2020-2021 EĞİTİM-ÖĞRETİM YILI PHAR 501 MEZUNİYET PROJELERİ			
Project name (Summary)	**Type of Project**	**Number of students**	**Advisor**
1. Pharmacological and Clinical Effects of Bromelain. Bromelain is an enzyme found in pineapple (*Ananas sativus*) fruits and stem. It acts mainly proteolytic, i.e. protein-digesting, and recently has become popular in medicine. Either alone or combined with other agents has been used topically in wound healing and orally to reduce inflammation and edema, particularly for osteoarthritis as well as a digestive aid. This study aims to review the scientific evidences to prove its utilization aims and to reveal its safety profile.	T	Ayşe Eslem GENÇ	Prof. Dr. Erdem YEŞİLADA
2. *Boswellia serrata'* resin; pharmacological and clinical effects: As an ancient remedy had been used in Eastern Traditional Medicines *Boswellia serrata* resin has recently gained popularity against inflammatory diseases. After confirmation of its effects with the results of scientific experiments worldwide demand for the resin has increased from 140.000 ton yearly in 2013 to 1.500.000 tons in 2018. The study aims to review the scientific evidence has been published on *B. serrata* resin.	T	Esra KARAMERCAN	Prof. Dr. Erdem YEŞİLADA
3. Designation of an Herbal Tea Formulation for the defined symptoms: Herbal teas are the oldest type of formulations both as prophylaxis ad for treatment of symptoms/or diseases. In ancient times such formulations were composed by the experienced staff (pharmacists, herb dealers or physicians) mainly based on the symptoms expressed by the patients. However, today the composition of such herbal teas should be composed based on the scientific evidence profiles on the efficacy and safety of its herbal components. This study aims to compose a herbal tea formulation for the following symptoms: Tea will be used after dinner and should provide relief from daily stress, to ease sleeping, erase the daily accumulated radioactivity in the body and also help digestion of the meal.	P	Gülce ÖZDEMİR	Prof. Dr. Erdem YEŞİLADA
4.* Isolation and structure elucidation of cytotoxic secondary metabolites from *Valeriana sisymbriifolia In the framework of this project, the isolation of secondary metabolites that could be responsible for the cytotoxic activities of the CHCl3 subextract of *Valeriana sisymbriifoli*a will be carried out by using common chromatographic techniques. The structures of the isolates will be elucidated by 1D and 2D NMR techniques as well as MS.	P	Şeref Tayga YILMAZ	Prof. Dr. Hasan KIRMIZIBEKMEZ

5. Isolation of polar constituents from the underground parts *Valeriana alliariifolia* The genus *Valeriana* is rich in secondary metabolites such as iridoids, sesquiterpenes and lignans. In this project it is aimed to isolate and identify the iridoid glycosides and other polar compounds from the n-BuOH subextract *of V. alliariifolia*. The compounds will be purified by chromatographic techniques including polyamide, SiO2 and C18-MPLC methods. The isolates will be characterized by 1D and 2D NMR techniques as well as MS.	p	Ceren ŞİMŞEK	Prof. Dr. Hasan KIRMIZIBEKMEZ
6. Medicinal plants used to manage diabetes mellitus and its complications Diabetes mellitus is a metabolic endocrine disorder which is mainly characterized by hyperglycemia. It is associated with the imbalance in carbohydrate, protein and lipid metabolisms. Currently available antidiabetic drugs are not without side effects. Herbal drugs and some plant secondary metabolites were shown to possess antidiabetic effects in *in vitro, in vivo* and clinical studies. Hence, herbal extracts and their compounds are gaining popularity in the treatment or management of diabetes. The aim of this review is to compile the recent (2010-) *in vitro, in vivo* and clinical studies performed on the medicinal and aromatic plants as well as their metabolites that have potential roles for the management of diabetes and its complications.	T	Elif KAYMAKOĞLU	Prof. Dr. Hasan KIRMIZIBEKMEZ
