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OBJECTIVE

Nanotechnology of Biologically Active Complexes becomes an important part of contemporary Life Science. Today Biologically Active Complexes frequently substitute traditional approaches in bio-pharmaceutical, nutraceutical and cosmeceutical industries and reward millions of consumers with highly effective products. Analysis of recent tendencies shows that nanotechnology of Biologically Active Complexes will take one of the leading positions in 21st century's Life Science. I feel that I can make a unique contribution to the field by applying my skills as a researcher and health care product developer.

POSITIONS AND PROFESSIONAL EXPERIENCE

1) BioNova, Inc. Department of Research & Development
43-15 11 Street, Long Island City, NY 11101
Phone: 718-433-4180, Web Site: www.bionovalab.com

Director of Research & Development --- 2002 – Present

Responsible for all aspects of nanotechnological development and modular production of Biologically Active Complexes (BAC) and Delivery System (DS) for nutraceuticals and cosmeceuticals. Proprietary Modular Production Technology allowed to optimize and increase BAC output up to 32% and to meet the appropriate business and regulatory requirements. Provided functional transfer of technological elements from research and development laboratory to scale-up manufacturing facility.

Principal developer of complex formulas for topical treatment of nail / skin / hair follicle fungal and bacterial infections – Q'urNail™ (www.qurnail.com), Q'urSkin™, Q'urBurnl™, Q'urFolical™. The products showed 76 – 88.5% full recovery from main clinical forms of fungal and bacterial infections and is available in Walmart and numerous of pharmacies in New York Area.

Senior Research Scientist --- 1999 – 2002

Responsible for development and optimization of BAC efficacy test system and control strategies. Prepared documents and presentations for domestic and international regulatory agencies supporting the safety of company's products.

Part of design team (responsible for web site logistics and navigation) assigned to develop company's commercial web site (www.bionovalab.com).

Part of scientific team developed BAC of antioxidants and free radical scavengers – Oxitre1™. The product was tested at Critical Care Clinic (Tbilisi, Georgia) and showed 24% overall shortening of recovery time in conjunction with specific treatment among patients with critical conditions.

Research Scientist --- 1996 - 1999

Responsible for experimental validation and balancing of lipid/lipoid components and amino acid sequences in company's proprietary Delivery System which is a replica of Cell Membrane.

Creation of algorithm for online diagnostics of skin type and skin unbalanced conditions.

2) National Center of Oncology, Research Department of Tumoral Thermogenesis
Lissi Lake, Tbilisi, Rep. of Georgia;

Senior Scientist and Medical Doctor --- 1985 - 1994

Study of clinical and experimental characteristics and underlying pathophysiological mechanisms in tumor microcirculation and thermogenesis.

Determination of tissue radio-sensitivity and radio-resistance by monitoring and analysis of tumor microcirculation and thermogenesis data. Development of radiation therapy efficacy index.

Development of analytical criteria for differential diagnosis between inflammations and tumors based on the digital processing of thermovisual information

Scientist and Medical Doctor --- 1978 – 1984

Research of new approaches to increase infrared response of tumors to pharmaco-chemicals enhancing the cutaneous capillary blood circulation.

Evaluation of pathophysiological mechanisms in breast cyst formation determined by hormonal dysfunctions of different genesis.

Study of tumorotropic effects of L-isomers in various carbohydrates.

ELABORATED BIOLOGICALLY ACTIVE COMPLEXES AND DELIVERY SYSTEMS

The developed Biologically Active Nano-Complexes imitate biological information transfer systems existing in a human organism and contain all necessary substances to restore and maintain normal function of a specific metabolic pathway. The type, concentration and quantity of the substances in the complex are precisely balanced and depend on the pathway being corrected. The efficiency and safety of Nano-Complexes are insured by concentration and ratio of the active agents that are governed by the living organism's buffering principle.

