

Lysando<sup>®</sup>

**YOUR LIFE  
IS OUR PRIORITY.**



**AMR CAN  
AFFECT  
ANYONE.**

Antimicrobial Resistance (AMR) is a rising problem globally—the World Health Organization (WHO) has identified it as one of the top 10 threats to public health worldwide.

Over time, bacteria develop resistance mechanisms rendering antibiotics ineffective.

This not only complicates the treatment of infections, but also amplifies the risk of disease transmission, severe illness, and even death.

**THERE'S NO TIME TO WAIT.**

**BUT IT IS  
STOPPABLE.**

## THE SILENT PANDEMIC

BACTERIAL INFECTIONS REMAIN THE SECOND MOST COMMON CAUSE OF DEATH

We have been fighting bacterial infections with antibiotics for almost a hundred years. Antibiotics were a medical revolution. These life-changing medications have transformed our world.

Yet, bacteria, resilient living microorganisms, persistently evolve and refine their defenses against antibiotics, demonstrating a growing mastery in countering these drugs.

Antibiotic resistance occurs naturally, but today it is accelerating due to overuse and misuse of antibiotics in both humans and animals.

This rapid escalation poses a critical threat as an increasing number of antibiotics lose effectiveness against a wide range of dangerous bacteria, leading to a surge in fatal infections.

Moreover, antibiotics tend to accumulate in the environment, persisting for years in soils and waterways, further fueling the spread of resistant bacteria.

While most bacteria are either harmless or helpful, antibiotics lack the ability to distinguish between beneficial and harmful bacteria. As a result, they disrupt our natural microbiome, increasing the likelihood of future infections.

Currently, bacterial infections claim the lives of more than 7 million people globally each year, with 1.3 million of these attributed to antibiotic-resistant strains.

One of the most significant risk factors for acquiring an infection caused by antibiotic-resistant bacteria is receiving medical care within a healthcare facility.

According to the WHO, the most aggressive and thus highest priority bacterial pathogens include the so-called "ESKAPE" species—representing six exceptionally virulent and antibiotic-resistant bacterial species linked to elevated rates of illness and death.

Antibiotic resistance is reaching critical scale all over the world. A century after their discovery, the effectiveness of antibiotics has steadily diminished, highlighting the pressing necessity for decisive action.

THIS IS THE BEGINNING  
OF THE POST-ANTIBIOTIC ERA.

THIS IS THE BEGINNING  
OF SOMETHING NEW.



FOR A  
WORLD  
WITHOUT  
FEAR.

Lysando<sup>®</sup>

# Lysando®

## FIGHTING EVERY DAY AGAINST THE MOST DANGEROUS TYPES OF BACTERIA

Bacteria are an integral part of our existence, present from childhood through old. While most bacteria coexist harmlessly, some can turn rogue. Infections spare no one; they can affect anyone.

Antibiotics have had immense value over the past century, but their efficacy has largely worn off. Resistant strains are making infections harder to treat and increasingly life-threatening. A solution is urgently needed.

What was just a mere idea in 2009 has evolved into a technology that empowers us to regain control over harmful bacteria, even those resistant to treatment.

Artilysin®, with its unique mechanism of action, offers a powerful defense against antibiotic-resistant and persistent bacteria. Thanks to its unique mode of action, it effectively addresses even recurring, chronic infections.

When applied topically, Artilysin® swiftly reduces targeted bacteria, initiating a localized response that empowers the microbiome to support the immune system and facilitate the natural healing process.

Our approach with Artilysin® has culminated in numerous success stories, narrating remarkable transformations in the lives of individuals battling infections. These stories inspire our strong dedication to creating a world where fear fades, guiding us each day toward a future filled with health and hope.



**Markus Matuschka de Greiffenclau**  
CEO, Lysando

**At Lysando, we are treading a new path in the treatment of bacterial infections to give the world a novel tool against harmful bacteria.**



**14**

years of in-depth experience.



**305**

national patents and patent applications.



**27**

passionate minds driving our success.

