LIFE IN 2056
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INTELLIGENT ROBOTS, NO RELIGION, TALKING ANIMALS AND WE ARE NOT ALONE IN THE UNIVERSE, WELCOME TO..
By Nick Webster

WE'LL live to well over 100 and when bits of us break down we'll simply grow new ones...

Oh, and we'll have found ET's home.

That's the vision of Earth just 50 years in the future according to an international group of Nobel prize-winners and other eminent scientists.

They gazed into their crystal test-tubes and, to celebrate the 50th birthday of the New Scientist magazine, have predicted what life will be like in 2056...

GETTING OLD SLOWLY

REGULAR injections of special regenerative cells will act as a body tune-up.

"Universal donor cells will naturally migrate to the site of an injury, where tissue repair and regeneration can occur," says Anthony Atala, director of the Wake Forest Institute for Regenerative Medicine, in North Carolina.

WE'LL FIND LIFE ON MARS

NO chance of coming face to face with a martian, but there will be evidence to show that life did once exist there.

"Perhaps we will confirm what some of us believe already," says Colin Pillinger, professor of planetary sciences at the Open University.

"The current interest in space missions to Mars, means that we have every chance of making one of the most sensational discoveries ever."

LOST LIMBS WILL REGROW

DRUGS will cause severed spinal cords to heal, hearts to regenerate and lost limbs to regrow.

"People will expect that injured or diseased organs are meant to be repaired, in much the same way that we fix a car," says Ellen Heber-Katz, professor of molecular oncogenesis at the Wistar Institute in Philadelphia. "Whole-body replacement will be routine."

ANIMALS WILL TALK

THANKS to a device which can "read" the emotions, feelings and thoughts of animals, the story of Dr Dolittle will be fact, not fiction.

"This would first work with primates, then mammals, then even other vertebrates including fish," says Daniel Pauly, director of the Fisheries Centre at the University of British Columbia, Canada.

"And it would cause a global revulsion at eating flesh - so we'd all become vegetarians."

GROWING BODY PARTS

WE'LL be able to produce unlimited supplies of transplantable human organs without the need for human donors.

"This would be done by growing them in the bodies of animals such as pigs," says Bruce Lahn, professor of human genetics at the University of Chicago.

FINDING ET

NEW techniques will give us the tools to scour the universe.

"Such discoveries will change the way we look at ourselves and our place in the universe," says Freeman Dyson, professor emeritus at the Institute for Advanced Study in Princeton, New Jersey. "We are developing the tools to make our searches of the universe much more efficient and far-reaching."

HAPPY 110th BIRTHDAY

ADVANCES in gene technology will see the baby-boomer generation reaching the age of 100 as standard, while still enjoying active, healthy lives.

"The most urgent question may not be 'How long can humans live?' but 'How long do we want to live?'" says Francis Collins, of the US Human Genome Research Institute.

PARALLEL UNIVERSES

ADVANCES in quantum physics will prove there are other universes - possibly an infinite number of them - where other versions of ourselves exist.

"The existence of such 'parallel universes' will be no more controversial than the existence of other galaxies was 100 years ago," says Max Tegmark, professor of physics at the Massachusetts Institute of Technology.

INTELLIGENT ROBOTS

ROBOTS equipped with ground-breaking artificial intelligence will make the next wave of scientific discoveries in areas like energy and healthcare.

"Advances attributed to automated scientists will include several world-changing breakthroughs," says Eric Horvitz, principal researcher at Microsoft Research.

HARNESSING THE SUN

THE sun pours about 10,000 times as much energy on to Earth as we now use.

"We'll learn how to capture at least a thousandth of that energy, thus vastly increasing the world's wealth," says Frank Wilczek, Nobel prize-winning Professor of Physics at MIT.

SCIENCE WILL KILL OFF RELIGION

SCIENCE will offer a more practical, universal and rewarding moral framework in which to live.

"The US will follow the UK in realising that religion is not a prerequisite for ordinary human decency," says Geoffrey Miller, evolutionary psychologist at the University of New Mexico in Albuquerque.

UNDERSTANDING THE BRAIN

WE don't yet have a clue how the brain generates our awareness of being alive.

"In 50 years we could have a clearer idea of how the brain generates consciousness," says Susan Greenfield, Professor of Physiology at Oxford University. "Is it a maths equation? A brain image? An animal

model?"

UNDERSTANDING THE MIND

GIANT leaps forward will bring greater understanding of disorders such as schizophrenia, depression, bipolar disorder, and anxiety - and how to treat them.

"These developments will lead to a marked decline in suicide rates, now one of the leading causes of death worldwide," says Charles Nemeroff, professor of psychiatry at Emory University School of Medicine in Atlanta, Georgia.

DARK MATTER

ALL we know at the moment is that it's a mysterious substance identifiable only by the effect it has on objects in space around it.

"I expect the most significant breakthrough to be the identification of the mysterious dark matter that appears to make up about 25 per cent of the mass of the universe," says particle astrophysicist Arthur McDonald, at Queen's University, in Ontario, Canada.

"This will add substantially to our understanding of the universe."

IF you think this is all a bit far fetched, consider this ...

In the past three weeks alone, scientists had announced that they had developed a cell therapy that will re-generate the human heart, given sight back to blind mice and grown tiny livers from stem cells...

Fifty years? How about 10?

The 50th anniversary edition of New Scientist is available in newsagents now priced £3.10.

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