

**An integrated  
suite of software  
and portable  
devices  
for transdermal  
drug delivery**



- **Velon is unique**
- Easy to use at home
- **Customized programs for each user**
- Manageable locally & remotely



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## Transdermal Methods

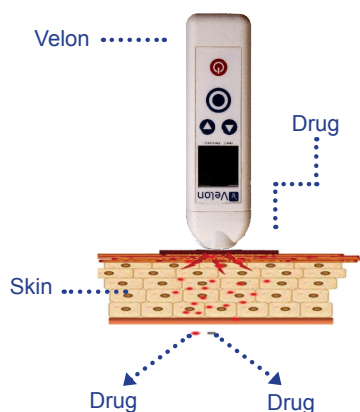
Transdermal drug delivery offers several advantages over traditional administration methods, however only a small percentage of drugs can be delivered due to the skin barrier properties.

To reach a stable therapeutic effect is therefore crucial to enhance skin penetration.

## Transdermal Electroporation

Transdermal drug delivery by **electroporation** is a useful alternative to the traditional methods of administration such as oral or injectable means.

*Transdermal electroporation is a technology based on a momentary creation of small pores in the skin by applying electrical pulses.*



*With appropriate electrical pulses, Velon creates a temporary permeabilized state that can be used to deliver a variety of compounds through the skin.*

## Velon Advantages

**Velon is an innovative fully integrated skin electroporation system to be used at Home, Clinic & Spa**

### Medical & Cosmetics

Velon enhances penetration of a wide range of compounds available in the market. It also supports advanced personalized pharmaceutical or cosmetic formulations.

### Personalized

Velon Proprietary Algorithm allows personalized treatments based on user's characteristics.

### Home electroporation

The HandVelon compact portable design brings electroporation at home, allowing self treatments in a safe and easy manner.

### Non invasive

Velon transdermal drug delivery has advantages over hypodermic injections, which are painful and generate medical waste that can pose risk of disease transmission.

### Safe

Velon personalized electroporation signals ensure that low energy is used during treatments, eliminating the risk of inducing skin damages.

### Efficient

Velon ensures high drug uptake with reduction of application frequency.

