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LASKER FOUNDATION ANNOUNCES 2024 LASKER AWARD WINNERS

***Recognizing revolutionary discoveries in immunology, therapeutics for obesity,
and global contributions to the fight against HIV/AIDS***

The 2024 Albert Lasker Basic Medical Research Award

Zhijian “James” Chen (UT Southwestern Medical Center)

For the discovery of the cGAS enzyme that senses foreign and self DNA, solving the mystery of how DNA stimulates immune and inflammatory responses

The 2024 Lasker~DeBakey Clinical Medical Research Award

Joel Habener (Massachusetts General Hospital)

Lotte Bjerre Knudsen (Novo Nordisk)

Svetlana Mojsov (The Rockefeller University)

For the discovery and development of GLP-1-based drugs that have revolutionized the treatment of obesity

The 2024 Lasker~Bloomberg Public Service Award

Quarraisha Abdool Karim (CAPRISA/Columbia University)

Salim S. Abdool Karim (CAPRISA/Columbia University)

For illuminating key drivers of heterosexual HIV transmission; introducing life-saving approaches to prevent and treat HIV; and statesmanship in public health policy and advocacy

(New York, September 19, 2024) -- The [Lasker Foundation](http://laskerfoundation.org) today announced the winners of its 2024 Lasker Awards: **Zhijian “James” Chen** (UT Southwestern Medical Center) will receive the Albert Lasker Basic Medical Research Award for the discovery of the cGAS enzyme, which senses the DNA of invading organisms or damaged cells and triggers the body to make a rapid immune response; **Joel Habener** (Massachusetts General Hospital), **Lotte Bjerre Knudsen** (Novo Nordisk), and **Svetlana Mojsov** (The Rockefeller University) will receive the Lasker~DeBakey Clinical Medical Research Award for their discovery and development of GLP-1-based drugs that have had a significant impact on fighting obesity; and **Quarraisha Abdool Karim and Salim S. Abdool Karim** (CAPRISA/Columbia University) are honored with the Lasker~Bloomberg Public Service Award for their contributions to combatting the spread of HIV/AIDS and for transformative public health advocacy and programming throughout Africa and globally.

Established in 1945 by Mary and Albert Lasker, pioneering biomedical research advocates, the Lasker Awards are now widely regarded as America’s preeminent biomedical research prize.

The awards carry an honorarium of \$250,000 for each category. They will be presented at a gala ceremony in New York City on Friday, September 27, 2024. More information – including additional background on this year’s winners and videos documenting their achievements – is available at laskerfoundation.org.

The 2024 Albert Lasker Basic Medical Research Award

The **2024 Albert Lasker Basic Medical Research Award** honors **Zhijian “James” Chen** for the discovery of the cGAS enzyme that senses foreign and self DNA in the cell’s cytoplasm. This breakthrough solved a pivotal biomedical mystery of how DNA stimulates immune and inflammatory responses; it holds promise for fighting infectious diseases and cancer, and for managing autoimmune diseases.

In a series of incisive studies, Chen unmasked the pathway through which our bodies sense DNA in our cells’ cytoplasm. This process begins when cGAS binds to cytoplasmic DNA and in response synthesizes cyclic GMP-AMP (cGAMP), which in turn activates STING (stimulator of interferon genes). STING then triggers an inflammatory response, which includes the production of Type 1 interferons, essential for combatting infections and regulating immune responses.

Chen’s research reveals the workings of a highly conserved part of the innate immune system – present in organisms from bacteria to humans – that protects from these invaders. In addition, aberrant responses to self DNA can initiate autoimmune diseases. Thus, cGAS represents a crucial element in the interplay between DNA sensing and immune activation.

Chen’s breakthrough reverberates far beyond the laboratory. His discoveries are a focal point for research into therapeutic interventions that target myriad illnesses, including autoimmune diseases, neurological disorders, and cancer.

>> [Read the full citation](#)

>> [Watch video](#)

The 2024 Lasker~DeBakey Clinical Medical Research Award

The **2024 Lasker~DeBakey Clinical Medical Research Award** honors **Joel Habener, Lotte Bjerre Knudsen, and Svetlana Mojsov**, for their roles in the discovery and development of GLP-1 based drugs that have revolutionized the treatment of obesity – a health epidemic of global scale associated with grave metabolic illnesses such as diabetes and heart disease – that impacts more than 900 million people, including 40% of American adults.

