



Quote of the Day

Truth will ultimately prevail where there is pains to bring it to light.

George Washington

For \$100,000, You Can Clone Your Dog

by Josh Dean, *Business Week* (Oct. 22, 2014)¹ condensed by Michael G. Maness

Behind glass in a never-before-used operating room inside ... Dr. Hwang Woo Suk ... wears baby blue scrubs branded with the logo of Sooam Biotech, his South Korea-based research company ... erected from scratch in eight days in the Chinese city of Weihai. Here, in a few hours, he'll deliver the first cloned puppies in the country's history.



For starters, the puppies are Tibetan mastiffs, a breed of ancient, aloof guard dogs so hallowed in China that owning the best specimens is an assertion of status almost without rival. The donor of the cells used to clone these puppies was an 8-year-old champion stud from Qinghai province whose owner turned down a \$5 million offer for him last year. He can earn nearly that much in one breeding season. Earlier this year, a developer paid \$2.6 million for a single, gold-colored puppy, and a scarcity of top-quality puppies in China means that the run on mastiffs costing more than mansions is unlikely to abate anytime soon.

[Chinese officials announced] a partnership between Sooam and BoyaLife, a fast-growing Chinese biotechnology company with 28 subsidiaries and operations in 16 provinces. Sometime early next year, ground will be broken for a 667,000-square-foot research laboratory on a spectacular plateau.... There, scientists from both companies will operate China's first commercial animal cloning facility.... "The point is to expand cloning in China," says Dr. Xu Xiao-chun, chairman and chief executive officer of BoyaLife, whose excellent English is the product of 17 years in the U.S.

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Hwang is famous – and infamous – in the world of genetics. A decade ago, he became one of the most celebrated scientists in the world when he published two studies in the journal *Science* that announced the first successful cloning of a human embryo.... *Time* named him one of its "People Who Mattered" in 2004, and in June 2005, Korea's Ministry of Science and Technology declared Hwang the first "Supreme Scientist" in the country's history. He was honored on a postage stamp.

One of the co-authors on the *Science* papers disavowed the work later [Hwang was prosecuted].

... ..

The Korean public never turned against [Hwang] and continued to support him and his work [he returned to Sooam]....

Every scientist who does mammal cloning, including Hwang, licenses the so-called Dolly patent from ViaGen, a U.S. company that acquired the intellectual property from Dolly's creator, Dr. Ian Wilmut.

Hwang ... [created] Snuppy, the world's first cloned dog, born in April 2005 at Seoul National University.... An Afghan hound clone, Snuppy was gestated in a Labrador retriever surrogate.



... ..

In 2007, Hwang met an American named Lou Hawthorne who had led the unsuccessful effort to clone a border collie mix named Missy in the late 1990s through a now-defunct company called Genetics Savings & Clone. Despite ... millions of dollars devoted to the so-called Missyplicity Project, scientists failed to clone Missy before she died in 2002. They had collected and stored samples of her cells, however, and when Hawthorne met Hwang, he asked if Sooam could try again. Hwang took the samples and cloned Missy on the first attempt, producing four pups. Hawthorne brought all four Missys back to California.

¹ Also published in *Bloomberg Weekly*, "The Clone Factory," (Oct. 27 - Nov. 2, 2014), 64-ff.

One year later, Sooam sold its first cloned dog to Edgar and Nina Otto, a Florida couple so distraught over the death of Lancelot, their beloved Labrador, that they were willing to pay \$155,000 in an auction for the opportunity to receive the world's first commercially cloned dog.... Six years and hundreds of cloned dogs later, Sooam has streamlined the process enough so that anyone with \$100,000 and the patience to wait in line for up to six months can have a dog cloned.... the lab has the capacity to produce 150 to 200 commercial clones a year for clients who so far have included celebrities, Middle Eastern royals, and a few proud, non-anonymous buyers such as Dr. Philip Dupont, a veterinarian in Lafayette, La.

... ..

Work at Sooam is divided into three sections: canine, porcine, and bovine. The canine team focuses on commercial cloning, as well as on transgenic clones, which are genetically engineered to express certain traits. Last year scientists on that team successfully manipulated the genes of one beagle clone to develop Alzheimer's disease, and all 18 clones from that cell line have been born with the disease. The project remains in the study phase, but if it can be commercialized, it would allow Sooam to produce dogs with Alzheimer's on demand, potentially opening up a huge business catering to pharmaceutical companies doing research in that space – which use 7,500 beagles a year in the U.S. alone, according to Sooam. A second project is under way to produce clones born with diabetes, another epidemic disease that affects both humans and dogs.

... ..

The porcine team is pursuing transgenic clones that could one day provide a safe source of organs for humans in need. Pig organs are similar to ours, which makes them an attractive potential substitute for patients awaiting transplants. Our immune systems, however, tend to reject foreign organs. One solution is to fuse human genetic material into the pig clone embryo, so that the recipient's immune system doesn't reject the transplanted organ....

