



# LACTOFERRIN NOVEL INGREDIENT

*ONE INGREDIENT, A THOUSAND BENEFITS  
(a non-hemic iron-binding protein)*

## WHAT IS LACTOFERRIN?

*Lactoferrin is a naturally occurring, iron-binding glycoprotein that is produced by the human body. It is a known part of the immune system and plays an important role in the first line of defence against microbial infections.*

*Lactoferrin derived from bovine milk has a very similar structure to the equivalent human protein.*

## WAS LACTOFERRIN STUDIED?

*The history of bovine (cow) lactoferrin dates back to 1939 when a red protein in milk was first reported.*

*However, it was not until the 1960's that it was fully identified.*

*Since then there have been more than 7,000 research articles listed on Pubmed and 1,500 patents relating to lactoferrin.*

# HOW DOES LACTOFERRIN WORK?

*Lactoferrin's primary role is to sequester free iron, and in doing so remove essential substrate required for bacterial growth. Lactoferrin is well documented for its role in reinforcing the immune system. Lactoferrin helps modulate the body's natural immune responses.*

*Lactoferrin is released by mucous membranes and some glandular tissues, as well as by neutrophil granulocytes (certain immune cells). The latter are attracted to the site of inflammation and release lactoferrin there. It attaches itself to viruses, bacteria and to toxic components of the bacterial surface and neutralises them.*

# HEALTHY BENEFITS OF LACTOFERRIN

*The powerful health benefits of lactoferrin have been the focus of extensive scientific research for over 50 years.*

Lactoferrin is recognised to help with:

- Iron absorption
- Immune function
- Growth & Development in children
- Antiviral&Antibacterial Protection
- Healthy Gut Microboita
- Bone Health
- Skin&Hair care
- Oral care
- Weight loss





## KEY FEATURES & BENEFITS OF OUR LACTOFERRIN

- Ease-to-use odorless powder
- Neutral taste
- Purity up to 95 %
- Good solubility
- Suitable for dry blending
- IFS Food Certified
- Wide range of applications

Lactoferrin is approved by US FDA and EFSA as dietary supplement in food products.

