

SMEs go LifeSciences – Projects under preparation

2. COMBATING MAJOR DISEASES

a) Applications-orientated genomic approaches to medical knowledge and technologies

Studying the brain and combating diseases of the nervous system

Projects # 59, 69, 91, 97, 105, 106, 110, 114.

- LSH-2005-2.1.3-1: Neuroimaging: "Bridging genetics and neural function" - INTEGRATED PROJECT
- LSH-2005-2.1.3-2: Functional genomics and neurobiology of epilepsy - INTEGRATED PROJECT
- LSH-2005-2.1.3-3: Cortical information processing - STREP
- LSH-2005-2.1.3-4: Schizophrenia: from genotype to phenotype – STREP
- LSH-2005-2.1.3-6: Neuroscience-oriented new technologies - STREPs dedicated to SMEs
- LSH-2005-2.1.3-7: Characterisation and use of animal models for neurological and psychiatric diseases - STREPs dedicated to SMEs
- LSH-2005-2.1.3-8: Early markers and new targets for neurodegenerative diseases - STREPs dedicated to SMEs
- LSH-2005-2.1.3-9: Perinatal brain damage: early markers and neuroprotection - STREPs dedicated to SMEs

Project #59

Project #59 - Beacon Tech Ltd. - Israel

Date: 2005/01/29	Deadline: 2006/12/31
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Contact			
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Familiar with the European Framework Programme? **YES**

PROJECT

Title: Understanding the brain's building blocks	Acronym: NeuResearch
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Project type	NEST (Adventure)
Status	Planned for submission
Call references	Call 4th

Priorities' Main Research Areas	ii) COMBATING MAJOR DISEASES a) APPLICATIONS-ORIENTATED GENOMIC APPROACHES TO MEDICAL KNOWLEDGE AND TECHNOLOGIES <ul style="list-style-type: none"> Studying the brain and combating diseases of the nervous system
Workprogramme Topic (according to each priority workprogramme)	LSH-2005-2.1.3-3: Cortical information processing – STREP

Project description

Only a thorough understanding of the brain's building blocks will allow building valid models of higher brain functions. The proposed project touches one of the basic yet still unresolved questions in neuroscience. How do neurons process information? What is the neuronal code at the cellular level?

Keywords	functional transformation information complex neuron large scale screening mapping complex neuronal networks		
Partners already involved	Bar-Ilan University (IL)		
Project budget (for the running projects)	nc	Budget reserved for SMEs	nc

Research topics

- LSH-2005-2.1.3-3: Cortical information processing - STREP

Profile of SME sought

Role	research
Country /region	Enlarged Europe & ACC
Start of partnership	mid-term

Expertise required

Experimentalists: Cellular neurophysiologists, neuro-biophysicists;
Theoreticians: experts in minimization algorithms, experts in artificial neural networks;
Industrialists: interested in complex neural networks

Project #69

Project #69 - Universidad Pablo de Olavide - Spain

Date: 2005/03/21	Deadline: 2039/12/12
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Contact

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Familiar with the European Framework Programme? **YES**

PROJECT

Title: Cortical information processing	Acronym:
Project type	STREP
Status	Planned for submission
Call references	Call 4th
Priorities' Main Research Areas	Studying the brain and combating diseases of the nervous system (4 topics)
Workprogramme Topic (according to each priority workprogramme)	Cortical information processing – STREP LSH-2005-2.1.3-3

Project description

The Division of Neurosciences of the Pablo de Olavide University has developed original behavioural and electrophysiological methods for the study of cortical function in alert behaving rabbits, rats and mice. Those experimental techniques include:

- i) multiple electrode recording from identified somato-motor cortex neurons in behaving rabbits during classical conditioning of eyelid responses;
- ii) substitution of peripheral (i.e., skin receptor) vs central (i.e., the corresponding somato-sensory cortex) electrical stimuli during associative learning in rabbits;
- iii) in vivo chronic induction of long-term potentiation and long-term depression in alert behaving mice and rats during classical and instrumental conditioning;
- and iv) drugs studies during acquisition, extinction, retrieval, and reconditioning in behaving rats and mice; role of associative (area 6) and prefrontal cortices in associative conditioning. We have developed specific recording techniques for EMG, EEG, field potential and unitary recordings in behaving animals and different analytical procedures.

