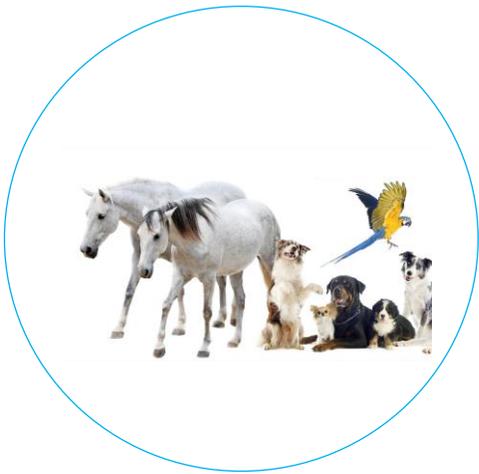




UniPharma
Group



**Introducing
Medical Innovations
for Wound Care in Animals**



A new innovative dimension for open wound treatment for Animals by eliminating the Biofilm (Non-Pharmacological)

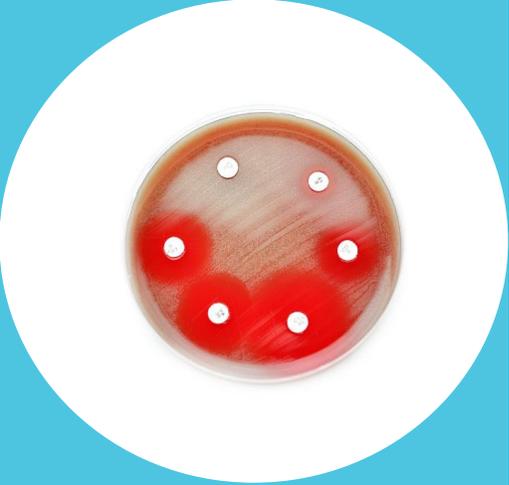
Our mission is to help solve the issue of anti-microbial resistance in open wounds, prevent suffering, treat animals rapidly, prevent scarring, relieve pain and odours effectively with substantial cost savings.

INTRODUCING



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Anti-microbial resistance: a global public and animal health problem

Anti-microbial resistance (AMR) has become one of the biggest threats to global health and endangers other major priorities, such as human and animal development.

Both antibiotics and antiseptics have been found to contribute to antimicrobial resistance (AMR). New studies by Public Health England show that antiseptics trigger tolerance mechanisms in bacteria, which cause the bacteria to become permanently resistant to both antiseptics and antibiotics and these changes occur within days, not years (Wand et al. 2017; Shepherd et al. 2018). Antiseptics therefore create resistant strains within the individual patients, leaving these patients resistant to an array of antiseptics and antibiotics. They furthermore accelerate the development and spread of resistant strains in hospitals and in the environment as these highly stable compounds often are released into nature.

Biofilm – protects bacteria from attack and causes infection of the wound

**THE
PROBLEM**



Antibiotic resistance can affect any animals, of any age, anywhere.

THE PROBLEM



Antibiotic resistance is one of the biggest threats to global health, food security and development today.



A growing number of wound infections are becoming harder to treat as antibiotics used to treat them become less effective.



Antibiotic resistance occurs naturally, but misuse of antibiotics in humans and animals is accelerating the process.



Antibiotic resistance leads to longer veterinarian hospital stays or treatment, higher medical costs and increased mortality of the animal.



Eliminating the biofilm on a wound is one of the most difficult problems to overcome in wound treatment

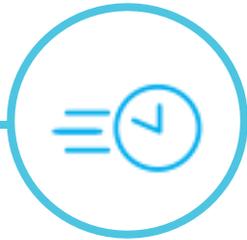


Pathelen® Hybrid Vet is a Class I Medical Device (CE), specifically designed and developed for the prevention and treatment of multi-resistant bacteria (e.g. MRSA) in open wounds. Vially, bacteria are unable to develop resistance to it, contrary to all antibiotics designed to perform a similar function.

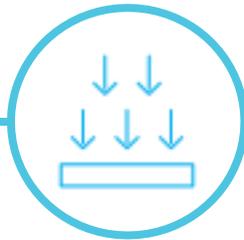
Pathelen® Hybrid Vet eliminates most external bacteria wound infections within 5-10 days in most cases, for example, when preparing for a wound closure surgery or enhancing growth of granulating tissue on the treated wound.

THE SOLUTION

Very fast acting



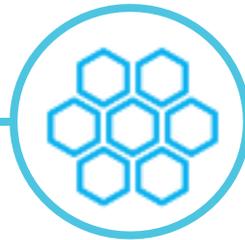
No systemic absorption
(not absorbed into the body)



Pure and natural ingredients
(Doping test safe)



Antimicrobial-resistant safe



No known side effects
No known cytotoxicity
(not toxic to cells)
Wound dressing does not stick to wound when taken off

Very safe.
Can be safely used on all animals including pregnant and new-born animals

Reduces Scarring

Common problems with animals with open wounds are

- Rapid destruction of tissue
- Slow detorsion of a wound
- Increase of infectious and inflammatory process (SIRS, sepsis)

The unique effect of Pathelen® Hybrid Vet is achieved through various simultaneous complex mechanisms of

- Removal of the biofilm
- Elimination of all germs in the wound
- Sorption of wound exudate
- Preparation of a physiological wound environment with granulating tissue
- Protect the wound against new germs

Eliminates the need for detoxification and systemic antibiotic therapy, even in cases of multi-preparation resistant wound microflora.



