

1 2

MODULARITY & FLEXIBILITY



DATASHEET_BIOPRINTER_3DDiscovery™ Evolution



<p>Printing technology</p> <p>11 different printing technologies available in a single process unit to address the most challenging applications</p>	<p>Tissue Engineering</p> <p>Bio stimulation process components</p>	<p>Software</p> <p>A unique user-friendly Bioprinting Software Suite to enhance your specific needs BioCAD™ BioCAM™ BioCUT™</p>
<p>Biological controlled environment</p> <p>Processing in physiological & sterile conditions. Class 2 biosafety environment</p>	<p>Technology convergence</p> <p>Macro & Nano bioarchitectures enabled by converging electrospinning & bioprinting biofabrication in one single process unit</p>	<p>Process control</p> <p>Improved process reliability supported by high precision sensors</p>

3

CUSTOMIZATION

MECHANICAL STIMULATION	ELECTRICAL STIMULATION	HYDRODYNAMIC STIMULATION	OPTICAL STIMULATION
Matrix density / Macro & Nano structural matrix mechanics	Electromagnetic stimulation (voltage and frequency modulation)	Microfluidic	Photo-activation
Controlled ECM compression	Cold plasma surface treatment	Perfusion	Controlled illumination (modulated)
Stress stimulation (vibration amplitude and frequency modulation)		Ultrasonic stimulation	

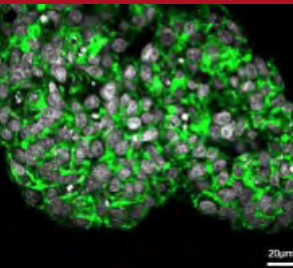
APPLICATION EXAMPLE

DENOVOSKIN™, a patient-specific autologous skin graft with dermal-epidermal structure, is setting a new standard-of-care in the treatment of permanent skin defects. This bio-engineered skin graft is the result of advanced tissue engineering science and biofabrication expertise translated into clinical application by Cutiss Ltd. (cutiss.ch).

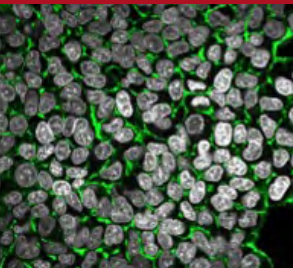


REGENHU PROPRIETARY PROCESS TECHNOLOGY

Manual



Printed



regenHU's proprietary process technology enables the fabrication of controlled tissue architectures with homogeneous cell distribution within optimized 3-dimensional biological environments, resulting in clinically quantifiable in-vivo relevant tissue structures.

CUTISS SUPERIOR THERAPEUTIC SOLUTION

Standard-of-care



denovoSkin™ overperforms the standard-of-care: after transplantation, the body has little means of producing scar tissue and inducing contraction. Superior clinical, functional & esthetical outcomes.

ENGINEER COMPLEX BIOARCHITECTURES TO MIMIC NATURE'S MACRO & NANO STRUCTURES

A STEP CLOSER TO THE DEVELOPMENT OF ARTIFICIAL ORGANS



SWISS INNOVATION



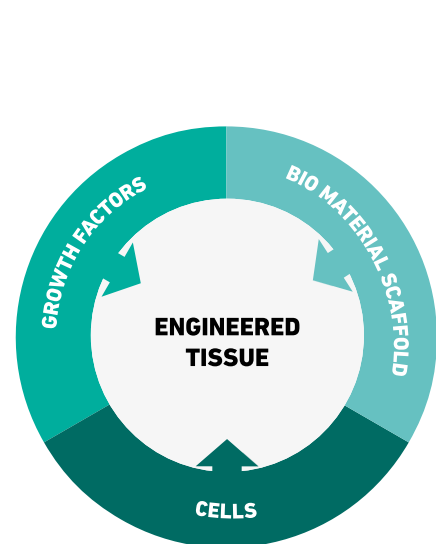
3DDiscovery™ Evolution

UNDERSTANDING WHICH STIMULI NEED TO BE USED AND IN WHAT CONDITIONS IS THE NEXT STEP IN TISSUE ENGINEERING.
WE PROVIDE THE SCIENTIFIC INSTRUMENT TO ACCOMPLISH THIS.

Tissue engineering & regenerative medicine evolution

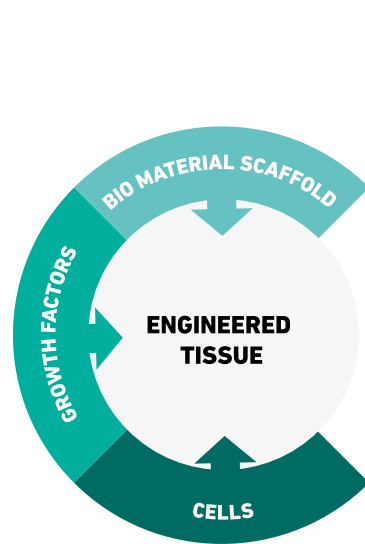
1ST GENERATION 3 PILLARS

PRINCIPALS OF TISSUE ENGINEERING
VACANTI & LANGER



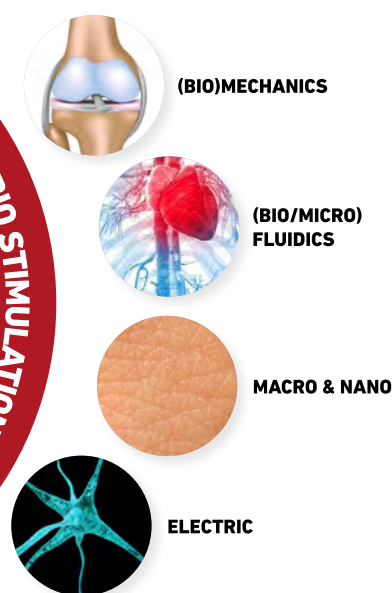
2ND GENERATION 4 PILLARS

BIO STIMULATION CONCEPT



EVOLUTION TO DATE

BIO STIMULATION
UNDERSTAND STIMULI & CONDITIONS



1995

2010

2015

1

MODULARITY

11 different printhead technologies in a single instrument: to process an extensive biomaterial portfolio, multiple polymerization methods and technical accessories allow us to adapt and optimize the instrument to your application needs.

2

FLEXIBILITY

Your requirements are constantly evolving: the configuration and specifications of your instrument can be modified and adapted at any time, thereby allowing your bioprinting hardware to develop along with your specific scientific progression.

3

CUSTOMIZATION

We offer the solution to your precise application: a broad range of bio stimulation features are dedicated to your bioprinting processes.

3DDISCOVERY™ EVOLUTION



**3DDISCOVERY™
EVOLUTION
IS YOUR PARTNER**
to find the right **STIMULI
& CONDITIONS** to enable
tissue & organ fabrication.



**A UNIQUE BIOPRINTING
SOLUTION TO DISCOVER
THE UNDISCOVERED**