Biologically Active Complex of Intracellular Transmitters

Biologically Active Complex of Antioxidants and Free Radical Scavengers

Biologically Active Complex of Stabilized Ascorbic Acid & Oil Soluble Vitamins

(Stability enhancement of Ascorbic Acid in aqueous solutions under extreme testing conditions was determined. At Day 90 concentration of bioavailable Ascorbic Acid in test solution was 94% compared to starting line)

Biologically Active Complex of Amino Acids

Biologically Active Complex of Nucleic Acids

Biologically Active Complex of UV Chromophores

Biologically Active Complex of Male Steroids

Biologically Active Complex of Female Steroids

Biologically Active Complex of Vitamins & Coenzymes
(42% enhancement of cell viability)

Biologically Active Complex for treatment of Dry Skin
(55% increase of Sebum Output, 32% increase of Active Gland Count and 20% increase of the Inherent Rate)

Biologically Active Complex for treatment of Oily Skin
(42 - 45% reduction of sebum output and 35% reduction of Inherent Rate)

Biologically Active Complex for treatment of Eye Puffiness
(27% increase of skin viscoelasticity at eye area)

Biologically Active Complex for Skin Lightening Effects

Biologically Active Complex for treatment of Acne

Biologically Active Complex for Collagen-Elastin-Fibronectin Synthesis – ‘Triple Biocomplex’
(28-30% increase in endogenous production of main connective tissue elements of the skin)

High Density Lipoprotein Complex

Intermediate Density Lipoprotein Complex

Skin Barrier System Complex

‘Bactostat’ – Anti-Microbial Biocomplex

Delivery System

(The novel delivery system imitates the cell's own design and provides effective stabilization and targeted delivery of active ingredients across the cell membrane. Biologically Active Complexes are entrapped within the Delivery System and become an integrated part of it).

WORKED-UP DEVICES

Device and technique for treatment of potentially malignant breast cysts (drawing and model are available upon request)

Device for conversion of densitometric data into absolute temperature indices

Device for interpretation of diagnostic thermograms

OTHER SCIENTIFIC ACCOMPLISHMENTS

Development of Logistics, Online Questionnaire and Modular Production System for Custom Designed Cosmeceutical Formulations (www.bionovalab.com)

Development of Nano-Complexes (building modules) and Delivery System optimized manufacturing of Custom Formulated Skin Care products that are in daily production activity of BioNova, Inc.

Development of online Skin Diagnostic Algorithm

Online Skin Diagnostic Algorithm determines Skin Oiliness, Skin Hydration, Skin Sensitivity, Skin Aging, Skin's Predisposition to Blemishes and recommends products corresponding to these factors

Development of 'Blue Light' Anti-Aging Skin Treatment

The treatment is based on special algorithm of skin exposure 280 – 320 nm UV light and use of special formulations preventing collagen crosslink and glycation. The method is in daily practice at "Le'Salon", New York and "Shibumi SPA", New York

CLINICAL EXPERIENCE (1978 – 1994)

Clinical practice at the Department of Mammology - National Center of Oncology, Tbilisi, Rep. of Georgia

Clinical practice at the Department of Radiology - National Center of Oncology, Tbilisi, Rep. of Georgia

Thermovisual screening and data analysis of breast and ovarian tumors among 10,000 workers of chemical plant – Rustavi, Rep. of Georgia.

Clinical practice at the Department of Gastroenterology - Republican Central Hospital, Tbilisi, Rep. of Georgia

TEACHING EXPERIENCE (1985 – 1994)

Assistant teacher in the Department of Clinical Oncology and Medical Radiology. Tbilisi State Medical Institute, Rep. of Georgia.

Principal instructor at Republican Association 'Knowledge'. Tbilisi, Rep. of Georgia.

EDUCATION

Ph.D. - Oncology and Medical Radiology --- 1984

National Center of Oncology, Tbilisi, Rep. of Georgia

Tbilisi State Medical Institute, Rep. of Georgia.

