



April 2022

A leading bioscience company

medical solutions from innovation to impact



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Company Overview

01

Company Profile

Drug Formulation

Thin-film **platform** technology to develop innovative cost-effective **transdermal (TDS) and oral dissolvable (ODF) formulations** of generic, hybrid-generic, and novel pharmaceutical ingredients.

Rapid Diagnostics

Development pipeline of **real-time ultra low-cost infectious disease and oral health biosensors**. Oral inflammation and infectious disease tests approved in Europe in 2021.

Psychedelic Medicine

Development of 2 industrial scale **GMP psychedelic production** development processes, chemical engineering of **patentable psychedelic analogues**, and clinical evaluation.



A **Bioscience Company** with innovative therapeutics and rapid diagnostics.

Headquartered in Canada
Made in Germany

XPhyto Companies & Synergies

Oral biosensors delivered via oral dissolvable (ODF) platform

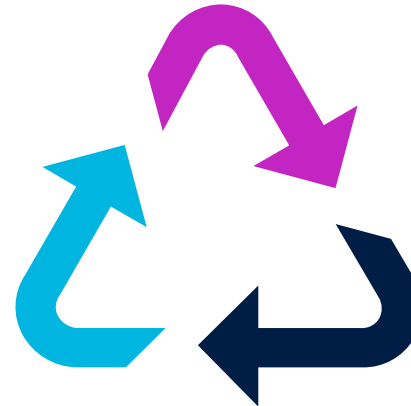
**Drug Formulation
Vektor Pharma (100%)**

Generic and hybrid-generic drug formulations using platform based-transdermal patches (TDS) & oral dissolvable strips (ODF)

Drug delivery expertise applied to emerging neurotherapeutic compounds

**Rapid Diagnostics
3a diagnostics (100%)**

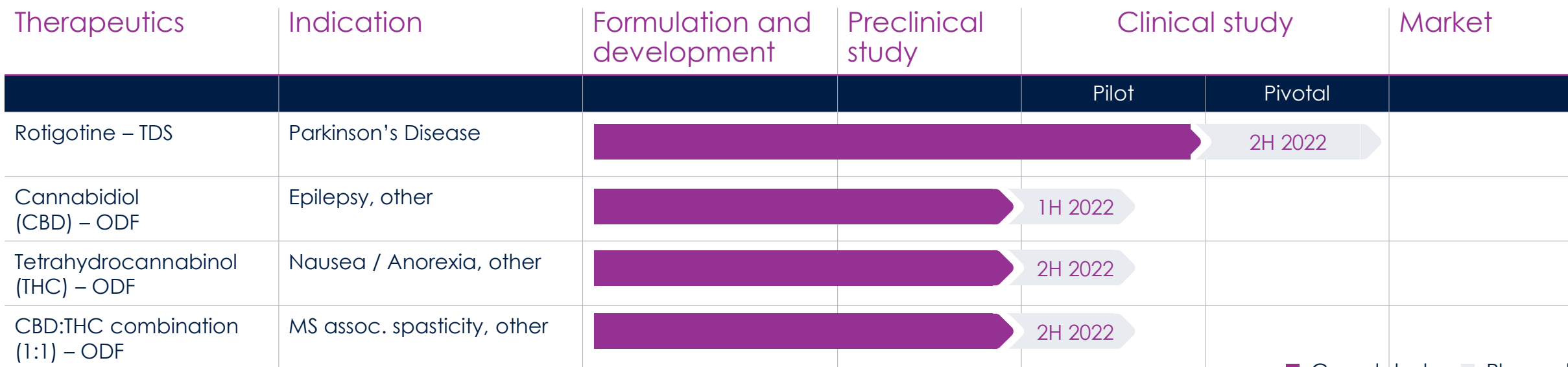
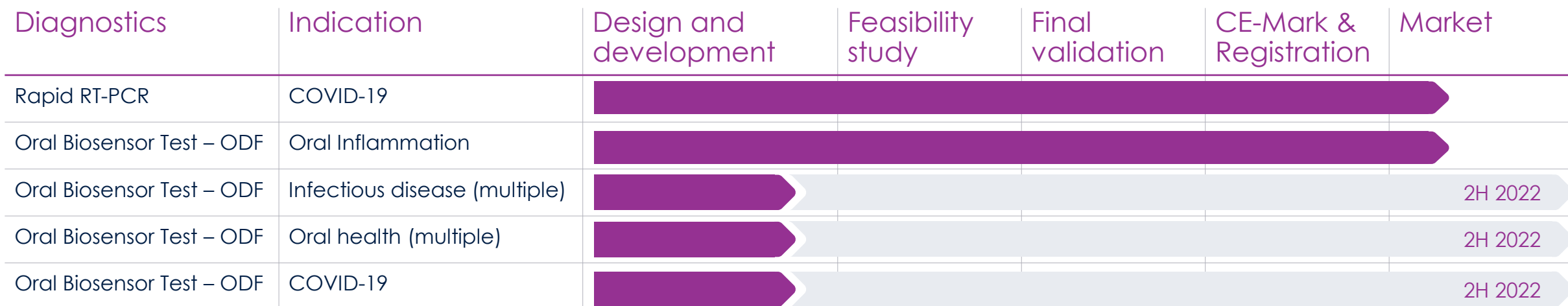
Point-of-care PCR innovation and oral biosensor screening tests for infectious diseases and oral health



