



Welcome to the Seventeenth Issue of INFORMission Weekly

The objective of this newsletter is to try and capture informative, interesting and relevant happenings from around our world and country across the week, without a focus on crime and sensationalism. The concept is that anyone can tune in on a weekly basis into a couple of pages and stay informed and updated. INFORMission Weekly will evolve in design, format medium and content as we go along. If you have any comments or feedback, do write into informission_weekly@gmail.com.

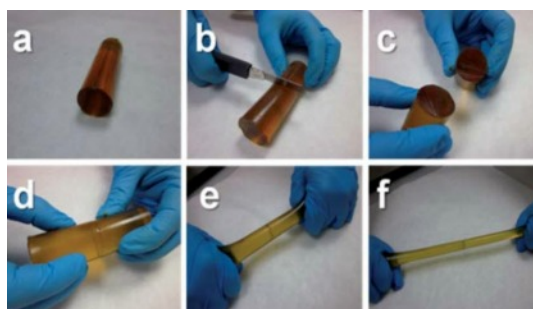
OF SPECIAL INTEREST THIS WEEK

How Raghuram Rajan Is Saving The Economy



Munshi Ahmed/BloombergNews

The Terminator Polymer



Royal Society of Chemistry/kurzweilai.net

The Calico Project: Can Google Reverse Aging



The Great Dolby Passes On

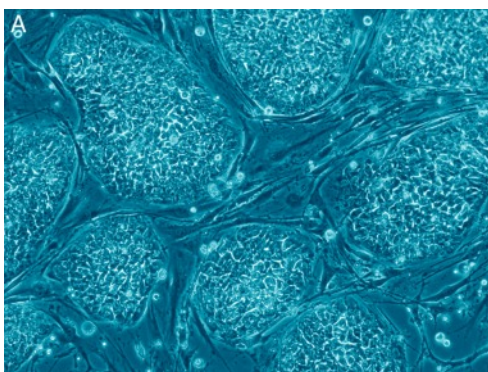


Tata SIA Airlines



topnews.in

Under Our Microscope: Stem Cells



Nissim Benvensy/Wikimedia Commons

Do It Yourself Energy



Ricardo Pinto/wikienergia.com

The World's Highest 'Civillian' Airport



Reuters/China Daily

Hercules the Liger: The Biggest Big Cat

ligerliger.com



How Raghuram Rajan Is Saving The Economy

Notice that we speak of him saving the **economy** and not just the Rupee. This is because RBI's recently appointed "Rockstar" governor Raghuram Rajan, whom we mentioned in our special issue last week is **doing more than just solving the Rupee crisis – much, much more – and we will explain how**. First things first – the falling value of the rupee in currency markets, which we reported on just 3 issues ago, **seems to have reversed all of a sudden**, as one dollar, which was worth 68 rupees a few weeks ago, is now worth just Rs 61 – **a massive drop (or rather, rise, in the value of the Rupee)**. The explanation for this miraculous escape is Mr. Rajan. The combination of **his masterful handling of the situation, and his very appointment itself** (and of course his handsomeness, according to one news source) has rescued the Rupee from the abyss. Immediately after his appointment, **stock markets soared – before he had even done anything** – because his appointment has, quite importantly, **increased the confidence of the country in the RBI** – him being a reputed economist and enterprising individual – and also because **he has shown very good early signs of what he will do**. But the best thing was the **appreciation (value increase) of the Rupee that followed his appointment**. So how did he do it – simple. He **increased the supply of dollars in the economy, while decreasing their demand** – using a collection of clever measures. Most of them are quite technical – but most importantly – **he let people borrow from abroad and enabled dollars to come into the economy; and by giving dollars to the main buyers of dollars, oil companies, outside the market – he reduced demand**. As we know for anything – when demand decreases and supply increases – price falls – so the price of the dollar fell – from 68 to 61 – and the rupee appreciated. This got everyone

