

HQP23 LATAM

The IDAL Way Today and Tomorrow

Rika Jolie

Global Head -Swine Business Unit at Merck Animal Health

Michael Swern

Director Device Technologies - Swine Business Unit at Merck Animal Health

We are present in the main categories of swine vaccines



UP TO 4 AT ONCE

From 1 to 4 immunizations in just 1 administration

Now the vaccination plan can be easily adapted to each farm's needs.

Simultaneous administration of MSD Animal Health's intradermal vaccines to get quadruple protection against major swine pathogens.

Up to 4 at once

From 1 to 4 immunizations in just 1 administration



- Flexibility
- Convenience
- Welfare

Simultaneous administration of MSD Animal Health's intradermal vaccines to get a quadruple protection against major swine pathogens.



THE IDAL[®] WAY

Pillars

+ 20 years of experience
+ 20 years of innovation

THE
IDAL[®]
WAY



IDAL APP

FEATURES

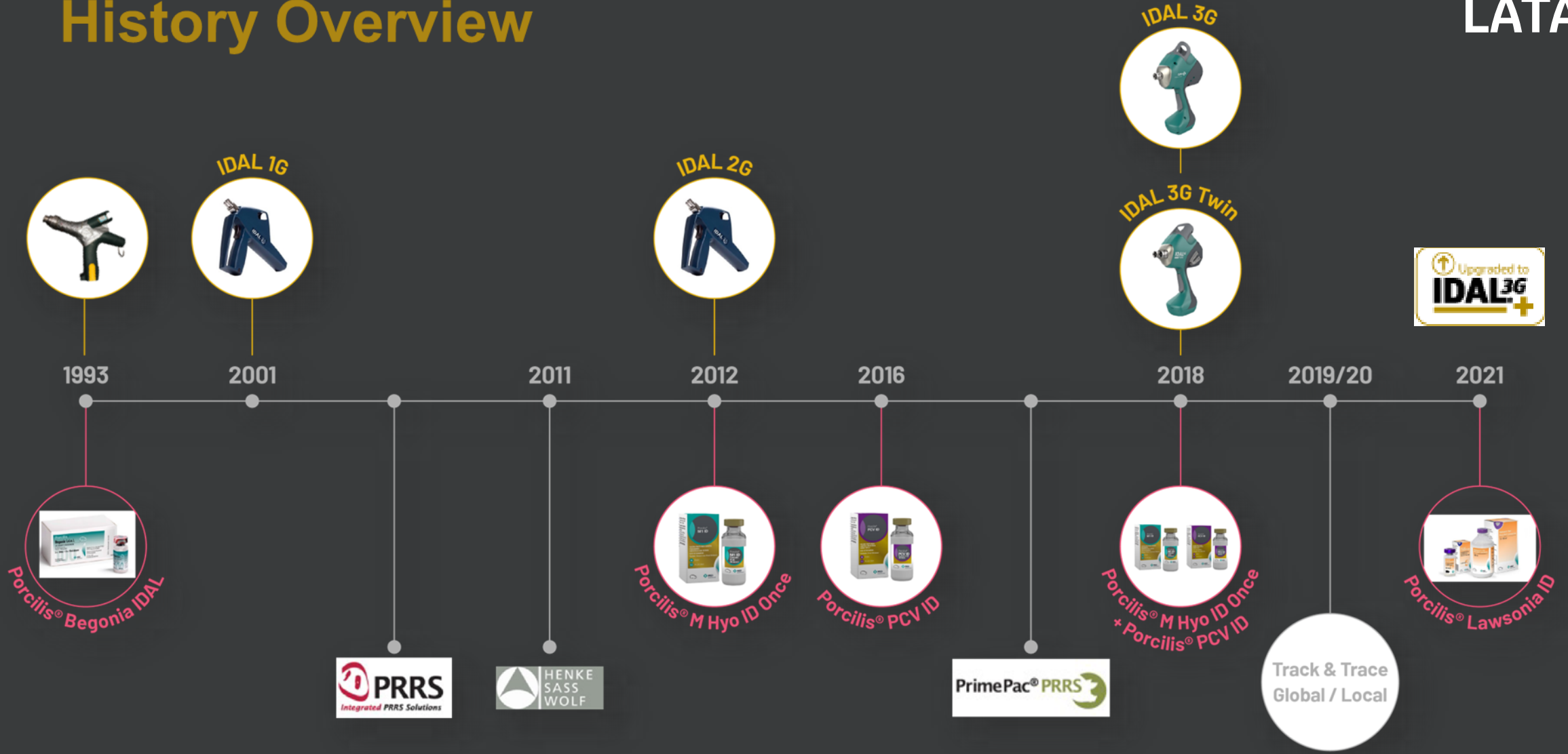
Needle-free



Intradermic



History Overview



IDAL[®] 3G -> 3G+ Features

Haptic Feedback

IDAL vibrates when it needs attention, so you don't need to proactively look for visual signals



