CEBIS·INTER·NATIONAL·

A Global Swiss-Based CRO

Lugano, Switzerland

ABOUT US

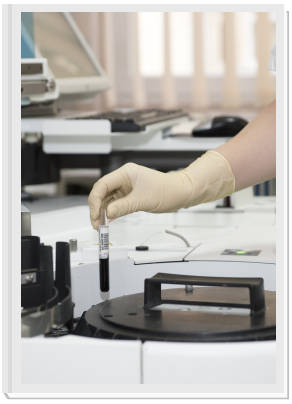
INTRODUCING CEBIS

CEBIS International is a Global Full Service Contract Research Organization (CRO).

Our Headquarter is in Lugano, Switzerland.

CEBIS has 2 major divisions:

- **Clinical & Regulatory Services (CRS):**



Clinical & Regulatory Services (CRS) Division: which provides clinical stage (phase II-IV), regulatory and market entry support to biotech, pharmaceutical, medical devices companies in already 29 countries.

- **Patient Support Programs (PSP):**

The PSP Division is focused on medication adherence and technology-based interventions to support patients access to the best available treatments and help them to comply with the requirements for administering their treatments ensuring high adherence.

What CEBIS Means?

CEBIS = **C**linical **E**vidence **B**ased **I**nformation **S**ervices

CEBIS·
INTER·NAT
IONAL ·

A Global Swiss-Based CRO

CLINICAL·
REGULATORY·
SERVICES·

OUR ACHIEVEMENTS

CEBIS AT GLANCE

> 13 Years on the Global Market

https://www.cebisinternational.com

Currently Operating in **29** countries

https://www.cebisinternational.com/clinical-research-services

Full Service Contract Research Organization

Pharmaceutical Research & Development

PRODUCT IDEA	R & D (In-vivo In-vitro)	DRUG SAFETY (IND)	EFFICACY (NDA)	REGULATORY APPROVAL	POST MARKETING

FROM IDEA TO MARKET

01 Medical Writing (Protocol, CRF, ICF)

02 Regulatory & EC/ I RB Approvals

03 Clinical trials (Initial Submission, Amendments, Annual Reports, follow-up, GCP trainings)

04 Monitoring (Site Initiation Visit, Site Monitoring Visits, For-cause Visits, Close-out Visit, Audit Visits, Co-monitoring Visits, Risk-Based Monitoring, Inspection Readiness Visits)

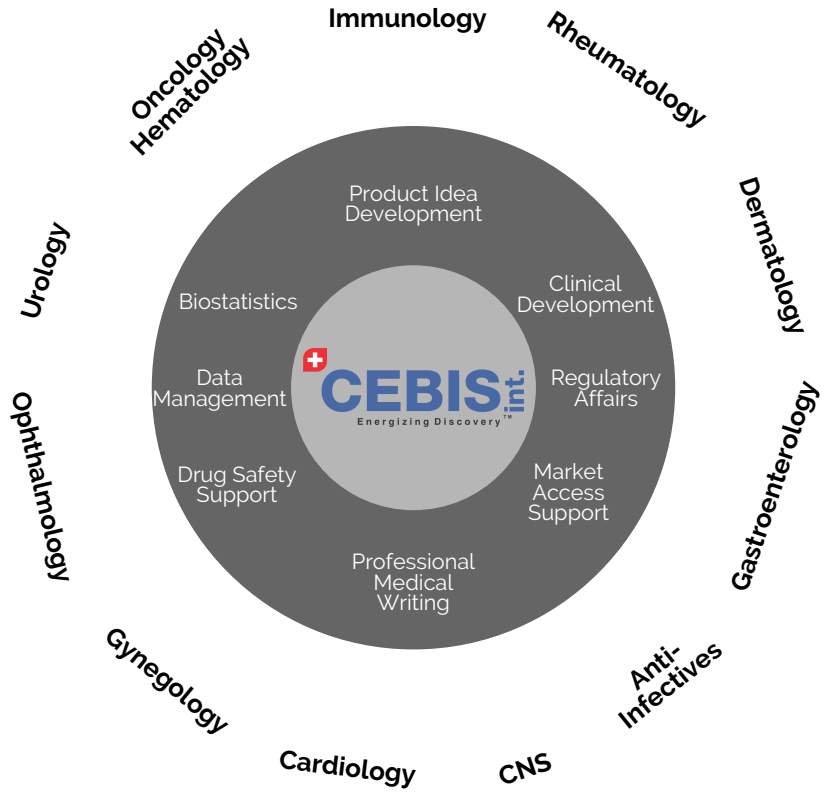
05 Data Management (Data Coding, Data Cleaning, Data Validation, Database Lock)