Keywords	electrode recording, classical conditioning, associative learning, in vivo chronic induction, drugs studies		
Partners already involved			
Project budget (for the running projects)	nc	Budget reserved for SMEs	nc

Research topics

- LSH-2005-2.1.3-3: Cortical information processing - STREP
- LSH-2005-2.1.3-6: Neuroscience-oriented new technologies - STREPs dedicated to SMEs
- LSH-2005-2.1.3-7: Characterisation and use of animal models for neurological and psychiatric diseases - STREPs dedicated to SMEs
- LSH-2005-2.1.3-8: Early markers and new targets for neurodegenerative diseases - STREPs dedicated to SMEs

Profile of SME sought

Role	technology development, research, dissemination, demonstration
Country /region	any
Start of partnership	start-up phase
Expertise required	This project should focus on cortical information processing involving sensory and motor cortical areas and thus lead to a better understanding of cognition and sensory/motor behaviour and the underlying neuronal networks. It should involve animal models and may include techniques from molecular to systems level (e. g. gene expression, neurophysiological and computational approaches.)

Project #91

Project #91 - Rambam Medical Center - Israel

Date: 2005/06/19	Deadline: 2006/12/31
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Contact

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Website			

Familiar with the European Framework Programme? **YES**

PROJECT

Title: Modulation of apoptosis in cancer	Acronym: Apoptosis and Cancer
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Project type	STREP
Status	Planned for submission
Call references	Call 4th

Priorities' Main Research Areas	<ul style="list-style-type: none"> ii) COMBATING MAJOR DISEASES <ul style="list-style-type: none"> a) APPLICATIONS-ORIENTATED GENOMIC APPROACHES TO MEDICAL KNOWLEDGE AND TECHNOLOGIES <ul style="list-style-type: none"> • Studying the brain and combating diseases of the nervous system b) COMBATING CANCER
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Workprogramme Topic (according to each priority workprogramme)	<p>LSH-2005-2.1.3-4: Schizophrenia: from genotype to phenotype – STREP.</p> <p>LSH-2005-2.1.3-8: Early markers and new targets for neurodegenerative diseases</p> <p>LSH-2005-2.2.0-2: Modulation of apoptosis in cancer prevention and therapy</p> <p>LSH-2005-2.2.0-3: Innovative diagnostic approaches and novel therapies of childhood cancers – STREP.</p>
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Project description

Our lab research is focused on ARTS is a highly potent pro-apoptotic protein that acts mainly through antagonizing Inhibitor of Apoptosis Proteins (IAPs). In living cells, ARTS resides in mitochondria, but in response to pro-apoptotic stimuli it is released and directly binds to IAPs, thereby inhibiting their ability to prevent apoptosis. Significantly, we have found that ARTS is a tumor suppressor in childhood Acute Lymphoblastic Leukemia (ALL), lymphoma and possibly other malignancies as well. This work constitutes the first evidence that inactivation of a pro-apoptotic protein promotes malignancies, and it validates IAPs as important and promising targets in cancer therapy. Our lab also obtained evidence for abnormal expression of ARTS in other diseases, including schizophrenia, Parkinson's disease, astrocytomas, hepatomas and cardiovascular disease. These observations provide a rich platform for better understanding the contribution of apoptosis to these various diseases, and for developing drugs that are based on ARTS.

Keywords	Apoptosis, cancer, IAPs		
Partners already involved	-		
Project budget (for the running projects)	nc	Budget reserved for SMEs	nc

Research topics

- LSH-2005-2.1.3-4: Schizophrenia: from genotype to phenotype - STREP
- LSH-2005-2.1.3-8: Early markers and new targets for neurodegenerative diseases - STREPs dedicated to SMEs
- LSH-2005-2.2.0-2: Modulation of apoptosis in cancer prevention and therapy - STREP
- LSH-2005-2.2.0-3: Innovative diagnostic approaches and novel therapies of childhood cancers - STREP

Profile of SME sought

Role	research, other
Country /region	All Europe
Start of partnership	start-up phase
Expertise required	Researchers working on apoptotic pathways or apoptotic proteins and their regulation and involvement in cancer. NMR or crystallography experts that could reveal the structure of ARTS protein

Project #97

Project #97 - Universidad Pablo de Olavide - Spain

Date: 2005/06/22	Deadline: 2039/12/12
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Contact

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Telephone	+34 954 34 98 72	Fax	
Website	www.upo.es/otri		

Familiar with the European Framework Programme? **YES**

PROJECT

Title: Development of tools and technologies for functional genomics	Acronym:
Project type	STREP
Status	Planned for submission
Call references	Call 4th
Priorities' Main Research Areas	Function and regulation of vertebrate iroquois genes
Workprogramme Topic (according to each priority workprogramme)	LSH-2005-1.1.0-3

Project description

We are performing a detailed study of the regulation mechanisms of the Iro/Irx genes during vertebrate development. To that end, we have identified, by means of a comparative study of different vertebrate genomes, evolutionary conserved cis-regulatory regions present in those clusters in which the Iro/Irx genes are located. We are functionally analysing these regions by transgenesis in *Xenopus laevis*, *Xenopus tropicalis* and zebrafish. In addition, we are characterizing the factors that regulate Iro/Irx expression through some of the identified cis-regulatory elements. Finally, by means of injecting specific antisense oligonucleotides (morpholinos) we are performing a detailed loss of function study of the different Iro/Irx genes, alone or in combinations, during *Xenopus* development.

