in Immunology I-III Coligan J. E., ed. (1994); Stites et al. (eds), Basic and Clinical Ivory (8th edition), Appleton & Lange, Norwalk, Conn. (1994); Mishell and Shiigi (eds), Selected Methods in Cellular Immunology, W. H. Freeman and Co., New York (1980); available im -tests are described extensively in the patent and scientific literature, see, for example, the American bed number 3,791,932; 3,839,153; 3,850,752; 3,850,578; 3,853,987; 3,867,517; 3,879,262; 3,901,654; 3,935,074; 3,984,533; 3,996,345; 4,034,074; 4,098,876; 4,879,219; 5.011.771 and 5.281.521; Oligonucenotide Synthesis Gait, M. J., ed. (1984); Hybridization of nucleic acid Hames, B.D., and Higgins S. J., ed. (1985); Transcript and translation Hames, B.D., and Higgins S. J., ed. (1984); Animal Cell Culture Freshney, R. I., ed. (1986); Immobilized cells and enzymes IRL Press, (1986); A Practical Guide to Molecular Cloning Perbal, B., (1984) and Methods in Enzymology Vol. 1-317, Academic Press; PCR Protocols: A Guide to Methods and Applications, Academic Press, San Diego, Calif. (1990); Marshak et al., Strategies for protein purification and characterization-a CSHL Press course laboratory manual (1996); all of these are incorporated by reference as if they were Here. Other general references are provided throughout the document. The procedures in these are considered to be well known in art and are provided for the comfort of the reader. All information contained therein is incorporated into this document by reference. Example 1 Cell lines derived from foreskin suitable for the cultivation of ES cells Experimental materials and methods Establishing cell feeding lines of the foreskin — the tissue of the foreskin was obtained by the informed consent of parents from normal men by 8 to 14 days. Tissue washed in sterile PBS (Invitrogen, Grand Island, NY, USA), chopped by scissors and dissociated to single cells by incubating with Tripsin-EDTA (0.5% Tripsin, 5.3 mM EDTA, Invitrogen, Grand Island, NY, USA) for 20-40 min. The resulting single cell suspensions were grown in a growing environment, including 80% modified mean Eagle of Dulbecco (DMEM) containing high glucose concentration and no pyruvate (Invitrogen, Grand Island, NY, USA), 2 mM L-glutamine, 0.1 mM β-mercaptoethanol, and 1% stock of non-essential amino acids (all purchased from Invitrogen, Grand island, NY, US products). The foreskin environment was supplemented with serum or serum replacement as follows: Growth medium for cell lines of the foreskin F3, F7 and F8 was supplemented with 20% bovine fetal serum (FBS) (Hyclone, Logan, Utah, USA), the growth medium for cell lines of the foreskin F2, F4 and F6 was supplemented with the replacement of the 30% serum (SR) (Invitrogen, Grand Island, NY, USA), and the growth environment for the cell lines of the foreskin F1, F5 and F9 was supplemented with 20% human serum (Chemicon Intnl, Inc. Temecela, Calif., USA). The foreskin cells were divided using Tripsin-EDTA (0.5% Trypsin 0.25% EDTA, Invitrogen, Grand Island, NY, USA) for 8 minutes every five to seven days. Prior to use, foreskin cells were mitoticly inactivated by cells incubated with 10 ng/ml mitomycin C (Sigma, St. Louis Mo., USA) for two hours, followed by 4 washes in PBS. The cells were then collected with Tripsin-EDTA (0.5% Tripsin 0.25% EDTA) by incubation for 8 min, centrifuged at 1500 RPM for 5 min, resuspended in the power medium, and plated at a concentration of 40,000 cells per cm2. Cell lines ES —Human cell lines ES I-6, I-3 (Amit and Itskovitz-Eldor, 2002) and H-9 (Thomson et al, 1998) were collected using 1 mg/ml Collagenase type IV (Invitrogen, Grand Island, NY, USA) and transferred to 2 ml wells in 6 probes containing pre-plated cells with pre-for-fores. The co-cultures were grown in an environment of 85% Ko-DMEM, supplemented by 15% SR, 1 mM L-glutamine, 0.1 mM β-mercaptoethanol, 1% stock of non-essential amino acids, and 4 ng/ ml bFGF (all purchased from Invitrogen, Grand Island, NY, USA). Cocultures were divided every four to six days using 1 mg/ml type IV collagenase for 30 minutes and replated in vials containing fresh medium. Morphological assessment – ES cells were examined in an inverted scope phase contrast (Olympus, IX70, Japan). Experimental results Cell lines derived from the foreskin provide excellent layers of feed for the growth of ES cells -In order to establish an animal-free environment for human embryonic stem cell growth the foreput cell lines have been generated as layers of feed. The foreskin cells grown in the environment supplemented by FBS gave rise to fibroblast-like cell lines, which persisted for more than 