

## SOLAR PLANE LANDS IN EGYPT IN PENULTIMATE STOP OF WORLD TOUR

**CAIRO:** The Solar Impulse 2 landed in Cairo yesterday for its penultimate stop as the solar-powered plane nears the end of its marathon tour around the world.

After the two-day flight from Spain, just one final leg lies between it and its final destination, Abu Dhabi, where it started its odyssey in March last year.

The aircraft landed in Spain last month, after completing the first solo transatlantic flight powered only by sunlight. After setting off from Seville on Monday morning, the plane passed through Algerian, Tunisian, Italian and Greek airspace, and flew over the Giza Pyramids before touching down at Cairo airport at around 7:10 am (0510 GMT). Its support crew cheered as the plane, no heavier than a car but with the wingspan of a Boeing

747, landed, and trailed after it on bicycles. It had finished the 3,745 kilometre (2,327 mile) journey with an average speed of 76.7 kilometres (47.7 miles) an hour, the flight organiser said. "It was fantastic, everything worked well," pilot Andre Borschberg told the control tower, as a live stream from the cockpit was broadcast on Solar Impulse 2's Facebook page.

He emerged from the cockpit and hugged Bertrand Piccard, with whom he has taken turns flying the plane around the world.

Solar Impulse is being flown on its 35,400-kilometre (22,000 mile) trip in stages, with Piccard and his Swiss compatriot Borschberg alternating at the controls of the single-seat plane.

Piccard, who had arrived early to greet the aircraft, told reporters that flying Solar Impulse 2 showed what new technologies can do. The 58-year-old had flown the plane across the Atlantic in a 6,765 kilometre (4,200 mile) journey.

### 'REALITY OF TODAY'

It had completed its flight from New York to Seville in 71 hours, flying through the night with the energy stored in its 17,000 photovoltaic cells. "It's a new era for energy," he said. "I love to fly this plane because when you are in the air for several days you have the impression to be in a film of science fiction," he said. "You look at the sun, you look at your motors, they turn for days

and for days, no fuel. And you think that's a miracle. That's magic. It is actually the reality of today. This is what we can do with these new technologies." He said the pilot takes 20 minute naps during the long flights, as the plane inches across the sky.

Borschberg had piloted the plane in its 8,924 kilometre (5,545 mile) flight from Japan to Hawaii in 118 hours, breaking the previous record for the longest uninterrupted journey in aviation history. "It is comfortable. But of course you need to train for that," Piccard said. Borschberg and Piccard have said they want to raise awareness of renewable energy sources and technologies with their project. Piccard said the plane could fly continuously. "The pilot is the limit," he told AFP. — AFP

## NEW KIDNEYS 40 YEARS APART SHOW TRANSPLANT PROGRESS

**WASHINGTON:** Brenda Hudson recalls weeks spent in a glass-enclosed isolation room after her first kidney transplant, her family allowed to visit only when suited up against germs.

That transplant lasted a remarkable four decades - and now Hudson's recovery from a second one, this time faster and surrounded by germ visitors, showcases how far organ transplants have come and the hurdles that still await.

"I'm ready to be well again," Hudson exclaimed before being wheeled into an operating room at MedStar Georgetown University Hospital last month, far more confident than back at age 17 when she was that hospital's first recipient of a living-donor kidney.

Transplants still require courage, but medical advances haven't just helped patients. Hudson's initial donor, her older sister, has a scar stretching from belly to side where doctors cut into her rib cage. This time Hudson's husband donated, and went home two days after surgeons squeezed his kidney through a roughly 3-inch incision.

Hudson's own lupus-damaged kidneys were removed about a month before her first transplant. That's hardly ever done anymore - nonworking kidneys shrink to make room.

Back then, finding a donor was pretty miraculous. It still is.

And with more than 120,000 people on the national waiting list for a kidney or other donated organ - but only about 30,000 transplants performed each year - new moves are getting underway to try to ease the critical shortage. Efforts range from smartphone apps letting would-be donors register with a few clicks, to helping transplant centers use some organs that today would be discarded for fear they're not good enough.

"I really didn't think about getting another kidney. How could I be that fortunate?" said Hudson, 57, of Owings, Maryland, who this time went home five days after surgery. Her thoughts strayed to friends on dialysis: "I just wish we could see more donors coming out."

The average kidney from a deceased donor lasts 10 years, while one from a living donor averages about 15 years, said Dr. David Klassen of UNOS, the United Network for Organ Sharing, which oversees the nation's transplant system. Doctors can't explain why occasionally people like Hudson beat those odds by a lot.

Dana Hudson knew his wife wouldn't ask for another kidney so when her first deteriorated badly enough to require dialysis, he volunteered.

Dr. Matthew Cooper, Georgetown's kidney and pancreas transplant director, examined the fist-sized organ and proclaimed it "a beauty."

Sewing it into its new owner, however, would prove nerve-racking. More than 6,000 people died last year waiting for a new kidney, liver, lung or other organ, according to UNOS.

Last month, the White House issued a call to reduce the wait, and highlighted \$160 million in regenerative research that one day might offer alternative therapies. Kidneys are

most in demand, with nearly 100,000 people on the national transplant list awaiting one.