Medical Doctor, qualification of Physician --- 1972 – 1976

Tbilisi State Medical Institute, Rep. of Georgia.

Bachelor of Science --- 1969 – 1972

Moscow First Medical Institute, Moscow, Russia

GRANTS

Grant # 101746.- Evaluation of the effectiveness of radiation- and chemotherapy by digital analysis of tumoral microcirculation and thermogenesis --- 1990 – 1994 National Center of Oncology, Tbilisi, Rep. of Georgia

Grant # 100511. - Thermovisual diagnostics of tumors in major localities --- 1986 – 1989 National Center of Oncology, Tbilisi, Rep. of Georgia

Grant # 91715. – Enhancement of infrared emission in tumors due to intensification of capillary blood circulation --- 1981-1985 National Center of Oncology, Tbilisi, Rep. of Georgia

Grant # 84319. - Correlation of morphological, microcirculatory and thermovisual data in breast tumors --- 1978-1990 National Center of Oncology, Tbilisi, Rep. of Georgia

HONORS

America's Registry of Outstanding Professionals --- 2005/2006

OTHER ACTIVITIES

Serve as a reviewer for Journal of Critical Care and Catastrophe Medicine (Tbilisi, Georgia)

LANGUAGES

English, Russian, Georgian

INVENTIONS AND RACIONALIZING PROPOSALS

- #2 05.07.79. Cutting Device for Fluorographic Film Use in Thermography.
- #6 17.07.80. Device for Interpretation of Thermograms of Head and Neck.
- #11 02.04.81. Modified Cutting System for Fluorographic Film Use in Thermography.
- #13 03.06.81. Device for Interpretation of Neck Thermograms.
- #162 16.04.84. Device for Diagnosis of Eye Diabetic Angiopathy and Inflammation
- #3/87 26.01.87. Method of Thermovisual Diagnostics of Breast Tumors.
- #8/87 20.04.87. Method of Thermovisual Diagnostics in Tumors of Major Localities.
- #13 24.08.87. Method of Determination of Absolute Temperature on the Thermograms.
- #16/87 09.11.87. Method for Differentiation of Skin Tumors.
- #4/88 28.03.88. Method for Obtaining and Marking Thermograms of Testes.
- #1/89 03.03.89. Device for Calculating of Temperature Tables.
- #3/89 19.05.89. Thermographic Analysis in Diseases of Upper and Lower Extremities.
- #2/89 10.09.89. Method of Depositing Liquid Crystals in Thermography.
- #8/90 03.12.90. Device for Thermography of Scrotum.
- #7/90 03.12.91. Device for Active Thermography in the Diagnosis of Scrotum Diseases.
- #2/92 07.05.92. Diagnostic Method in Inflammations and Tumors of Extremities.
- #3/93 08.12.93. Method of Differential Diagnosis of Breast Tumors.

PUBLICATIONS

Nanotechnology in Life Science – Critical Care & Catastrophe Medicine, 2007, #3, 17-25. (with M. Danielov)

QurNail in treatment of Onichmycoses - Critical Care & Catastrophe Medicine, 2007, #3, 60- 69. (with M. Danielov)

Oxitrel – a new generation of antioxidants in Critical Care - Critical Care & Catastrophe Medicine, 2005, #1, 76-81. (with M. Danielov, Zv. Kheladze)

Non-Steroid Anti-Inflammatory Drugs in Oncology. - Proceedings of Georgian Research Center of Oncology, 1994, vol. 1, p. 74-78. (with B.B.Kapanadze)

Low-dose Radiation Therapy of Pancreas in treatment of Diabetes. - Bulletin of Georgian Academy of Science, 1994, 2, p. 51-53. (with B.B.Kapanadze)

A new approach in the treatment of malignant tumors. - Proceedings of Georgian Scientific Society Conference, 1994, p. 60-64. (with R.I.Vepchvadze)

Treatment of experimental tumors in rats. - Proceedings of Georgian Research Center of Oncology, 1993, vol. 1, p. 26-30.