**THE SOLUTION THAT PAVES THE WAY OUT OF THE BACTERIAL CRISIS.**

# Artilysin®

Artilysin® is a new antimicrobial platform technology that effectively combats bacterial pathogens across diverse applications.

Our specially engineered proteins can selectively target a broad spectrum of bacterial species, including both Gram-positive and Gram-negative strains.



ACTIVE ON RESISTANT AND PERSISTENT BACTERIA.



HELPS TO REBALANCE THE SKIN MICROBIOME.



ACTIVE IN BACTERIAL BIOFILM.



ENVIRONMENTALLY FRIENDLY.

**ARTILYSIN® PUTS AN END TO UNTREATABLE BACTERIAL INFECTIONS.**

## The Most Customizable Antimicrobial Solution

### AN ADVANCED ANTIMICROBIAL PLATFORM TECHNOLOGY

Each Artilysin® is tailored to meet specific requirements, maximizing its benefits and ensuring versatility in application.

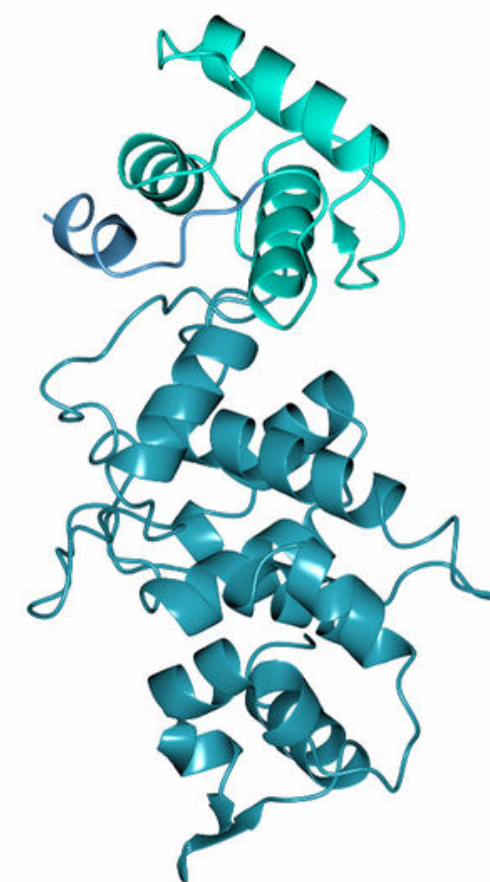
Most infections do not arise solely from bacterial colonization; they occur because of an imbalance among bacterial species.

Depending on the disease, Artilysin® does not strive to eliminate all bacteria, but rather it aims to restore the microbial balance by suppressing pathogens.

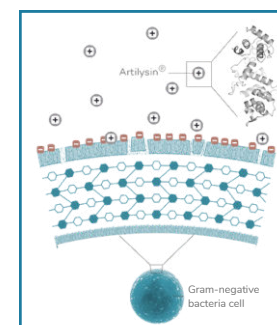
For instance, in cases of chronically infected wounds that do not respond to conventional treatments, Artilysin® offers a unique solution as a spray. It can effectively target multiple harmful bacterial species while preserving the beneficial ones.

Thanks to its unique mechanism, Artilysin® is effective against resistant germs, offering aid to patients infected by these strains. Persistent bacteria are also targeted, reducing the likelihood of recurrent infections.

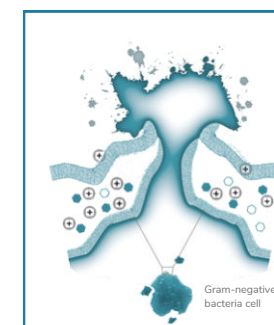
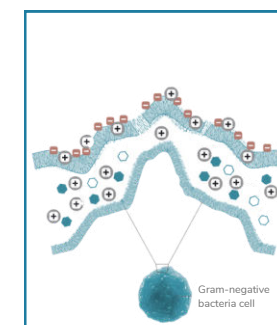
In light of our database with more than 450 prototype molecules, even the ESKAPE pathogens no longer pose an untreatable threat to humanity.



### HOW ARTILYSIN® WORKS



Artilysin® penetrates the outer membrane of Gram-negative bacteria, subsequently destabilizing the bacterial cell wall.