In the 1970s, **Habener**, an endocrinologist, became interested in how the hormone glucagon fits into the puzzle of how the body regulates blood sugar levels. When Habener cloned the gene for glucagon, he discovered that it encodes not only glucagon itself, but also another molecule that resembles glucagon called GLP-1, which stands for glucagon-like-peptide-1.

Independently, **Mojsov**, a chemist, identified and synthesized the physiologically active form of GLP-1 and developed innovative research methods and reagents that detected GLP-1 in the intestines. Collaborating with other scientists, she drew unambiguous conclusions about essential aspects of GLP-1 biology.

Then, beginning in the 1990s, **Knudsen**, the head of GLP-1 therapeutics at Novo Nordisk, and her team transformed these breakthroughs into treatments to fight diabetes (Ozempic) and

obesity (Wegovy), advancing the duration of the drug's therapeutic effects from a few hours to over a week.

Through their discoveries and dedicated efforts, Habener, Mojsov, and Knudsen have introduced a new era of weight management, dramatically improving the wellbeing and health prospects for hundreds of millions. Their work has opened up a burgeoning field of studies about the numerous health benefits seen during GLP-1 therapy, including those related to cardiovascular disease, chronic kidney disorders, fatty liver disease, Alzheimer's and Parkinson's diseases, and addiction.

>> [Read the full citation](#)

>> [Watch video](#)

The 2024 Lasker~Bloomberg Public Service Award

The **2024 Lasker~Bloomberg Public Service Award** honors the dynamic wife and husband team of **Quarraisha Abdool Karim and Salim S. Abdool Karim**, whose research insights and advocacy work have defined new life-saving preventive and treatment approaches for people with HIV/AIDS, an infection that has claimed 42 million lives and with which 40 million people live today.

Growing up under apartheid in South Africa, the Abdool Karims gained a deep grasp of how societal inequities undermine health. While at Columbia University in the 1980s, they witnessed the staggering toll of HIV/AIDS in New York and returned to South Africa to study the trajectory of the disease at home. Their pioneering research highlights the disproportionate impact of HIV on women and girls. They showed that use of an antiretroviral drug, tenofovir, reduced new infections by 39% in women who used it for two-and-a-half years. This ultimately led to the creation of a game-changing antiretroviral treatment called Pre-Exposure Prophylaxis – or PrEP – today a crucial element of global HIV prevention endorsed by the World Health Organization. They defined approaches to better treat HIV and tuberculosis co-infection; after five years of use in South Africa, annual deaths decreased by over 50%.

As vocal advocates for the vulnerable, the Abdool Karims advise medical, philanthropic, and government leaders on optimal public health strategies. Through their founding and leadership roles in CAPRISA (Centre for the AIDS Programme of Research in South Africa), the Abdool Karims have helped train more than 600 South African HIV and TB investigators and established world-class research centers in Africa. They are powerful voices in the response to Covid and have tirelessly fought medical disinformation. The Abdool Karims have saved lives around the globe through their innovative research, evidence-based policy proposals, public education, and courage to speak truth to power.

>> [Read the full citation](#)

>> [Watch video](#)

About the Lasker Awards: Since 1945, the Lasker Foundation has awarded more than 400 prizes through the Lasker Awards, renowned as America's preeminent biomedical research prize. The Lasker Awards recognize the contributions of leaders who have made major advances in the understanding, diagnosis, treatment, cure, and prevention of human disease. Over the years, 97 Lasker Laureates have also received the Nobel Prize, including nine since 2018.

More details on the Lasker Award recipients, the full citations for each award category, video interviews and photos of the awardees, and additional information on the Foundation are available at laskerfoundation.org.

About the Lasker Foundation: Established in 1942 by Albert and Mary Lasker, The Lasker Foundation seeks to increase support for biomedical research by celebrating the power of biomedical science to save and improve human lives. Through its internationally renowned Lasker Awards, educational initiatives, and public advocacy, the Foundation recognizes the most important achievements in science and public service, supports and encourages the scientific leaders of tomorrow, and raises awareness of the ever-present need for research funding. The Foundation is committed to inspiring robust and sustained support for biomedical research, fueled by Mary Lasker's call to action: "If you think research is expensive, try disease!" More information at laskerfoundation.org.

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