7. A review of Turkish folk medicine literature on dermatological problems: The student is expected to survey the ethnobotanic-based studies concerning the herbal remedies used in Turkey against dermatological problems, predominantly focusing on studies since 2005.	T	Deniz ÇOLAKOĞLU	Assoc. Prof. Engin CELEP
8. Efficacy of aromatherapy applications: A literature survey: The student is expected to assess the scientific literature regarding the health applications on aromatherapy: From both positive and negative approach.	T	Buse KOCAER	Assoc. Prof. Engin CELEP
9. Evaluation of Anti-Biofilm formation and anti- Quorum sensing activity of traditional medicine: The student is expected to conduct a comprehensive overview of the scientific publications about the mentioned activities of the plants.	T	Ayçelen TÜRKBEN	Assoc. Prof. Engin CELEP
10. A review on therapeutic potential of 'Bee pollen' The pollen, plant's male gametophytes, are placed in the anthers of flowering plants. These pollen grains having negative charge can easily stick to positively charged honeybees' (*Apis mellifera L.*) body during collection of floral nectar. Then, honeybees process pollen by using floral nectar and their salivary enzymes such as amylase and catalase. For centuries, bee pollen has been used as a folk medicine due to its wide range of therapeutic properties such as antimicrobial, antioxidant, anti-inflammatory, hepatoprotective, antimutagenic, immunomodulatory activities. The aim of the study is to review on bioactivity studies performed on 'bee pollen'.	T	Özge ERGİN	Asist. Prof. Dr. Etil GÜZELMERİÇ

11. Investigation on polyphenolic content of 'Bee pollen' Beekeeping is one of the oldest and traditional agricultural activities in Turkey. It has been reported that Turkey is the second biggest country (after China) with 8 million 700 bee colonies. Among the hive product bee pollen has recently gained growing attention of the scientific community. The chemical constituents of bee pollen differ with its plant source and geographical origin. The aim of the study is to review on studies based on chemical composition of 'bee pollen'.	T	Günce EREN	Asist. Prof. Dr. Etil GÜZELMERİÇ
12. Investigation Of Phenolic Content And Biological Activites Of Bee Bread		Çetin HELVACI	Asist. Prof. Dr. Etil GÜZELMERİÇ
13.* Anticancer activity and phytochemical composition of *Myrtus communis L. Cancer is one of the leading causes of death in humans. It is believed that plants can provide potential bioactive compounds for the development of new leads to combat cancer and other diseases. The present study focuses on chemical composition of the different parts (leaves, flowers and fruits) of *Myrtus communis L.* and their anticancer activities.	P	Pırıl UĞURLU	Asist. Prof. Dr. Etil GÜZELMERİÇ & Assoc. Prof. Dr. Muhammed HAMİTOĞLU
14. Adverse Drug Reactions caused by medicines which were used against COVID-19 The aim of this project is to collect published data about adverse drug reactions caused by medicinal products which were used against COVID-19 disease	T	Onur Tufan ERTAŞ	Prof. Ahmet AYDIN
15. Investigation of toxicity profile of food colorings/ food dyes Artificial food dyes are used in processed food. Many of them have been banned due to their adverse effects. The aim of this study is to investigate potential toxicities of food dyes on human health.	P	Gamze ÖĞÜTÜCÜ	Prof. Ahmet AYDIN & Assist. Prof. Gülçin TUĞCU
16. Investigation of hepatotoxicity of catechol-bearing compounds While many catechol-bearing compounds are not hepatotoxic, some of them are known to have hepatotoxic effects. The aim of the study is to explore hepatotoxicity of compounds with catechol substructure.	T	Sibel Ceren FAKALI	Prof. Ahmet AYDIN & Assist. Prof. Gülçin TUĞCU
17. *In vitro* biocompatibility study to evaluate the safety profile of play dough for skin. Play-dough is a children's modeling compound used to support early childhood skill development. However, cytocompatibility information is insufficient. The aim of this project is to evaluate the biocompatibility profile of various play dough on skin.	P	Fatma Zehra IŞIK	Assoc. Prof. Hande SİPAHİ

