

# **TWYDIL® RANGE**

## **a scientific overview**



**TWYDIL®**  
RESEARCH, QUALITY AND HORSE SENSE

**Dr Brieuc de Moffarts**

**Director R&D**

**Responsible for the quality control**



# TWYDIL® SPECIFICITIES...



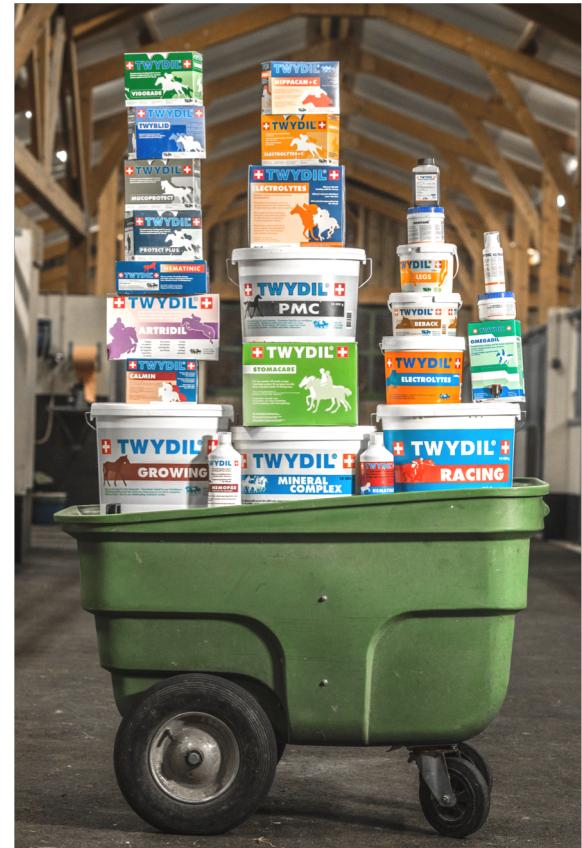
Proven results with scientific studies

Guaranty of content till expiry date

Unequalled antidoping control

For more than 50 years TWYDIL® has developed a consistent range of :

- daily base supplements
- specific purpose supplements
- external use products



The TWYDIL® range is based on years of research. Every product is continuously improved but keeps the same name. Instead of launching a new product by means of a noisy marketing, our policy is to enrich our formulas in the course of the evolution of science.

# DAILY BASE SUPPLEMENTS

- TWYDIL® COURSE / RENNSTALL

- Contains

- ✓ 14 vitamins
- ✓ 7 trace elements
- ✓ 4 amino acids
- ✓ magnesium

**NEW palatable formula**

*The best way to assure  
an optimal metabolism  
linked to effort*



# DAILY BASE SUPPLEMENTS

- TWYDIL® COURSE / RENNSTALL
- History:
  - ✓ Named ELYSINE
  - ✓ Incorporation of vitamins, trace-elements and magnesium to correct feed imbalance (oat + hay)
  - ✓ Incorporation of methionine and threonine
  - ✓ Rebalancing of the product in order to stabilize blood levels of nutriments into the plasma during entire season on top of a complete feed
  - ✓ ...



# DAILY BASE SUPPLEMENTS

- *TWYDIL® ELEVAGE / GESTÜT*
- *Contains*
  - ✓ 15 vitamins and pro-vitamin A
  - ✓ 7 trace elements
  - ✓ 1 amino acid
  - ✓ Magnesium
  - ✓ Prebiotic complex



**NEW formula with beta-carotene**

- *The best way to assure fertility, optimal gestation, quality colostrum and milk production*

# DAILY BASE SUPPLEMENTS

- *TWYDIL® ELEVAGE / GESTÜT*

- *History:*

- ✓ *Updated formula*
- ✓ *Incorporation of prebiotics*
- ✓ *Incorporation of beta-carotene*



# DAILY BASE SUPPLEMENTS

- **TWYDIL® GROWING**

- *Contains*

- ✓ 14 vitamins
- ✓ 7 trace elements (diversified sources)
- ✓ amino acids (selected forms)
- ✓ Magnesium
- ✓ Prebiotics and Probiotics



**TO BE USED ALSO DURING  
BREAKING-IN**

- *The best way to assure optimal growth, health and development of the digestive system*

Latest generation TWYDIL® product

# DAILY BASE SUPPLEMENTS

- **TWYDIL® BEBACK**
- *Solution for old horses and horses in convalescence*
- *The best way to assure optimal recovery and well-being.*