06 Biostatistics (Data Analysis, Data Report, Data Interpretation)

07 Publishing (Article Writing, Poster design, Abstract Preparation, Article Adaption to Journal Requirements, Follow-up Until Publication)

Drugs & Biologics ICH-GCP Guidelines	**Medical Devices** ISO 14155-2011 PMCF (Med DEV 2.12.2) CER (MED DEV 2.7.1)	**Food Supplements** EFSA Guidelines
Phase II-IV Interventional Studies	Regulatory Interventional Studies (before the CE Mark)	New Claim Approval Studies
Observational Studies	Observational Studies (after CE Mark)	Food Research & Evaluation Studies

EXPERTISE



Our Clinical Development Expertise (2016 - 2019)

Drugs & Biologics	Medical Devices	Food Supplements
> 25 Studies	> 30 Studies	> 10 Studies
> 6000 Patients	> 4000 Patients	> 1200 Patients
> 300 Sites	> 100 Sites	> 20 Sites

Our services support the clinical development and product life cycle for: drugs, biologics, biosimilars, generics, medical devices, nutraceuticals, food for particular medical purposes in multiple therapeutical areas.

CEBIS INVOLVEMENT

CLINICAL DEVELOPMENT INVESTMENT

RE-Inventing Drug Development

CEBIS IS ACTING AS A PRIVATE INVESTOR FOR COMPANIES THAT ARE SEEKING FUNDS FOR CLINICAL TRIAL DEVELOPMENT.
THE RISK IS CONTROLLED BY CEBIS, AS THE CRO INVOLVED IN THE PROCESS.

- CEBIS has a modeling framework for an improved design and decision-making in drug development.
- We take investment decisions on the clinical effect model.
- The drug development program enters a selection process.
- Our internal analysis check the probability of success of the clinical effect model.
- Our financial team forecasts sales revenue generated by the clinical effect model.
- Investment decisions are based on financial metrics and cash flow models.

RISK - SHARING PROGRAM

Clinical trials take years of dedicated work and cost billions of dollars.

Despite the time commitment and spend, only 14% of drugs in clinical trials win FDA approval*

Depending when the failure is happening, the financial impact may vary from few thousands to several billion.

The losses are less during the in-vitro and in-vivo testing, compared with a failed phase III clinical trial. Moreover, the cost of a failed phase 3 trial is not just the cost associated with the trial itself but the cost of all previous performed trials as well as the cost of unregenerated revenue from a viable product.

* http://www.clinicalinformaticsnews.com/2019/09/23/the-potential-for-digital-tech-in-clinical-trials-how-to-improve-engagement-and-weed-out-deception.aspx, accessed Nov 11, 2019

CEBIS - PREMIUM SOLUTION

RISK - SHARING PROGRAM

Factors INFLUENCING Trial Failure

PRIMARY FACTORS (drug related)

1 EFFICACY
The primary source of trial failure has been and remains an inability to demonstrate efficacy

2 SAFETY
Issues with safety may only become apparent with the larger populations associated with phase 3 studies.

SECONDARY FACTORS (trial related)

Poor Study Design
Ineffective Site Selection
Eligibility Criteria
Low Recruitment Rates
Low Retention
Poor Trial Execution
Poor Risk Management

Our Risk-Sharing Management Program for Clinical Trials is covering the all trial related causes that are leading to failure.

FACTORS RESPONSIBLE FOR THE TRIAL FAILURE

POOR STUDY DESIGN

CEBIS - SOLUTIONS

Complete literature review
Assumption of appropriate endpoints
Statistical analysis early planning
Determination & justification of appropriate sample size
Reduce likelihood of amendments
Reduce inconsistenices in protocol

INEFFECTIVE SITE SELECTION

CEBIS - SOLUTIONS

Effective measurement of trade-offs for each site
Selection of sites with a proven track record of good recruitment

ELIGIBILITY CRITERIA

CEBIS - SOLUTIONS

KOLs' & Specialists' early involvement in eligibility
Eligibility scenarios & risk management planning

LOW RECRUITMENT RATES

CEBIS - SOLUTIONS

Improved use of recruitment funds
Ensuring appropriate eligibility patients
Facilitating access for eligible patients
Enrolling patients who are likely to complete the trial