Contrast medium procedure followed the carbohydrate intake restriction in Radiographic Imaging of Cancer. - Georgian Scientific Magazine, 1993, #3, p. 42-45. (with A.B.Kapanadze)

“Specific Synaptic Theory of Illness” - Review Article. - The World of Science, 1993, 7, p.15-20.

Glucose metabolism in breast and ovary tissues following their radiation exposure. - Proceedings of Georgian Research Center of Oncology, 1993, vol. 2, p. 42-46.

Low-level radiation effects in breast tumor vascularization (in-vivo study). - Annual Report of Georgian Research Center of Oncology, 1993, vol. 1, p. 57-59. (with E.G.Gedevanishvili)

Cancer radiation therapy and Pavlov’s Theory of Neurism. - Georgian Scientific Magazine, 1993, 7, p. 52-55.

Effects of radiation therapy in ‘ionization and excitation’ of atoms and molecules in malignant tumors. -Proceedings of Georgian Research Center of Oncology, 1992, vol. 1, p. 37-42 (with B.B.Kapanadze)

Radioisotopes in measuring of biological tissue blood flow. - Georgian Medical Report, 1992, 4, p. 32-34.

Prevention of metastases spread by the anastomosis between Iliac and Inferior Cava Veins. - Proceedings of Georgian Research Center of Oncology, 1992, vol. 2, p. 147-151. (with T.M.Kldiashvili)

A comparison of various therapies in treatment of Cancer. - Georgian Scientific Magazine, 1992, 2, p. 72-76.

The Mechanisms of Oncogenesis. - Annual Report of Georgian Research Center of Oncology, 1992, vol. 2, p. 96-99. (with A.B.Kapanadze and R.V.Khomeriki)

A Conceptual Model in development of Chronic Gastritis. - Bulletin of Georgian Academy of Science, 1991, 99, 1. (with B.Ch.Rachvelishvili and O.I.Galitskaia)

Correlations between local infrared emission and microcirculation in Breast Tumors. - Proceedings of the 9-th Republican Medical Conference, 1991, p. 23-24.

Diagnostic Thermography in Ovarian Tumors. - Proceedings of Georgian Research Center of Oncology, 1991, vol. 1, p. 31-35 (with E.S.Khvedelidze)

Thermographic changes in tumors of Head and Neck following Cryosurgery. - Medical Radiology (Medicinskaia Radiologia), 1991, 10, p. 24-27. (with I.L.Gamburg, R.I.Vepchvadze, O.G.Tapladze)

Clinical application of Diagnostic Thermography in Ovarian Tumors. - Proceedings of Conference “Medical Thermography”, 1991, vol. 2, p. 44-45.

Thermographic evaluation of pharmaceutical effects of Metronidasole in rats with Sarcoma-45. - Medical Thermography Report, 1991, p. 107-111. (with E.G.Gedevanishvili and R.I.Vepchvadze)

Thermography in Cancer of Esophagus. - Medical Thermography Report, 1991, p. 64-66 (with O.Sh.Targamadze)

Individual differences in skin adaptation to ambient temperature prior to the Thermography of Ovaries. - Georgian Scientific Magazine, 1991, 5, p. 32-35.

Post-Cryosurgical prognosis of lip tumors determined by Infrared Thermography. - Proceedings of Caucasian Physicians Conference, 1990, vol. 1, p. 37-40.

Mapping the local temperature distribution on the surface of the neck. - Proceedings of Junior Physicians Conference, 1990, p. 27-29.

Umbilical area temperature as a test-point in the Thermographic Diagnosis of Ovarian Tumors. - Medical Thermography Report, 1990, p. 54-57.

A large-scale study of the 'Digital Thermography System' in the screening of Ovarian Tumors. - Proceedings of Conference "Thermography in Medicine", Kiev, 1990, p. 98-102.