Keywords	genomics, proteomics		
Partners already involved			
Project budget (for the running projects)	nc	Budget reserved for SMEs	nc

Research topics

- LSH-2005-1.1.0-3: Proposals concerned with the development of tools and technologies for functional genomics + research focusing on multidisciplinary functional genomics approaches to study basic biological processes. – STREPs dedicated to SMEs

- LSH-2005-1.1.1-1: A systems approach to understanding the regulation of gene transcription - INTEGRATED PROJECT.

- LSH-2005-1.1.3-2: High throughput phenotyping tools and approaches for large scale functional genomics studies - INTEGRATED PROJECT.

- LSH-2005-2.1.3-1: Neuroimaging: "Bridging genetics and neural function" - INTEGRATED PROJECT

Profile of SME sought

Role	technology development, research, dissemination, demonstration
Country /region	Any country/ region
Start of partnership	start-up phase
Expertise required	<p>Research will focus on the study of fundamental biological processes relevant to human health (including studies on micro-organisms, plants and animals where appropriate). This research will be of a multidisciplinary nature, involving the different disciplines of functional genomics: gene expression and proteomics, structural genomics, comparative genomics and population genetics and bioinformatics.</p> <p>Our interest would be to participate as partner in the project, offering our expertise in functional genomics.</p>

Project #105

Project #105 - Netherlands

Date: 2005/06/23	Deadline: 2005/11/09
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Contact

Partner search located in Netherlands

To obtain more information about this Partner Search, feel free to contact our national expert in charge of this file:

Organisation	CR 20 / SENTERNOVEM		
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Familiar with the European Framework Programme? **YES**

PROJECT

Title: Early markers for Alzheimer's disease	Acronym: EarlyAD
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Project type	STREP
Status	Planned for submission
Call references	Call 4th

Priorities' Main Research Areas	1.B. APPLICATION OF KNOWLEDGE AND TECHNOLOGIES IN THE FIELD OF GENOMICS AND BIOTECHNOLOGY FOR HEALTH
Workprogramme Topic (according to each priority workprogramme)	1.B.2. Development of new diagnostics

Project description Aim of the project is to investigate the diagnostic properties of new markers for early Alzheimer's disease in a clinical setting. Also, a cost-benefit evaluation will take place.			
Keywords	Alzheimer		
Partners already involved			
Project budget (for the running projects)	nc	Budget reserved for SMEs	nc

Research topics

- LSH-2005-1.2.2-2: Development of innovative methods for diagnosis of nervous system disorders - STREP.
- LSH-2005-1.2.2-4: Development of new diagnostics - STREPs dedicated to SMEs
- LSH-2005-2.1.3-1: Neuroimaging: "Bridging genetics and neural function" - INTEGRATED PROJECT
- LSH-2005-2.1.3-8: Early markers and new targets for neurodegenerative diseases - STREPs dedicated to SMEs

Profile of SME sought

Role	research, dissemination
Country /region	Europe
Start of partnership	start-up phase
Expertise required	Test for Alzheimer's disease based on proteomics and genomics approach available for diagnosing testing.

Project #106

Project #106 - France

Date: 2005/06/23	Deadline: 2005/12/31
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Contact

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Country	France		

Familiar with the European Framework Programme? **YES**

PROJECT

Title: New technologies for studies of sub-groups of neurons : their applications to mouse models of multifactorial psychiatric diseases	Acronym: not defined yet
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Project type	SME STREP
Status	Planned for submission
Call references	Call 4th

Priorities' Main Research Areas	2. COMBATING MAJOR DISEASES 2.A. APPLICATIONS-ORIENTATED GENOMIC APPROACHES TO MEDICAL KNOWLEDGE AND TECHNOLOGIES 2.A.4. Studying the brain and combating diseases of the nervous system
Workprogramme Topic (according to each priority workprogramme)	LSH-2005-2.1.3-6 Neuroscience-oriented new technologies

Project description

New technologies for studies of sub-groups of neurons : their applications to mouse models of multifactorial psychiatric diseases

- Goals
- identification of sub-groups of neurons :
- differential expression analysis from these identified neurons (control versus transgenic or versus experimentally manipulated : i.e. siRNAs)
- proteomics from identified neurons : single cell
- > proof of concept : applications to mouse models of multifactorial psychiatric diseases

Keywords	Transgenic mouse; laser microdissection; transcriptome; single cell proteomics		
Partners already involved	Two Biotechnology companies		
Project budget (for the running projects)	nc	Budget reserved for SMEs	nc