LOW RETENTION & ADHERENCE RATES

CEBIS - SOLUTIONS

Minimize travel and wait times
Minimize out-of-pocket expenses
Minimize possibility of contraindicated medicines / procedures
Visit reminders to PIs
Treatment administration reminders
Permanent contact point - working with dedicated nurses

POOR TRIAL EXECUTION

CEBIS - SOLUTIONS

Use of validated EDC / eCRF tools
Automating reporting of events
Preparing data and reporting for write-up
General awareness
Project management in place for risk minimization

POOR RISK MANAGEMENT

CEBIS - SOLUTIONS

Risk management early planning: operational, financial
Early risk identification & early mitigation
Analysis to improve trade-offs based on budget and other constraints

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PATIENT·
SUPPORT·PRO
GRAMS·

FACTS

Medication non-adherence is one of the most serious concerns in healthcare.

Chronic disease and poor adherence are linked. Poor adherence leads to poor outcomes and to increased medical costs.*

30% +

of the Revenue of any Pharmaceutical Company is Lost Due to Non-Adherence to Medication**

Every prescription that isn't filled, every delayed drug administration, every omitted drug administration, every issue encountered at the pharmacy level becomes a lost chance for the patient to achieve the expected clinical outcomes and lost revenue for the pharmaceutical company.

Studies have consistently shown that 20 % to 30 % of medication prescriptions are not filled and that **50 %** of medications for chronic disease are not taken as prescribed***

Improved medication adherence represents a clear win-win for all constituencies in healthcare, not only for pharmaceutical companies, but also—and most importantly—for patients.**

* https://www.nehi.net/writable/publication_files/file/pa_issue_brief_final.pdf, accessed Nov 8, 2019

** https://www.capgemini.com/wp-content/uploads/2017/07/Estimated_Annual_Pharmaceutical_Revenue_Loss_Due_to_Medication_Non-Adherence.pdf, accessed Nov 8, 2019

*** https://annals.org/aim/fullarticle/1357338/interventions-improve-adherence-self-administered-medications-chronic-diseases-united-states, accessed Nov 8, 2019

ADDRESSING NON-ADHERENCE

Although there are steps that physicians can take to improve adherence, they tend to minimize the difficulty that many patients have with incorporating regular medication, often with side effects, into their busy lives. The most effective interventions have resulted from system change and multifaceted strategies.*

CEBIS CREATES PATIENT EXPERIENCE PROGRAMS THAT HAVE A POSITIVE IMPACT ON PATIENTS ADHERENCE, INCREASING THE TREATMENT SUCCESS RATES AND THE PATIENTS AND PHYSICIANS CONFIDENCE IN THE PRODUCT

THAT LEADS TO A BETTER BRAND PERFORMANCE.

Improving adherence requires an active process of behavioral change, which is nearly always a challenge. It requires education, motivation, tools, support, monitoring, and evaluation.*

CEBIS services respond to increasing customer demand for classical & digital solutions that change behaviors and improve patients' lives.

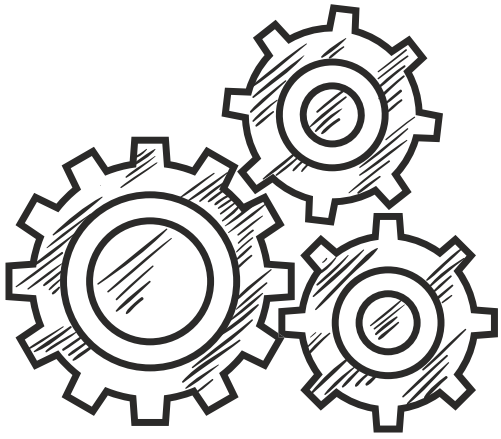
*https://doi.org/10.7812/TPP/18-033, accessed Nov 8, 2019