18. Cytotoxicity of Histone Lysine Specific Demethylase 1 (LSD1) inhibitors used as anti-cancer agent Histone Lysine Specific Demethylase 1 (LSD1) inhibitors have been used as anti-cancer agents. The aim of this study is to investigate potential cytotoxicity of LSD-1 inhibitors.	T	Kaan Erçeri	Assoc. Prof. Hande SİPAHİ & Assist. Prof. Gülçin TUĞCU
19. Toxicity evaluation of Azapentacene polysulfonate from the view of genotoxicity Azapentacene (CAS No:3863-80-7) is used in ophthalmologic eye lotions containing polymers with side-chains of phosphorylcholine analogs. Azapentacene is used for cataract. It protects the sulfhydryl groups of the lens from oxidation and promotes the resorption of opaque lens proteins. Has an activating effect on the proteolytic enzymes contained in the aqueous humor and the anterior chamber of the eye. It may improve or delay degeneration of vision in patients with cataracts including senile, traumatic, congenital, and secondary cataracts. There is no information in literature regarding the toxicity of azapentacene. Hence, the aim of this study is to investigate the genotoxicity of this compound.	P	Zeynep ACARARICıN	Assoc. Prof. Dr. Muhammed HAMİTOĞLU
20. Trace element content and antioxidant activity of the green walnut shell The aim of this study is to investigate the trace element content and antioxidant activity of the green walnut shell**.**	P	İpek COŞAR	Assoc. Prof. Dr. Muhammed HAMİTOĞLU
21. Study on Insulin Resistance and Therapy Insulin resistance is a big health problem today. Modern research has shown that insulin resistance can be treated by several methods: insulin injections or insulin pumps or reducing insulin resistance can be achieved by low-carbohydrate and ketogenic diets or medications that reduce insulin resistance. In this project under the latest researchs, student will prepare a review about treatment of insuline resistance by medication.	T	Sude KARACA	Prof. Dr. Hülya AKGÜN
22. New Targets for COVID-19 Therapy Some tyrosine kinases such as NAK and AAK1's are new targets for Covit-19 therapy**.** In this project under the latest researchs, student will prepare a review about new strategies and new targets for covit-19 treatment.	T	Ahmed Enes ÖZDEMİR	Prof. Dr. Hülya AKGÜN
23. History and Development of Antiviral Drugs Development of antiviral drugs is a very complex process. Currently, around 50 drugs have been approved for human use against viruses such as HSV, HIV-1, the cytomegalo virus, the influenza virus, HBV and HCV. Today human needs definitely new drugs for Covid-19 therapy. This review will be focused on what has been done to develop a successful antiviral therapy.	T	Nour ABDULLAH	Prof. Dr. Hülya AKGÜN

24. The development of Coronavirus 3C-Like protease (3CLpro) inhibitors In this study, student is expected to review the coronavirus 3CLpro peptidomimetic inhibitors and nonpeptidic small molecule inhibitors developed from 2010 to 2020. He/she will discuss the structural characteristics, binding modes and SARs of these 3CLpro inhibitors.	T	Mehmetcan YÖRÜK	Prof. Dr. Meriç KÖKSAL AKKOÇ
25. Inhibitors that target both Fatty Acid Amide Hydrolase (FAAH) and Cyclooxygenase (COX) to treat pain and inflammation The design of multitarget-directed ligands is a promising strategy for discovering innovative drugs. In this stdy, a review study that clarifies key aspects of the dual inhibition of the fatty acid amide hydrolase (FAAH) and the cyclooxygenase (COX) enzymes by a new multitarget-directed ligands will discuss.	T	Aslan TUNG	Prof. Dr. Meriç KÖKSAL AKKOÇ
26. New Players in Alzheimer's Disease Drug Discovery The global impact of Alzheimer's disease (AD) continues to increase, and focused efforts are needed to address this immense public health challenge. Based on the latest research, the possible pathogenesis of AD and the new direction of drug development are described in this Project.	T	Selin KARABURUN	Prof. Dr. Meriç KÖKSAL AKKOÇ
