

Imperfection is freedom.

LETTERS



INGENUITY: NEXTGEN'S VISION

The next generation's Frankenstein films

In Mary Shelley's *Frankenstein*, Victor Frankenstein's well-intentioned research goes awry, creating a monster. The novel was first adapted to film in 1910, and many movie remakes and variations followed. We asked young scientists to craft their own Frankenstein-inspired science fiction by pitching a movie plot answering this question: **What modern research could serve as the basis for the next box office hit?** According to the responses, the research discoveries most likely to play a part in this year's blockbuster are gene-editing technology, xenotransplantation, and artificial intelligence. Microbes and viruses also played a starring role. Several scripts were set in the future against a backdrop of extreme climate change. Read on for a selection of our scientific Oscar line-up. —Jennifer Sills

Recombinant

DRAMA | In a monochromatic world where scientific advancement allows for optimization of life itself, a ruling class of scientists uses CRISPR technology to produce classes of civilians with singular purposes: farmers resistant to sunlight, doctors with photographic memories, and fearless police officers. To ensure political and social control, scientists include a genetic weakness: Upon hearing a specific frequency, the

listener enters an unconscious state. But as much as scientists manipulate CRISPR, it is not perfect. Those born with certain mutations escape control.

Aware of the ruling class's despotic regime, those with mutations become renegades who live underground and reproduce among themselves to breed humans without genetic enhancement, and without the weakness gene. Plotting a revolution against the scientists in control, this insurgent "naturalist" society targets the

gene bank and central radio tower in a war to wrest the world from the scientists and from genetic perfection.

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The Glass Palace

COMEDIC HORROR | The year is 2020, and the world's vision has never been more clouded. The climate is roiling, skies are darkening, and children play on beaches threatened by rising tides of rubbish. Resources are running out and struggling pilot Sophie and her family can't find a safe space in a dirty world.

A top-secret government lab might be her savior: Sophie is hired to fly across the Earth spraying a genetically engineered microbe that eats plastic. Is this the panacea for climate change? Humanity's second chance? Trash mountains liquidate; oceans unclog. But the bugs are ever hungry—is there anything in the world they cannot eat? Anywhere they cannot reach? Watch in horror as humanity fights for survival against its own creation.

Matilda S. Newton

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Malware 2.0

DRAMA | Beyond the depths of the dark Web, something sinister stirs. Cautiously traversing systems; evading detection. Scavenging, searching...longing for

information. Artificially intelligent by design, deceptively perceptive, mining superfluous data with malicious intent. What started as a seemingly innocuous experiment in machine learning has now evolved into an entity unrecognizable, irretrievable, and unstoppable by its creator, its programmer.

...Accessing systems...cataloging human genomic data...compiling...analyzing... detecting essential genes...learning... modeling...accessing literature...tracking pathogens...outbreaks...viral interactions...RNAi...CRISPR...learning... modeling...analyzing social networks... crypto mining...ordering synthetic biopolymers...sending...waiting...

In the depths of the midnight digital expressway lurks an enigmatic foe.

...std::cout << "goodbye, world"; return 0;

Michael Strong

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Pandora's Gene

PSYCHOLOGICAL THRILLER | In one week, six young adults die, seemingly of natural causes. But before proper autopsies can be carried out, the bodies begin to mysteriously disappear. Genetic analyses of the remains reveal a shocking connection: All of the victims' genomes contain a pre-programmed suicide gene and an identical set of tissue antigens. What could this mean? Krasinski, a junior detective, takes up the case.

The strand of DNA clues leads him to an in vitro fertilization clinic, where a genius embryologist, suffering from multiple organ dysfunction syndrome, gene-edited the unborn babies of his patients to grow a stock of compatible transplant organs for himself. Krasinski realizes that he was conceived through assisted reproductive technology in this very lab. He must race to find the answers he needs before he becomes the next victim of the irreversible suicide gene.