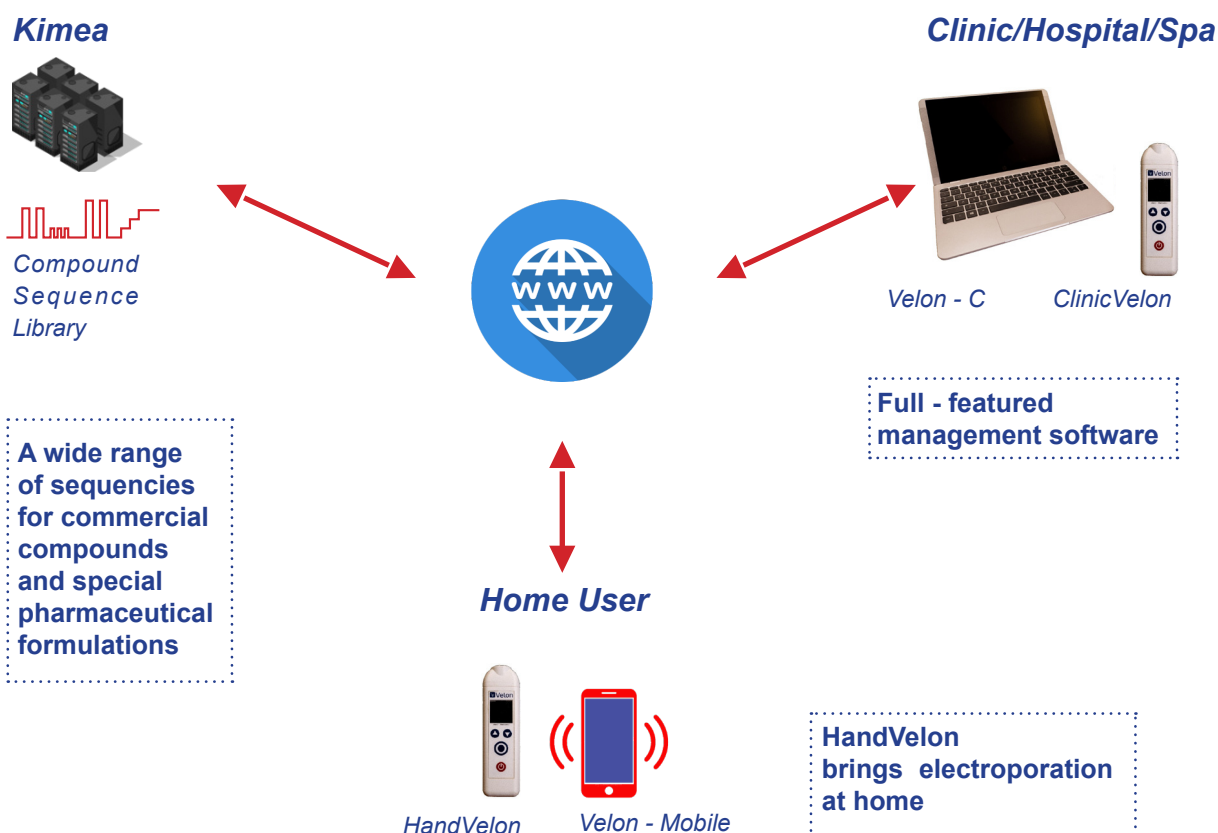
### Management Software

Full - featured management software, with automatic Prescription generation, Rental Reports & Adherence Reports.

## System Components



## Velon System Architecture



## HandVelon™

HandVelon is an innovative handheld device designed for transdermal drug delivery by means of Electroporation

### Skin microelectroporation

The pre-programmed electric waves generated by HandVelon create temporary pores on the skin outer most layer enhancing transdermal drug delivery.

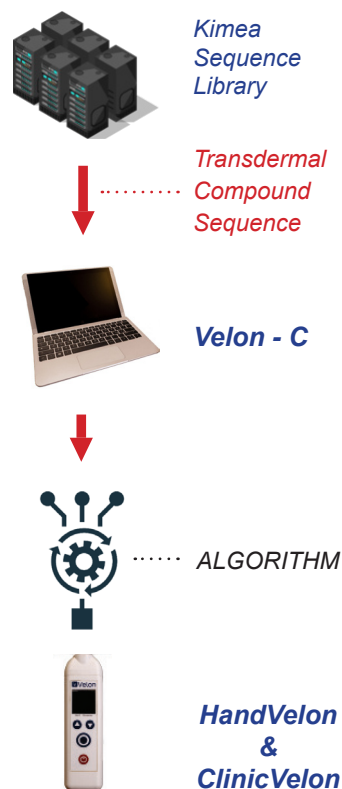
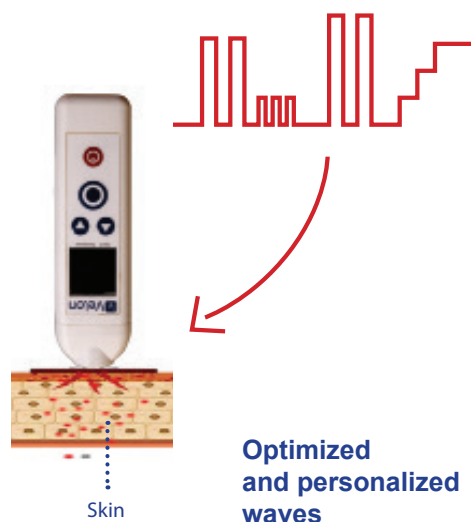
### Optimized Sequences

HandVelon electrical sequences are optimized for safe and efficient skin electroporation.

HandVelon stores sequences studied by biologists and medical experts, based on the physical and chemical characteristics of the substances to be administered.

### Personalization

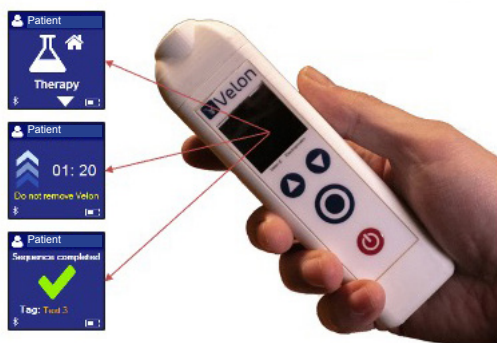
The Transdermal Compound Sequences - TCS, once loaded on HandVelon are processed by a proprietary complex algorithm for user personalization based on each user feature like anatomical site, age, gender and many other parameters.