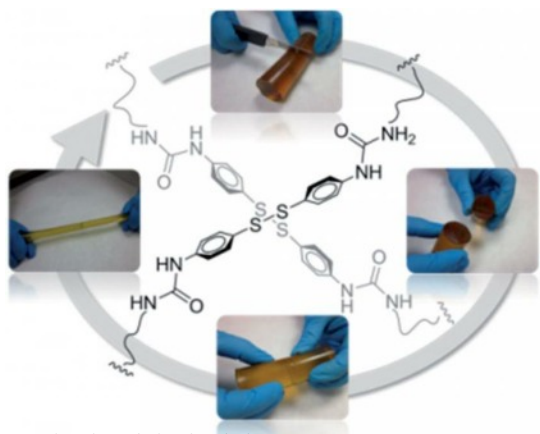
super-excited – stock market soaring, crisis solved, blah, blah, blah – **but not Rajan**. In a move against all expectations, he **brought everyone back to reality by increasing interest rates** on Friday in his first major policy announcement, while catering to **people's hopes by increasing cash flow in the economy**. Before you ask "what???", let me explain. Everyone (media, economic analysts) thought that now that Rajan had solved the rupee problem **he would relax the rates, and bring money into the economy to fuel economic growth** – basically, lots of money means businessmen, investors, & important people party. **But Rajan betrayed these expectations, and increased interest rates (rate at which banks lend to people when giving loan) to control inflation** – disappointing the stock market and most people – but doing what is better for the economy. However, **he did increase cash flow (amount of cash/money) in the economy** which help businessmen and economic growth. And, rather cleverly, he waited for the American monetary policy announcement (next issue) before deciding what he would do – and **he has decided to tackle inflation and rupee crisis, protect the economy from external shocks, but disappoint the greedy stock market**. Kudos to you, Mr. Rajan.



Chicago Booth

Welcome to The 'Terminator' Polymer

A real example of "extreme technology", Spanish scientists have created **the world's first self-healing plastic polymer**. A video released and readily available on news sites shows **the material being cut into half by a blade**. The 2 half are then



pressed together and left at room temperature, untouched for 2 hours – amazingly the polymer seems to have healed itself as **one sees the two parts joined together and unable to be pulled apart again even with a lot of manually pulling and stretching**. While currently the polymer is soft and squishy – and not rigid enough to make into parts just yet – however this **heralds what could be a real breakthrough** as polymers similar to this new one are used a lot in everyday products and therefore can **greatly increase the lifetime of plastic parts used in everyday products**. It's been called "Terminator" polymer as a tribute to the T-1000 robot from "Terminator 2". Watch the video - mashable.com

Google's Calico Project Reversing Ageing, Cheating Death

Throughout the ages, wise men, scientists, kings and emperors have been seeking ways to **cheat the inevitability of death and achieve immortality**. All humankind's myths have some reference to it and

gods (from the Greeks to the Indians) were always imagined to be immortal. Olden Alchemists, Druids, Explorers and modern Scientists **have spent centuries and lives to discover the secret "elixir of life" which bestows ageless youth and immortality**. In recent times,

there are medical treatments, yoga and pilates, creams and lotions and cosmetic surgery to preserve one's youth and health. Now into this old quest enters **Larry Page, the 40 year old co-founder of Google, changer of the world, 13th richest man in the world**. His famous company, Google is forming a new entity, Calico, whose purpose is **to solve the problem of human ageing!** Ambitious isn't it, but one does stop to think, is man's hubris challenging the gods yet again. **All who have come before have failed, will Larry and Google succeed?** They may yet, medical science has been making **amazing advances in recent times in understanding the process of human ageing**, what causes it and how to stop it. From everything we know about human physiology,

there is **no logical reason why we must age and die (just as there is no physiological reason for sleep!)**, why the body can maintain itself for 70-80 years and then just chooses to stop. Living things

are known to live for thousands of years (trees) and centuries (turtles). There are researchers who have **successfully extended lifespans to mice by 2X** and slow down human telomerase shortening (Telomeres are portions of DNA that control the ageing process) to enhance human lifespans. Still the body

may age and die, **the true solution may be to preserve the mind**, There are people like Ray Kurzweil (our Leader to Know a few issues ago, who now works for Google!) who have **predicted just such technology enabled immortality**. Then there are the stem cell researchers (see next page), who are using stem cells to cure diseases, grow organs, regenerate damaged parts of the body - could be used to achieve these objectives. **Whatever the future holds, the Calico project, named after the mythical Cat with its nine lives**, may be a part of revolutionizing our lifespan if it succeeds. The problem then of course would be **how to keep these bored immortals occupied** - perhaps this is where Youtube comes in! ☺