**It's not only vitamins and trace elements, but also :**

**Prebiotics and probiotics**

**Collagen fractions**

Latest generation TWYDIL® product

# DAILY BASE SUPPLEMENTS

- *TWYDIL® ELECTROLYTES*
- *Contains*

✓ Na  
✓ Cl  
✓ K  
✓ Mg  
✓ Ca

## Electrolytes and their roles:

- Stimulation of drinking (rehydration and renal function)
- Neuronal regulation of nerve impulse (nerves function, electric load balance and proprioception)
- Regulation of muscular contraction-relaxation sequences (lack of electrolytes => myopathies)
- Participation in the coagulation



# DAILY BASE SUPPLEMENTS

- *TWYDIL® ELECTROLYTES*

- *History:*

✓ *Incorporation of anion gap*

✓ *First product including Palatinose*



# DAILY BASE SUPPLEMENTS

- *TWYDIL® PMC*
- Contains
  - ✓ MFP
  - ✓ Ca
  - ✓ 20% collagen
  - ✓ GAG
  - ✓ MSM
  - ✓ Trace elements



**Don't forget: 3 periods  
of supplementation**

*6 months to 18 months*

- *3 first months of training*
- *1 to 3 months in case of injury or surgery*

Latest generation **TWYDIL®** product

# DAILY BASE SUPPLEMENTS



**TESTED IN VITRO and IN VIVO**

- effect on bones
- tendons
- cartilages



Latest generation TWYDIL® product

# DAILY BASE SUPPLEMENTS

- **TWYDIL® MINERAL COMPLEX**

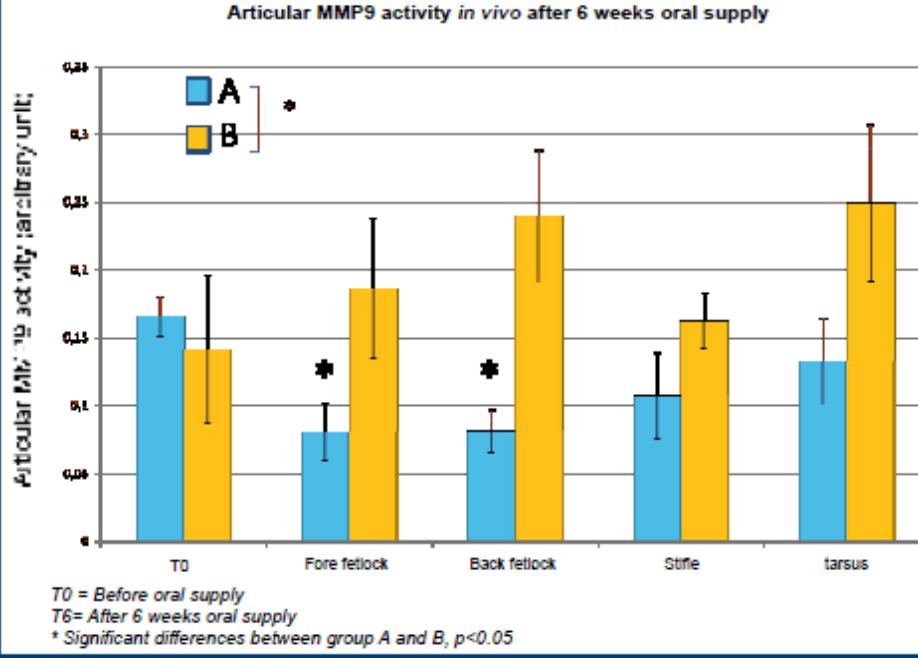
- *Contains*

- ✓ 17 g Ca / 80 g
- ✓ 10 g NaCl / 80 g

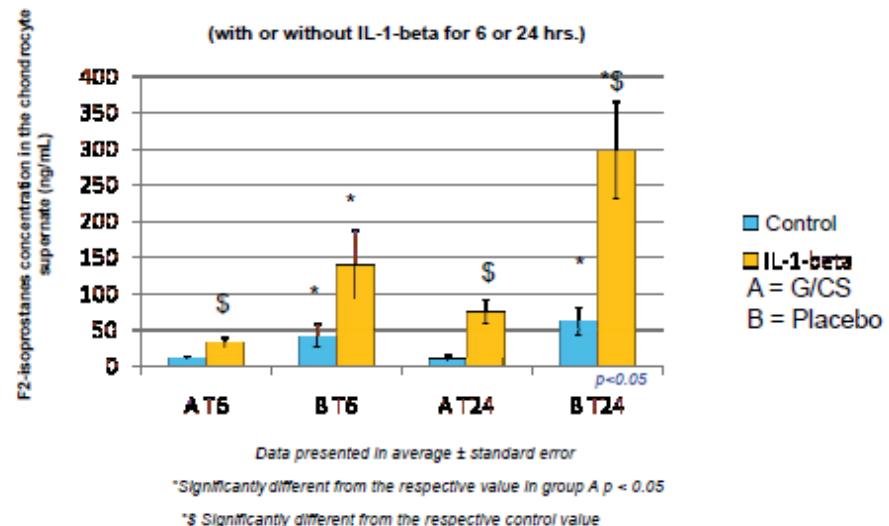
- *Nutritional approach to restore the Ca/P ratio in the ration*
- *3 different sources of calcium*