Low vaccine Warning

When vaccine levels are low, the device will warn you to replace vial



Multiple sessions

it allows to capture the data of more than one session per day



User-friendly

An improved IDAL menu. It gives you more feedback than before. Using IDAL is easier than ever



Language Choice Option

English, Spanish, German, Vietnamese, Portuguese



Vaccine Deposition

How deep is the vaccine deposited?

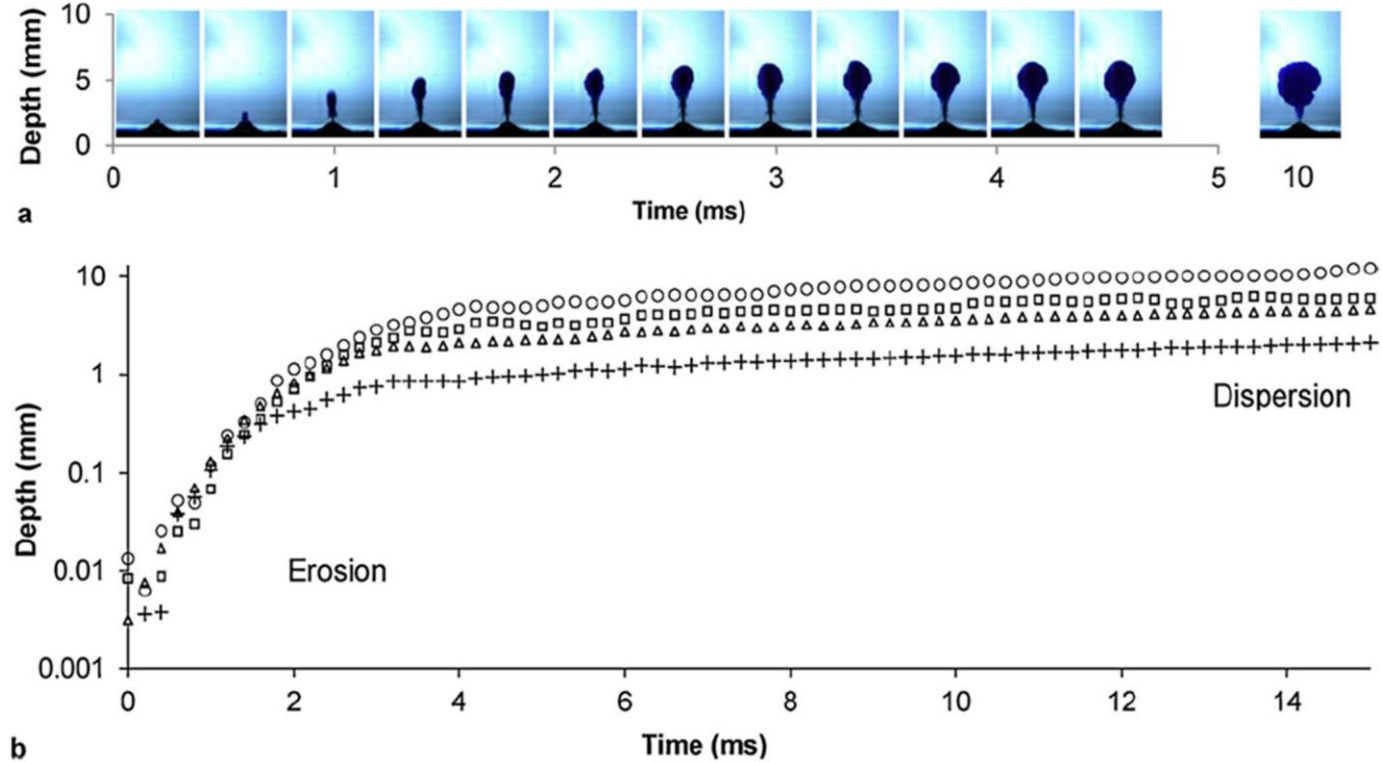
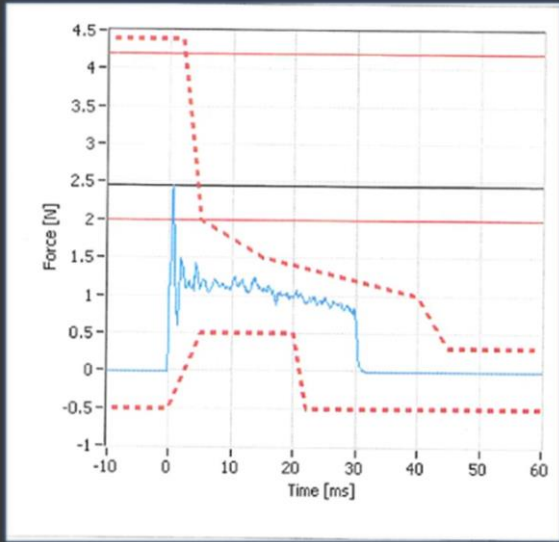