Martin Pačesa

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Back to the Stone Age

COMEDIC HORROR | Scene 1: 10 May 2038. Sunshine. Mr. and Mrs. Smith, a couple about 90 years old, sit at a kitchen table.

Mrs. Smith opens the refrigerator, picks up a piece of raw cabbage, and devours it. Mr. Smith looks on, perplexed. "Odd to see her choosing vegetables," he soliloquizes. "She was always more of a meat-eater before."

Scene 2: 10 September 2068. Cloudy. Mr. Smith adroitly climbs up the apple tree, picks several apples, and throws them to Mrs. Smith. They eat the unwashed apples. They no longer communicate through language, howling to each other instead.

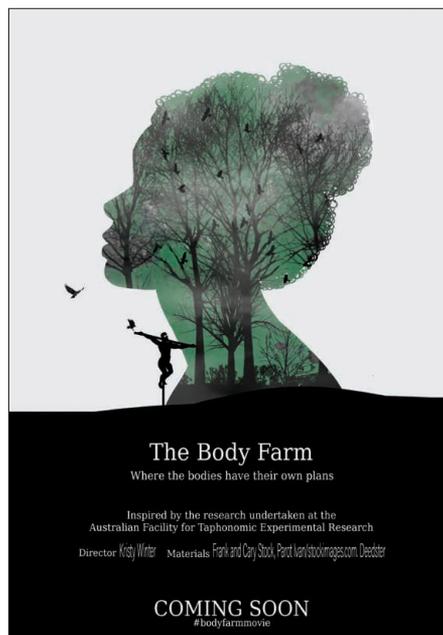
Scene 3: 10 December 2098. Snowy. Mrs. Smith sits near the fire in their car-like cave. Mr. Smith hunts for food outside. The flame is fading. Mrs. Smith picks up a paper certificate, scrutinizes it for a moment, and then throws it into the fire. The flame becomes brighter as the fragments of paper burn.

"...Mr. and Mrs. Smith, a couple of 70 years, both have undergone heart transplantation using gene-edited pigs...because the aging genes have been replaced...will extend life spans...no known side effects...plan to conduct in all mankind..."

As the article burns to ashes, the Stone Age returns.

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The Body Farm

THRILLER | It is a cold Tuesday in Seattle. Tall trees grow around the ivy-covered, padlocked gate. Cringing at the stench of rotting flesh, Rose approaches the facility, hoping she will finally find her specimen in the next stage of decomposition to complete her research. Little does she know that the body—equipped with resistance to insects, bacteria, and microbes—is waiting

for her, eyes wide and conscious, with research plans of its own.

Kristy A. Winter

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Transplant

THRILLER | Xeno-Edit, a CRISPR gene-editing biotechnology firm, has successfully created the world's first pig organs ready for xenotransplantation in humans. Desperate for funding in a world that fundamentally opposes the procedure, Xeno-Edit makes a conniving deal with a wealthy donor: They will film a television series documenting the first recipients' transplantation experiences. Yet when the recipients agree to participate in the documentary in exchange for receiving life-saving organs, they are unaware that they're signing up for a twisted competition.

To win the antidote to transplant rejection, participants must race to solve elaborate puzzles. With time a precious commodity, and only enough antidote for one person to survive, who will be the last person standing?

Ken Dutton-Regester

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Arca™

DRAMA | In a new era, Arca™ is your better half. Based on the latest deep-learning techniques, her unique autonomous form allows her to accompany you everywhere. She can do everything from holding your umbrella to analyzing bodily function data to predict and respond to an oncoming heart attack. With her patented emotion-detection technology, she can even analyze your environment and the people around you. By integrating all aspects of your physical, emotional, and social well-being, she knows you better than you know yourself.

As we invite Arca™'s machine learning further into our personal lives, human interactions become the new fodder for analysis, and even the slightest twitch threatens to expose subconscious thoughts and feelings. Gone are the little white lies that used to make society run smoothly as the people of the world excitedly usher in technology that makes the human mind almost transparent. When technology puts all the cards on the table, do you like who you see in the mirror?

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