## Treatment at Home

### Easy to use

HandVelon is compact, very easy to use and designed to support personalized Electroporation Treatment Protocols -ETP- for user safety and convenience.



### Treatment at Home

The compact battery operated HandVelon allows user to do self administration in a quick, safe and easy manner.

The device is loaded with customized programs for each user to deliver the prescribed substance.

Home treatments are logged and monitored to ensure strict compliance.

Users who needs repeated treatments can avoid repetitive visits to the Clinic / Hospitals / Spa saving time and money.

### How to use

#### 1. Power on HandVelon and select treatment



#### 2. Apply compound to skin



#### 3. Hold HandVelon to the skin and massage as per program



#### 4. "End of treatment" signal



## Velon - C

### Management Software

Velon - C is a software application developed for easy **Programming, Customization** and **Management** of the HandVelon and ClinicVelon portable electroporator devices.

Velon - C main features are:

- **Create Electroporation Treatment Protocol (ETP)**
- **Program HandVelon for home use**
- **Create Compound Prescriptions**
- **Manage the Rental of multiple HandVelons**
- **Create Adherence Report**

Velon - C



HandVelon



ClinicVelon



### Personalization

By means of Velon - C it is possible to program HandVelon and ClinicVelon based on user's data, and substance physicochemical characteristics for a personalized treatment.

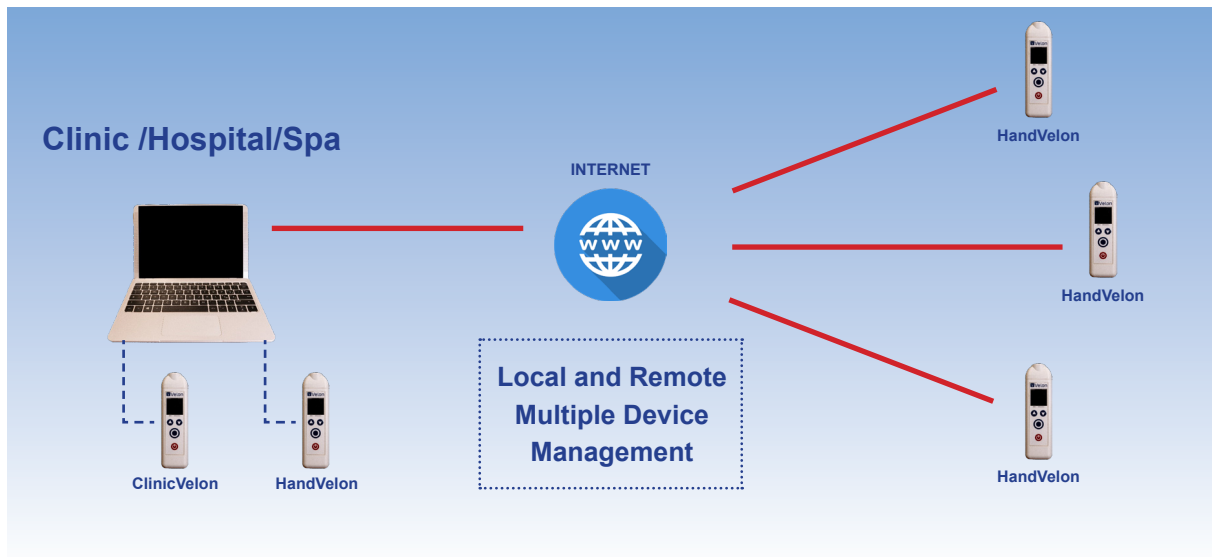
## Personalized treatments

The screenshots illustrate the software's capabilities in managing users, treatments, and devices. The 'Users' window shows a list of users with fields for Name, Birthdate, Age, Height, Weight, BMI, Pigmentation, Gender, and Note. The 'Treatments' window displays a table with columns for Status, Date, Description, Device, and Left. The 'Devices' window shows a list of devices with fields for Device, Status, Rental, Started on, Owner, and Available TCS. The 'Delivery' window shows a form for creating a treatment protocol with fields for Compound, Anatom. Site, Dose, Steps, Nbr of sessions, Duration, Interval, Expiration date, and Note.