Fig. 4. Injection progress into acrylamide gel at constant jet speed. (a) Frames from a video recording of an injection ($400 \mu\text{s}$ apart, jet speed = 100 m/s); last frame shows dispersion at $t = 10 \text{ ms}$. (b) Injection progress at various constant jet speeds.

The Importance of the Device For Successful IDAL[®] Vaccination



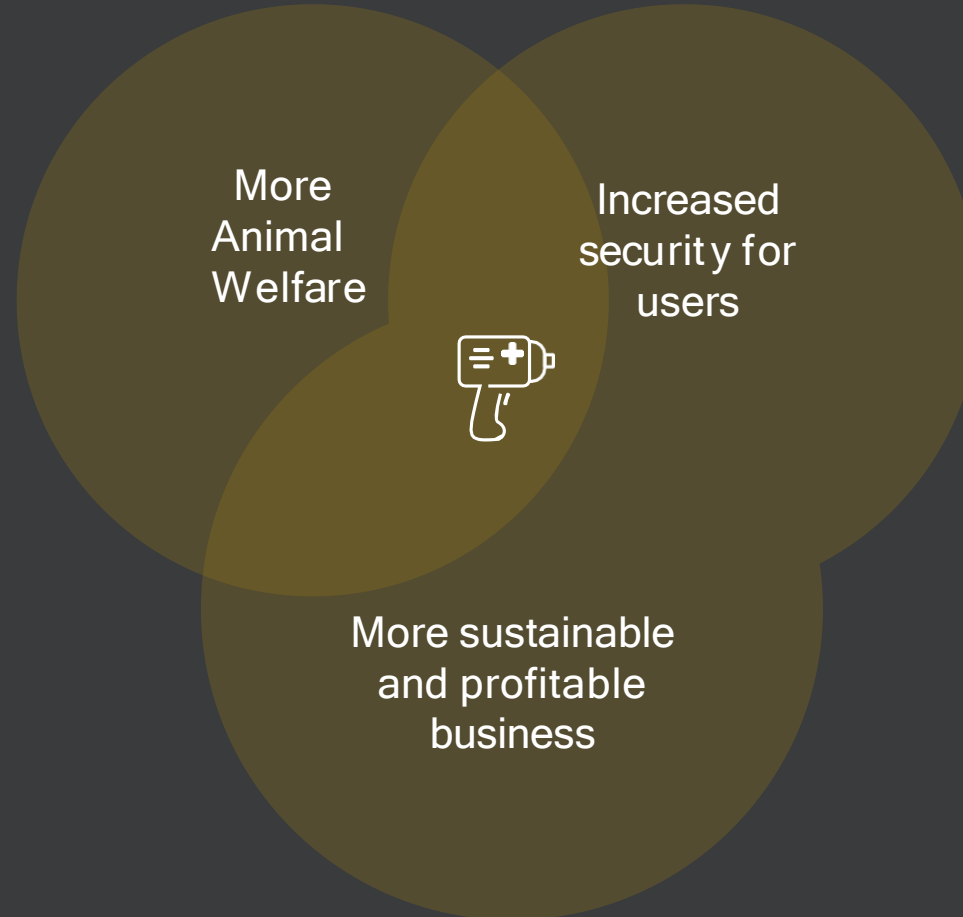
Injecting in the air with IDAL[®]



Injecting into gelatin with IDAL[®]

Pillars

**THE
IDAL[®]
WAY**



Benefits

01. Animal Benefits

02. User Benefits

03. Operating Benefits

04. Environmental Benefits

Animal Benefits

ANIMAL WELFARE



Less pain and stress

HYGIENE



Reduction of the risk of iatrogenic transmission.