TREATMENT AND PREVENTION

Reduces
Need of long-term care time
General recovery time and for competitions
Risk of putting down the animal
Financial impact
Therapy time



SUBSTANTIAL COST SAVINGS



PRIOR SURGERY WOUND
PREPERATION & ALL POST
OPERATIVE WOUNDS

FUNGATING LEGIONS
PRESSURE SORES
DECUBITUS ULCERS
TRAUMATIC WOUNDS
BURN WOUNDS
EXUDATING WOUNDS
CHRONIC WOUNDS



PREVENTION



Infection prevention



Infection treatment



TREATMENT

TRAUMATIC WOUNDS
BURN WOUNDS
EXUDATING WOUNDS

INSECT BITES
MRSA/ MDR /ESBL
INFECTED WOUNDS
ABSCESSSES AND CYSTS (AFTER OPENING)

THE BENEFITS OF PATHELEN® HYBRID VET

For Open Wound Treatment



Based on highly dispersed silicas that have high absorptive, anti-inflammatory properties and supports the healing process.



Helps eliminate the biofilm



Can be used in different fields of practical medicine for the treatment of diseases.



Affinity of proteins in comparison to antibiotics. Antibiotics neither helps topically nor systematically with chronic wounds.

It has a unique healing effect by agglutinating (clump together) microorganisms which have protein molecules on the surface.



Proven by factual and strong evidence, licenses and personal testimonials



Highly accelerated healing time and dressing does not stick to the wound
It eliminates most bacterial and fungal wound infections **within an average of 5-10 days**

BENEFITS FOR ANIMAL WOUND TREATMENT

SOLVING A NATIONAL & GLOBAL PROBLEM

How Pathelen® Hybrid Vet can help

Can be used in remote locations

Takes a lot of pressure off any Pet, horse or commercial animal owners

High reduction of putting down animals

Considerably reduces operations caused by chronic wound infections

Reduces post-op infections

Less training and staff cost due to low skill application

Substantially reduces death rates caused by infections

Reduces the financial impact





**PATHELEN®
HYBRID VET
POWER**

Pathelen® Hybrid Vet is a more effective and powerful replacement for all other currently available antimicrobial wound treatment devices.

Pathelen® Hybrid Vet eliminates the shortcomings of other products by creating:

- A universal **hydrophilic-hydrophobic** composition with a highly sorptive and detoxifying effect
 - Hydrophobic molecules and surfaces repel water
 - Hydrophilic molecule or portion of a molecule is one whose interactions with water and other polar substances

Pathelen® Hybrid Vet is accessible:

- Pathelen® Hybrid Vet can be administered **without the need for specialist training**
- It can be used in remote locations where healthcare provision may be sparse
- It can be stored easily

Pathelen® Hybrid Vet significantly reduces the quantity of infectious complications of pressure ulcers including:

Bacteremia



Sepsis



Abscesses



INGREDIENTS DESCRIPTION

Aerosil 300 Pharma

Is a high purity amorphous anhydrous colloidal silicon dioxide for use in pharmaceutical products (tested according to USP/ NF, Ph Eur. Monograph 0434 and JP).

Applications: Pharmacy, especially solid dosage form and emulsion

Properties:

- Used as viscosity increasing agent to thicken and thixotropize liquids
 - Improves storage and temperature stability of semi-solid and liquid dosage forms
 - Improves distribution of active pharmaceutical ingredients
 - Desiccant for moisture-sensitive actives
 - Free flow and anti-caking agent to improve powder properties
-

Is a high purity, amorphous, hydrophobic colloidal silica for use as an excipient in pharmaceutical products (tested according to Ph. Eur. and USP/ NF monographs)

Applications: Pharmacy, especially semi-solid and liquid dosage form

Properties:

- Glidant for improving powder flow, especially suitable for very hygroscopic and/or cohesive powders
 - Viscosity adjuster for thickening and non-polar pharmaceutical oils
 - Stabiliser for water in oil (w/O) emulsion
 - May be used to adjust release behaviour of active ingredients
-

Also known as BZK, BKC, BAK, BAC, alkyldimethylbenzylammonium chloride and ADBAC, is a type of cationic surfactant. It is an organic salt classified as a quaternary ammonium compound. It has three main categories of use:

- As a biocide
- A cationic surfactant
- A phase transfer agent

Doping Safe

The ingredients are not regulated by the International Doping Agency or FEI.

Aerosil R972 Pharma

Benzalkonium Chloride

MARKET COMPETITORS

Although Pathelen® Hybrid Vet is a powder, it has completely different properties compared to all currently available wound powders on the market. When Pathelen® Hybrid Vet comes into contact with the wound exudate, it transforms into a gel-like substance.

