Research & Services | Laboratory of Neuropharmacology, Neurotoxicology and Neural Engineering (Yissum)

code: 7-2007-1794

Philip Lazarovici, HUJI, School of Pharmacy, Pharmacology

Categories	Drug discovery R&D, stem cells , neural tissue engineering for regenerative medicine, pharmacological tools , in vitro assays

Research Capabilities

Through a combination of cellular, molecular and pharmacological strategic technologies our laboratory is accelerating drug discovery and optimization towards licensing in neurology, cancer and regenerative medicine. Our unique expertise and research capabilities in molecular pharmacology of toxins, growth factors and stem cells is exploited towards R&D of novel pharmacological targets and discovery of novel lead compounds.

Research Background

- Dr. Lazarovici's Laboratory is active in the field of neuropharmacology ,neurotoxicology and neural tissue engineering with expertise in neurotrophins and neurotoxins and their mechanisms of action and involvement in neurological and cancer diseases; research activities are in the fields of:
- Receptors: structure, regulation and signal transduction
- NGF: function, regulation, drug discovery
- Toxins-pharmacological tools to understand molecular function and develop lead compounds for drug development
- Improvement of in vitro neuropharmacological models to study neurological diseases and discover novel therapeutic approaches
- Neural tissue engineering to generate tissue models and for cell therapy
- Biotechnological issues related to protein expression, isolation and characterization

Researchers

Philip Lazarovici, PhD, Head Laboratory of Neuropharmacology, Neurotoxicology and Neural Engineering, School of Pharmacy Institute for Drug Research, Faculty of Medicine, HUJI

Link to homepage: http://pharmacy.huji.ac.il/eng/staff_win.asp?id=64&type=2

Laboratory Personnel

- Dr. Hadar Arien-Zakay-an experienced molecular and cellular pharmacologist with expertise in neurosciences and neural stem cells; in charge with industrial projects performance and management
- Mr. Shimon Lecht – an advanced PhD student pharmacist with broad experience in molecular, cellular and animal methodologies with special interest in cell signalling, angiogenesis and tumor imaging; trained with industrial projects performance and management

- Mr. Gadi Cohen- a pharmacist ,Ph.D student in charge with animal experiments mastering imaging abilities
- Ms. Keren Ettinger-– an advanced PhD student biologist with broad experience in molecular, cellular and animal methodologies with special interest in muscle degeneration; in charge with in vitro experiments

Research Interests

- Development of a novel technology based on human umbilical cord blood neural stem cell for cell therapy in brain trauma (IP).
- Optimization of anti-metastatic peptidomimetic lead compounds based on specific integrin-receptor antagonism (IP)
- Development of a diagnostic kit based on nerve growth factor receptors for carcinoma staging and prognosis (IP)
- Characterization of nerve growth factor receptors in the cardiovascular system in comparison to nervous system towards development of novel, tissue specific and potent drugs (pre clinical research)
- Establishment and validation of in vitro pharmacological models to study neuronal proliferation and differentiation, neuroprotection and angiogenesis (IP)
- Developments of scaffolds and technologies based on nerve growth factor for neural engineering (IP)

Advantages

Experienced in generating IP, licensing and pharmacological services to biopharmaceutical companies; we are using validated pharmacological models and provide with the scientific data the certificate of performance according to GLP requirements.

Available Resources

- GLP facility-ISO class 7 clean room equipped with class2 B2 Nuaire hoods and incubators, liquid nitrogen tanks, refrigerator, Nikon microscope , Eppendorf centrifuge, sterile disposable equipment and appropriate furniture
- Tecan SPECTRAFluor Plus spectrofluorometer
- Amersham Biosciences FPLC digital chromatography system
- Electrophoretic systems for separation and analysis of proteins and nucleic acids
- Eppendorf Mastercycler gradient –PCR instrument and centrifuges,
- Equipment for radioactive research and refrigerators
- Near IR imaging platform for in vitro and in vivo applications (Odyssey, LiCor).
- Pharmacologically validated in vitro ischemic device and protocols mimicking stroke and other ischemic disorders.
- Carcinoma and pheochromocytoma models for in vitro and mice experiments

Certification (from authorizing/governing body)

Certificates of Performance to the clean room facility of the School of Pharmacy, room 608B being annually tested in accordance with National Environmental Balancing Bureau procedural standards

to meet the ISO class 7 air clean room level requirements of ISO 14644-1 for at-rest clean room (10.000 particles/m2), supervised by En-Dor Sterile Systems Ltd., Israel.

Laboratory Contact

Head of Lab: Prof. Philip Lazarovici, Institute for Drug Research, School of Pharmacy, Faculty of Medicine, The Hebrew University of Jerusalem, Ein-Kerem POB 12065, Jerusalem 91120, Israel

Tel (office): +972-2-6758729

Tel (lab): +972-2-6758767

Fax (office): +972-2-6757490

E-mail: philipl@ekmd.huji.ac.il

Previous experience and work with industry

Dr. Lazarovici's laboratory was involved in research services related to the development of reagents, diagnostic kits and drugs and provided over the last 20 years pharmacological services to a variety of national and international companies such as Fidia Italy, McNeil Pharmaceutical USA, Promega USA, Alomone, Labs. Israel, Sigma Israel, Compugene Israel, D-Pharm Israel, Teva Israel, Kyowa Hakko Kogyo Japan.

The laboratory is staffed by experienced, knowledgeable Ph.D students researchers utilizing state-of-the-art equipment and technologies and is performing the majority of activities upon FDA regulatory requirements in a good laboratory practice GLP-facility-ISO class 7 clean room,

Contact for more information:

Itzik Goldwaser ✉, VP, Head of Research Collaborations , +972-2-6586685

Yissum Research Development Company of the Hebrew University of Jerusalem
Hi-Tech Park, Edmond J. Safra Campus, Givat-Ram, Jerusalem P.O. Box 39135, Jerusalem 91390
Israel Telephone: 972-2-658-6688, Fax: 972-2-658-6689