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## **THE FUTURE OF MEDICINE**

The future of medicine is really exciting: science fiction is becoming real. The purpose of my article is not only to tell about the importance of the experimental medicine at the present time, but also to show that it is a necessary part of any medical specialist's training. So this article shows you the latest medical researches.

Nobel Prize for anti-parasite drug discoveries.

The Nobel Prize for physiology or medicine has been split two ways for groundbreaking work on parasitic diseases.

William Campbell and Satoshi Omura found a new way of tackling infections caused by roundworm parasites.

Youyou Tu shares the prize for her discovery of a therapy against malaria.

The Nobel committee said the work had changed the lives of hundreds of millions of people affected by these diseases.[1]

Nobel Prize for the brain's GPS discovery.

The Nobel Prize for physiology or medicine has been awarded to three scientists who discovered the brain's "GPS system".

UK-based researcher Prof John O'Keefe as well as May-Britt Moser and Edvard Moser share the award.

They discovered how the brain knows where we are and is able to navigate from one place to another.

Their findings may help explain why Alzheimer's disease patients cannot recognise their surroundings.[2]

Cellular 'shipping' wins Nobel Prize.

Three scientists have won the Nobel Prize for medicine or physiology after discovering how cells precisely transport material.

James Rothman and Randy Schekman, both from the US, and Thomas Sudhof, from Germany, shared the prize.

They found the way "vesicles" act like a fleet of ships transporting their goods to the exact destination.

It is crucial for the way the brain communicates, the release of hormones and parts of the immune system.[3]

Gurdon and Yamanaka share Nobel prize for stem cell work.

Two pioneers of stem cell research have shared the Nobel prize for medicine or physiology.

John Gurdon from the UK and Shinya Yamanaka from Japan were awarded the prize for changing adult cells into stem cells, which can become any other type of cell in the body.

Prof Gurdon used a gut sample to clone frogs and Prof Yamanaka altered genes to reprogramme cells.

The Nobel committee said they had "revolutionized" science.[4]

Immune pioneers share Nobel prize for medicine.

Three scientists who “revolutionized” understanding of how the body fights infection have shared this year's Nobel prize for medicine.

Bruce Beutler, of the US, Jules Hoffmann from France and Ralph Steinman from Canada all shared the prize.

Profs Beutler and Hoffman discovered how the body's first line of defence was activated.

Prof Steinman discovered the dendritic cell, which helps defeat infection.[5]

“Father of test tube baby” wins Nobel Prize for medicine.

The “father of the test tube baby,” Robert G. Edwards, won the Nobel Prize for medicine on Monday, the awards committee announced.

His contributions to developing in vitro fertilization (IVF) “represent a milestone in the development of modern medicine,” the committee said.

“As early as the 1950s, Edwards had the vision that IVF could be useful as a treatment for infertility,” which affects about 10 percent of all couples worldwide, the committee said.

A test that finds 3x more breast tumors, and why it's not available to you. Working with a team of physicists, Dr. Deborah Rhodes developed a new tool for tumor detection that's 3 times as effective as traditional mammograms for women with dense breast tissue. The life-saving implications are stunning. So why haven't we heard of it? Rhodes shares the story behind the tool's creation, and the web of politics and economics that keep it from mainstream use.

A needle-free vaccine patch that's safer and way cheaper

One hundred sixty years after the invention of the needle and syringe, we're still using them to deliver vaccines; it's time to evolve. Biomedical engineer Mark Kendall demos the Nanopatch, a one-centimeter-by-one-centimeter square vaccine that can be applied painlessly to the skin. He shows how this tiny piece of silicon can overcome four major shortcomings of the modern needle and syringe, at a fraction of the cost.[8]

Medicine's future? There's an app for that

Daniel Kraft offers a fast-paced look at the next few years of innovations in medicine, powered by new tools, tests and apps that bring diagnostic information right to the patient's bedside.[6]

Synthetic voices, as unique as fingerprints

Many of those with severe speech disorders use a computerized device to communicate. Yet they choose between only a few voice options. That's why Stephen Hawking has an American accent, and why many people end up with the same voice, often to incongruous effect. Speech scientist Rupal Patel wanted to do something about this, and in this wonderful talk she shares her work to engineer unique voices for the voiceless.[8]

A bold new way to fund drug research

Believe it or not, about 20 years' worth of potentially life-saving drugs are sitting in labs right now, untested. Why? Because they can't get the funding to go to trials; the financial risk is too high. Roger Stein is a finance guy, and he thinks deeply about mitigating risk. He and some colleagues at MIT came up with a promising new financial model that could move hundreds of drugs into the testing pipeline.[7]

### A test for Parkinson's with a phone call

Parkinson's disease affects 6.3 million people worldwide, causing weakness and tremors, but there's no objective way to detect it early on. Yet, Applied mathematician and TED Fellow Max Little is testing a simple, cheap tool that in trials is able to detect Parkinson's with 99 percent accuracy — in a 30-second phone call.[8]

In conclusion, we must say that these researches are important not only for medicine. Moreover, they constitute a tremendous contribution to world science.

### **REFERENCES**

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