



A Company Narrative

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ITL Pharma Overview

■ Mission

ITL Pharma is a pioneering pharmaceutical company located in Bristol, Va., in the heart of the Appalachian Region.

ITL Pharma’s primary mission is to discover – and bring to market – cutting-edge treatments of some of today’s most pervasive and long-suffering diseases, resulting from pharmacology that will revolutionize the delivery of health care and the entire pharmaceutical industry.

While the company’s initial objective was to market new methods of culturing human stem cells, that research led to new, FDA-approved, marketed products and breakthrough drug discovery in a number of therapeutic areas. Based on ITL Pharma’s increased understanding of how human cells function, new treatments have been formulated to intervene in the basic causes of disease and to change the treatment of human disease as it now exists.

“What goes on in cells goes on in tissues and in the entire integrated body,” explains company founder Dr. Keith R. Latham. “So when you learn things about cells in cultures, you can apply that to tissues and whole organisms – and that’s what we do. We find that certain treatments affect the cells in a predictable way and keep them healthy.”

Current medical practice primarily addresses the challenge of relieving the symptoms of disease. ITL Pharma’s discoveries go directly to the root cause of human disease and the ability to alter the proliferation and chain reaction of harmful cells. This research laid the foundation for the development of new drugs targeted at curing multiple diseases – ultimately reversing trends in the major causes of death in humans.

Although Dr. Latham’s original motivation to discover cures for some conditions was on a personal level – with members of his own family suffering from both Parkinson’s and Alzheimer’s diseases – he is driven by a stronger desire to alleviate the tragedy of diseases worldwide.

“If you want to help breast cancer patients, for example, and you know how, you have a moral obligation to implement that plan and bring it to the patients,” says Dr. Latham. “The most important tenet in our founding philosophy is to bring these drugs to the patient. I want to make a difference in people’s lives. This includes a cascade of people close to the patients.”

■ **History**

ITL Pharma was founded by Keith R. Latham, Ph.D., for the purpose of discovering and developing new drug therapies to intervene in the basic causes of disease. Dr. Latham, current president and chairman of the ITL Pharma board, is a pharmaceutical chemist whose distinguished career includes the study of biophysics, extensive research in the diseases of aging, and revolutionary drug discoveries.

Following several years of leadership within the pharmaceutical industry and an academic appointment as professor of medicine at Uniformed Services University of the Health Sciences in Bethesda, Md., Dr. Latham sought a “gentle, quiet, supportive” business environment in which to launch a new company – and a comfortable place to live. He found the perfect elements in scenic Southwest Virginia, and opened the doors of Innovative Technologies (later renamed ITL Pharma) on Bonham Road in Bristol, Va., in 1994. Two years later, ITL Pharma moved its headquarters to the present location at 15120 Industrial Park Road, also in Bristol, Va. The company also operates a distribution and cold storage facility in nearby Abingdon, Va.

After 30 years of dedicated research, Dr. Latham’s work has resulted in breakthrough achievements with the discovery and development of 38 drugs in various stages of the regulatory process. ThyroMax®, a product designed to treat hypothyroidism, is currently in clinical trials. Additional ITL Pharma products in or near the clinical trial phase also include drugs to diagnose and treat breast cancer, Parkinson’s disease and Alzheimer’s disease.

■ **Dr. Keith R. Latham’s Body of Work**

Dr. Keith Latham has devoted the majority of his life to investigating the basic mechanisms of human health and disease. Much of his work focuses on the way cells work and their integration into tissues and organs to form living entities.

A native of Pennsylvania, Dr. Latham began his higher education at Penn State University and Columbia University, where he studied oceanography. He earned a bachelor of science in biophysics at California State University at Los Angeles and a Ph.D. in the Neurobiology of Aging at the University of Southern California and Ethyl Percy Andrus Gerontology Center. He completed post-doctoral work in molecular endocrinology and pharmaceutical chemistry at the University of California at San Francisco.

Dr. Latham served for 12 years as professor of medicine in the department of medicine and physiology at the Uniformed Services University of the Health Sciences in Bethesda, Md. Following that, he was involved in research at Abbott Laboratories for two years and then continued a research and scientific career that spanned 24 years at the helm of three pharmaceutical companies.

The vast experience and innovative research of this forward-thinking scientist have led to more than 100 published papers – on topics ranging from thyroid, geriatrics, T3 and T4 receptors and testosterone to aging at the cellular level. Dr. Latham’s work has also resulted in multiple patents, the sale of original technology, strategic licensing partnerships and several marketed products, including AmnioGrow®, EpiGrow® and Polythroid®.