Due to this destabilization, the cell wall can no longer withstand the high osmotic pressure, leading to the bursting of the bacterial cell.



"Staphylococcus aureus is a major therapeutical challenge in patients with atopic dermatitis. Targeting those pathogenic germs with Artilysin® and to thereby help rebalance the natural human skin microbiome is a true innovation for the good of the patient."

Priv.-Doz. Dr. med. Wolfgang G. Philipp-Dormston

"Two weeks after the treatment my wife is physically & mentally better than she has been for 3 years!"

## Christa Ostertag - Dancing With Joy

Dancing with her husband used to bring immense joy to Christa's life.

But that all changed when the 78-year-old began suffering from atopic dermatitis (eczema), which was particularly severe on her hands.

Despite trying traditional treatments, Christa's pain intensified over the years, impacting her daily life and causing symptoms such as sensitivity to touch, flaky skin, thickened leathery patches, and persistent eczema.

When Christa's husband discovered Lysando, he contacted us promptly, sharing details of Christa's symptoms and the devastating impact her condition had. We were thrilled to be able to offer Christa some hope.

Working in collaboration with Christa Ostertag's physician, the Lysando Team facilitated access to an Artilysin® prototype spray.

In just 13 days, there was a significant improvement in Christa's symptoms, with her itchiness, redness, and eczema all beginning to subside.

At the end of her treatment, Christa was not only free from the pain and distress that had blighted her life for so long, but she had also regained control over her hands. She could dance with her beloved husband once again.



# Lysando<sup>®</sup>

Our current endeavours aim to positively influence people's lives through impactful projects:

## Human Pharma Projects



**CHRONIC WOUND INFECTIONS**



**ATOPIC DERMATITIS/ ECZEMA**



**URINARY TRACT INFECTION (UTI)**

## Beyond Pharma



**ACNE TREATMENT**



**BOVINE MASTITIS**



## We Strive to Make a Difference

We believe that every person has the right to live a fulfilled life. With our novel Artilysin<sup>®</sup> technology, we help everybody to live a better and fearless life. Our mission extends beyond promoting health and hope; it empowers individuals to live freely and take control of their own health, thereby fostering a better quality of life.

By prioritizing the quality of life of every individual, we want to help create a humane world. This is how we work every day - at Lysando we strive to make a difference for you.

## Shaping a Healthier Future Together

We are working intensively on various projects with our partners to bring life-enhancing solutions to the market as quickly as possible.

What began as a mere idea, envisioning a novel approach to safeguard individuals from bacterial infections, has now evolved into multiple effective prototypes well on their way to becoming market-ready products.

Throughout this transformative journey, physicians have helped people with various compassionate use cases applying our molecules and our self-developed product Medolysin<sup>®</sup> Wound spray for chronic wounds, giving people new hope for a healthy life in the future.

Our achievements are the result of collective teamwork, as we bundle our strengths and focus on our core competencies. By thinking outside the box, we create new perspectives and different angles. We always go the extra mile to reach a world without fear of harmful bacteria.



**We are Lysando—  
leaving a lasting impact  
on people's lives.**

**EMPOWERING PEOPLE**

**WANT TO  
LIVE IN A  
FEARLESS  
WORLD?**

**JOIN US—  
SPREAD THE WORD.**



Sources

- Fighting Antibiotic Resistance in Hospital-Acquired Infections: Current State and Emerging Technologies in Disease Prevention, Diagnostics and Therapy, Front. Microbiol., Volume 12 - 2021
- Antibiotic Resistance: World Health Organization, July 2020, who.int.
- Global mortality associated with 33 bacterial pathogens in 2019: a systematic analysis for the Global Burden of Disease Study 2019; GBD 2019 Antimicrobial Resistance Collaborators, DOI: [https://doi.org/10.1016/S0140-6736\(22\)02185-7](https://doi.org/10.1016/S0140-6736(22)02185-7)

Lysando<sup>®</sup>

A biopharmaceutical company at the forefront of antimicrobial technology. We aim to create a world without fear of harmful bacteria, empowering individuals to live better and longer lives.

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