27 consecutive passages. No reduction in the growth rate of foreskin cells or its ability to support the growth of human ES cells was observed, regardless of whether the foreskin cells used were of a large number of passes or as a result of freezing and thawing cycles. Worth noting is that when in culture, foreskin fibroblasts have been reported to grow at least 42 passages before senescence (ATCC Catalog). Similarly, the growth rate and morphology of the cell lines of the derived foreskin using SR or human serum (F1, F2, F4, F5, F6 and F9) in parallel with that of the LINES derived with FBS. To determine the ability of human foreskin cells to support the growth of human ES cells, the two cell populations were co-cultivated in 85% Ko-DMEM supplemented with 15% SR, thus detailed in hereinabove methods. The human lines ES, I-3, I-6 and H-9 originally grown on MEF supplemented with SR responded well to the transfer to the foreskin feed layers. Each transferred line continued proliferation and maintained the normal characteristics of ES cells for at least 70 passages. The morphology of ES colonies grown on the feed layers of the foreskin differs slightly from that of cells grown on meF. When grown on foreskin feeders the growth of ES cells was organized according to the direction of growth of the foreskin layers (FIG. 1 a) resulting in somewhat less round colonies (data not displayed). However, when viewed under greater magnification, the morphology of ES cells derived from the foreskin was identical to that of ES cells derived from MEF. Essentially, ES cells remained round and small, with a high nucleus-cytoplasm ratio, with a notable presence of one to three nucleols and typical cell spacing (FIG. 1 b). In addition, the ES human lines originally grown on one of the foreskin lines for 20 passages, resulting in the ES cells being grown on another foreskin line, did not reveal any difference in the growth of ES cells. Each of the lines of the foreskin F3, F7, F8, F1, F5, F4 and F2 supported an increase in equally human ES cells and were replaced between them, the mean culture (from 5 to more than 20), as feeders for ES cells. Following 76 passages of substitutes for the average culture, ES were transferred to a pathogen-free environment provided by each of the animal-free foreskin lines (e.g. F1, F2, F4, F5, F6 and F9). Under these conditions, ES cells were propagated and maintained pluripotent and in an undifferentiated state for at least 11 passages. These results demonstrate the ability of the foreskin feed cells of this invention to support a normal growth of human eS and replace MEF as power layers. Cell feed lines of the foreskin are characterized by natural antibiotic resistance —For the selection of the post-transactional antibiotic, hES cells are usually grown on transgenic MEFs demonstrating neomycin resistance at a concentration of 200 ng/ml [Eiges et al., (2001). Current Biology 11: 514-518]. To test their antibiotic resistance, the unmodified human foreskin F-3 and MEF cell lines were grown in an environment supplemented with 100 μg/ml of neomycin. While MEF cells began to die on the second day after the selection of neomycin and demonstrated an aberrant phenotype (FIG. 2 a), the cells of the human foreskin appeared phenotypically normal and competent for hES plating without detectable cell death even after 4 days of antibiotic selection (FIG. 2 b). These results demonstrate that foreskin cells have a natural resistance to antibiotics, which can be used for the selection of post-transfectional antibiotics of human ES cells. Example 2 Preput-Derived Feeder Cell Lines Support Increase Phenotypically Consistent ES Cells Materials and Experimental Methods Analysis Karyotype-ES cells metaphases were blocked using colcemid (KaryoMax colcemid solution, Invitrogen, Grand island, NY, USA) and nuclear membranes were lysed into a hypotonic solution according to standard protocols (International System for Human Cytogenetic Nomenclature, ISCN). The g-bandage of chromosomes was carried out in accordance with the manufacturer's instructions (Giemsa, Merck). Cariotypes of at least 50 cells per sample were analyzed and reported, according to ISKN. Immunohistochemistry —The cells were fixed for 20 min in 4% paraformaldehyde, locked for 15 min in 2% normal goat serum in PBS (Biological Industries, Beth Haemek, Israel) and incubated for the night at 4°C. with dilutions 1:50 of SSEA1, SSEA3, SSEA4, TRA-60, TRA-81 mouse anti-human antibodies, supplied by Prof. P Andrews University of Sheffield, England. The cells were then washed in PBS and further incubated with 1:100 