INTERNAL RESOURCES

CEBIS Patient Support Program **CRM**

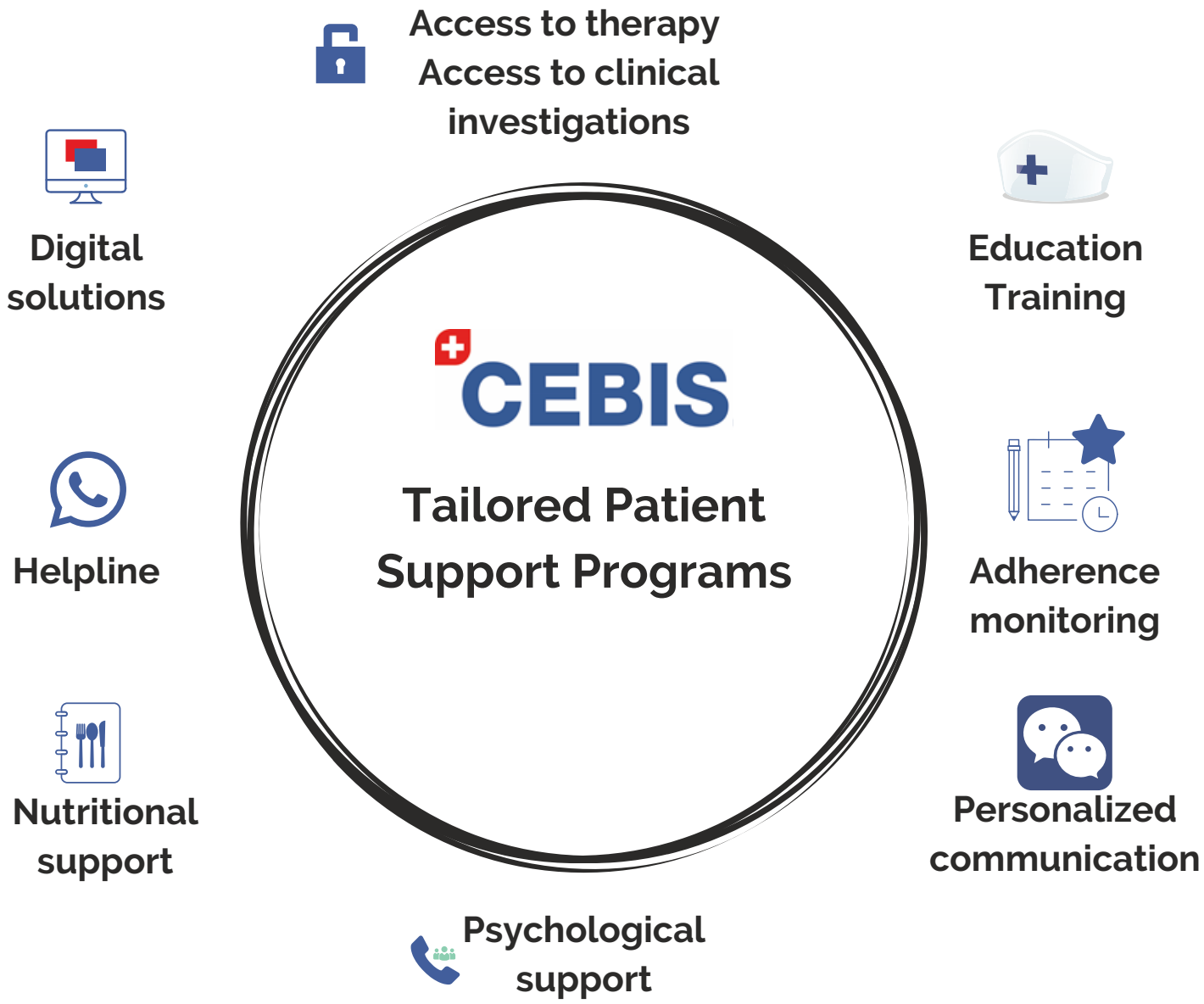
CEBIS in house **Call Center** - conducted by specialy trained medical staff

CEBIS dedicated **team** >40 professionals in adherence management



SOLUTIONS

We help patients start and stay on their prescribed therpay by helping them develop health routines and enheancing their value perception on medication.



We support the habit change - when patients are educated and understand the treatment's benefits, they become involved in taking their medications as prescribed.

Benefits for patients

Enhanced Access to Medication

Better Outcomes

Improved Quality of Life

Facts about CEBIS

More than 40,000 patients received support from CEBIS between 2016-2019

Patients' experience within our programs

98%

patients believe that the support program helped them better understand the disease*

96%

patients believe that the support program helped them understand the importance of therapy administration*

95%

patients believe that the support program helped them controle the disease*

*Market Research, May 2019

Benefits for physicians

3000+ MDs have collaborated with CEBIS between 2016 - 2019

Superior Disease Management

90%

of MDs believe that their patients are benefiting of a superior disease management with the aid of the support program*

Informed Patient Care

85%

of MDs consider the support program useful for an Informed Patient Care*

Enhanced Access to RWE

95%

of MDs believe that the IT apps are helping them access RWE about their own portfolio of patients for a better patient management*

*Aggregated (extrapolated) results of a selected sample-size of MDs which have been asked to answer to surveys regarding their satisfaction for the activity performed by CEBIS during the Patient Support Programs.