# SPECIFIC USE SUPPLEMENTS



***ex vivo* F2-isoprostanes in the chondrocyte supernatant from horses first orally supplied with the feed complement**



# SPECIFIC USE SUPPLEMENTS

- **TWYDIL® ARTRIDIL**

- *History:*

- ✓ *Updated formula*
- ✓ *Incorporation of Palatinose*



# SPECIFIC USE SUPPLEMENTS

- **TWYDIL® CALMIN**

- *Contains*

- ✓ Vitamin E
- ✓ Mg
- ✓ L-tryptophan
- ✓ Prebiotics
- ✓ ...



*Contributes to reduce sensitivity and improves muscles and guts well-being*

# SPECIFIC USE SUPPLEMENTS

- **TWYDIL® CALMIN**

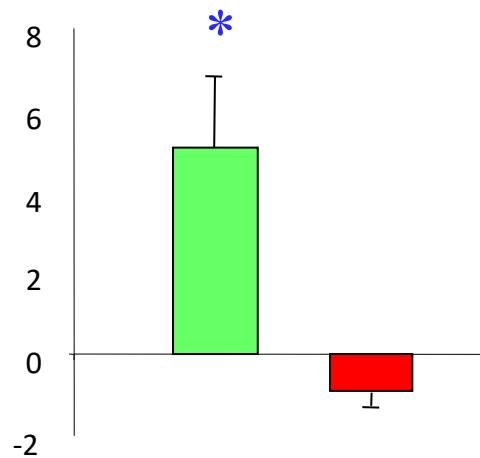
- *History:*

- ✓ *Updated formula*
- ✓ *Incorporation of prebiotics and vitamin E increase*
- ✓ *Incorporation of Palatinose*

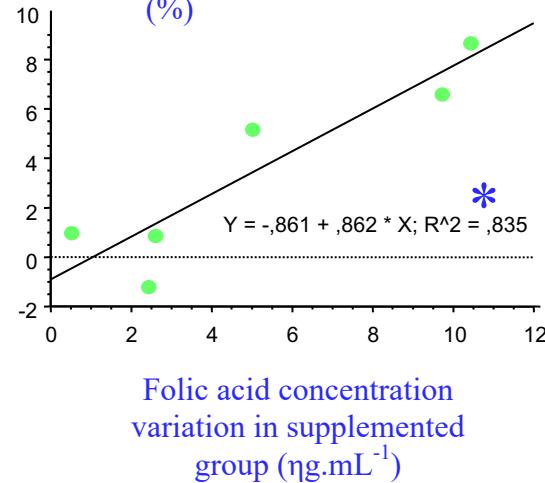


# SPECIFIC USE SUPPLEMENTS

Folic acid concentration variation  
( $\text{ng.mL}^{-1}$ )



Haematocrit variation  
in supplemented group  
(%)



For an anaemic horse we observed that the PCV increased by 2-3% after 10 days of supplementation.

Latest generation TWYDIL® product

# SPECIFIC USE SUPPLEMENTS

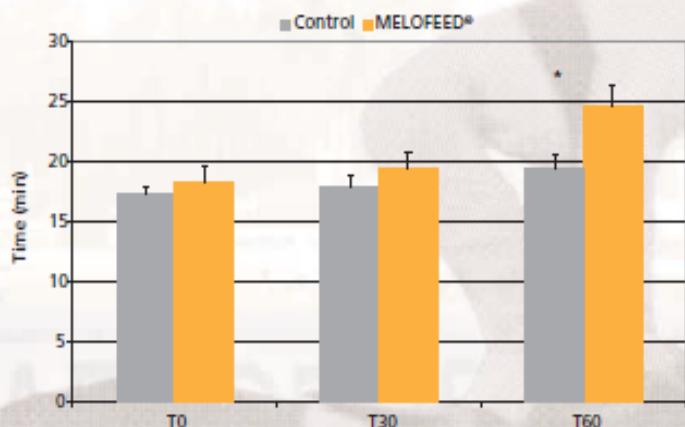
- **TWYDIL® HEMATINIC**
- *History:*

- ✓ Latest generation TWYDIL® product
- ✓ Vitamin E increase
- ✓ Incorporation of SOD
- ✓ Lowered cobalt level responding to new doping thresholds



# ENRICHED TWYDIL® HEMATINIC WITH SOD

- Increases blood resistance to hemolysis: improves muscle cells membrane protection and supports plasmatic antioxidant defenses.

