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## CHIEF SCIENTIST/ENTREPRENEUR — Advanced Pharmaceutical/Device Development

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Invigorating Business Capabilities and Opportunities through  
Creative Application of Scientific and Technological Problem Awareness and Solution Skills.

- **Creating Proprietary Ideas & Concepts to Form New Products & Companies or Collaborations** -

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**Executive leader** and **advanced drug development expert** offering core expertise in innovative controlled-release & biodegradable drug delivery systems and device technologies producing multimillion dollar enterprises.

### Created technologies that attract collaborations

(e.g., formed partnership with UCSF Dental School to use a FK-proprietary advanced drug delivery platform for oral/dental products.  
HealthChem raised **\$50+ million** for diabetes device based on the technology brief and clinical study support)

### Increased market penetration to achieve profitability

(e.g., co-founded Nuvora and moved early-stage technology concept from the initial bench-top prototype phase into the oral-hygiene consumer market by conceptualizing scientific product/consumer connection and instituting marketing program)

### Invented new advanced drug delivery technologies/product concepts and launched startups to develop the technologies

(e.g., raised **\$5 million** to start-up Talima, invented/developed product for clinical testing, which created mezzanine funding of **\$25 million**, biodegradable implant for onychomycosis)

### Turned-around stale, dead-end technologies creating high value assets

(e.g., Oculex sold for **\$400 million**, ophthalmic products)

Positioned EuroWound for sale

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## Areas of Expertise & Benefits to Others

Technical and entrepreneurial domain expertise in pharmaceutical drug & device development and fund-raising capabilities. Manage R&D groups and lead projects to conclusion

<b>Hands-on Leadership Solutions Selling</b>	<b>Strategic Planning Negotiating Skills</b>	<b>Tactical Project Management Team-building</b>	<b>Operations Management Entrepreneurial Vision</b>
<u>Drug Delivery, Controlled-release</u> Injectable, polymeric, biodegradable implants (ophthalmic, dental, etc.)  Micro-encapsulations, micro-particles  Transdermal, skin patches and gel systems  Intra-oral, transmucosal long-lasting sustained-release lozenges/chewing gums	<u>Medical Devices</u> Non-invasive transdermal blood glucose monitoring (Diabetes)  Saliva replacement (Sjogren's, mucositis, etc.)  Blood purification systems: Artificial kidney, cascade plasmapheresis  Chronic Wound healing	<u>Management &amp; Document Preparation</u> Fund-raising, business plans, Executive Summaries, slide presentations  Patent & NIH/SBIR Applications  Scientific presentations, peer-reviewed publications  FDA regulatory packages, e.g., IND, including related cGMP, QA/QC, SOP, MBR, etc.  Toxicology / clinical strategies and protocols	

## Academic Background & Certifications

**Ph.D., Chemical Engineering**, Technische Universität, Berlin, FRG

Dissertation: Fraktionierung von Humanplasmaproteinen mit Membranen

**M.S., Physics**, Freie Universität, Berlin, FRG

Diplomarbeit: Die Ultrafiltration von Blut und Plasma durch poröse Kapillarmembranen

**B.S., Physics/Mathematics**, Fritz-Karsen-Gymnasium, Berlin, FRG

**Exemption Certificate for the Manufacture of Dangerous Drugs**, License # 10114

State of California Board of Pharmacy

## Patents & Publications

Authored/co-authored about 50 papers and presentations and more than 17 patents.

Wrote and won 2 SBIR NIH grants.

Prepared 2 IND's and received FDA approval (nicotine transdermal patch & cataract ocular implant)

## Professional History

### **MYCRODOSE THERAPEUTICS**, San Diego, CA, 2020 – 9/2022

- **Chief Science Officer**, Co-Founder
- Develop innovative and proprietary drug delivery systems for mental health conditions based psychedelic drug
- Innovator of the Year (1<sup>st</sup> Annual Microdose Award, 2021)
- Psilocybin Company of the Year (1<sup>st</sup> Annual Microdose Award, 2021)
- B2B Tech Company of the Year (1<sup>st</sup> Annual Microdose Award, 2021)

### **PAVANA PHARMACEUTICALS**, San Diego, CA, 2017 - 2020

- **Chief Science Officer**, Co-Founder
- Develop innovative and proprietary drug delivery systems for the OTC and prescription drug markets using a variety of active ingredient families

### **EUROWOUND**, Stockholm, Sweden, 2015 - 2016

- **CEO**, Co-Founder
- Setup commercialization of unique medical products, where other treatment approaches have failed to resolve non-healing, chronic wounds.

### **UCSF – SCHOOL OF DENTISTRY – PREVENTIVE & RESTORATIVE SCIENCES**, SF, CA, 2011 -2014

- **Advanced Drug Delivery** – Formed scientific, technological and clinical partnership with UCSF to address Oral/Systemic connection.
- Setting up GMP manufacturing for clinical studies
- Preparation of NIH and other grants

### **ENTREPRENEURIAL SOLUTIONS**, San Jose, CA, 1993 - 2021

- **President** - Scientific, technological and regulatory consulting service with focus on providing entrepreneurial, strategic and beyond the state-of-the-art advice in advanced controlled-release drug delivery product development, with hands-on project management.
- Main focus is the pharmaceutical industry with the need for advanced drug delivery systems, primarily controlled-release products (biodegradable implant products or other sustained-release products, like transdermal patches or intraoral drug delivery to teeth or mucosal tissues).
- Other contractual work ranges from optimizing protein recovery processes, developing new technologies in waste management, including nuclear industry and industrial hygiene.
- Services include the devising and preparation of grant applications to the Small Business Administration for R&D efforts in a multitudinous variety of technology and research.
- Performing due diligence and providing expert witness services.