Correlations between infrared emission of breast and ovaries in patients with Breast Fibrocystic Disease. - Proceedings of Conference "Thermovisual Control of Biological Objects", Kiev, 1989, vol. 2, p. 38-42.

The effectiveness of Thermography in the diagnosis of Ovarian Tumors. - Proceedings of International Symposium "Diagnosis and Treatment of Tumors in Gynecology", Pskov, 1989, p. 61-64.

Infrared Thermography in diagnosis of Bone Tumors. - Traumatology and Orthopaedy, 1988, 6. p. 28-32. (with O.N.Gudushauri, M.O.Gudushauri)

Thermography in diagnosis of Uterine and Ovarian Tumors. - Diagnosis and Treatment of Tumors, 1988, vol. 1, p. 22-26.

A Thermographic survey of temperature changes in Radiation-Induced Osteogenic Tumors in rats. - Proceedings of the 4-th International Congress of Oncologists, 1988, p. 61-63. (with M.O.Gudushauri)

Improvement in diagnosis of Skin Tumors by the combined use of Radioisotope Uptake and Thermography. - Proceedings of the 4-th International Congress of Oncologists, 1988, p.109-111. (with T.G.Baramidze, Ch.G.Tevdoradze, D.Z.Piradashvili)

Thermography in differentiation of Skin Nevuses and Melanoma. - Proceedings of the 7-th Republican Conference of Physicians, 1988, p. 35-37.

Infrared Thermography in Pediatric Oncology. - Proceedings of the Republican Conference in Pediatric Oncology, 1988, vol. 2, p. 40-42.

Thermography in diagnosis and prognosis of Malignant Melanoma. - "Diagnosis and Treatment of Malignant Tumors", 1987, p. 57-61. (with I.Sh.Nadiradze and G.K.Ordzonikidze)

Differences in diagnosis of Breast Cancer as determined by patient age. - Proceedings of the 4 Conference of Georgian Oncologists, 1987, p. 77-79.

A "Composite Diagnostic System" to detect sub-clinical neoplasm's. - Georgian Scientific Magazine, 1987, #8, p. 24-28.

A Thermographic survey of temperature changes in chemically induced Rhabdomyoblastomas in rats. - Bulletin of Georgian Academy of Science, 1987, 6, p. 34-37. (with D.Sh.Beniashvili)

Evaluation of treatment effectiveness in Breast Fibrocystic Disease. - Proceedings of Georgian Research Center of Oncology, 1986, vol. 2, p 41-45.

Thermography in detection of recurrent malignancies of Soft Tissues. - "Diagnosis and Treatment of Malignant Tumors", 1986, vol. 1, p. 62-65. (with R.I.Vepchvadze)

Thermosemiology of Inflammation and Tumors of the Testes. - The Problems of Oncology (Voprosi Onkologii), 1986, vol. 36, #4, p. 21-25. (with D.T.Gotsadze)

Thermography in diagnosis of Bone Cysts and Giant Tumors in children. - Traumatology and Ortopaedy, 1985, 8, p. 14-17.

Radiography of the cranium in diagnosis of Prolactinomas. - Reports of Rentgenology and Radiology (Vestnik Rentgenologii - Radiologii), 1985, 6, p. 19-23. (with E.G.Veinberg, V.A.Sabachtarashvili, M.N.Kvachadze)

METHODOLOGICAL RECCOMENDATIONS

'Digital Thermography System' in diagnostics of Ovarian Cancer. - Methodological Recommendations, Tbilisi, 1990.

Medical Thermography in the differential diagnosis of Inflammation and Tumors of the Eye. - Methodological Recommendations, Tbilisi, 1989.

'Digital Thermography System' in differentiation of Malignant and Pre-Malignant Bone Tumors. - Methodological Recommendations, Tbilisi, 1988

Thermography in diagnosis of tumors in major localities. - Methodological Recommendations, Tbilisi, 1987.