**Psychedelic Medicine
XPhyto Laboratories (100%)**

Psychedelic API production and drug formulation for mental health conditions

Product Pipeline



■ Completed ■ Planned

Drug Formulation

02

Innovative delivery platforms

Thin-film technology platform

- Innovative thin film formulations of **generic, hybrid-generic and new active pharmaceutical ingredients (API)**
- Development and manufacturing of **transdermal patches (TDS)** and **oral dissolvable films (ODF)**

Advantages

- High versatile platform technologies will high compatibility
- **Low-cost, effective and non-invasive drug delivery**
- Precise dosing of API
- Improved patient convenience

Applications

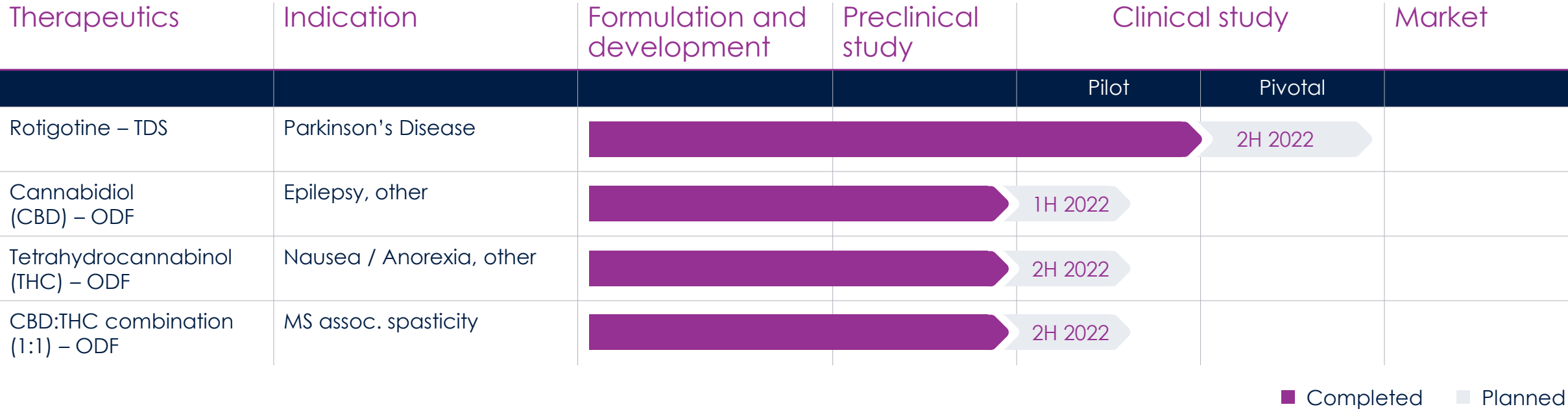
Therapeutics

- **Rotigotine transdermal** patch for Parkinsons's disease to be advanced to a **pivotal human trial in Q4 2022**
- ODF dosage forms for CBD, THC, and CBD/THC for increased bioavailability, product efficacy and ease of use – **CBD human pilot study completed Q1 2022**
- **Scalable pipeline** with numerous drug formulation opportunities

Diagnostics

- **ODF platform compatible with 3a's biosensors**
- Low-cost mass production for population-scale self-screening

