| General Project Information | |
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| **Project Title** | **Creation of a Kidney Specific Biobank and Infrastructure for Genomics/Proteomics Research** |
| **Project Code** | ΝΕΑΥΠΟΔΟΜΗ/ΣΤΡΑΤΗ/0308/24 |

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| **Summary** | We propose the launching of a BIG SCIENCE Project through the creation, maintenance and continuous development of the Cyprus Center for Research in Molecular Medicine (CY.CE.R.M.M.) that in its heart will be a Biobank as an essential resource for biomedical research. Initially it will be a kidney-specific Biobank (NefroBiobank) but provisions will be made for expanding into a Disease Specific Biobank by including many more diseases, as well as expanding into a general population Biobank. It will aim at becoming the seed for the Cyprus Human Genome Project, following the paradigms of other small countries such as Iceland's and Estonia's. This NefroBiobank has the ambition to be integrated and harmonized in order to become one hub in the network of similar resources around Europe and the globe. Biobanks are becoming a *sine quo non* part of the wheel that rolls toward modern massive investigations of the many monogenic but especially so of the frequent multifactorial conditions that consume or kill most of us, such as Alzheimer disease, coronary artery disease and cancer, to name a few.<br>The disease entities that interest us are inherited kidney disorders as well as diabetic nephropathy and chronic kidney disease (CKD), the silent epidemic, as it has been named. This is based on the evidence that population aging, diabetes and hypertension are responsible for the continuous rise of the number of people with compromised kidney function, while it is estimated that 1 in 10 adults worldwide suffers from a form of CKD. The association of CKD with cardiovascular disease and the high risk for CKD patients to die of such an event even before they reach end stage kidney disease (ESKD) makes research in this field an excellent choice for the first Biobank in Cyprus.<br>Most existing such facilities do not satisfy certain criteria and they do not maintain the highest quality of material and service, whereas there is a need for certified operations, i.e. Certification ***ISO 9001:2000 Quality*** management systems. Recruitement of patients and controls will be mainly through the nephrology clinics of all public hospitals, with which we maintain excellent relationship and collaboration for 18 years. The research to be performed with the collected material will be dual pronged, genomics and proteomics aimed at identifying early biomarkers and genetic modifiers for renal conditions, using biological material in the form of plasma, serum, DNA or mRNA, urine, tissue biopsy or cell culture. State-of-the-art facilities and technologies will be implemented, such as association as well as genetic linkage studies (unmapped families are in our posession), microRNA identification, microchip arrays and proteomics research (with high caliber collaborators).<br>In Cyprus, we have unique advantages that we shall fully exploit. These are the small size of the island with a population that still maintains a high degree of genetic homogeneity, and the previous work we have done which established us as a serious team aimed at solving kidney related problems. Anticipated results and benefits are: Cloning of new genes, identification of genetic modifiers for monogenic disorsers, detection of genetic and early proteomic biomarkers for disease development or progression. This project will provide opportunities to students to pursue PhD/MSc studies while it will employ Cypriots with skillls in specialized fields.<br>Overall, the objectives of this proposal fulfill a long needed ambitious aim that will serve the Cypriot med. research community for many years to come. At the same time, even though the NefroBiobank is concentrating on kidney disorders, the creation of proper infrastructure can be expanded to accommodate material for other diseases or even become a Biobank for the general population, aimed at delineation of other multifactorial phenotypes. |

| Funding | |
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| **Funding Agency** | Research Promotion Foundation |
| **Framework** | 2009-2010 |
| **Programme** | New Infrastructure |
| **Action** | Strategic Infrastructure Projects-Stage II |

| Internal Coordination | | | | | | |
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| **Project Submitted Under** | University of Nicosia Research Foundation (UNRF) | | | | | |
| **Role in Project** | Partner | | | | | |
| **Partner Research Coordinator (PRC)** | Dr. Kyriacos Felekkis | | | | | |
| **Department & School** | Department of Life and Health Sciences, School of Sciences | | | | | |
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| External Coordination | | | | | | |
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| **Host Organisation** | University of Cyprus | | | | | |
| **Project Coordinator (PC)** | Prof. Constantinos Deltas | | | | | |
| **Contact Details** | **Tel:** | | **Fax:** | | **E-mail:** | |

**Partners**

| Partner No. | Organisation | Country | Contact Person | Contact Details |
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| **1** | Medical Services of the Ministry of Health | Cyprus | Ms. Androulla Argyrou | |
| **2** | Biomedical Research Foundation Academy of Athens | Greece | Dr. Antonia Vlachou | |
| **3** | Medical Research Center, University of Heidelberg, Mannheim | Germany | Prof. Nobert Gretz | |
| **4** | University of Nicosia Research Foundation | Cyprus | Dr. Kyriacos Felekkis | felekkis.k@unic.ac.cy |

**Schedule**

| Year Awarded | Duration (in months) | Start Date | Expected End Date |
|---|---|---|---|
| 2011 | 48 | 01/01/2011 | 31/12/2014 |

**Budget**

| | % | Euro | |
|---|---|---|---|
| **Funding Agency Contribution to UNRF** | 100 | 12,502 | |
| **Total Project Budget** | | **1,998,754** | |

| Dissemination | |
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| **Funding Website** | www.research.org.cy |
| **Project Website** | |

The Project **ΝΕΑΥΠΟΔΟΜΗ/ΣΤΡΑΤΗ/0308/24** is co-financed by the European Regional Development Fund and the Republic of Cyprus through the Research Promotion Foundation.