## Field of application

### RECONSTRUCTIVE PLASTIC SURGERY

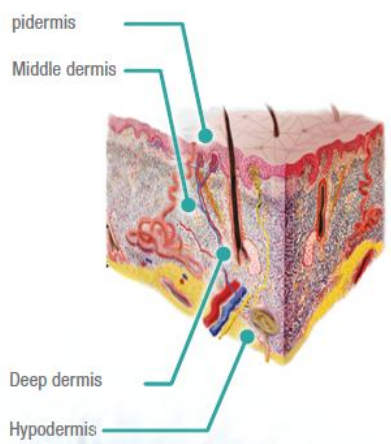
PRP mixed with purified fat in the adipocyte implants (lipostructure, lipofilling, lipotransfer)

- Correction of Lipodystrophy
- Blepharoplasty
- Lifting

### COSMETIC SURGERY

- Biological Regeneration
- Wrinkle Filling
- Cellular mask (after laser ablation, post-peeling)
- In combination with other anti-aging treatments to enhance the effect (radio frequency, fractional laser)
- Improvement of scars
- Mixing hyaluronic acid fillers
- Hair thickening / hair transplant

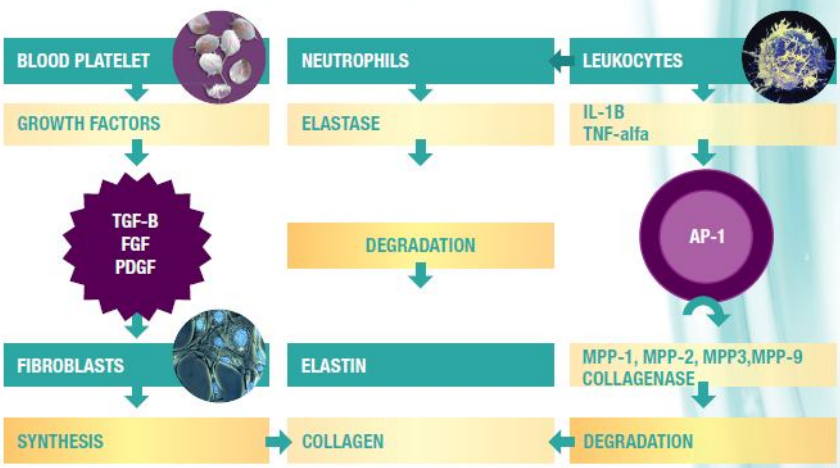
### Depth of PRP injection




## Pure MyCells® PRP in anti-aging treatment

Depending on the production method used, the PRP can vary both in terms of platelet concentration, and in erythrocyte contamination, but especially in the content of leukocytes.
It's important to select the appropriate PRP depending on the application and the clinical end-point.
Leukocyte contamination may decrease the effectiveness of the treatment with PRP (1, 2). A significant increase of interleukin 1 (IL-1) was observed in the PRP contaminated by leukocytes (1, 3); on the contrary, the platelets release low concentrations of IL-1.
It is well known that the IL- 1 induces the expression of other inflammatory cytokines (4, 5) such as the tumor necrosis factor a (TNFa) and increases the production of metalloproteinase capable of degrading the collagen.
In the photo-aging, due to the aging process of the skin, the cellular receptors are activated for the IL-1 and TNFa cytokines able to trigger, in turn, a series of signals of transcription with the increase of the kinases, which result in the degradation of the collagen and of elastin.
The cellular kinases act through a critical factor, the nuclear transcription factor AP-1, which can activate the concentration of the metalloproteinase genes: enzymes able to cleave and accumulate the dermal collagen fibers, the elastin fibers and the collagen fibers of the basement membrane (6).
The damage to MPP-1- mediated collagen is the most important factor in causing the phenotype of aging skin (7, 11).
Recent data suggest that the neutrophils, which release oxygen free radicals, cytokines and proteolytic enzymes (12), increase and accelerate the inflammatory response triggered by UV.
The neutrophils are, therefore, the cells responsible for the pathophysiology of the skin photo-aging.
In addition, the neutrophils are a major source of production of elastase (13, 14) whose increase is related to the typical solar elastosis.
Any infiltration of PRP contaminated by neutrophils can thus cause a further degeneration of the collagen and of elastin, reducing the biological regeneration produced by platelet growth factors and the anti-aging effect of PRP.
**The set of data reported in the literature indicate as optimal the use of pure MyCells PRP, uncontaminated by neutrophils.**

### Schematic table of the damaging role of leukocytes concentrated in the PRP in anti-aging treatments




Leukocytes release high concentrations of inflammatory cytokines IL-1β and TNF-α that induce the expression of collagenase (MPP-1, MPP-2, MPP-3, MPP-9) through the induction of nuclear transcription factor AP-1, resulting in the degradation of the structural proteins of the dermis. The neutrophils also release elastase able to digest the matrix of elastin as well.

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## Quality tests

PRP MyCells® has passed stringent quality tests performed by **Harlan Biotech Ltd and by BSL Bioservice**, Laboratories GmbH.

All the tests were performed according to the protocols established within the European Reference Standards or the official guidelines, recognized at European level (Official Pharmacopoeia), and complying with the stringent requirements for obtaining the FDA approval

### Tests carried out:

- Acute toxicity in mice
- Delayed hypersensitivity skin test (Guinea Pig Maximisation Test)
- In Vitro Cytotoxicity test
- Biological validation
- Sterility Test
- Bacterial Endotoxins Test
- In vitro hemolysis test under static conditions (Hemolysis potential test)
- Analysis of the partial thromboplastin time (PTT) and activated partial thromboplastin time (aPTT)

## Ordering Guide

| Codes | MyCells® DESCRIPTION |
|---|---|
| PPK1 | MyCells® System for Autologous PRP - KIT of 1 PPT tube (1 tray of 1pcs) |
| PPK2 | MyCells® System for Autologous PRP - KIT of 2 PPT tubes (1 tray of 2pcs) |
| PPK4 | MyCells® System for Autologous PRP - KIT of 4 PPT tubes (2 trays of 2pcs) |
| PPK3.1 | Package of 40 PPTs + needle and safety filter |
| | ACCESSORIES |
| RE-CENT | Centrifuge |
| VORTEX | Vortex |

**Storage:** room temperature (18°C-25°C)
**Shelf-Life:** 18 months
**Sterilization:** gamma rays

## Certifications

All the components of the MyCells® PRP kit have been approved and certified:

- CE Class IIA 1023 for therapeutic use CE 0123
- ISO 13485
- FDA 21-CFR-880.5860

MYCELLS