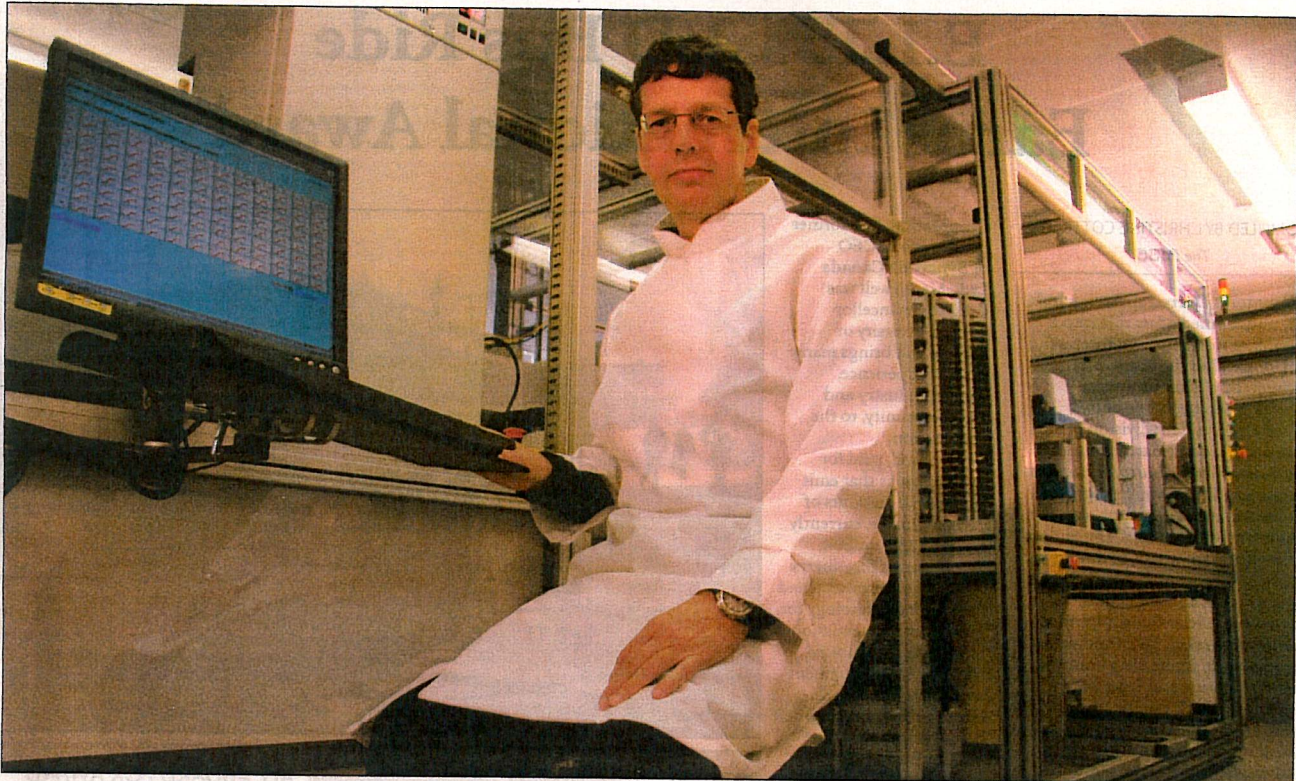


WORLD WATCH



ADAM'S KING

-Photo by Gareth Evans, Aberystwyth University

Mundane research could some day become the purvey of machines, says Ross King of Aberystwyth University in Wales, where a creation known as Adam became the first robot to independently discover scientific knowledge.

Airplane Wings Go to the Birds?

BY GAIL HELGASON
Freelance Writer

Engineers at the University of Genoa in Italy believe airplane wings could be made more efficient by a coating of artificial bristles that resemble feathers. The researchers noticed how a smaller set of feathers called coverts help birds fly efficiently by reducing drag, reports *New Scientist* (United Kingdom). The feathers accomplish this by preventing the formation of low-pressure slipstreams.

In a similar vein, research into robotic flying machines is receiving a boost from closer observation of birds, reports Associated Press. University of North Carolina researchers have discovered that the process birds use to turn in the air is less complicated than they thought — they simply turn and start flapping again.

World's Newest Adam Takes a Bite Of the Research Apple

A robot called Adam has become the first machine to discover new scientific knowledge independently. Researchers at Aberystwyth University in Wales developed the robot, which can complete up to 1,000 experiments in a day, says BBC News.

Ross King, lead researcher in computer science at the university, explains that Adam was designed to investigate the function of genes in yeast cells. The robot uncovered three genes that code for an "orphan enzyme" in yeast.

Dr. King envisions a day when scientists use robots for more mundane experiments, freeing up scientists for the ones that are more advanced.

New Scientist (United Kingdom) reports that the team is at work on a new robot, called Eve. She'll spend her time searching for new drugs.

Iceland Looks At Making Rock From Carbon Dioxide

Icelandic engineers believe they have come up with a method to convert carbon dioxide to solid rock as a strategy to tackle global warming. *The Guardian* (United Kingdom) reports that the engineers are pursuing a way to use the country's volcanic origins to dispose of up to 30,000 tonnes of greenhouse gas annually.

The proposal will take carbon dioxide from an Icelandic geothermal energy plant, dissolve it in water under high pressure, then pump it underground into layers of basalt. Laboratory results indicate the dissolved carbon dioxide will react with calcium in the basalt, forming calcium carbonate.

Reservoir Link To China Quake Investigated

Could the earthquake that devastated the Chinese province of Sichuan last year have been caused by the weight of the Zipingpu Reservoir? That possibility is being explored, says an item in *Civil Engineering* (New York). The reservoir, which contains nearly 300 million tonnes of water, is located near a major fault line.

The 50-storey dam that impounds the water is one of China's largest water control projects. Although no direct links have been established between the quake and the reservoir, scientists have concluded that it has affected seismic activity in the area.

Meet The DNA Carpenter

Most non-carpenters would be pleased with themselves if they succeeded in making a lockable box with hinges. Imagine how impressed they would be if they had fashioned it out of DNA.

Danish researchers have done just that, reports *Technology Review* (Boston). Although DNA origami has been used previously to build three-dimensional objects, the new box is the first to have solid sides and moving parts. It even includes tiny DNA latches that correspond to DNA keys.

Wind Power Could Move Cargo Ships

Wind powers sail boats — why not cargo ships?

SkySails, a company based in Hamburg, Germany, is exploring that option, says coverage in *Deutschland* magazine (Berlin). The technology can reduce a ship's average annual fuel costs by 10 to 35 per cent or more, pilot systems indicate.

SkySails, established by German industrial and shipbuilding engineers, says that all existing cargo vessels could be retrofitted with the auxiliary wind propulsion system. The system entails three main components: a towing kite with rope, a launch and recovery system, and a control system for automatic operation.

Blind Fish Offer Engineering Tips

Blind fish that live in the world's deep caves know a thing or two about finding their way around. The fish have inspired researchers at Georgia Tech's School of Materials Science and Engineering in Atlanta to seek a new generation of sensors, reports *Civil Engineering* (New York). They think it could outperform sonar.

The hair cells the fish use to navigate are "like well-engineered mechanical sensors," the publication says. They are superior to standard sonar, which takes a lot of space and sends out strong signals that may affect the environment.