The Great Dolby Passes On

Hollywood Reporter

Nearly every time we visit the cinema, we see a great big "Dolby Digital" logo before any movie - all the work of **one man who revolutionised the way we experience music and cinema - Ray Dolby**. The founder of Dolby Laboratories, and **'inventor of surround sound'** died last week at the venerable age of 80. He started out as a young American engineer, who decided to found Dolby Laboratories in 1965 with a meagre staff of 4 - but it would soon grow - because soon after the Labs conception, **Dolby invented 2 products that would change sound forever - the Dolby Sound System and the Dolby Noise Reduction System**. The Sound System became their premier product, and NR became his foremost invention - it, as he said, re-



duced the "hissing" noise that was generally associated with cassette recording at the time. His company went from strength to strength, inventing **surround sound and Dolby Digital cinema** (which was introduced first with the movie Star Wars Episode III) - that have **filtered into and transformed our lives unbelievably**. The audio wizard was diagnosed with leukaemia and

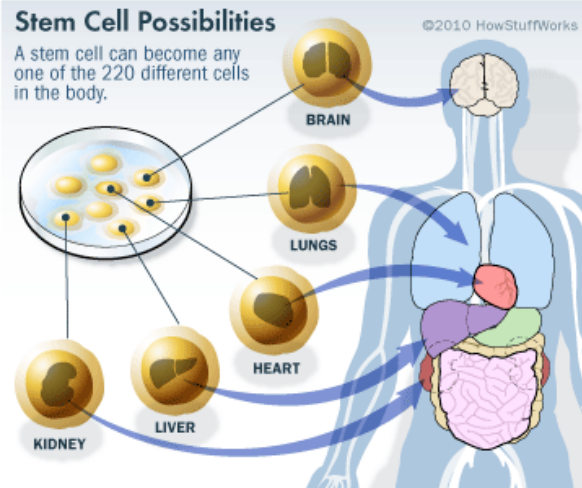
passed away on 12th September.



Under The Microscope

Stem Cells

Stem cells – everyone’s heard a lot about their greatness and magnificence lately – so **we are putting them under our microscope**. Stem cells are a **very simple concept** at the core, and we’ve known about their existence for ages – but **it’s their**



recently discovered potential that’s really blown everyone away. In lay terms, they are **cells in our body, which have no original**

purpose to serve – but have one, very special ability - they can divide into any other cell of our body. Its like an unmolded, or more correctly, unevolved cell – its remained in that infant stage where its future is yet undecided, and it **can become anything it wants, or we want.** In that way it is like a little child, and just like a child, it **has huge potential.** The exploitation of this potential is the essence of the stem cell revolution. However, the problematic

fact was that **stem cells are only found in the umbilical cord of a newly born baby, and if not stored away at that very moment – they are lost.** The industry grew on the storage of stem cells of babies, until the time was ripe for their use. Two very recent and amazing discoveries have really changed everything. The first was the discovery that **one need not necessarily use one’s own stem cells for treatment – instead the stem cells of a compatible individual** (compatibility is measured by some tests) – can be injected into you. This changed the economic side of the industry amazingly – **any-one, not just people who have stem cells stored, but any person can use stem cells in treatment.** And the second discovery – that has made news in the last year – is **even more amazing** – the umbilical cord is not the only source of stem cells. Research has **discovered alternative sources for stem cells within our bodies,** and even better – **ways to convert normal cells to stem cells.** These new discoveries **allow us to access to our own stem cells in greater abundance.** What are the uses – they are innumerable. One can use stem cells to do everything **from repairing damaged tissue and treating disease to regenerating full organs and limbs** – because they can replace any cells you have lost – and that one little thing **will soon change medical science beyond imagination.**