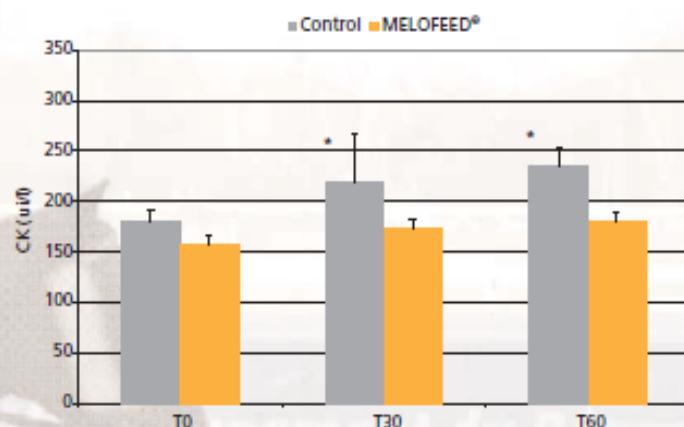


*Evolution of plasma resistance to haemolysis (KRL test).*

*N = 12 control trotters*

*N = 12 MELOFEED® trotters before (T0), 30 and 60 days after supplementation.  
(Notin et al., 2010)*

- Increases horse resistance to training by decreasing cell membrane permeability (CPK as a marker of muscle integrity).

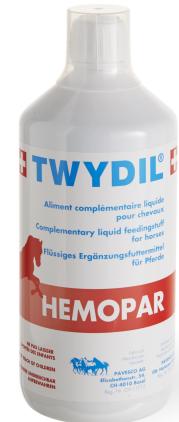


*Evolution of the resting plasma CK creatine kinase activity in MELOFEED® and control groups (similar data for post-exercise).*

*(Notin et al., 2010)*

# SPECIFIC USE SUPPLEMENTS

- *TWYDIL® HEMOPAR*
  - ✓ *Aids appetite*
  - ✓ *Maintains good liver function*
  - ✓ *Improves detoxification and well-being*
  - ✓ *In favour of good haematological parameters*



# SPECIFIC USE SUPPLEMENTS

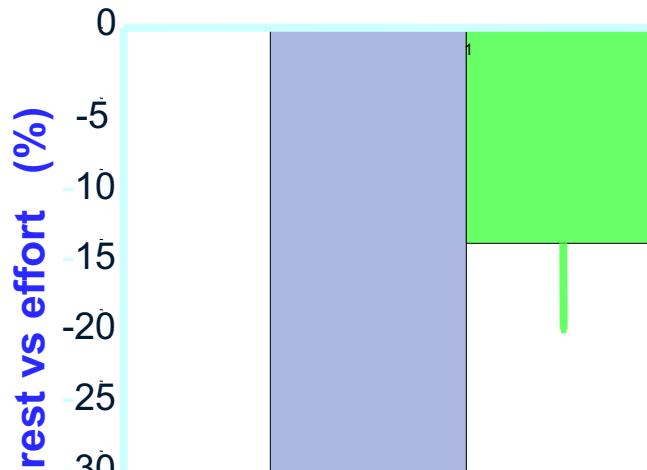
- **TWYDIL® HEMOPAR**
- *History:*
  - ✓ Sophisticated composition
  - ✓ Addition of B-group vitamins
  - ✓ Addition of prebiotics