### **HEALTH-CHEM DIAGNOSTICS, INC.**, Pompano Beach, FL, 2008 – 2018

- **Scientific Advisor / Interim Executive** – Continued advisor in the R&D and redesign of the transdermal glucose monitoring system.
- Instrumental in the original clinical testing and positioning of the transdermal glucose monitoring system for the fund-raising process, including development of the fundamental concepts and mechanisms describing the product's function during the due diligence process of VC's.
- Heavily involved with the Company's fund raising activities, providing instrumental support in raising \$50 million.

# FRANK KOCHINKE, *PH.D.*

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## NUVORA INC., Santa Clara, CA, 2006 - 2010

- **Founder, Senior Vice President and Chief Scientific Affairs Officer** – Envisioned the fundamental concepts of Nuvora's overall mission and vision.
- Responsible for all scientific and technological efforts, including medical and regulatory tasks.
- Heavily involved with the Company's marketing and sales orientation and fund raising activities. Company positioned for sale to big pharma concern.

## TALIMA THERAPIES INC., Palo Alto, CA, 2004 - 2006

- **Founder, Senior Vice President and Chief Scientific Officer** – Leading role in fund-raising to form a specialty pharmaceutical company with focus on dermatology and podiatry. Raised the initial \$5 million to start-up and positioned the company for another \$25 million funding round.
- Inventor of the technology platform. Leading and responsible for all product development efforts.

## ADVANCED NUTRITIONAL INNOVATIONS, INC., Reno, Nevada, 2001 – 2003

- **Vice President and Director of Transdermal Technology** (Consultant) – Directed development of topical products designed to deliver essential supplements and other nutraceutical compounds.
- Lead scientist devising all new technologies and providing the capabilities to generate multi-component transdermal formulas with sufficient high skin permeation performance for economical large scale manufacturing.
- Responsible for all intellectual property related tasks ranging from "freedom-to-operate" opinions to drafting patent applications.

## Other Positions Held

## ORAVIRON PHARMACEUTICALS, Inc., San Jose, CA

- **Founder, Senior Vice President and Chief Scientific Officer** – Founded state-of-the-art pharmaceutical company dedicated to the development of an innovative *Target Site Release System* for orofacial and medical/surgical procedures involving inflammation, infections and pain.
- Invented and developed the company's technology platform, resulted in VC funding to form Talima (\$5 million).
- Conducted all corporate development tasks and the implementation of company's infrastructure, including fund-raising and placement of technology for acquisition.

## PHARMETRIX CORP., Division of TCPI, Menlo Park, CA

- **Vice President of Research, Consultant** – After Pharmetrix' sale to TCPI, returned to help reorganize the business and to support TCPI's development of a non-invasive glucose monitoring system (TD-Glucose™).
- Improved the product so that clinical testing could be conducted.
- The clinical study and the technology brief became later pivotal assets in due diligence phase to raise more than \$50 million.

## **OCULEX PHARMACEUTICALS, INC.,** Palo Alto, CA

- **Director of Research and Development** – First employee. Transitioning business from mere conceptual start-up to its final position as one of the #1 developing corporations in the intraocular drug delivery industry.
- Pioneered the introduction and implementation of a series of leading edge controlled-release drug delivery technologies.
- Heavy hands-on manufacturing development and characterization of the new product in the laboratory and animals.
- Setup GMP and manufactured clinical supplies for Phase I IND study.
- Prepared IND, involved in the company's money/fund raising process and presentations to joint venture and venture capitalist partners. Company was acquired by Allergan for about \$400 million.

## **PHARMETRIX CORP.,** Menlo Park, CA

- **Director of Research** - Instituted and directed aggressive research program, responsible for development of innovative and new transdermal products.
- Main activities included implementation of small-scale production processes, assembling of regulatory and patent documentation, assisting corporate management in long and short-term planning, formulating goals and strategy, and assigning program priorities, identifying new technologies and improved product opportunities in coordination with market research, budgeting, staffing.

## **MEMBRANE TECHNOLOGY & RESEARCH, INC.,** Menlo Park, CA

- **Sr. Research Scientist** – Setup R&D department to research, development and fabricate novel controlled drug delivery systems. Designed research and development facility, organized set-up and validation of laboratory test and analysis methods. Department was bought by Italian pharmaceutical company (Recordati), Pharmetrix was formed.

## **UNIVERSITY CLINIC CHARLOTTENBURG,** Berlin, FRG

- **Sr. Research Scientist** – Invented and developed membrane based plasma processing systems for apheresis of blood protein disorders used now worldwide. Executed implementation of new technology into standard clinical treatment program, conducted the initial treatment sessions (about 1000). Directed and maintained training programs for clinic personnel. Responsible for preparation of grant proposals and reports.
- **Research Scientist** - Research and improvement of standard blood purification technology. Invented & introduced technologies based on specialized ultrafiltration membranes for the long-term use as first feasible artificial kidney. Development of novel theoretical and practical approaches of membrane separation technology.

## **Publications, Patents & Patent Applications**

*(See Addendum)*