"Without a transplant, we lose way too many people," said Georgetown's Cooper. "It's just an organ supply problem." To try boosting that supply: Apple says its upcoming software update will let iPhone users register as an organ donor through its health app, linking to Donate Life America's national registry. Georgetown also is developing an app for smartphones and tablets that will allow a click for donor registration.

Studies are underway to preserve donated organs longer by pumping them with oxygenated fluids, and to spur use of higher-risk organs that work despite not being in optimal condition, Klassen said.

And the University of Pittsburgh Medical Center and Donate Life launched a new Facebook page to educate the public about the need for living donors; fewer than 6,000 every year give a kidney or part of their liver.

It's hard to ask, and there are some disincentives. A living donor's surgery is covered by the recipient's insurance but not related costs such as lost wages. Dana Hudson expects to be away from his truck-driving job for about four weeks but said, "The most important thing is that she gets better."

Back at Georgetown, where about a third of kidney transplants now are from living donors, Dana Hudson underwent a battery of tests to be sure he was healthy enough to live with one kidney.

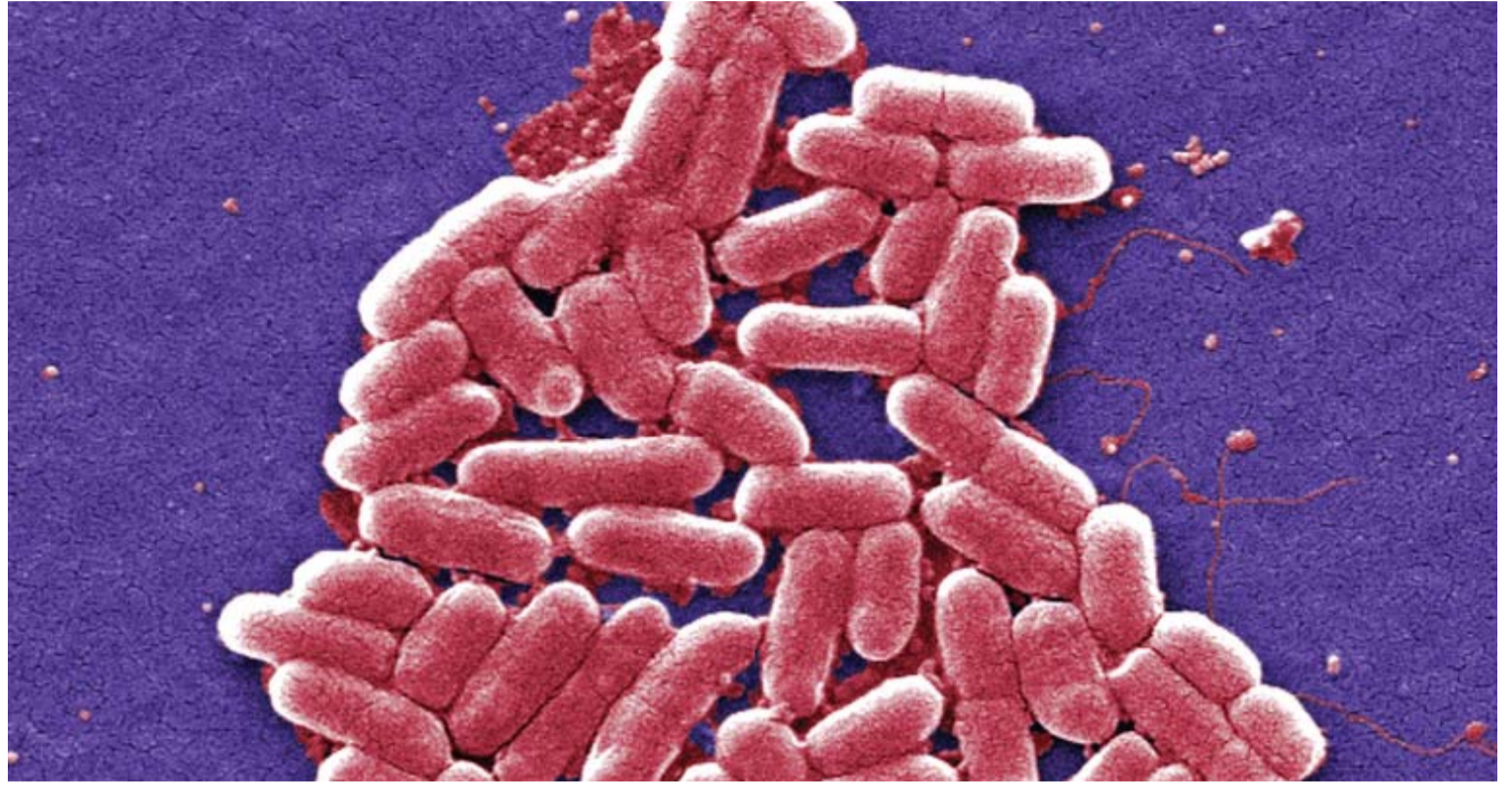
The "keyhole" surgery used for living donation today is easier on patients but trickier for surgeons. Guided by a miniature camera, Dr. Seyed Ghasemian inserted long-handled probes through tiny abdominal incisions and painstakingly snipped the kidney free from surrounding tissue. It was producing plenty of urine and had great blood vessels, Ghasemian reported. But he paused before severing that blood supply, the point of no return. Across the hall, Cooper had found a problem with Brenda Hudson.

