

CALIFORNIA RIGHT TO LIFE EDUCATION FUND

P.O. Box 4343, Walnut Creek, CA 94596-4343
(925) 944-5351

E-Mail: callife@calright2life.org

Web Site: www.calright2life.org

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What is CRISPR?

Several years ago, scientists from the United States and Sweden invented a technology that is literally upending our view of the limits of biotechnology, called CRISPR-Cas9. The technology is akin to a biological word processing system that allows scientists to cut and paste DNA almost as easily as if they were editing a journal article.

CRISPR stands for Clustered Regularly Interspaced Short Palindromic (the same backwards as forwards) Repeats, which describes a process in nature that scientists have harnessed to snip and splice sections of DNA. To do this, they use what is known as a slicer enzyme called Cas9.

CRISPR/Cas-9 is the most powerful gene editing tool ever developed, able to identify, cut, and replace genes in DNA, including human DNA, with scalpel-like precision.

In April 2015, scientists in China reported carrying out the first experiment using CRISPR gene editing to alter the DNA of human embryos, potentially impacting the germline. Although the embryos were not viable and could not have developed into babies, the announcement ignited an outcry from scientists warning that such a step, crossed an ethical redline.

Gene editing in humans can refer to two very different things. One use would seek to alleviate patients' symptoms—or perhaps even cure their diseases—by targeting particular cells or tissues in their bodies. Although past experiments with this approach have been disappointing, recent advances, including new gene-editing techniques, are raising hopes that gene therapy can be made safe and effective. If so, it could be a significant and welcome medical advance.

A radically different use of gene editing would target human sperm, eggs or early embryos in an effort to alter the DNA and the traits of resulting children. These genetic changes would be irreversibly reflected

in every cell of future children's bodies, and in the bodies of their children and subsequent generations—in ways that we cannot possibly predict because of the complexity of the human genome. The biological risks and ethical implications of reproductive gene editing would be unacceptable.

Gene editing brings us to a consequential crossroads. We need to think carefully and choose wisely between applications that lead to dangerously unacceptable social consequences, and those that can contribute to human flourishing and well-being.

There are yellow warning lights ahead. The biggest one is that CRISPR could make off-target modifications in embryonic DNA and hence cause widespread damage to the genome, which could cause defects. CRISPR is so relatively simple to perform. However, that does not make it foolproof. There is significant potential for these "off-target effects" or mutations that may occur in other parts of the genome if the editing is not incredibly precise. That is one reason why the 'baby experiment' was received so poorly.

Even more of concern is alterations to the genes of reproductive cells, known as human germline modification or inheritable genetic modification. Such efforts would be experiments with engineering the traits of future children, and the altered genes and traits would be passed on forever more through the generations.

Crossing this threshold has long been considered dangerously unacceptable for both safety and social reasons. Several international human rights treaties and more than 40 countries prohibit it. However, the United States does not currently have any legal prohibitions in place; in fact, the first level 1 clinical trials may start as early as 2017 to attack three types of cancer: multiple myeloma, melanoma, and sarcoma.

Pope Quote

“There is a tendency to justify transgressing all boundaries when experimentation is carried out on living human embryos. We forget that the inalienable

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worth of a human being transcends his or her degree of development. In the same way, when technology disregards the great ethical principles, it ends up considering any practice whatsoever as licit. [A] technology severed from ethics will not easily be able to limit its own power.”

~ Encyclical Laudato Si – paragraph 136

Osteoarthritis: Using Adult Stem Cells to Repair Cartilage

The INSERM Regenerative Nanomedicine Unit in Strasbourg led by Dr. Nadia Benkirane-Jessel has devised a new generation of 3D implants to treat osteoarthritis, long since “considered an ageing-related fatality” with pain relief being feasible in only some cases.