ANIMAL SAFETY



Fewer systemic adverse effects.
Less local reactions/ abscesses.

EFFICACY



Better health (Efficiency vaccines -> disease protection).

Better animal care... animal welfare

User Benefits

USER WELL-BEING



Straight-forward ergonomically designed equipment.
Training & support provided.
Less stress.

USER SAFETY



No risk of self-injuries (needle stick)

CONCURRENT USE



Sows + piglets
M Hyo + PCV +
Lawsonia + PRRSV

FLEXIBILITY



Less work / faster vaccination

Better user care... cost efficiency

Operating Benefits



Better for the company... sustainability

Environmental Benefits

Corporate Responsibility

IMPROVED
PRODUCTIVITY



>

FOOD
SAFETY



ANIMAL
WELFARE



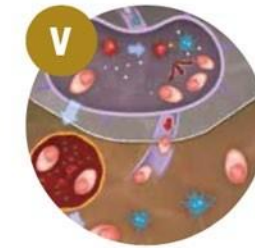
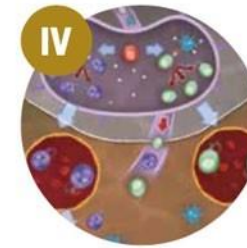
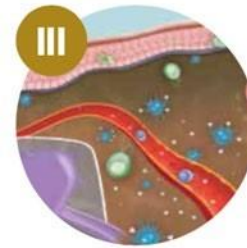
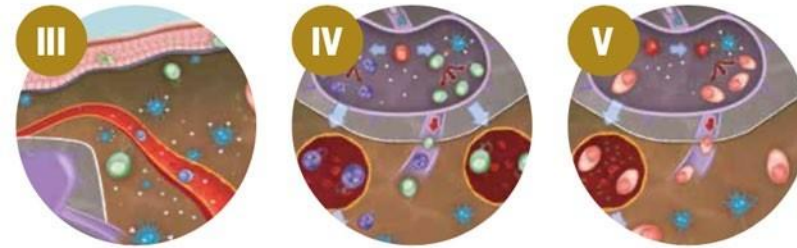
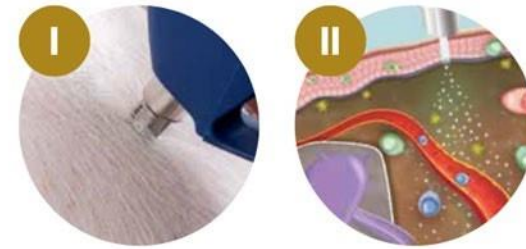
SUSTAINABILITY



Better for the company... sustainability

IDAL benefits: efficacy

- High concentrations of specialized cells in the skin respond very quickly and efficiently to vaccine antigens.
- ID vaccination **stimulates an immune response as efficient or better** as following IM administration.