Hunched tensely over the operating table, Cooper was uncovering arteries hardened by high blood pressure and Type 2 diabetes - no good for sewing on her husband's kidney.

Finally the surgeons devised a way for blood vessels to feed the incoming organ. "This was not an easy case," Cooper said. "You have to have a Plan B."

Back across the hall again, Ghasemian made the last cut to Dana Hudson's kidney and tugged it through a slit in the abdomen.

Taking the kidney, Cooper flushed out the donor's blood, cleaned away some yellowish fat and carefully carried it to Brenda Hudson - with one brief stop. Using high-tech imaging, researchers scanned the kidney's filtering tubules as part of a study to better determine which donated organs will have the best outcome. Soon after being stitched into place, Brenda Hudson's new kidney started to work. Two days later, she softly told her husband: "It's pretty amazing what you did for me, honey." — AP



**NEW YORK:** This 2006 colored scanning electron micrograph image made available by the Centers for Disease Control and Prevention shows the O157:H7 strain of the E. coli bacteria. Bacteria with a special type of resistance to antibiotics have been found for a second time in the US, increasing worries that the country will soon see a superbug that cannot be treated with known medications. This case, first reported in a medical journal Monday, occurred a year earlier in New York. — AP

## SUPERBUG PRECURSOR FOUND IN US AGAIN

**NEW YORK:** A New York City patient was infected with bacteria that had a special type of resistance to antibiotics last year, the earliest known case in the US of bacteria that could lead to a superbug impervious to medications.

The bacteria were found in a patient who was treated in May of 2015 and reported in a study published Monday. They were discovered by an Iowa company that's been testing thousands of bacteria collected from patients from around the world over the last two years.

The company, JMI Laboratories, found hundreds globally that were resistant to colistin, an old, powerful antibiotic that is now seen as a drug of last resort. Health officials worry that these bacteria will spread their resistance to last-resort antibiotics to other bacteria that are already resistant to front-line antibiotics, creating germs that can't be killed by any known drugs.

A similar infection was reported in a Pennsylvania woman earlier this year and initially reported as the first known US case. But the New York case happened almost a year before, and scientists now believe these bacteria were likely in people in the US even earlier.

### WHY ARE PEOPLE WORRIED?

Since the 1940s, doctors have used antibiotics to beat back a large number of dangerous bacteri-

al diseases. Over the decades, bacteria have adapted to become resistant to more and more of the drugs. An exception has been an old antibiotic called colistin. But recently scientists have spotted evidence of colistin-resistant infections in animals and people in China, Europe and Canada. Now, at least two human infections have also been seen in the United States.

### ARE THESE COLISTIN-RESISTANT GERMS SOME NEW BREED OF BACTERIA?

No. In both the US cases, they were E. coli bacteria, a common type of germ found in the gut. In both cases, while they were resistant to colistin, they were vulnerable to more common antibiotics and were not hard to treat. "It's not an immediate threat," said Mariana Castanheira, one of the study's authors.

### SO WHAT'S THE PROBLEM?

Bacteria often mingle and swap genetic material. The E. coli bacteria in New York and Pennsylvania were vulnerable to other antibiotics, but some other germs are nearly impervious. Colistin is reserved for germs that already resist one of the other last lines of defense - antibiotics called carbapenems. If carbapenem-resistant bacteria absorb the colistin-resistance gene, that could set the stage for creation of supergerms

impervious to all known antibiotics.

### WHEN DID THIS FOR OF ANTIBIOTIC RESISTANCE FIRST APPEAR?

Scientists think the colistin-resistant gene was in bacteria in livestock in China as far back as the 1980s. Reports of these bacteria in humans date back to 2008, and since have been confirmed in Asia, Europe, Canada and the United States.

Until this study, none of the reported US infections were thought to have occurred before this year, when colistin resistance was detected in pigs in Illinois and South Carolina, and in the 49-year-old Pennsylvania woman who had gone to a military clinic with symptoms of a urinary tract infection. But the new report found the New York case in 2015, and Castanheira said it's likely colistin-resistant bacteria were in the United States before that.

### WHAT MORE IS KNOWN ABOUT THE CASE?

No additional details about that patient were released by the researchers or in their study, published online Monday in Antimicrobial Agents and Chemotherapy, a journal of the American Society of Microbiology. The authors believe it is the most comprehensive search to date of bacteria that have the colistin-resistant gene, which is known as mcr-1. — AP

# CLINIC PAGE



Kuwait Times  
248 33 199





Dr. Fahad Al-Mukhaizeem  
د. فهد علي المخيزيم

استشاري أطفال  
M.B. Bch. FRCPC. FAAP. PEM



Al-Jabriya - Block 1A - St. 1 - Mazaya Building - 15th Floor - Clinic B - Tel.: 22269369 - Fax: 22269368