dilutions of IgG anti-mouse antibodies conjugated with cys 3 fluorochrome (Chemicon International, Temecela Calif., USA). The cells were viewed under an inverted fluorescent microscope (CARL Zeiss, Germany). Experimental results The feed cell lines derived from the foreskin provide ES cells with a consistent cariotype and phenotype like other feeding cell growth protocols —To test the ability of the feed layers of the foreskin to support normal growth of ES cells, the cariotype analysis was performed on ES cells following continuous cultivation on the feed layers of the foreskin. Two separate batches of I-3 and one of H-9 ES cell lines were tested after 22, 29 or 47 After being shown in FIG. 3, all ES cells locked in the metaphase tested had normal cariotype (i.e. 46, XX). These results demonstrate that the feed cells of the foreskin are able to maintain human ES cells with stable chromosomes for Human ES cells co-cultivated with feed cells derived from the foreskin express embryonic surface markers —To further characterize the ability of feed cells derived from the foreskin to maintain the normal growth of human ES cells, IHC was performed on human es cells with embryonic surface marker antibodies, including TRA-1-60, SSEA4, TRA-1-81, SSEA3 and SSEA1. After 57 passages on the feed layers derived from the foreskin, the human 1-6 ES cells demonstrated high expression levels of TRA-1-60, SSEA4 and TRA-1-81 (FIG. 4 a, b and c, respectively). These markers are typical characteristics of non-differentiated ES cells (Thomson et al., 1998, 1996, 1995). In particular, stage 3-specific embryonic antigen (SSEA3) was expressed only moderately, while the expression of stage 1 embryonic antigen (SSEA1), a unique marker of mouse ES cells, was not detected (data were not submitted). These results demonstrate that feed cells derived from the foreskin are able to keep human ES cells in an undifferentiated state after a prolonged culture period. Example 3 Feed cells derived from the foreskin support the growth of functional ES cells and experimental methods: The formation of embryoid bodies (EBs) from human ES cells — Human ES cells grown on feed layers derived from the foreskin have been removed from co-culture of the plate with 6 wells (60 cm2) of type IV Collagenase (1 mg/ml) and were further dissociated into small clamps using Gilson pipette tips of 1000 μl. Subsequently, dissociated cells were grown in 58 mm petri dishes (Greiner, Germany) in an 80% Ko-DMEM medium, supplemented by 20% defined fetal bovine serum (FBSd, HyClone, Utah, USA), 1 mM L-glutamine, 0.1 mM β-mercaptoethanol and 1% stock of non-essential amino acids. Unless otherwise stated all purchased from Gibco Invitrogen Corporation, USA. EB training was examined after one month of suspension. Reverse transcriptase (RT) coupled PCR—Total RNA was isolated from either undifferentiated human ES cells or one-month-old EBs using the Tri-Reactive kit (Sigma-Aldrich Corp., St. Louis, Mo., USA), according to the manufacturer's protocol. cDNA synthesis was performed on a total arn template of 1 μg using MMLV RT (Promega Corp., Madison, Wis., USA) according to the manufacturer's instructions. PCR primers and reaction conditions are described in Table 1 below. All PCR reactions included an initial distortion of the tore for 5 minutes at 94°C. PCR products were divided in size using 2% agorose gel electrophoresis. TABLE 1 Genetic product (Forward accession (F) and reverse size number) SEQ ID NOS. (R) primers (5′ρ3′) Reaction state (bp) Oct-4 SEQ ID NO: 1 F: 30 cycles at 60° C. 219 (S81255) SEQ ID NO: 2 R: TTCTGGCGTTTTACACACCACA CCACCACCA C in 1.5 mM MgCl2 NF-68 kD SEQ ID NO: 3 F: GAGTGAAAT GGCACGATACTTA 30 cycles at 60°C. 473 (AY156690) SEQ ID NO: 4 R: TTTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTctctc t in 2 mM MgCl2 α-cardiac α-cardiac SEQ ID NO: 5 F: GGOTGTGGTGGTGGTGGTC 35 cycles at 65° C. 486 (NM_005159) SEQ ID NO: 6 R: AGTGGGACAAGGAGGTAGCCA in 2 mM MgCl2 α-fetoprotein SEQ ID NO: 7 F: GCTGGATTTGTCGGGGAA33 cycles at 60° C. 216 (BC027881) SEQ ID NO: 8 R: TCCCTGAAAAATGtGGTTTAAAAAT in 1.5 mM MgCl2 Glut 2 SEQ ID NO: 9 F: AGGACTTCTGTACTTGTG 35 cycles at 55° C. 231 (J03810) SEQ ID NO : 10 R: GTTCATGTCAAAAGCAGAGG in 1.5 mM MgCl2 Albumin SEQ ID NO: 11 F: TGCTTGAATGTGTGATGACAGGG 35 cycles at 60°C. 302 (AF542069) SEQ ID NO: 12 R: AAGGCAAGCCAGCCCATCAT EDIN 1.5 mM MgCl2 GAPDH SEQ ID NO: 13 F: AGCCATCCTCAGACCACC3 30 cycles at 60°C. 302 (J04038) SEQ ID NO: 14 R: GTACTCAGCCGCCAGCCCCCG in 1.5 mM MgCl2 Teratoms training-ES cells co-cultivated for at least 20 passages with foreskin derived feed cells were drawn from 4-6 confluence 