Epidermis



Dermis



Vein



Antigens



Dendritic cells



Skin-draining lymph node



Activated dendritic cells



Naive T lymphocytes



Naive B lymphocytes



Helper T lymphocytes



Cytotoxic T lymphocytes



Plasma B lymphocytes



Antibodies

IDAL benefits: safety and food quality

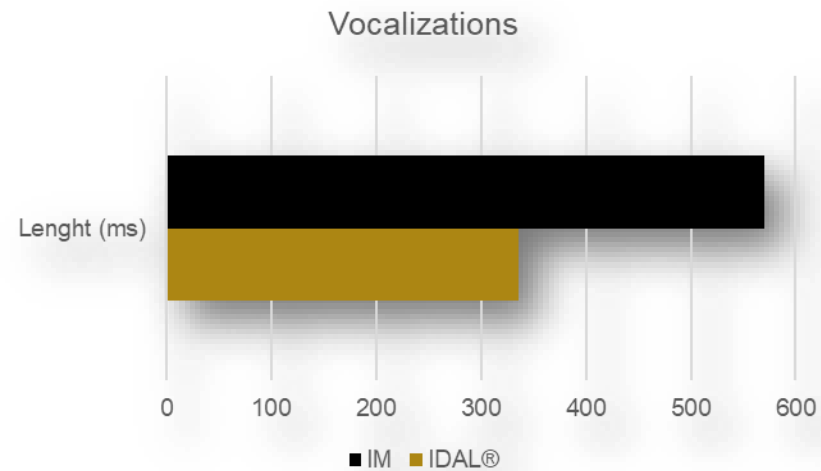
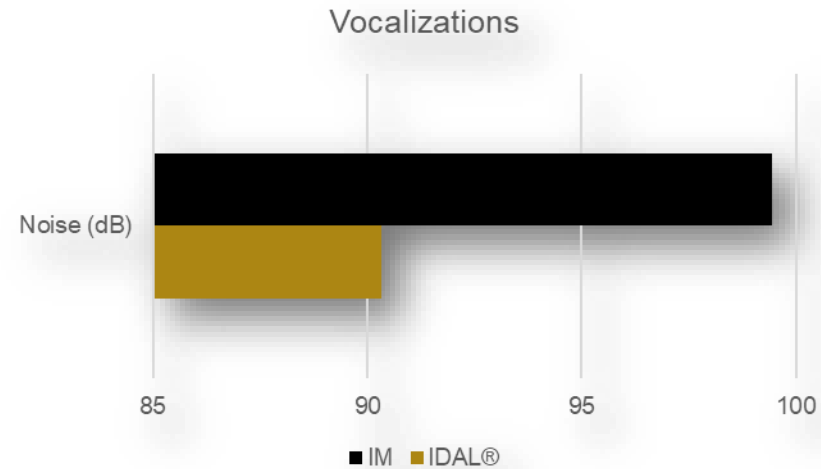
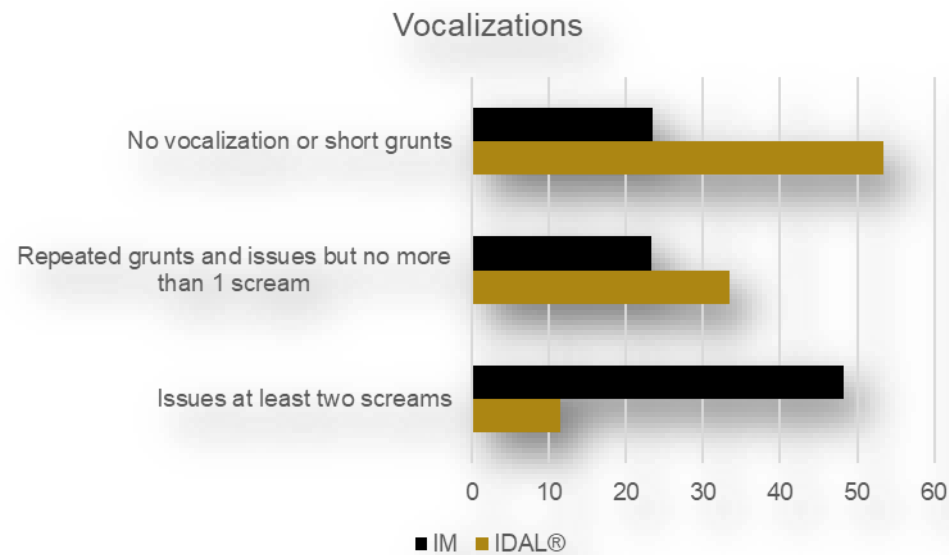


- **Pig safety**
 - Fewer adverse systemic events
- **Food safety and quality**
 - Less risk for muscle damage:
 - Injected volume = 0.2 ml
 - Distribution of the vaccine limited to the skin