Dr. Nadia Benkirane-Jessel has committed herself to developing treatment with a dual therapeutic action: “The technology concerns membranes fitted with nano reservoirs, which are equivalent to small patches containing growth factors to promote bone regeneration. Hydrogel is then deposited on this first patch using stem cells derived from the patient’s bone marrow to regenerate the cartilage... The process then works on its own!” As they grow, the stem cells will divide and trigger the release of growth factors which, in turn, will stimulate the cells.

Validated using various animal models, the technique must be tested in human phase 1 clinical trials. The scientist explained, “These tests will be carried out on 30 patients (between 18 and 50 years) with knee lesions, enrolled in three countries (France, England and Spain).”

Scientists hope that the results will show that, in addition to repairing cartilage, the already patented implant will regenerate the bone located just below in order “to repair joints in a robust, sustainable manner.”

9 to 10 million people suffer from osteoarthritis in France.

Sources:

Communiqué de presse de l'INSERM (10/06/2016) ; Le Figaro (Anne-Lefèvre-Balleydier et Cécile Thibert) 13/06/2016 ; 20 minutes (14/06/2016) ; Pourquoi docteur (13/06/2016)

Library Corner - Alison's Choice

Gripping & inspiring. A profound, relevant story; a movie on the front lines; a clear message of healing & hope that confronts our choices with love & compassion. So are the reviews on Amazon.com

Alison is a young woman who discovers she is pregnant and goes to the local abortion mill. While waiting for her name to be called, she talks to a number of people, including the heart-weary receptionist, a flamboyant counselor, a determined “clinic worker,” an urban Mother of two, and one of my favorite characters: Lecretia, who is a regular at the clinic. Alison also encounters a gentle-faced janitor with mop “eternally” in hand. It quickly becomes obvious he is no mere janitor, as he pleads for the life of her baby. (Spoiler Alert: remember the TV show “Joan of Arcadia?” Not everyone is solely who they appear to be.) As the movie progresses, the clock ticks away precious minutes in the fight for life or death of many a precious preborn. What will Alison choose? What “choice” and outcomes await the other women?

“Alison’s Choice” covers many of the quandaries and outcomes of a woman considering abortion, addressing an important issue for today’s society in a gentle yet persuasive way. It would be an excellent choice for a movie night, or teen group at your church. Or invite some friends over for Movie Night. The characters and their actions are true to life; depicting what likely happens in many abortion mill waiting rooms and “outside” when the woman or young girl goes “out to get a breath of fresh air.” (Although sidewalk counselors are missing from the mix of characters.)

We recently added this movie to our library. Contact our office at 925-944-5351 If you would like to borrow the DVD, or available at Amazon.com for \$14.99.

Do you know someone who might be considering abortion?

**Make sure they get the facts first!
A LIFE depends on it...**

1-800-712-HELP (4357)

Website: <http://www.optionline.org/>

Abortion Kills Three Times More Black Lives than Heart Disease, Cancer and Stroke

Our friend and fellow advocate for life Pastor Walter B. Hoyer II helps us put into perspective the tragically high number of abortion deaths in the Black American community. He shares an interesting slant on the “Black Lives Matter” idea.

Abortion is a problem among every racial group, but it is particularly troubling in the Black community in America. Hoyer, president of Issues4Life Foundation, is a leading African American figure in the pro-life movement who works to end abortion through education and outreach, especially in the Black community.

Reverend Hoyer reminds us all that black Americans have a disproportionately high number of abortions, compared to other racial groups. According to census data, African Americans make up about 13 percent of the U.S. population but have about 30 percent of the abortions. In New York City, data shows more black babies are aborted than are born.

Hoyer just released another startling analysis about abortions in Black America. He compares the number of abortion deaths in the Black community to the 13 other leading causes of death:

Heart Disease: 72,010

Abortion kills 5.9 times as many Blacks as heart disease.

Malignant Neoplasms: 67,953

Abortion kills 6.3 times as many Blacks as cancer.

Cerebrovascular Disease: 16,269

Abortion kills 26.4 times as many Blacks as strokes.

Accidents (unintentional injuries): 13,413

Abortion kills 31.9 times as many Blacks as accidents of all kinds.