# LACTOFERRIN PRODUCT TYPES WE OFFER

## LACTOFERRIN MIG-90

**TOTAL PROTEIN** > 93%

**LACTOFERRIN** > 90%

**MOISTURE** <4.5%

**pH** 5,6-8,6

**ASH** <4.0%

**IRON** < 350mg/kg

## LACTOFERRIN MIG-95 EU/ CHN\*

**TOTAL PROTEIN** > 95%

**LACTOFERRIN** > 95%

**MOISTURE** <4.5%

**pH** 5,2-7,2

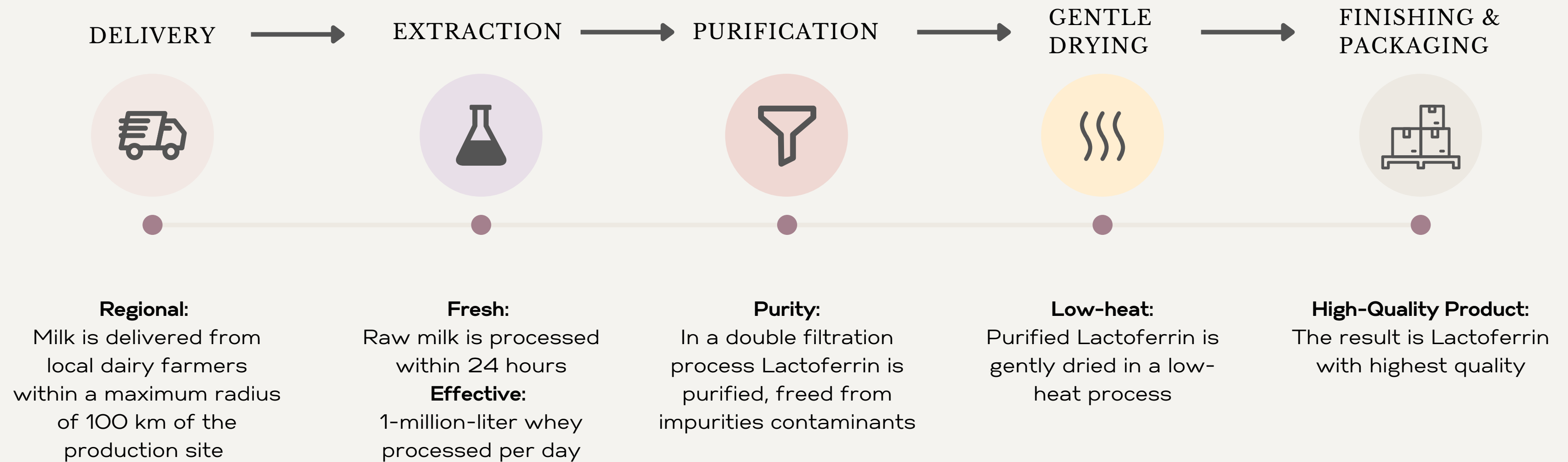
**ASH** <1.5%

**IRON** < 350mg/kg

\* The product complies with the Chinese food regulation.  
The product is Halal and Kosher certified.



# THE PRODUCTION OF OUR LACTOFERRIN





# LACTOFERRIN - INGREDIENT FOR DIFFERENT APPLICATIONS



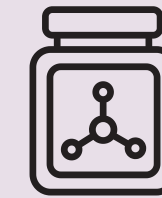
PREGNANCY  
FORMULA



INFANT  
FORMULA



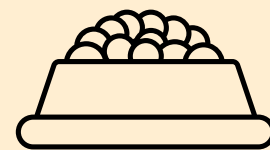
FOOD  
SUPPLEMENTS



SPORT  
NUTRITION



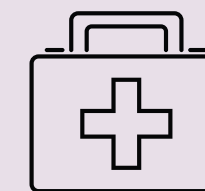
COSMETICS &  
PERSONAL CARE



ANIMAL  
NUTRITION



ORAL HEALTH



MEDICAL  
DEVICE

# HEALTH EFFECTS OF LACTOFERRIN IN DETAILS



## Anemia of inflammation

- ↓ Serum IL 6 and hepcidin
- ↓ ↑ RBCs, Hb, TSI, sFtn



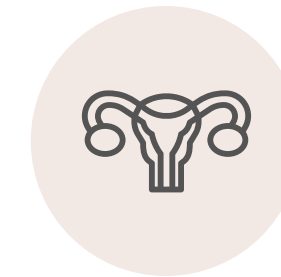
## Type 2 diabetes

- ↓ Serum IL 1 $\beta$ , IL 6, TNF  $\alpha$
- ↓ Glycemia
- ↑ Insulin



## Cystic Fibrosis

- ↓ Bacterial load
- ↓ Leukocytes recruitment
- ↓ Pro-inflammatory cytokines



## Chlamydia trachomatis infection

- ↓ C. Trachinatis invasiveness
- ↓ Cervico-vaginal IL-6 and IL-8
- ↑ Clearance of C. trachomatis infection



## Alzheimer disease

- ↓ A  $\beta$  aggregation and deposition
- ↓ ROS, TNF  $\alpha$  and IL 6
- ↑ Cognitive capacity