IDAL Welfare Comparisons

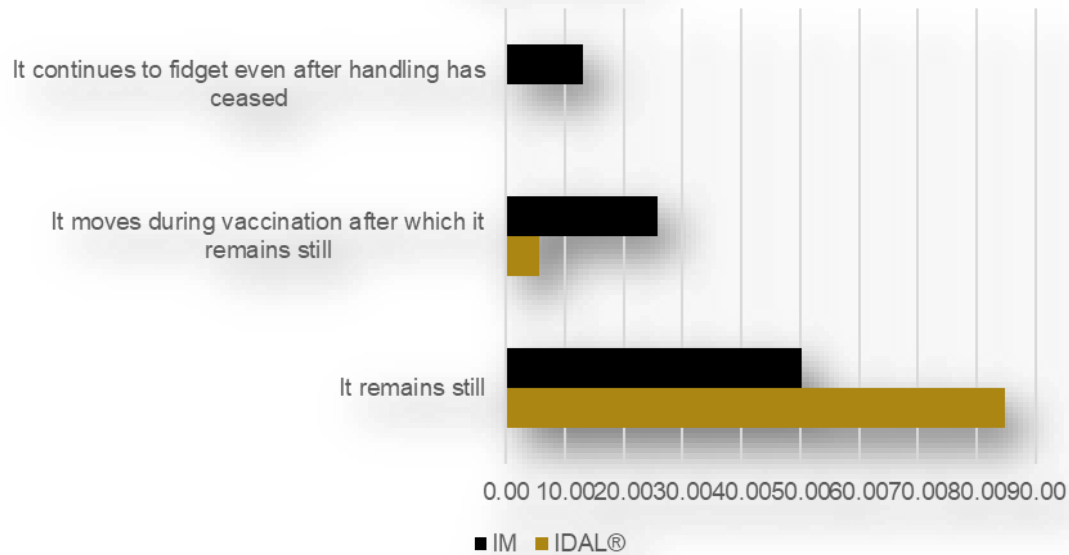
IDAL benefits: welfare

- **Less stress**
- **Reduced fear and pain at time of injection**
- **Lower behavioral aversive responses**