10 cm2 Plates. The cells were then injected into the back leg muscle for 4 weeks of male SCID-beige mice (Harlan, Jerusalem Israel). Teratomas results were histologically examined at least 10 weeks after injection. Experimental results ES cells are spontaneously differentiated into embryonic cell types from in vitro germ layers after their removal from the cocultures of feed cells derived from the foreskin — To verify that human ES cells co-cultivated with feed cells derived from the foreskin are functional, as well as phenotypically consistent with human ES cells derived by other food cell protocols , ES cells have been removed from the cocultures of this invention and have been grown in suspension. As a result, embryoid bodies (EBs) were isolated and es-consistent gene expression within EBs was verified using RT-PCR. Within EBs stem cells differentiated into representative cells of the three embryonic layers of germs, namely mesoderm, endoderm and ectoderm. After shown in FIG. 5, while undifferentiated cells grown on feed lines derived from foreskin expressed 4 October, a marker for pluripotent embryonic stem and germ cells (Pesce M, and Scholer H R. Oct-4: gatekeeper at the beginning of mammaldevelopment (2001). Stem cells 19(4): 271-8], cells harvested from one-month-old ebs expressed genes, which are associated with cell differentiation, including neurofilament (NF-68 kD) related to embryonic ectoderm, α-cardiac associated with embryonic mesoderm, and α-fetoprotein, Glut 2 and albumin all being embryonic endoderm indicators. The decreased expression of 4 October in the EBs samples was consistent with the previous reports of the decreased expression of 4 October after the differentiation of totipotent cells from the somatic lines (Thomson et al., 1998, Reubinoff et al., 2000). Thus, these results demonstrate that human ES cells grown on feed cells derived from the foreskin are capable of creating EBs differentiated from the different somatic progeny. ES cells co-cultivated with feed cells derived from the foreskin are differentiated into layers of embryonic germs in further justify the ability of human es cells supported by foreskin lines to differentiate from embryonic germ layers, ES cells have been tested for in vivo teratom formation. After injection into the beige SCID mice, the three ES, I-3, H-9 and I-6 cell lines were able to form teratomas. Each teratoma contained representative tissues of the three embryonic layers of germs, including cartilaginous tissue, smooth muscle, layered epithelium, melanin-secreting cells, connective tissue and intestine-like epithelium. The representative tissues formed in these teratomas are demonstrated in FIG. 6. In conclusion, human ES cells grown on feed cells derived from the foreskin were thus functionally indistinguishable from cells grown with alternative protocols. Following differentiation, ES cells expressed their genes associated with all three embryonic layers of germs, in vitro, and formed teratomas in vivo, consisting of tissue resulting from all three germ layers as well. However, unlike other protocols, ES cells have been propagated in culture for long periods of time today, up to 87 passages, maintaining their pluripotent, undifferentiated state. Although the invention has been described along with its specific embodiments, it is obvious that many alternatives, changes and variations will be evident for those qualified in art. It is therefore intended to adopt all these alternatives, amendments and variations which fall within the spirit and wide scope of the attached claims. All publications, patents and patent applications referred to in this specification shall be incorporated entirely by reference in the specifications, to the same extent as each individual publication, patent or patent application would be indicated specifically and individually to be incorporated into this document by reference. Furthermore, the summons or identification of any reference in this application shall not be construed as an admission to the fact that such a reference is available as an art prior to this invention. QUALITY REFERENCES Additional references are quoted in text 1. Amit M, Carpenter M K, Inokuma M S, Chiu C P, Harris C P, Waknitz M A, Itskovitz-Eldor J, Thomson J A. (2000). Clonal-derived human embryonic stem cell lines maintain pluripotence and proliferative potential for prolonged periods of culture. Dev. Biol. 227: 271-8. 2. Amit M and Itskovitz-Eldor J. (2002). Spontaneous derivation and differentiation of human embryonic stem cells. J Anat 200: 225. 3. 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