Diabetes Mellitus: 13,385

Abortion kills 32 times as many Blacks as diabetes.

Chronic Lower Respiratory Disease: 9,916

Abortion kills 43.2 times as many Blacks as lung disease.

Nephritis and Nephrosis: 8,393

Abortion kills 51.1 times as many Blacks as kidney disease.

Assault (Homicide): 8,059

Abortion kills 53.2 times as many Blacks as all homicides.

Septicemia (pathogens): 6,250

Abortion kills 68.6 times as many Blacks as blood poisoning.

Alzheimer’s Disease: 5,714

Abortion kills 75.1 times as many Blacks as Alzheimer’s disease.

Influenza and Pneumonia: 5,567

Abortion kills 77.1 times as many Blacks as pneumonia and the flu.

Chronic Liver Disease and Cirrhosis: 3,052

Abortion kills 140.5 times as many Blacks as liver disease.

Intentional Self-Harm (Suicide): 2,353

Abortion kills 182.3 times as many Blacks as suicide.

In total, abortion takes 185 percent more Black American lives every year than all 13 leading causes of death combined, Hoyer said. There are an estimated 429,000 abortions performed every year on Black babies in America, he said. His statistics come from the U.S. Statistical Abstract for 2013 and the National Vital Statistics Report from 2015.

In presenting the numbers, Hoyer called on Black leaders to take action against the injustice of abortion in America. He said it is time for African American politicians and others in leadership to stop supporting the abortion industry.

“How can Black Americans align themselves with an industry that profits from the death of more Black Americans than are taken every year by the 13 leading causes of death and 5,800 times more Black lives than were taken by the Klu Klux Klan?” Hoyer asked.

He cited numbers from the Tuskegee Institute showing that “3,446 Negroes were lynched by the Klu Klux Klan between 1882 and 1968. Compared to the over 20 million Black lives taken by abortion since 1968, Black abortion has taken 5,800 times more Black lives than the Klu Klux Klan.”

Around the Office

The mid-year financials are completed, and the situation is not good. We are running at over \$1,000 a month deficit in 2016. So if you have a few extra dollars, consider sending them to us, as we are going into the fall busy season, and we need to get supplies to equip students with presentation packets as well as the various community events.

Calendar of Events

*For the latest updates of events, see
www.calendarforlife.org*

4th Annual National Day of Remembrance for Aborted Children - Saturday, September 10, 2016 Pro-life Americans throughout the country will gather at the gravesites of aborted babies and other memorial sites dedicated in their honor for the fourth annual National Day of Remembrance for Aborted Children. Solemn vigils will commemorate the more than 55 million children who have lost their lives to legal abortion since 1973, and remind our society of the humanity of the unborn child. Please join us for a memorial service in our community near you. Visit: <http://abortionmemorials.com/sites.php>

40-DAYS FOR LIFE – Sept. 28-Nov. 6, 2016
See: <http://40daysforlife.com/> for a location near you.

LIFE CHAIN – October 2, 2016 in most locations.
For a location nearest you see: <http://lifechain.net/>

WHO IS CALIFORNIA RIGHT TO LIFE?

This is the newsletter of **California Right to Life Education Fund**, a 501-c-3 organization established to educate the public about pro-life issues. Donations to the EDUCATION FUND are **tax-deductible** and can be sent to P.O. Box 4343, Walnut Creek, CA 94596-0343.

California Right to Life **Committee, Inc.** is a 501-c-4 organization providing information on legislative issues affecting the right to life, and pro-life political advocacy. **CRLC, Inc. is not permitted**, under IRS regulations, to offer a tax deduction for donations. \$24.99 annually is requested for a subscription to the CRLC legislative email updates list and can be sent to 1920 Monument Blvd #309, Concord, CA 94520.

Both are affiliates of American Life League, headed by Judie Brown, and share the same “no-exceptions, no excuses” beliefs and the same dedication to promoting the Culture of Life, respecting all innocent human life from the single-cell stage to natural death.

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