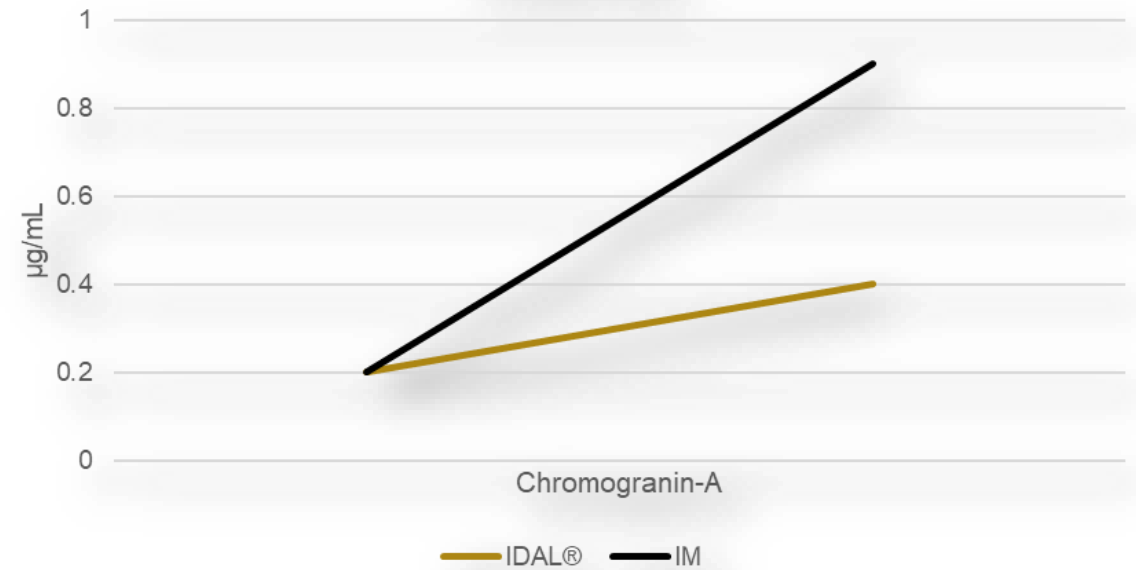


IDAL benefits: welfare

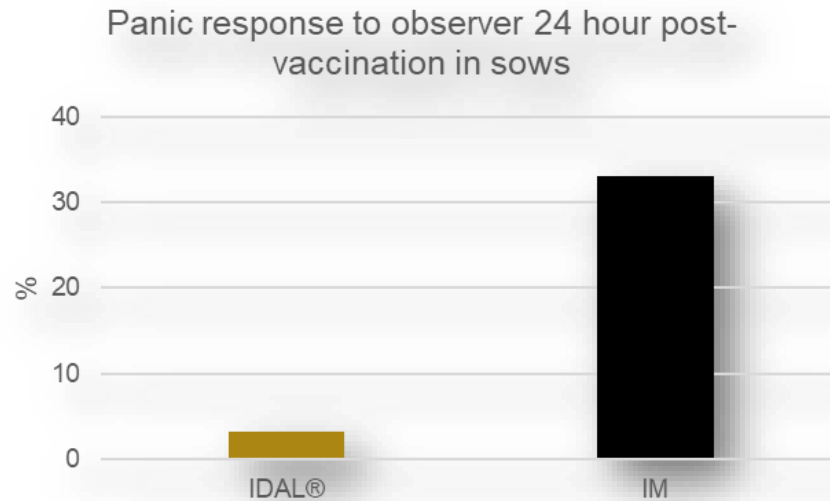
Flight reaction



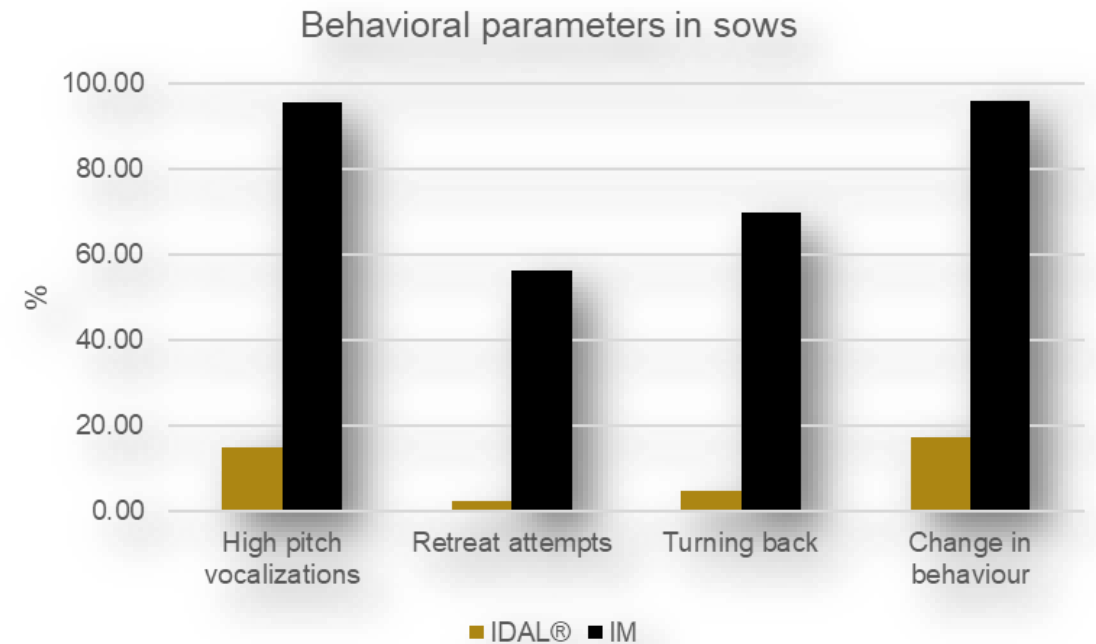
Reduction of stress indicator in sows vaccinated intradermally



IDAL benefits: welfare

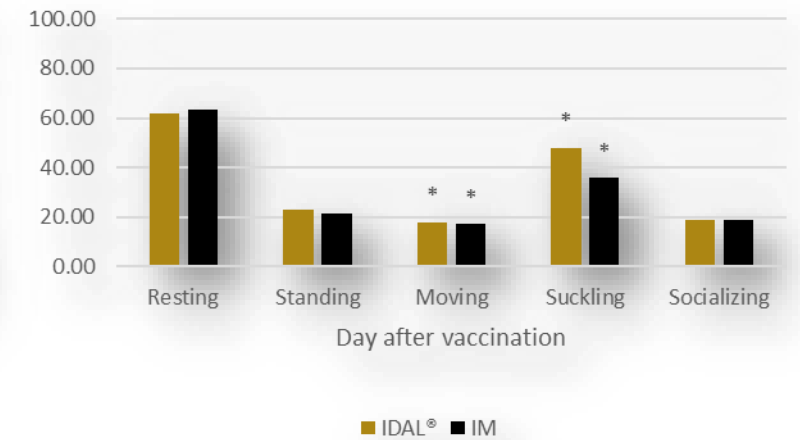
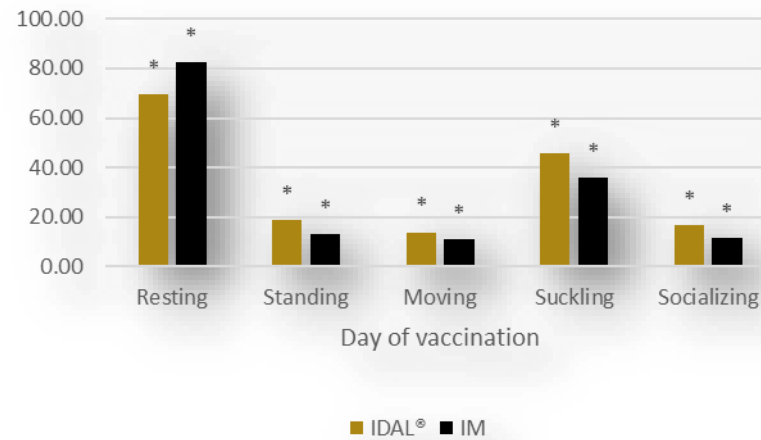
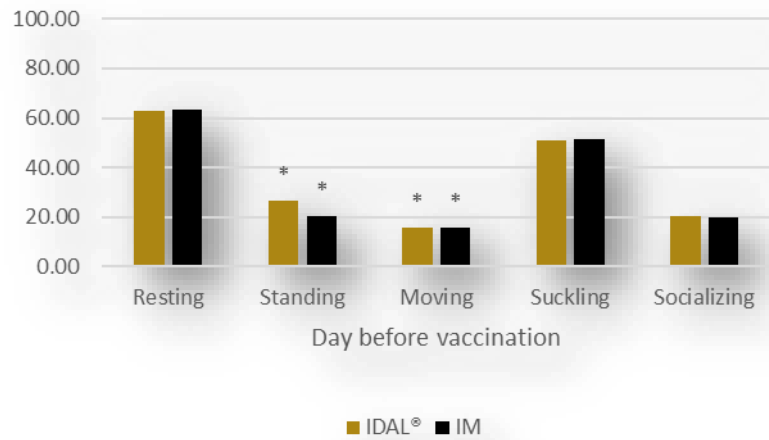