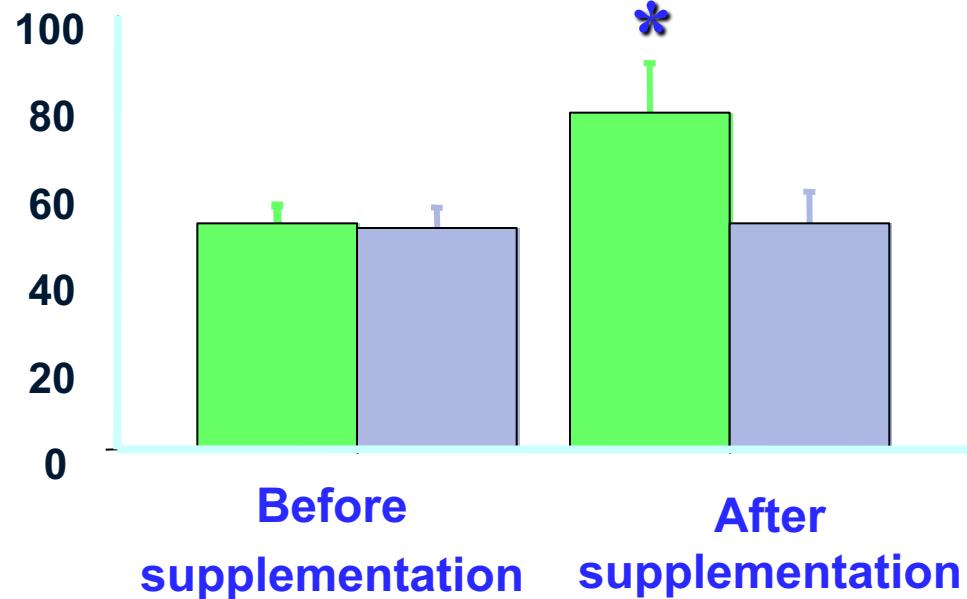
Latest generation TWYDIL® product

# SPECIFIC USE SUPPLEMENTS

Interferon beta BAL



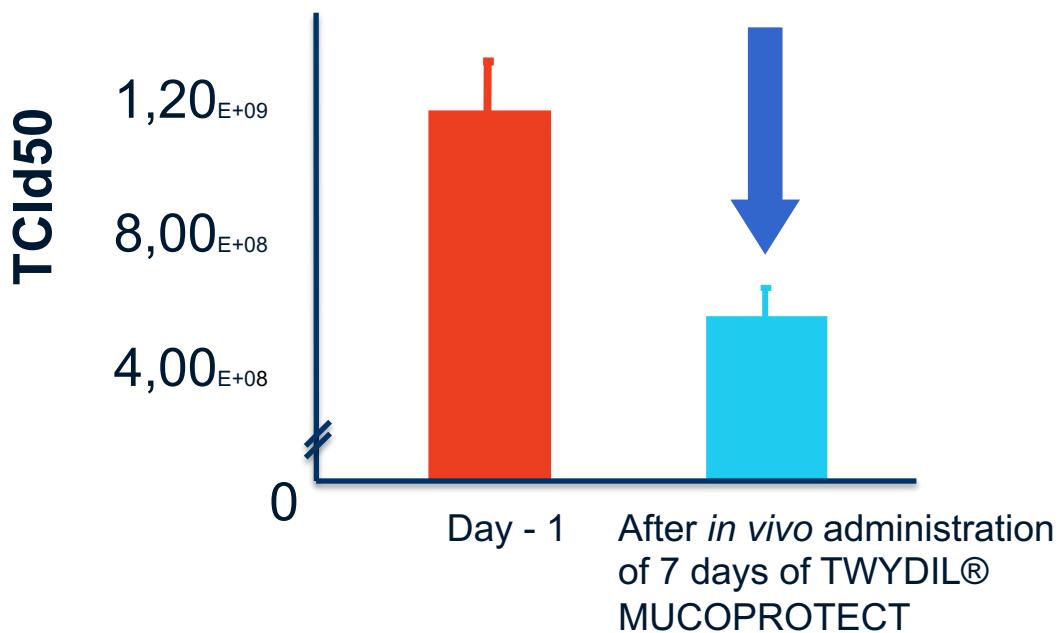
TTF/lactate ( $s.(mmol/L)^{-1}$ )



■ supplemented  
■ placebo

# SPECIFIC USE SUPPLEMENTS

reduction of  
56% EHV-1



## BEST PREPARATION

- The only anti-viral in equine market
- Improves immunity
- Improves training
- Delays fatigue

Latest generation TWYDIL® product

# SPECIFIC USE SUPPLEMENTS

## TWYDIL® OMEGADIL

promotes lung defenses:

- Improves ciliary mobility
- Decreases latent inflammation
- Increases the capacity of macrophages
- Increases immunity

**INFLAMMATION**

**MICRO-CIRCULATION**



## TWYDIL® OMEGADIL

promotes endurance:

- Decreases the latent inflammation
- improves red blood cell fluidity
- maintains lower heart rate frequency

Latest generation TWYDIL® product

# SPECIFIC USE SUPPLEMENTS

## TWYDIL® OMEGADIL

promotes joint defenses:

