EXECUTIVE SUMMARY

WHO WE ARE

CERHUM prints bone graft and technical ceramics for medical applications. Using innovative 3D printing technology and its own biocompatible materials, CERHUM has developed **MyBone©,** a technology that allows **fast bone repairing** using 3D printing of synthetic bone material. This technology combines a material similar to bone and porosities that promotes tissue colonizing and bone reconstruction. This patented solution lead Cerhum to develop patient specific bone graft **for repairing people** in a mini-invasive and sustainable way. CERHUM invested in a fully controlled process and has validated its material in term of biocompatibility.

CERHUM also has **ISO 13485 - 2016** accreditation at SGS, which is the medical quality reference.

THE ISSUE

Adibia, 22 years old lives in Liège, Belgium. She suffered from ameloblastoma, a facial tumor infiltrating her mandibula. After resection of the tumor, the surgeons took the bone from the patient (fibula in the leg). The surgeon crafted the bone and placed it within the patient to repair the mandibula defect. This **self-grafting** procedure is frequent: A **lot of issues occur** with this solution: pain at donor site, long rehabilitation, too fast resorption, cosmetic and success depend on surgeon's expertise. (https://www.youtube.com/watch?v=i_sW-7sjeFM)

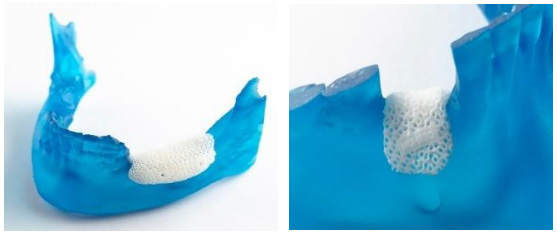
An **alternative is to use synthetic material**. The drawback is that metal and plastic can be source of inflammation, toxicity, and rejection. To overcome that, bone similar ceramics are used. But they are fragile and uncontrolled porosity will limit bone reconstruction.

Mandibula repair using MyBone Custom

MyBone CUSTOM - MaxilloFacial

CERHUM has firstly developed MyBone Custom. This patient specific device is dedicated for people suffering from facial deformities after trauma or congenital disease.

In March 2020 CERHUM and its partner 3D-SIDE participated to a **World Premiere** by repairing a mandibular defect after tumor resection, using 3D cutting tools and 3D bone graft (left down pictures)



Our solution promotes bone regeneration faster than standard procedure, and reduce the time and number of surgeries.

In parallel to MyBone Custom, CERHUM has identified **new opportunities** with clinicians in dental (right up pictures) and plastic surgery. These opportunities will be managed as a Contract Manufacturing Organization for key players, already on the market.

THE SOLUTION

3D printing of bone similar ceramics allows for bone reconstruction with:

- **bone similar material (no reaction),**
- **tailor made/patient specific shape,**
- **revolution in biological properties.**

Our team has developed specific design approach based on porosity management, thus **increasing 7 times biological performance** compared to gold standard product. By using CT-scan of the patient, a volume of the gap can be reconstructed. CERHUM includes its specific porosities design. The implant is then 3D printed, sterilized and sent to the hospital for implantation.

MyBone Custom (first version of MyBone) is firstly dedicated for **bone regeneration** for specific indications. CERHUM joined the service of 3D-SIDE -market leader in its field- for the patient 3D data acquisition and management (exclusive and mutual contract).

CONTACT CERHUM's CEO, Grégory Nolens - mail : gregory.nolens@cerhum.com - : +32 477 443 481
CERHUM -PIMW B56 - Rue des pôles, 1 - 4000 Liège - mail: info@cerhum.com - T : +32 4 361 59 12 - https://www.cerhum.com

BUSINESS MODEL

CERHUM wants to extend the use of MyBone Custom in other European countries than Belgium, and mount partnership with Dental and Plastic Key Players (e.g. Geistlish, Stryker,…) to offer MyBone solution to other promising markets.

The customer is the hospital where the surgeon makes the order through a prescription. **Pricing is slightly superior to actual solutions** as MyBone has advanced performances and better patient outcome.

COMPETITORS

MyBone has **no direct competitor**, moreover with such performances. However, MyBone replaces some self-grafting, allogenic and animal-derived bone grafts. On another side, MyBone will replace synthetic non-bone similar implants.

NEXT STEPS

CERHUM is making first patients with MyBone Custom. Partnership with distributors and on negotiation to sell MyBone in a large manner. Scaling production will be then needed.

In parallel, CERHUM will mount partnership with Key Players to propose MyBone for Dental and Plastic use. These partners will certify and distribute MyBone around the globe. All the clinical phase will be done by the partner

"MyBone is an innovative and promising product that will find many indications in surgery". **Dr Gitani – Head of oral and maxillofacial surgery dpt at CHIREC -Brussels - Belgium**

Next steps in MyBone development and market

YEAR	2020	2021	2022	2023	2024	2025	2026	2027
Total Sales	**0,15**	**1,00**	**2,21**	**6,17**	**11,89**	**19,92**	**29,86**	**44,15**
Total Cost	2,61	2,00	2,11	3,36	5,64	9,06	13,18	19,13
EBITDA	**-2,46**	**-1,00**	**0,10**	**2,80**	**6,25**	**10,86**	**16,68**	**25,02**

Actual Sales and forecast of MyBone and services

OUR TEAM

GREGORY NOLENS

Founder and manager of the company. PhD in Biomedical Sc, he has more than 12 years of experience in the development of medical devices.

CATHERINE BRONNE

Materials and process technician, she is responsible for the production of material and 3D parts at Cerhum, with 10 years of experience in this field.

ALAIN SARTON

Former COO in medical device company. 34 years of experience in operation and team management.

AND ALSO…

BERNARD CHAMINADOUR - Former Managing Director at **DePuy Synthes** (J&J), Sulzer Orthopedics. More than 25 years Medical Device industry. Define and execute **MyBone strategy**

ELISABETH COBRAIVILLE - Biomedical engineer, quality management and clinical experience.

VALENTIN HENRIET – Biomedical engineer in process and product validation

+ quality, finance and sales competences

Scientific Advisory Board - made of different KOL's and physicians: Pr Reychler (BE), Pr Goudot (FR), C Ronsmans (BE), G Cantella (BE), Dr Gelee (FR), J Gitani (BE), Pr Mahy (BE), Dr Meyns (BE), Pr Langele (BE) ,… Enlarged progressively.

CONTACT CERHUM's CEO, Grégory Nolens - mail : gregory.nolens@cerhum.com - : +32 477 443 481
CERHUM -PIMW B56 - Rue des pôles, 1 - 4000 Liège - mail: info@cerhum.com - T : +32 4 361 59 12 - https://www.cerhum.com