Drug Formulation Pipeline



Generic and Hybrid-generic formulations

Approved off-patent drugs in equivalent or novel delivery systems

Low development risk and scalable

Expedited regulatory timeline and reduced cost

Improvement

Pharmacokinetics, bioavailability, convenience

Initial approval and launch

European Union / Germany

USD \$29.2 billion

The global thin film drugs market is expected to grow to USD \$29.2 billion by 2024 at a **CAGR of 10.5%.***

Drug Formulation - Psychedelics

Opportunities

Psychedelics as new APIs

- Psychedelic compounds have the potential to overcome shortcomings of traditional neurotherapeutics

Indications with high unmet medical need

- Psilocybin designated as a “breakthrough therapy” twice by the U.S. FDA for the treatment of major depressive disorder and treatment-resistant depression
- Potential in multiple common mental health-related indications, e.g. anxiety, addiction, anorexia, PTSD

Market potential

- Global antidepressant drug market is predicted to reach approx. USD \$16B by 2023, with an estimated CAGR of 2.1% from 2017 to 2023 according to Allied Market Research

Strategy

Pharmaceutical grade psychedelic production

- Exclusive agreements for the development of **industrial-scale GMP production process methodology for mescaline and psilocybin**
- Chemical engineering of **patentable psychedelic analogues**

Drug formulations

- Application of XPhyto’s drug delivery expertise to emerging neurotherapeutic compounds
- **Development of standardized psychedelic drug formulations** with safe and precise dosing for clinical studies and therapeutic use

Clinical validation

- **Validation of psychedelic drug formulations in the treatment of addiction, trauma, anxiety, and depression**

Rapid Diagnostics

03

Oral biosensors

Advantages

- ✓ **Tongue as a sensor**
presence of pathogens is indicated by bitter taste

- ✓ **Unique proprietary platform technology**
biosensors for various pathogens, including COVID-19

- ✓ **Accessible, easy-to-use testing**
no infrastructure or expert knowledge required

- ✓ **Rapid testing**
results in 2-5 minutes

- ✓ **Cost-effectiveness**
low cost enables broad testing, pre-screening and self-monitoring

Product strategy

ODF test for oral inflammation

- EU product registration in Q3 2021
- Simple at-home self-check to improve oral health

ODF for peri-implantitis

- EU product registration expected in 2H 2022
- Early detection of infection associated with dental implants

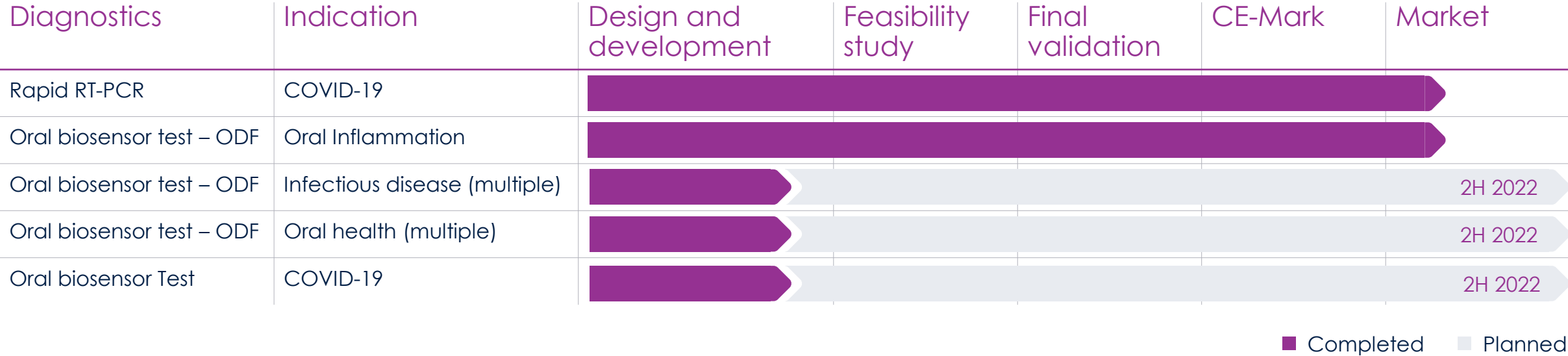
ODF for COVID-19

- Approval and launch expected in 2H 2022
- Rapid, low-cost screening system for pandemic self-monitoring