- Decreases latent inflammation
- Increases ECM resistance and functionality



**INFLAMMATION**

**MICRO-CIRCULATION**

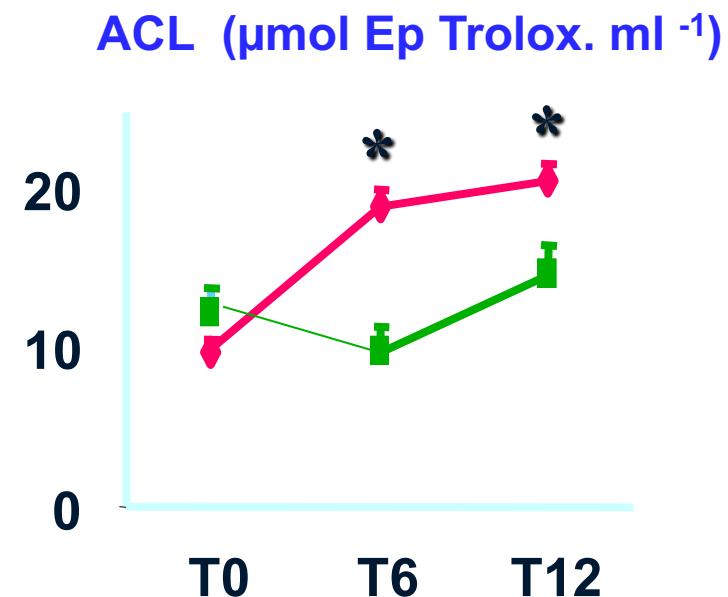
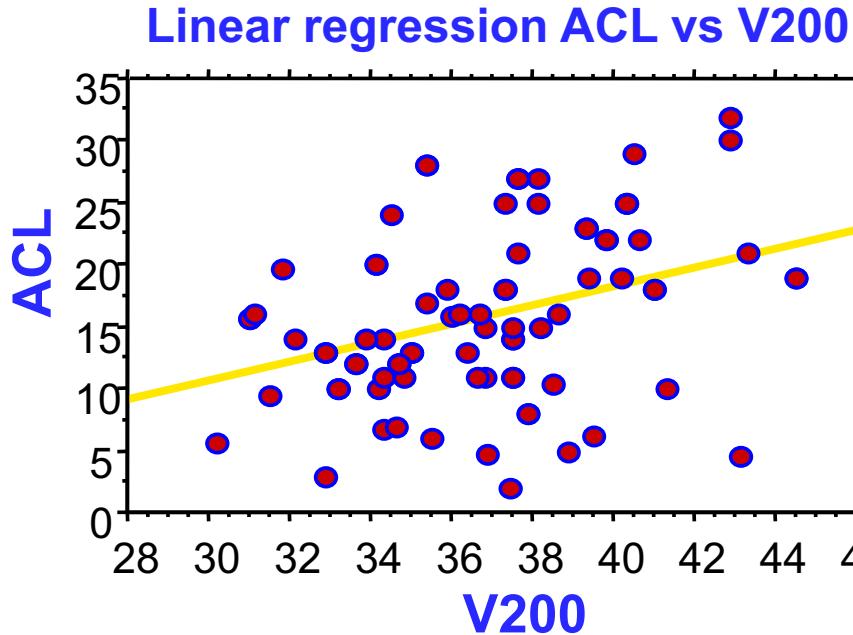
## TWYDIL® OMEGADIL

promotes fertility:

- Decreases the latent inflammation
- Improves ciliary mobility
- Improves freezability

Latest generation TWYDIL® product

# SPECIFIC USE SUPPLEMENTS



# SPECIFIC USE SUPPLEMENTS

- *TWYDIL® PROTECT PLUS*

- *Manages*

- ✓ *Oxidative stress*
- ✓ *Muscle tonicity*
- ✓ *Muscle soundness*
- ✓ *Race preparation*