## User & Device Management



## Management Software




### Adherence Report

The Adherence Report describes the degree to which a user correctly follows the advices during home treatments.

HandVelon logs in real time all the user's treatment data.

Specialists & Doctors can assess patient compliance with all the treatments performed at home.



# ADHERENCE Report

Date: 20/01/2023

User Name: Linda Boers

Birthdate: 20.08.1960

User ID: 1.8119901

## PLANNED

Date of Plan: 09-01-2021

Expiration Date: 16-01-2021

Total treat. time: 49 min 30 sec

Nbr of sessions: 20

Session dur: 2:00 min

Nbr of steps: 2

Co: Placeoid (1 Hz)

Doseage: 2 mg

ETP: 1.81016831s


## PERFORMED

Nbr	Date	Time Isolate	Our isolate	Stop	Pre	Click	Pause	Skip	Accepted	Score
1	10-01-2021	08:00	1:00	2	✓					100
2	11-01-2021	08:00	2:00	2	✓		1			94
3	12-01-2021	08:00	2:00	2	✓					91
4	13-01-2021	08:00	2:00	2	✓	2	1			88
5	14-01-2021	08:00	2:00	2	✓	1	1			86
6	15-01-2021	08:00	2:00	2	✓	1	1			84
7	16-01-2021	08:00	0:15	1	✓	2			✓	0
8	17-01-2021	08:00	---	---	---	---	---	---	---	---
9	18-01-2021	08:00	2:00	2	✓	6	4		✓	77
10	19-01-2021	08:00	1:15	2	✓	1	1		✓	0
TOTAL:		20:00	---	---	8.5	11	1	2		

Session unlocked on: 18-01-2021 19:40

Treatment aborted on: 19-01-2021 16:57

Average Score: 89.57    Std. Deviation: 14.32



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### Rental Report

The Rental Report shows an overview of all active rentals as a given time.

For each rental, the Treatment duration, the Start and End dates, the Compound Prescription and the Rental charges are shown.

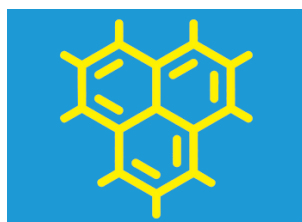
Velon		Rental Report		Date: 20/02/2022
#	User	Dev	Status	2022
				February
1	1.8119901	8	Treatment	15 16 17 18 19 20
2	1.8119901	11	Treatment	15 16 17 18 19 20
3	1.8119901	8	Treatment	15 16 17 18 19 20
4	1.8119901	11	Treatment	15 16 17 18 19 20
				pg 1/1

## Compound Sequence Library

Wide library of skin electroporation electrical sequences developed by medical specialists for each substances can be downloaded from Kimea Server.

Examples:

- **Prescription only medicine**
- **Over the Counter medicine**
- **Cosmetic products**



**Galenic  
Formulations**

Thanks to Velon flexibility and personalization features, a range of Cosmetic and Pharmaceutical formulations are supported.

## Main Specifications

HandVelon & ClinicVelon		Velon - C
<b>Electrical</b>	Full electrical protection	Application software for the management of multiple HandVelon and ClinicVelon devices.
<b>Firmware</b>	Remote Update	
<b>Power Supply</b>	Battery powered	<b>Velon - P</b>
<b>Operation</b>	Long lasting autonomy	
<b>Data protection</b>	Full data encryption	Application software for Cosmetic and Over the Counter medicine home self administration.
<b>Bluetooth</b>	v. 5.2	
<b>Charge</b>	Ext. power supply	<b>Velon - M</b>
<b>Dimensions (mm)</b>	155 L, 41 W, 22 T	
<b>Weight (gr)</b>	140	Smartphone App for mobile assisted self treatment.

## Standards & Certifications

**CE Mark**

EN 60601-1    EN 60601-1-6    EN 14971    EN 1041  
EN 60601-1-2    EN 60601-2-    EN 980    EN 10993-1

**Patent Pending**