H1N1 (Swine Flu) and H5N1 (Avian Flu) Oral Biosensors

- Approval and launch expected in 2H 2022
- German government funded

Diagnostic Pipeline



Rapid & ultra rapid new medical device products

Initial launch in Europe

State funding

USD \$39.1 billion

The global rapid test market is projected to reach USD \$39.1 billion by 2023 with a **CAGR of 8.9 %**



Markets, Team and
Highlights

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Market Overview

> Thin film drug products

Global thin film drugs market is expected to grow to **USD \$29.2 billion** by 2024 at a CAGR of 10.5 %^A.

Key players are MonoSol Rx, Tesa Labtec GmbH, Pfizer, Inc., Novartis AG, and Wolters Kluwer, Solvay, Allergan plc. Sumitomo Dainippon Pharma Co., Ltd., IntelGenx Corp, and Transition Therapeutics, Inc^B

Disease indication:
Schizophrenia, Migraine,
Opioid Dependence,
Nausea & Vomiting

> Rapid diagnostics

The global rapid test market is projected to reach **USD \$39.1 billion** by 2023 with a CAGR of 8.9 %^C.

Some **Key players** are ACON Laboratories, Inc., Abbott Laboratories, Artron Laboratories Inc., Alfa Scientific Designs, Inc. Becton, Dickinson and Company, BTNX, Inc., bioMérieux SA, Bio-Rad Laboratories, Inc., Danaher Corporation, F. Hoffmann-La Roche AG

> Psychedelic medicine

The global antidepressant drug market is predicted to reach approx. **USD \$16 billion** by 2023, with an estimated CAGR of 2.1% from 2017 to 2023.^C

Psilocybin is designated as a “breakthrough therapy” twice by the U.S. FDA for the treatment of major depressive disorder and treatment-resistant depression

Management and team

Management



Hugh Rogers

CEO & Director

Lawyer, B.Sc

Extensive experience in venture capital, capital markets, and biotechnology.



Prof. Dr. Thomas Beckert

Managing director

Founder and managing director of Vektor Pharma

Experienced in formulation and machine development for thin film delivery systems.



Roland Spleiss

Director of Business Development

Over 25 years of experience in planning and building out effective sales forces, strategic realignment, production relocation, and project management.

Board Directors



Per Thoresen

Director

25 years of experience including executive roles with pharmaceutical companies.

MD of Nycomed Pharma AS, acquired by Takeda Pharmaceutica. Total value: approx. USD \$14B.



Prof. Dr. Raimar Löbenberg

Director

Founder and director of the Drug Development and Innovation Center, Faculty of Pharmacy and Pharmaceutical Science, University of Alberta, Canada

Co-founder of RS Therapeutics Inc.



Peter Damouni

Director

Entrepreneur and financier with over 18 years of experience in investment banking and capital markets.

More than 10 years as a director or an officer of different private and public companies listed on the TSX, the TSXV and LSE.



Wolfgang Probst

Director

Management consultant specialized in investment consulting and capitalization.

Expert in mergers and acquisitions, corporate re-organizations, and divestitures.

Highlights



Business Highlights

Acquisition of Vektor Pharma TF GmbH 2019

- TDS and ODF drug delivery platforms

Acquisition of 3a-diagnostics GmbH in 2021

- Proprietary biosensors and rapid PCR technology

Drug Formulation

1. Transdermal (TDS) - Rotigotine

2. Oral Dissolvable (ODF) - CBD, THC, and CBD:THC

Low-cost, expedited, and scalable development pipeline

Rapid Diagnostics

Infectious disease and oral health biosensor development pipeline

Low-cost, rapid, and point-of-care screening tests

Two products approved for sale in EU in 2021



Psychedelic Medicine

Exclusive development deal with Canadian University for industrial scale synthesis of pharmaceutical grade Mescaline

Exclusive development deal with German University for industrial scale biotech production of pharmaceutical grade Psilocybin

Non-dilutive Funding

Funding from German Federal Ministry of Education and Research for development of real-time ultra low-cost biosensors for high-risk pandemic threats such as Influenza A, swine flu and avian flu

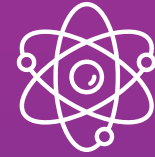
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