**Faculty of Engineering and Natural Sciences**

**4th Year Graduation Project Courses**

**The Projects Proposed By The Faculty Members Of Molecular Biology And Genetics (English)**

**Projects with Open Quotas**

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| **Faculty Member** | **Project Title** | **Project Type** | **Quota** | **Prerequisite** |
|
| Assoc. Prof. Dr. Tunç Çatal | Developing self-sustained biofuel cells | Experimental | 1 |  |
| The negative regulators of cascular endothelial growth factor and the important microRNAs in the process of aterosclerosis | Review | 1 |  |
| Assist. Prof. Dr. Pınar Öz | Ion channel gating kinetics on conductance-based dentate gyrus granule neuron model | Experimental  (Computational) | 1 | (Intermediate level ) Experience with Matlab or NEURON |
|
| Numerical simulation of IPSC proliferation and differentiation | Experimental  (Computational) | 1 | (Advanced level) Experience with Matlab |

**Projects That are Pre-matched With Students**

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| **Faculty Member** | **Project Title** | **Project Type** | **Pre-matches** | |
| **Students** | **Department** |
| Assoc. Prof. Dr. Tunç Çatal | Developing self-sustained biofuel cells | Experimental | M. Buğra Yaman | MBG EN |
| S. Gamze Yayman | MBG EN |
| Assoc. Prof. Dr. Tunç Çatal (co-supervisor : Assoc. Prof. Dr. Korkut Ulucan) | Determination of ACE I/D polymorphism of Turkish Professional dancers | Experimental | Betül Bıyık | MBG EN |
| Joe Coffey | MBG EN |
| Assist. Prof. Dr. Pınar Öz | The effect of cytokinines on adult rat hippocampal NPC proliferation and differentiation | Experimental | Efe C. Yavuzsoy | BM |
| Batuhan Uygar | MBG EN |
| The effect of cytokinines on rat depression models | Experimental | H. Kübra Gökalp | MBG EN |
| The role of orexinergic system in rat psychosis models | Experimental | Tansu Göver | MBG TR |
| Pre-nervous system and non-neuronal reflexes in *Porifera* | Review | Ayşe Mert | BM |
| The role opioid receptors in opioid addiction with a focus on the dopaminergic neurons of nucleus accumbens | Review | Elif Mutlu | MBG EN |
| Promoter deletion and transcription factor binding site mutational analysis | Experimental | Nazlı Serin | MBG EN |
| The interaction of orexinergic system with other neurotransmitter systems in neurodevelopmental disorders | Review | Sebile Arabacı | MBG EN |
| The role of catecholaminergic systems in psychiatric diseases | Review | Aylin Kübra Çağdaş | MBG EN |
| Assist. Prof. Dr. Pınar Öz  (Co-supervisor :  Prof. Dr. Halil Kavaklı,  Koç University) | TBA | Experimental | Ayşe Taşdelen | MBG EN |
| Co-supervisors:  Assist. Prof. Dr. Türker Tekin Ergüzel /  Assist. Prof. Dr. Pınar Öz | Neural modelling using Jansen & Rit model | Experimental | Gözde Kibar | MBG EN |
| Sultan Kaman | MBG EN |
| Assist. Prof. Dr. Kaan Yılancıoğlu | Data Mining in Cancer Research | Experimental | Esma Mutlu | MBG EN |