Research topics

- LSH-2005-2.1.3-6: Neuroscience-oriented new technologies - STREPs dedicated to SMEs

Profile of SME sought

Role	technology development
Country /region	any
Start of partnership	start-up phase
Expertise required	We search for two SME partners : (i) a SME involved in transgenic technology (ii) a SME involved in proteomics (i.e. expertise in antibodies; single cell kinomics)

Project #110

Project #110 - European Network for Research on Alternating Hemiplegia - Austria

Date: 2005/06/27	Deadline: 2006/12/31
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Contact

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Website	www.enrah.net		

Familiar with the European Framework Programme? **YES**

PROJECT

Title: STREP(s) on Cell Biology/Pathology of Channelopathies, resp. AHC (Alternating Hemiplegia of childhood); Drug Testing in vitro/in animal models	Acronym:
Project type	STREP
Status	Planned for submission
Call references	Call 4th
Priorities' Main Research Areas	Rare disease Neurology
Workprogramme Topic (according to each priority workprogramme)	LSH-2005-1.2.2-2: Innovative methods for diagnosis of nervous system disorders LSH-2005-1.1.0-3: Multidisciplinary functional genomics approaches to study basics biological processes LSH-2005-2.1.1-12: In vitro/animal model for rare diseases LSH-2005-2.1.3-6: Neuroscience oriented new technologies

Project description SPECIFIC TARGETED RESEARCH PROJECT(S) ON CELL BIOLOGY/PATHOLOGY OF CHANNELOPATHIES, RESP. AHC DRUG TESTING IN VITRO/in ANIMAL MODELS			
Keywords	channelopathies, drug discovery, cell biology, proteomics		
Partners already involved			
Project budget (for the running projects)	nc	Budget reserved for SMEs	nc

Research topics

<ul style="list-style-type: none"> • LSH-2005-1.1.0-3: Proposals concerned with the development of tools and technologies for functional genomics + research focusing on multidisciplinary functional genomics approaches to study basic biological processes. – STREPs dedicated to SMEs
<ul style="list-style-type: none"> • LSH-2005-1.2.2-2: Development of innovative methods for diagnosis of nervous system disorders - STREP.
<ul style="list-style-type: none"> • LSH-2005-2.1.1-12: Development of in vitro and/or animal models for rare diseases - STREPs dedicated to SMEs
<ul style="list-style-type: none"> • LSH-2005-2.1.3-6: Neuroscience-oriented new technologies - STREPs dedicated to SMEs

Profile of SME sought

Role	technology development, research
Country /region	any
Start of partnership	start-up phase
Expertise required	cell biology, proteomics, animal models systems, molecular biology applications, drug testing

Project #114

Project #114 - Cengiz Cokluk - Turkey

Date: 2005/07/06	Deadline: 2039/12/12
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Contact

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Website			

Familiar with the European Framework Programme? **NO**

PROJECT

Title: Venous infarction/ischemia of the brain	Acronym: venous stroke of the brain
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Project type	Integrated Project
Status	Planned for submission
Call references	Call 4th

Priorities' Main Research Areas	Combating major diseases / Application-orientated genomic approaches to medical knowledge and technologies / Studying the brain and combating diseases of the nervous system
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Workprogramme Topic (according to each priority workprogramme)	This is an integrated and running project in our experimental laboratory. In the same time we have three other running project in different field.
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Project description

Main research area of this project is the work on brain venous infarction and ischemia. We are working experimentally in our experimental model to find brain own (natural) stem cell sources, repair mechanism of brain, drugs affecting repair mechanisms and drugs stimulate repair mechanisms.

Our project is mainly focused on the treatment modality of brain venous infarction and ischemia. According to our works venous insufficiency of the brain may result with some problems such as demands etc.

Keywords	Venous infarction/ischemia of the brain, stem cell sources		
Partners already involved			
Project budget (for the running projects)	nc	Budget reserved for SMEs	nc

Research topics

<ul style="list-style-type: none"> • LSH-2005-2.1.3-3: Cortical information processing - STREP
<ul style="list-style-type: none"> • LSH-2005-2.1.3-6: Neuroscience-oriented new technologies - STREPs dedicated to SMEs
<ul style="list-style-type: none"> • LSH-2005-2.1.3-7: Characterisation and use of animal models for neurological and psychiatric diseases - STREPs dedicated to SMEs
<ul style="list-style-type: none"> • LSH-2005-2.1.3-9: Perinatal brain damage: early markers and neuroprotection - STREPs dedicated to SMEs

Profile of SME sought

Role	research
Country /region	TURKEY
Start of partnership	start-up phase
Expertise required	I am a neurosurgeon, I am working in this field (venous infarction of the brain, stem cell sources) recent three years.