- **Less fear response** to assessor 24 h post-vaccination
- **Increased general activity** in sows
- **No behavioral differences** in piglets



IDAL benefits: welfare

Behavioral parameters in piglets

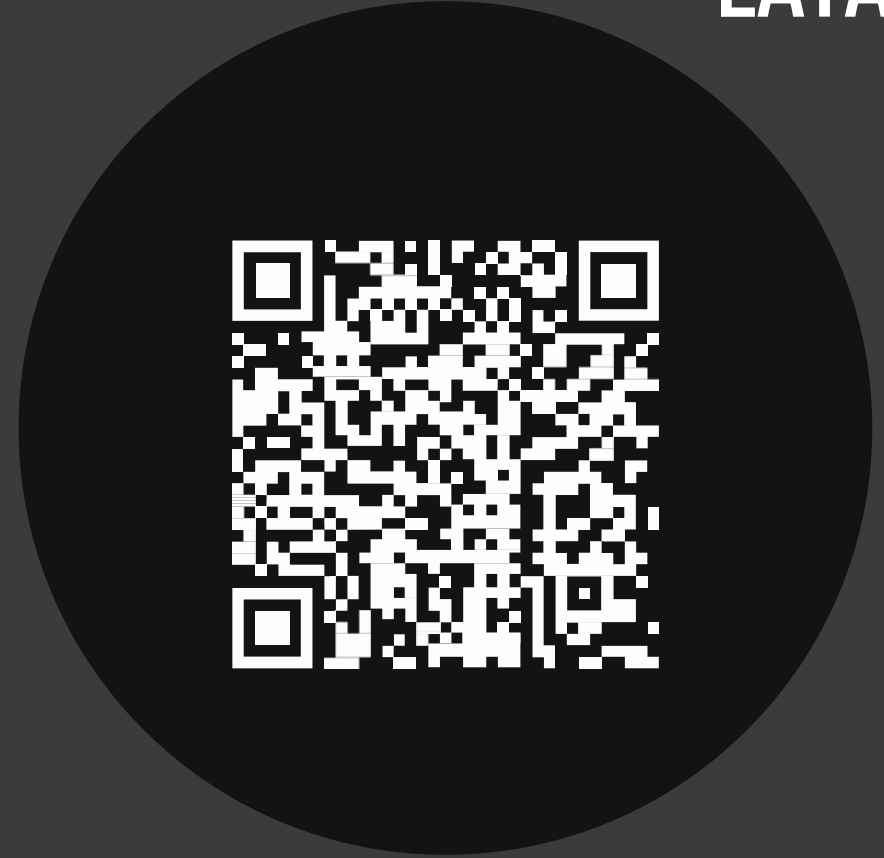


* Indicates a significant difference ($p < 0.05$).

The future
is needle-
free.

The FUTURE
IS NOW.

THE IDAL[®]WAY



Scan the QR
for more
information

HQP23 LATAM

Thank you!

Rika Jolie and Michael Swern
PUERTO VALLARTA (MEXICO) | AUGUST 2023