In addition, Dr. Latham’s discoveries have spawned multiple inventions and a number of commercialized products in the areas of artificial intelligence, statistical logic devices, eutectic gasses, media for culturing human cells, radio-protective compounds, indigogenic enzyme substrates, viral vaccines and new chemistries for the synthesis of pharmaceuticals and key synthetic intermediates.

■ Achievements, Milestones and Critical Steps

ITL Pharma is guided by an aggressive business plan that establishes a timeline for taking a number of revolutionary new drugs through clinical development, then to regulatory approval and finally to market launch. The company has charted these major developments and milestones along the way:

- 1974 – Keith R. Latham received Ph.D. in Neurobiology of Aging (University of Southern California and Ethyl Percy Andrus Gerontology Center).
- 1977 – Dr. Latham concluded three years’ post-doctoral fellowship in pharmaceutical chemistry (University of California at San Francisco).
- 1977 – Dr. Latham joined faculty at Uniformed Services University of the Health Sciences (Bethesda, Md.)
- 1986 – Dr. Latham founded Inovar Chemicals (later to become Inovar Pharmaceuticals).
- 1986 – Dr. Latham invented GeneCare Diagnostics (rights sold in 1992).
- 1987 – Initiated drug development program for anti-aging drugs.
- 1988 – Invented AmnioGrow® and EpiGrow®; approved by FDA as 510k in 1996 (out-licensed to Cytogen GmbH, Germany, in 2003.)
- 1990 – Invented SafeSerum.
- 1992 – Invented Polythroid® (rights sold to Boots Pharmaceuticals in 1995. ITL now retains rights.)
- 1994 – Innovative Technologies founded by Dr. Keith R. Latham.
- 1996 – Relocated corporate offices for Innovative Technologies to Bristol, Va.

1999 – Invented carrierwave technology (sold in 2007 to New River Pharmaceuticals).

2000-2008 – Period of major drug discovery for Innovative Technologies.

2008 – Innovative Technologies began process of drug development.

2009 – Innovative Technologies acquired global distribution and storage facility in Abingdon, Va.

2011 – Innovative Technologies rebranded as ITL Pharma to focus on developing pharmaceutical products through clinical trials and strategic partnerships.

■ Operations

The ITL Pharma headquarters cover more than 16,000 square feet in eight stand-alone buildings. The expansive site in Bristol Industrial Park includes a main building, Tablet Manufacturing I and II, API (Active Pharmaceutical Ingredient) production building, an animal laboratory, a supply storage, a quarantine building and a process water treatment facility.

Employees are involved in a variety of activities within several departments, including administration, medical research library, research and development/chemical synthesis laboratories, regulatory affairs, marketing and sales, FDA documentation, cell culture, sterile filling, API synthesis, formulation and manufacturing. The fully-automated, sterile production line is capable of producing over 1 million tablets per hour. Automated filling and packaging are also handled in-house.

A 35,000-square-foot facility located in nearby Abingdon, Va., is a global distribution and cold storage center, providing manufacturing support for the company. The center includes 27,500 square feet of refrigeration and freezing capabilities, with a four-level racking system.

Critical Steps Toward New Drug Therapies

■ Research and Development

ITL Pharma is accelerating its continual pursuit of new drug therapies that promise to improve the quality of life – and lifespan – for the human race. New drugs already in the pipeline address the following:

- Alzheimer’s disease
- Parkinson’s disease
- Breast cancer diagnostics & therapy
- Cardiovascular disease
- Cell culture
- Thyroid replacement therapy
- Wound healing and tissue repair

■ Oxidative Free Radicals

The basis of Dr. Latham’s pharmaceutical research is oxidative free radicals and their connection to the diseases of aging.

Dr. Latham has spent decades investigating new and better treatments and diagnostics in the areas of Alzheimer’s and Parkinson’s diseases, anti-inflammatory agents, cancer diagnostics, cancer therapy, cell culture, heart attack recovery, thyroid replacement, wound healing/tissue repair and others.

Oxidative free radicals are highly reactive chemicals that cause physiological damage if released into the body. Oxygen’s interaction with body cells causes oxidation, or change, in the cells. Oxidation is normal and necessary to keep the body healthy; it takes place continuously, 24 hours a day. In the process, approximately one to two percent of cells become damaged, and free radicals form. They are described as “free” because they lack a critical molecule and try to rob other molecules to fill that need. Most free radicals are controlled by antioxidants produced by the body and are not a problem. However, they may set off a chain reaction that can lead to a host of chronic diseases.

Based on years of intensive study, ITL Pharma is offering innovative treatments to keep cells healthy and to combat the diseases of aging.

Additional information is available at www.itlpharma.com.