Do It Yourself Energy

Firms are creating their own power sources - **shortage of power, power outages causes by hurricanes and the increasing cost of power** are forcing companies to **create their own private power sources** or electricity generation units. **As the WSJ reports** – Kroger Company (a Cincinnati based grocery chain) is one such example. At one of its big food distribution centers, **the company has installed a tank system** that uses bacteria to convert 150 tons of organic waste and unusable damaged food products into biogas that is burned on site **to produce 20% of the electricity the center uses.** Elsewhere on a hill, two big **wind turbines** produce electricity for the company’s hilltop dairy unit. Four Kroger grocery stores use **solar panels** for electric output. These Power generation projects are **saving the company \$160 million a year** on electricity. The reducing costs of both solar panels and natural gas are making more companies produce at least a part of their own power requirement. **Walmart produces 4 percent of the electricity it uses through solar arrays on stores’ roofs** and intends to pro-

duce 20% by 2020. Google a while ago installed big solar arrays on top of its silicon valley **Googleplex** campus and so did Apple at its **Cupertino** headquarters. **BMW gets half its power from its own onsite Power Center that burns methane** piped into it from a nearby garbage dump. Japan is well ahead of other countries - with **increasing usage of residential fuel cells.** A fuel cell is like a battery – creating energy through a chemical chain (except they don’t run out overtime like batteries do) – they can produce electricity and heat continuously as long as fuel and oxygen are available. Residential fuel cells when combined with solar panels **gives homes round the clock power supply - its a less wasteful, more self-reliant approach** that’s being seen not only in companies, but also homes.



TATA-Singapore Airlines

There soon **maybe a new world class airline in the Indian Skies**. The **Tata Group has joined hands with the world renowned Singapore Airlines to start a new full service airline in India**. For those of us who maybe wondering why this has not happened earlier – it has been attempted in the past but it was only last year that the government changed its civil aviation policy, to now allow 49% foreign investment in domestic airlines. So Tata Sons will own 51% stake in the proposed carrier and Singapore airlines 49%. Interestingly, in 1932 **JRD Tata had started Tata Airlines which was renamed in 1946 as Air India, which was nationalised 1953**. A new Airline ,from a partnership be-

tween the TATAs and Singapore Airlines has **definitely sent the hopes of consumers flying high!**



World's Highest 'Civillian' Airport

This week, the **Chinese government inaugurated the world's highest commercial airport** in Garzi, Tibet. At **4, 411 meters high**, it beats the **previous record of 4, 334 meters**, held by another Chinese airport – the Bangda Airport in another part of Tibet – and set a new world record. Already many are **rushing to fly into or from the Daocheng Yading Airport** – which will start operating from Monday. Its not small either – it has a runway of 4200 meters – very large for an airport at that height. But **its not the world's highest airport per se – that title goes to the Daulat Beg Oldie air-strip in Ladakh, India** – where the Indian army landed a Super Hercules (see Issue 13).



Reuters/China Daily

Hercules the Liger: The Biggest Big Cat

Hercules is actually a liger....what's a liger ?????? It's a hybrid between a tigress & a lion. .. and are considered to be the world's largest 'cats'. The 10 feet long liger, Herules has been named the world's biggest cat by the Guinness book of world records . It weighs a massive 418 kgs - impressive.



Sources

Raghu – The Economist, Mint, BBC News, The WSJ

Stem Cells – Wikipedia, Medical News Today, Financial Times

Liger - ligerliger.com, TOI, HT

Daocheng Yading - TOI, ABC News, Reuters

Tata SIA - Economic Times, The Mint

Energy - The WSJ

Dolby - Wikipedia, TIME

Calico - TechCrunch, TIME

Terminator - Mashable, Washington Times, FOX News