An ordinary wound gel only creates a moist wound environment but does not eliminate enough bacteria and biofilms to ensure a fast-healing process or wound healing at all.

Pathelen® Hybrid Vet creates a germ-free wound with granulating tissue independent of the state or the immune system.

We have researched the market and there is no direct competition to Pathelen® Hybrid Vet, as we are the only product that can safely eliminate the Biofilm.

All our claims are backed up with hundreds of case studies and also numerous testimonials



Infected wound

APPLICATION PROCESS



Step 1

Remove any bandages, plasters etc.



Step 2

Apply antiseptic



Step 3

Dry the wound surface with sterile gauze



Step 4

Shake the 50 ml bottle for 10 seconds (the powder will grow in density)



Step 5

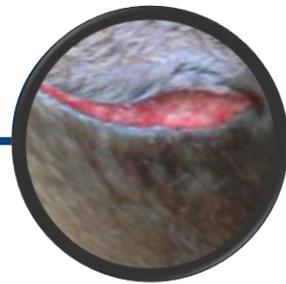
Apply Pathelen® Hybrid Vet in a uniform layer with a thickness of 3 to 5 mm directly on wound or onto dressing for vertical application.

Approx 36 days later

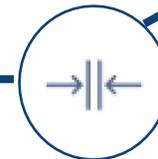


Rapid recovery expected

5 days later



Infection eliminated. Terminate treatment and continue with recovery.



Step 6

Add further treatment following point 1 to 5 after 24 hours.

ANIMAL CASE STUDIES

Pathelen® Hybrid Vet is a new product for the Veteranarian market, as a new safe solution to treat animal wounds.

There have been hundreds of human studies all with 100% success rate using Pathelen® Hybrid Vet.

We are currently conducting case studies in various European countries and will publish the results in due course.

In the meantime, we will also conduct case studies in the UK.

We are confident, that the results will be as positive as with human case studies, as the biofilm problem and all other principles are the same.



HUMAN CASE STUDY

Examples

Patient: Anonymous, 55 y.o.

Injury:

Diagnosis : Avulsion injury of the right side of face. Injury resulted in the loss of tissue on the right side of face. There was complete loss of cheek tissue as the cheek wound communicated with the oral mucosa.

Wounds were required to granulate and or were required to heal by secondary intention with epithelialization.

Local treatment:

Selected wounds were thoroughly cleaned with Savlon and copiously irrigated with saline. Pathelen was applied to the wound. Vaseline gauze was applied to hold the Pathelen in place, dry gauze was applied, and wound was bandaged lightly with gauze bandage. Dressing was changed every 48 hours.

By day 10 of Pathelen dressings the wound had filled up with granulation tissue with remarkable wound contraction. As a result, will not require the use of a flap to cover the wound she will require a simple split thickness skin graft to cover the wound.



HUMAN CASE STUDY

Examples

Patient: Jacob A., 28 y.o.

Injury:

Diagnosis : open right leg injury, debridement and external fixation done on same-day admission. Extensive laceration over the dorsum of the foot with foul odour, exudate and heavy slough over the surface of the wound

The wound was initially cleansed with normal saline and covered with iodine solution. Unfortunately, wound healing process was slow.

Local treatment:

The wound was cleansed with normal saline and Pathelen WoundPowder was applied onto the wound.

Dressing changes were done daily, and the wound showed drastic improvement within few days. There was no foul odour and no discharge



HUMAN CASE STUDY

Examples

Patient: Z.V., male, 68 y.o.

Diagnosis:

Type 2 diabetes mellitus, diabetic foot syndrome neuroischemic form; wound infection of the left foot after amputation of fingers Case relevant history: Ischemic heart disease Hypertensive heart disease; Heart failure Atrial fibrillation is a permanent form

Microflora:

Staphylococcus aureus Staphylococcus epidermidis Enterococcus faecium

Blood tests:

White blood cells (WBCs): $8,0 \times 10^9 / l$ Banded neutrophils – 8%. On the lateral surface of the left foot was observed infected wound sized 9 x 3 cm



Infected Wound



Wound was covered with 3-5 mm layer of Pathelen Hybrid and covered with antiseptic bandage



After 26 days 70% of the wound is healed, is clean and actively epithelialised

Pathelen® Hybrid Vet contains a unique patented formula, which when shaken for 15-20 seconds will grow visibly in density by more than 20 times, creating the advanced sorption property and filling the bottle content.

This change is clearly visible inside the bottle.

THIS REACTION CANNOT BE COPIED!

**COUNTERFEIT
SAFE**

Pathelen® Hybrid Vet is a development of Pathelen Health Care AG Switzerland.

Led by Chief Scientist and CEO, Andreas Tausch, the company has developed Pathelen® Hybrid Vet over several years. The development was made in close cooperation with various universities and hospitals. Pathelen® is protected by several patents and further products of the product family are under development.



Could you imagine a world without Pathelen® Hybrid Vet?



**DISTRIBUTING
MEDICAL INNOVATIONS
FOR WOUND CARE
PRODUCTS**

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