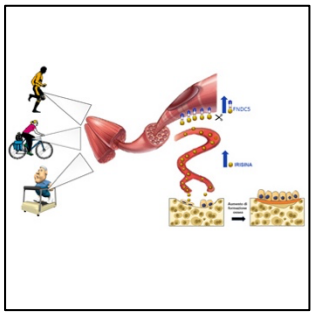
TOP 10: MOST VIEWED TECHNOLOGIES IN 2020



1. IRISIN FOR CARE AND PREVENTION OF OSTEOPOROSIS

Università degli Studi di Bari, Università degli Studi di Foggia, Università Politecnica delle Marche

Irisin to be used as a drug for the treatment and prevention of osteoporosis: *in vivo* administration of Irisin, in animal models of osteoporosis and sarcopenia, showed successful treatment of both pathologies. Irisin acts on all cell populations present in the bone but is particularly active on the cells that form new bone.

https://www.knowledge-share.eu/en/patent/irisin-for-care-and-prevention-of-osteoporosis/

2. PORTABLE RANDOM NUMBERS GENERATOR

Istituto Nazionale di Fisica Nucleare

The present invention relates to the development of an apparatus and the implementation of a method for random variables generation. The method bases on recording signals associated with the transition of atmospheric muons, such as the energy deposited in the detector or the time of single muon detection.

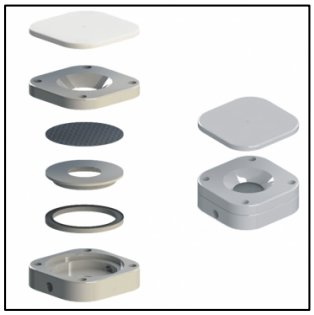
https://www.knowledge-share.eu/en/patent/portable-random-numbers-generator/

3. ECG WATCH: WEARABLE WIRELESS ELECTROCARDIOGRAM

Politecnico di Torino

A great example of a 'pocket physician' is the ECG-WATCH, «smart watch» which can be used to detect an ECG signals with a single contact (finger-wrist) and visualise these on a smartphone device. The invention also comes with an app that can be configured to send a patient's results directly to the cardiologist.

https://www.knowledge-share.eu/en/patent/ecg-watch-wearable-wireless-electrocardiogram/

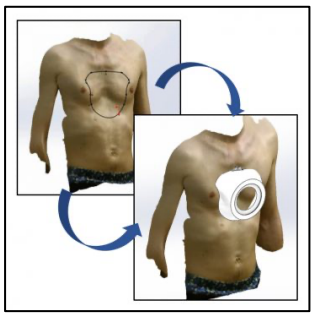


4. DIFFUSION CELLS FOR IN-VITRO AND EX-VIVO PERMEATION STUDIES OF DRUGS

Università degli Studi di Sassari

A diffusion cell for *in-vitro* and *ex-vivo* permeability studies of drugs. The permeation cell is a device for studying the permeation and/or diffusion of substances, in particular pharmaceuticals, through selective membranes such as synthetic or biological membranes (mucosae and tissues).

https://www.knowledge-share.eu/en/patent/diffusion-cells-for-in-vitro-and-ex-vivo-permeation-studies-of-drugs/



5. PERSONALIZED VACUUM BELL FOR PECTUS EXCAVATUM TREATMENT

Università degli Studi di Firenze

The Vacuum Bell and the relative construction method claimed in this patent allow the design and the manufacturing of customized equipment for the treatment of pectus excavatum. This Vacuum bell is able to ensure a more efficient and shorter treatment since it is conformed to a patient's anatomy.

https://www.knowledge-share.eu/en/patent/personalized-vacuum-bell-for-pectus-excavatum-treatment

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6. MODIFIED CPAP MASK WITH SAFETY SYSTEM

Università degli Studi di Padova

Snorkelling masks converted to mechanical ventilation masks for continuous positive airway pressure (CPAP) treatment: this non-invasive system provides patients experiencing respiratory distress with a positive airflow, through an airtight connection with the nose and mouth, in order to improve their breathing capacity.

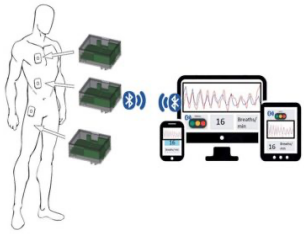
https://www.knowledge-share.eu/en/patent/modified-cpap-mask-with-safety-system/

7. RECYCLING PROCESS FOR RECOVERING PRECIOUS METALS FROM ELECTRONIC EQUIPMENT

Università degli Studi dell'Aquila

A hydrometallurgical process for the recycling and recovery of base metals (Copper, Tin, Lead, and Nickel) and precious metals (Gold and Silver) from electronic boards or printed circuits from electrical and electronic equipment.

https://www.knowledge-share.eu/en/patent/recycling-process-for-recovering-precious-metals-from-electronic-equipment/

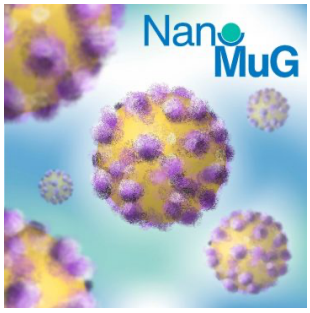


8. RESPIRHO' – WEARABLE DEVICE FOR RESPIRATORY RATE MONITORING

Politecnico di Milano

Respirhò is a wearable device for non-invasive and continuous monitoring of the respiratory rate, based on inertial sensors allowing the remote control of fundamental temporal respiratory parameters. It can be used in hospitals, at home or taken on the go.

https://www.knowledge-share.eu/en/patent/respirho-wearable-device-for-respiratory-rate-monitoring/

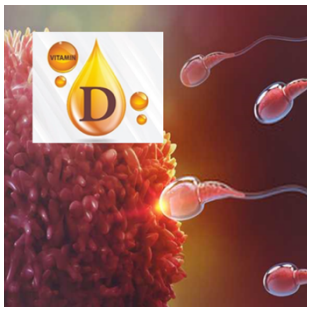


9. NANOMUG: PROTEIN GLYCOSYLATED NANOPARTICLES

Università degli Studi di Torino

NanoMugs are multifunctional nanoparticles, intrinsically glycosylated and with mucoadhesive properties, able to incorporate drugs. Ideal for targeted drug delivery and release of molecules with different molecular weight, charge and chemistry, can be loaded via a one-step synthesis. As drugs are not covalently bound to NanoMug, they can be released over time.

https://www.knowledge-share.eu/en/patent/nanomug-protein-glycosylated-nanoparticles/



10. IDENTIFICATION OF MALE INFERTILITY BASED ON POLYMORPHISMS OF VITAMIN D

Università degli Studi di Foggia

Couple infertility can affect up to 15% of new couples who wish to become parents. This kit helps determine the propensity of a male to infertility, by identifying polymorphisms of vitamin D.

https://www.knowledge-share.eu/en/patent/identification-of-male-infertility-based-on-polymorphisms-of-vitamin-d/