## Preterm delivery

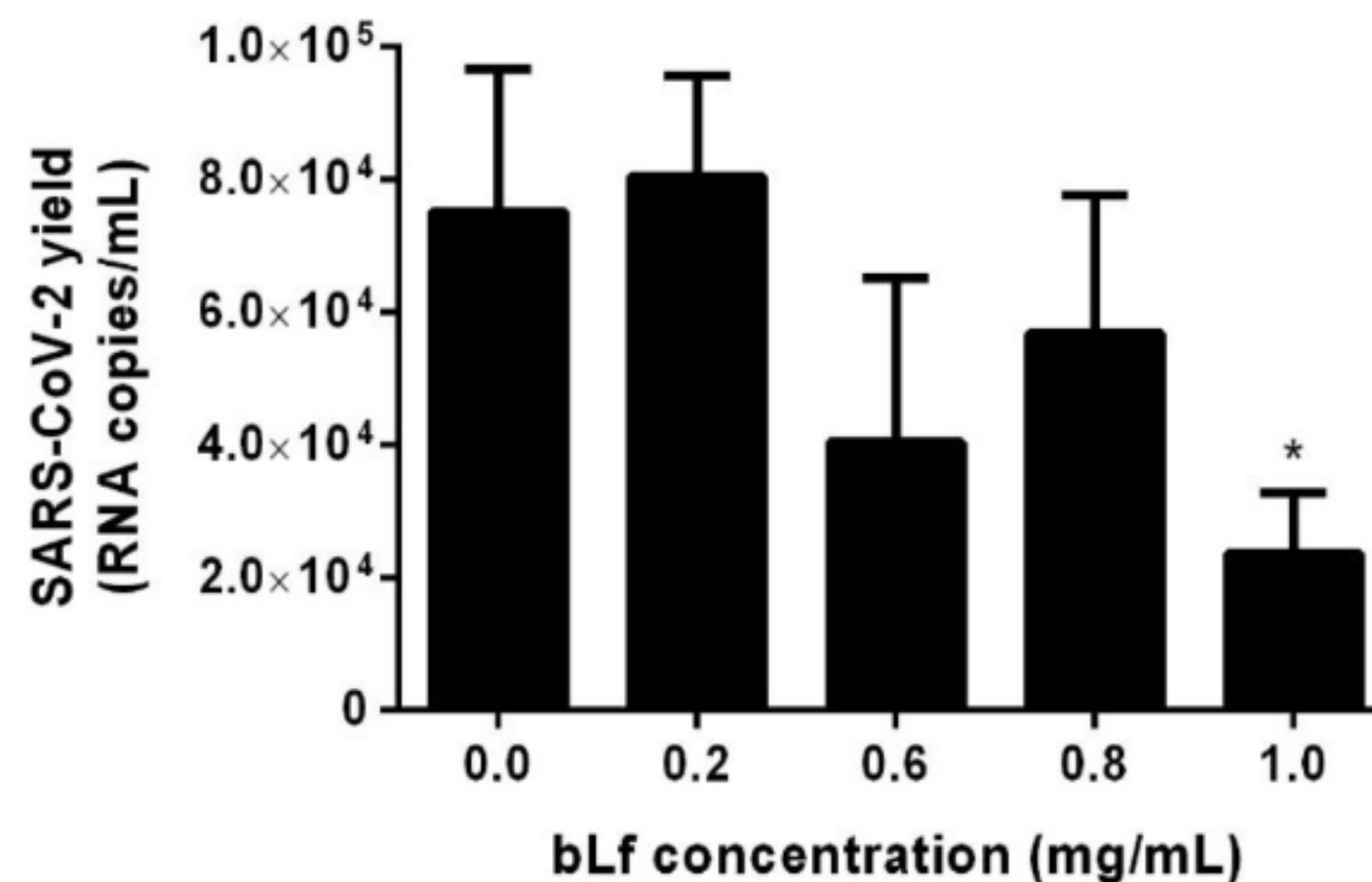
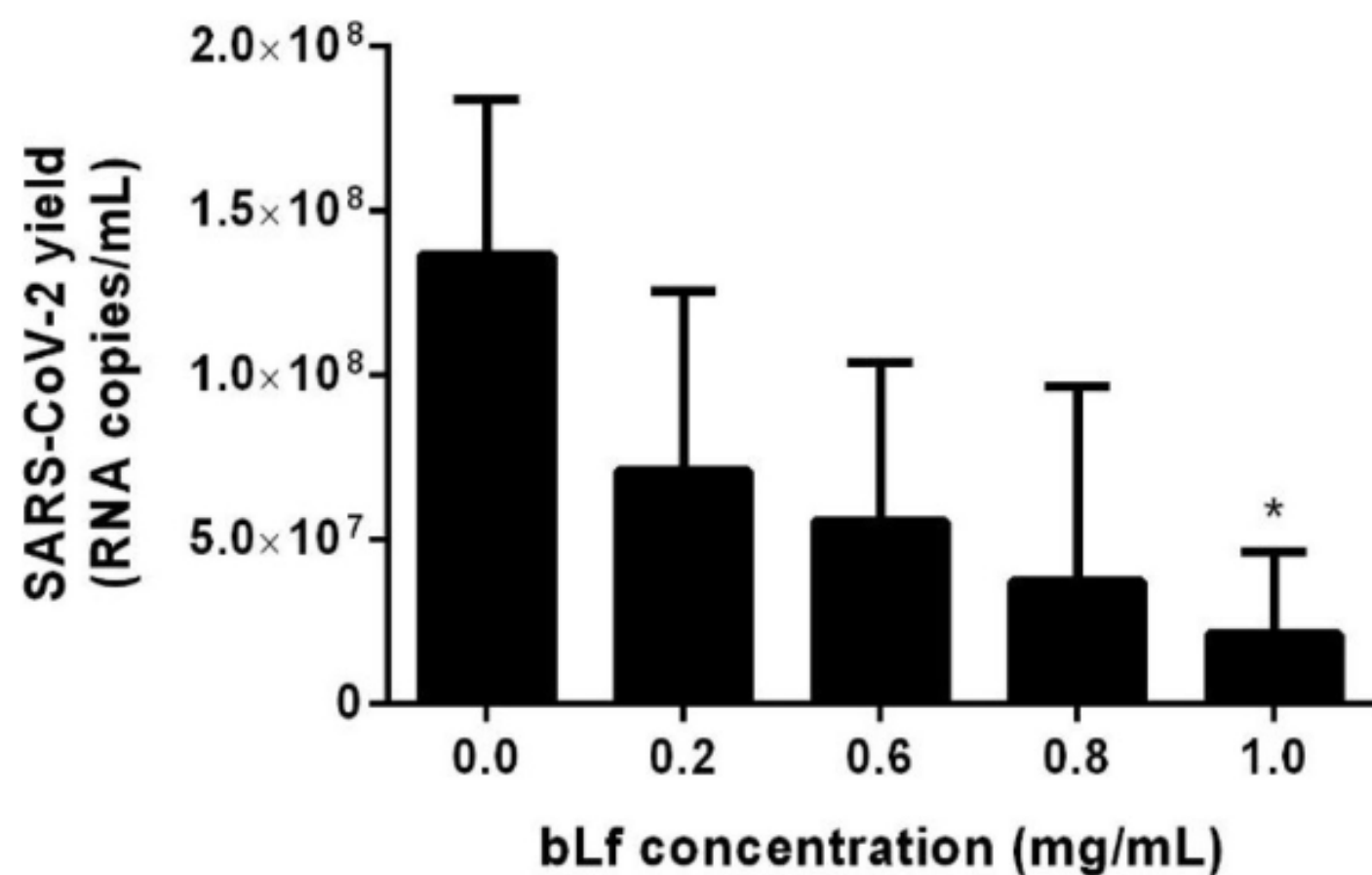
- ↓ Cervico-vaginal IL 6 and PGF2a
- ↓ Pro-inflammatory mediators in amniotic fluid
- ↑ Cervicallength



## Inflammatory bowel disease

- ↓ TNF  $\alpha$  and NF $\kappa$ B
- ↓ Neutrophils infiltration
- ↑ Epithelial barrier integrity

# LACTOFERRIN IN SARS-COV2 INFECTION (IN VITRO)



In Vitro Inhibition of SARS-CoV-2 Infection by Bovine Lactoferrin

Braga Gonçalves 2020

doi: <https://doi.org/10.1101/2020.05.13.093781>



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