# SPECIFIC USE SUPPLEMENTS

- *TWYDIL® PROTECT PLUS*

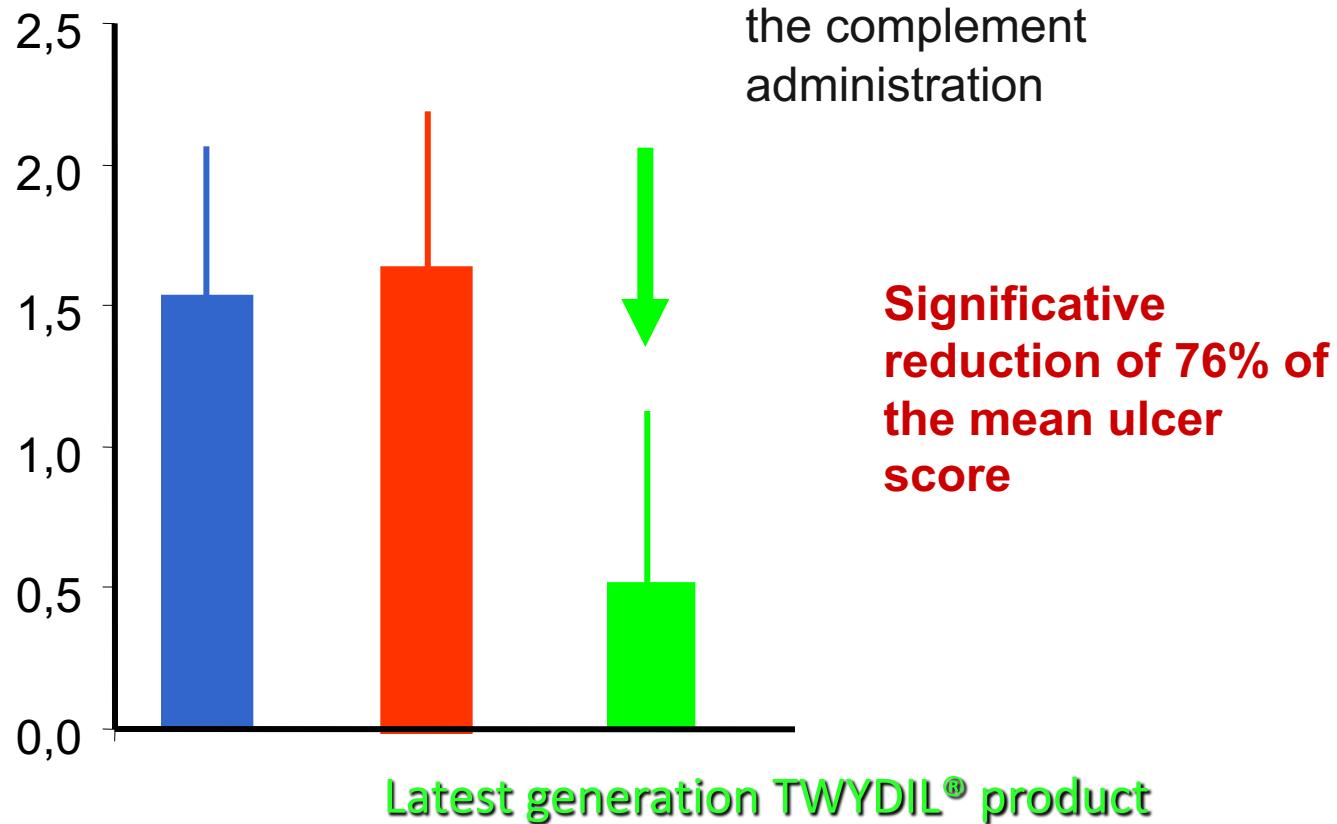
- *History:*

- ✓ *Updated formula*
- ✓ *Addition of vitamin C and L-carnitine*
- ✓ *Addition of whey protein*
- ✓ *Addition of glutathione precursor*
- ✓ *Addition of Palatinose*
- ✓ *Test on Lipoic acid (2001) and CoQ10 (2003) with significant effect alone but no increase of product efficacy*



# SPECIFIC USE SUPPLEMENTS

## Evolution of the ulceration score by gastroscopy



- Situation before supplementation
- Situation after 15 days of placebo administration
- Situation after 15 days of the complement administration



# SPECIFIC USE SUPPLEMENTS

- **TWYDIL® TWYBLID**

- *Manages*

- ✓ Oxidative stress
- ✓ inflammation
- ✓ Viral infection
- ✓ Race preparation for bleeders



# SPECIFIC USE SUPPLEMENTS

- **TWYDIL® TWYBLID**

- *History:*

- ✓ *Updated formula*
- ✓ *Addition of Rutin*
- ✓ *Addition of antiviral active principle*
- ✓ *Addition of Palatinose*



# SPECIFIC USE SUPPLEMENTS

- **TWYDIL® VIGORADE**

- ✓ *Krebs cycle vitamins*
- ✓ *Improves recuperation*
- ✓ *Race preparation*



# SPECIFIC USE SUPPLEMENTS

- **TWYDIL® VIGORADE**

- *History:*

- ✓ *Updated formula*
- ✓ *Addition of prebiotics*
- ✓ *Addition of bromelain*
- ✓ *Addition of palatinose*



# COSMETOLOGY

- *TWYDIL® 4LEGS*

- *Contains*

- ✓ Zinc oxide (15%)
- ✓ Calendula (6%)
- ✓ Thymol (1.5%)
- ✓ Kaolin (22%)
- ✓ ...



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# COSMETOLOGY

- **TWYDIL® HOOFCARE**
- *Updated formula*
- *Contains*
  - ✓ *Lanolin*
  - ✓ *Paraffin*
  - ✓ *Petrolatum*
  - ✓ *Beeswax*
  - ✓ *Spirulina extract*
  - ✓ *Vitamin E*
  - ✓ ...



# COSMETOLOGY

- *TWYDIL® GEL MEMBRE and TWYDIL® LIQUIDE MEMBRE*



- *Contains*

✓ I

✓ KI

✓ Alcohol

✓ ...