One of Hwang's biggest dreams is to revive his work on human stem cells. To this day, he asserts that the cell line he created back at Seoul National University was from a cloned embryo, not cultured from an existing embryo as investigators determined. Sooam still owns the line. There's just one problem: The Korean government, in response to the scandal, banned research on human stem cells. "We will keep knocking on the doors," Hwang says, "not only in South Korea but also in other countries, until we can continue our human stem cell research."

Some projects are even more audacious. In 2012, Hwang and his team cloned a litter of seven rare Asian coyotes using a mutt as a surrogate. That same year he announced a partnership with North-Eastern Federal University in Russia to work on the so-called Mammoth Restoration Project. The National Geographic Channel filmed the initial expedition into Siberia in search of a frozen carcass from which genetic material might be taken and turned the footage into an hourlong special, "Mammoth: Back From the Dead." It's a compelling idea—and not as outrageous as it might seem, Director of Research Jeong explains. "Principally it's possible because we use stem cells stored in nitrogen already," he says. "So they're frozen." Scientists in Japan managed to clone a mouse using cells harvested from a specimen that had been frozen for 10 years, proving that prolonged freezing isn't an insurmountable barrier. What's critical is that the mouse cells were frozen in a steady state. In the instance of the mammoths, the tissues have been through a series of freezes and thaws.

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- 1902** - German embryologist Hans Spemann uses a hair from his infant daughter to separate a salamander embryo into two. Each develops normally.
- 1938** - Spemann proposes a "fantastical experiment" to clone via nuclear transfer but can't perform the experiment because baby hairs don't cut it.
- 1958** - Oxford's John Gurdon clones tadpoles using the intestinal cell of an African clawed frog.
- 1981** - Karl Illmenese and Peter Hope clone a mouse at the University of Geneva.
- 1996** - "Hello, Dolly!" Ian Wilmut and Keith Campbell of the Roslin Institute use the nucleus from a sheep's udder cell to replace that of an egg. Only 1 of 277 transfers takes, and Dolly's it.
- 2001** - Scientists at Advanced Cell Technology use a surrogate to clone the first endangered species: Noah, a bull gaur (wild ox). He dies of an infection unrelated to cloning.
- 2001** - The first cloned cat, CopyCat, is born at Texas A&M under the direction of Dr. Mark Westhusin, in collaboration with Dr. Taeyoung Shin, later a Sooam founder.
- 2003** - Goodbye, Dolly. The celebrity sheep is euthanized after developing lung cancer.
- 2004** - A group of scientists at Seoul National University (SNU) led by Hwang Woo Suk announce the cloning of a human embryo. This is later exposed as a fraud.
- 2005** - The first dog, an Afghan hound named Snuppy, is cloned by Hwang and his team at SNU.
- 2008** - Sooam clones the first pet dog for an American couple. They pay \$155,000 for the historic privilege.
- 2009** - Closer to Jurassic Park, French and Spanish scientists clone a Pyrenean ibex, extinct since 2000. Ten minutes after her birth, she dies—and the species goes extinct all over again.
- 2013** - An Oregon team led by Shoukhrat Mitalipov appears to achieve what Hwang claimed in 2004: It uses SCNT to clone a human embryo that can be used as a source of stem cells.



Recently, Sooam secured a contract to provide 40 cloned special purpose dogs to the South Korean national police, and several are already in service at the Incheon International Airport near Seoul. But Hwang's scientists lack proof that the donor dogs were truly special. That's why they sought out the Americans, to find empirically great dogs to clone.

The four Americans arrive after lunch, in the company of some powerful South Koreans, including Younghoon (David) Kim, chairman of the Daesung Group, one of the country's largest multinationals, and his managing director.... Daesung has interests in energy and defense and ... if this experiment proves out, sell cloned super dogs to police departments and military units around the globe.

... ..

Known as BioPremium K9, the startup was founded by Peter Hwang, a Korean American who served 25 years with the Illinois State Police and the FBI. Hwang (no relation to the doctor) has known Daesung's chairman since they were both young men, and Kim came to him with an unusual request: He needed to find "the best working dog in the U.S." for a special project. Hwang recruited an Illinois-based cop and canine specialist named Bert Badertscher to help him, and the two set out to locate just such a dog.

... ..

"Ghost and Echo are the first research study to see if this idea works: Can we reproduce these top-quality dogs through cloning" and eliminate most of the margin for error, Badertscher says. Beyond that, he believes, "the next step is giving these dogs a chance to live longer" by using cloning to eliminate problems such as cancer, hip dysplasia, and bad eyesight that can prematurely end a working dog's career. Two extra years of work would be an incredible boost in productivity, keeping the best dogs working longer and offsetting the increased costs of cloning. "The biggest thing we'll have to fight," he says, "is the word 'cloning.'"



Article: www.BusinessWeek.com/articles/2014-10-22/koreas-sooam-biotech-is-the-worlds-first-animal-cloning-factory



Senate votes 53-46 to stop US from joining UN Arms Trade Treaty

By Ramsey Cox, *The Hill* (3-23-13)

In the last batch of amendment votes to the budget, the Senate voted on several foreign policy proposals.