WHY WORK WITH US?

SPECIAL PRODUCTS

ALLIAT
Product for Financial Assistance

iVoucher
Product for Electronic Vouchers

SUCCESS
Product for Adherence Management

iPatient
Application designed for patients

IMPACT
Product for Lab Investigations

iDoctor
Application designed for physicians

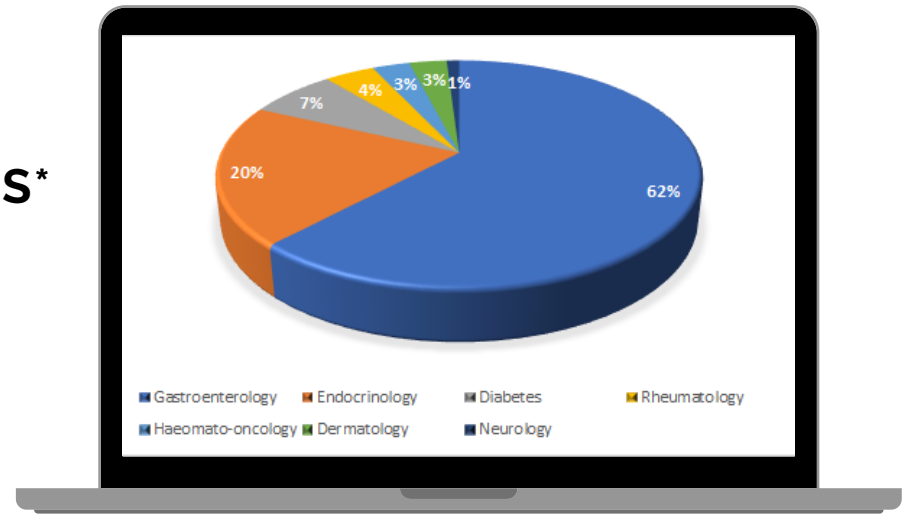
EXTENSIVE EXPERTISE

>40,000

ASSISSTED PATIENTS*

>97%

ADHERENCE RATES*



* CEBIS Int. internal data, 2016 - 2019

REAL-WORLD EVIDENCE FOR HEALTH TECHNOLOGY ASSESSMENT

Good Practices for Outcomes Research

Real-World Evidence

Good Practices for Real-World Data Studies of Treatment and/or Comparative Effectiveness

Health economics and outcomes research (HEOR)

Healthcare Cost, Quality and Outcomes

Data Sources for Outcomes Research & Disease and Health Management Programs

CEBIS International **Top-10** Biopharmaceutical service company **in Europe**

https://cro-europe.pharmatechoutlook.com/vendors/top-cros-in-europe-2018.html

WHY WORK WITH US?

KNOW - HOW

Qualified, Trained & Experienced Professionals

Ethics, Compliance, PV & Regulatory Requirements Followed in Business Conduct

Human & Technology Based Interventions

"With our professional approach to engage patients face to face interactions and technology intervention solutions we get and maintain high adherence rates, improving outcomes and increasing brand loyalty."

Mihai Manolache
President & CEO

WHAT OUR CLIENTS SAY ABOUT US

"A reliable partner delivering comprehensive services with expertise, efficiency and integrity"

Head of Clinical Operations, ROCHE

" My cooperation with CEBIS started several years ago. There are two elements that are making this cooperation a real partnership: CEBIS initiative in finding solutions when there is a difficulty, and being open to implement suggestions with all the necessary attention. Having this approach, the partnership with CEBIS is a real cooperation on solid grounds, in the context of profound understanding of the mode of action of each partner and respect. I find all of this in the cooperation I had for years with CEBIS."

Regional Ethics & Compliance, ABBVIE

"A team united through common values which drive their actions to long term partnerships and success."

Medical Manager, ASTELLAS

"Highly skilled professional organization, proactive and flexible to adapt its strategy to a very demanding and challenging environment. Committed and dedicated to deliver high standard knowledgeable services and fully capable to conduct the projects to very successful completion. Creative in finding customer tailored solutions for any possible challenge and strong foundation build by resourceful human capabilities. Provides an excellent execution for broad range of services from the patient support programs to the most sophisticated clinical trials.

Medical Manager, MERCK

"Scientific expertise and experience to provide the highest quality in pharmaceutical research field "

Scientific Medical Advisor, BRISTOL-MYERS SQUIBB

A Leading Life-Science Company