# COSMETOLOGY

- **TWYDIL® CUTAGEL**

- *Contains*

- ✓ *Spirulina extract (spirulan)*
- ✓ *Tea tree essential oil*
- ✓ *Lavender essential oil*



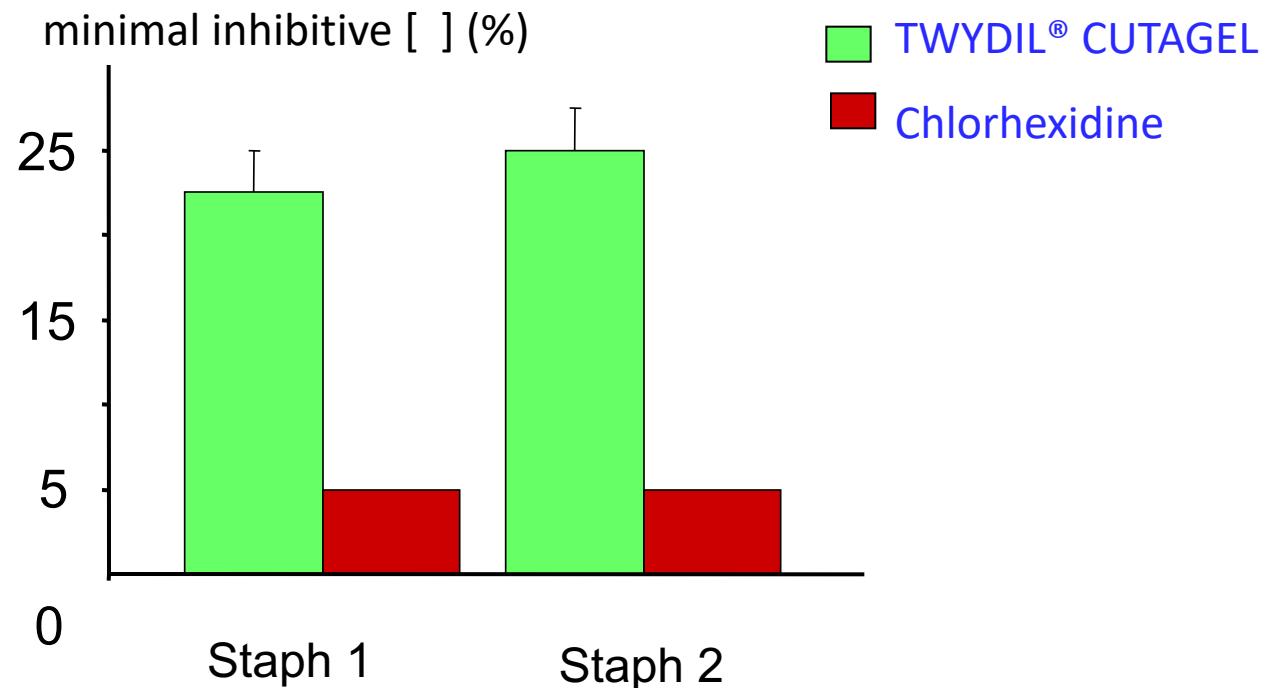
Latest generation TWYDIL® product

# COSMETOLOGY

## Antibacterial activity:

2 different *Staphylococcus aureus* were sampled from equine infected wounds.

Incubated in liquid media in order to determined a minimal inhibitive concentration.



# COSMETOLOGY

## Evaluation of efficacy in equine

Case n° 9



# COSMETOLOGY

Evaluation of efficacy in equine



D0

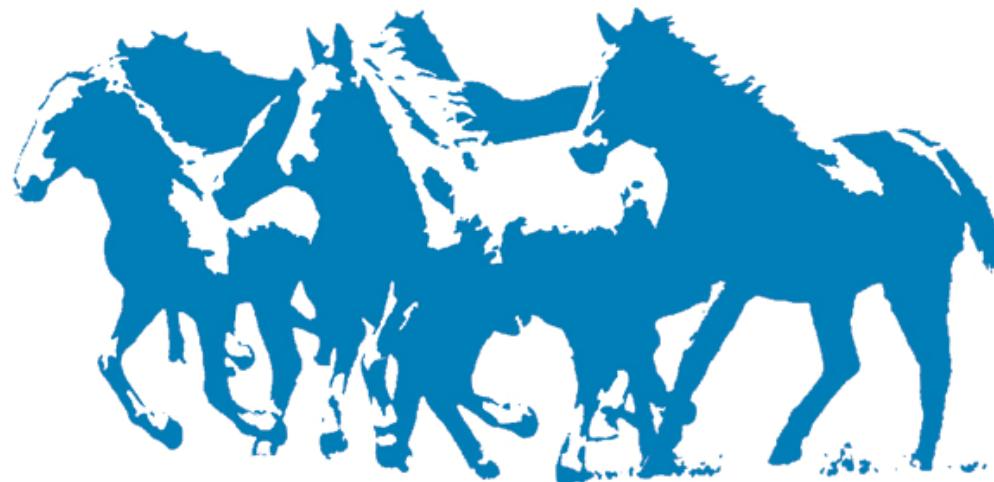


D+7



D+27





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