Sen. James Inhofe (R-Okla.) introduced an amendment that would prevent the United States from entering into the United Nations Arms Trade Treaty in order to uphold the Second Amendment. His amendment passed on a 53-46 vote.

Republicans have been critical of President Obama's decision to consider the treaty, although Obama has said he would not vote for anything that would violate the Second Amendment.

The U.N. Arms Trade Treaty would regulate international arms sales. Negotiations end on March 28.

"We're negotiating a treaty that cedes our authority to have trade agreements with our allies in terms of trading arms," Inhofe said. "This is probably the last time this year that you'll be able to vote for your Second Amendment rights."

Article: <http://thehill.com/blogs/floor-action/senate/290001-senate-votes-to-stop-us-from-joining-un-arms-treaty>

See treaty here: <https://unoda-web.s3.amazonaws.com/wp-content/uploads/2013/06/English7.pdf>

UN Security Council resolutions here: www.un.org/en/sc/documents/resolutions/2013.shtml & www.UN.org/disarmament/ATT/

U.S. Senate Roll Call Votes 113th Congress - 1st Session – March 23, 2013:

Vote Number: 91 Required for Majority: 1/2

Vote Result: **Amendment Agreed to**

Amendment Number: **S.Amdt. 139 to S.Con.Res. 8**

Statement of Purpose: **To uphold Second Amendment rights and prevent the United States from entering into the United Nations Arms Trade Treaty.**



Vote Counts: YEAs 53 >>>> all Republicans & 5 Democrats Not Voting 1
NAYS 46 . . . amendment passed by SLIM majority

See Senate site: www.Senate.gov/legislative/LIS/roll_call_lists/roll_call_vote_cfm.cfm?congress=113&session=1&vote=00091

ISIS Snuffs Out Ancient Christianity

by [Raymond Ibrahim](#), Gatestone Institute (11-1-14)

In Egypt, a young Coptic Christian man, accused of blaspheming Islam for simply “liking” an Arabic-language Facebook page, was sentenced to six years in prison. One of the intruders in Uganda was shouting, “Today we shall kill you [for converting to Christianity] – you... are not respecting our prophet’s religion.” He then heard his 12-year-old-girl’s cries as the Muslim intruders were strangling her. Then they seized him. Muslims in Germany were granted their own section of the cemetery. Now these same Islamic communities are demanding that, during Islamic funerals, Christian symbols and crosses in the cemetery be removed or covered up.

During the Islamic State’s June invasion and consolidation of Mosul, Iraq – where Christians have been present since the first century – countless atrocities against them were committed. Accordingly, the region is now reportedly empty of Christian presence.

The Islamic State ... reinstated the collection of jizya, the “tribute” conquered Christians (and Jews) were historically required to pay in order not to be killed in accordance with the Koran (9:29).² ...

Article: www.GatestoneInstitute.org/4817/muslim-persecution-of-christians-june



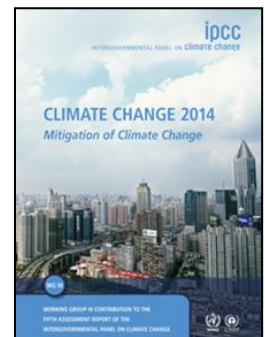
U.N. – Phase Out Fossil Fuels by 2100, Or Face ‘Irreversible’ Climate Impact

by Nolan Feeney, *Time* (Nov. 2, 2014)

“Science has spoken,” U.N. Secretary General Ban Ki-moon said in Copenhagen at Sunday’s launch of the fourth and final report by the Intergovernmental Panel on Climate Change (IPCC), CBS News reports. “There is no ambiguity in their message. Leaders must act. Time is not on our side.”

The IPCC assessment ... reaffirms with 95% certainty that global climate change is both real and a mostly man-made problem – a conclusion it shared in an earlier report. The entire project, which reviewed approximately 30,000 studies about climate, also suggests that if greenhouse gas emissions continue without intervention, there could be “irreversible” impacts, such as rising sea levels, more frequent heat waves and even a change in the human population’s male-female ratio.

To halt climate change, countries around the world will have to wean themselves off fossil fuels ... in favor of more sustainable and environmentally friendly energy sources, the IPCC report concluded. Last month, leaders of 28 European nations agreed to cut greenhouse gas emissions to at least 40 percent of 1990 levels by the year 2030.



Article: <http://time.com/3553269/un-climate-change-report> - 2014 IPCC Report at www.IPCC.ch/report/ar5/wg3/

Technical Summary: http://report.mitigation2014.org/drafts/final-draft-postplenary/ipcc_wg3_ar5_final-draft_postplenary_technical-summary.pdf

² See <http://quran.com/9/29>: “Fight those who do not believe in Allah or in the Last Day and who do not consider unlawful what Allah and His Messenger have made unlawful and who do not adopt the religion of truth from those who were given the Scripture - [fight] until they give the *jizyah* willingly while they are humbled.”