27. Design of novel iron chelators as a therapy for thalassemia patients Iron overload can be a huge issue for people coping with thalassemia. This project will involve the design of novel ion chelators that are effective and ultimately exhibit less side-effects of existing treatments.	T	Ezgi Ecem AKAY	Prof. Dr. Mine YARIM YÜKSEL
28. Artificial blood This project aims to develop larger water-based systems that can be used in accident or emergency situations. Specifically, the aim is to use these molecules as alternative "volume expanders" that can also bind and release oxygen (i.e. for use as an oxygen delivering plasma).	T	Ayşe UZUNASLAN	Prof. Dr. Mine YARIM YÜKSEL
29. Hydroxychloroquine: SAR and therapeutic use What is currently known on the targets and the SAR data of these molecules ? In this project you will have to gather information that has been published on this structure and will present the studies that discuss the targets of the molecule as well as the structure-activity relationship for the described target	T	Serenay ALTINTAŞ	Assoc. Prof. Filiz Esra ÖNEN BAYRAM

30. Azithromycin: SAR and therapeutic use What is currently known on the targets and the SAR data of these molecules? In this project, you will have to gather information that has been published on this structure and will present the studies that discuss the targets of the molecule as well as the structure-activity relationship for the described target.	T	Rengin PARLAK	Assoc. Prof. Filiz Esra ÖNEN BAYRAM
31. A literature review on main protease enzyme of SARS-CoV-2 The project will consist of a literature review on existing inhibitors of the target main protease (M-pro) of SARS-CoV-2, knowing that M-pro is a key enzyme of coronaviruses and has a pivotal role in mediating viral replication and transcription, making it an attractive drug target for SARS-CoV-2.	T	Lale SEVDİK	Assoc. Prof. Filiz Esra ÖNEN BAYRAM
32. Animal behavioral tests used in the assessment of aging Knowledge of age sensitivity, the capacity of a behavioral test to detect age-related changes, has utility in the design of experiments to elucidate processes of normal aging. Behavioral assessments are a valuable means to measure functional outcomes of neuroscientific studies of aging. Student will learn theoretically behavioral aging tests and methods for aging.	T	Deniz Ozan BENLİ	Prof. Dr. Turgay ÇELIK
33. *in vitro* antiviral tests used in different action mechanisms The increasing emergence of several virus infections worldwide has necessitated the urgent need to discover novel and highly effective antivirals due to the lack of vaccines and therapies available to control viral infections. Therefore, student will learn theoretically the action mechanisms and test methods of antiviral drug**s.**	T	Osman Çağatay GÜLEN	Prof. Dr. Turgay ÇELIK
34. Viral gene therapy Certain viruses are often used as vectors because they can deliver the new gene by infecting the cell. The viruses are modified so they cannot cause disease when used in people. Some types of virus, such as retroviruses, integrate their genetic material (including the new gene) into a chromosome in the human cell. Student will learn theoretically alternative gene therapy methods for disease.	T	Sinem LİMONCU	Prof. Dr. Turgay ÇELIK
35. The importance choosing Zebrafish models in pharmacological research. Humans and zebrafish have more in common than you would think. Therefore, zebrafish are used more and more, for example, to study the function of genes, to create animal models for human diseases and to develop new human drugs. Student will learn the zebrafish models for the treatment of some disorders.	T	Tevfik Can SÖNMEZ	Assist. Prof. Dr. Beril KADIOĞLU YAMAN

36. New Treatment Approaches, and The Relationship Between Leaky Gut Syndrome and Autoimmune Diseases The intestinal epithelial lining forms a barrier that protects the host from allowing the passage of toxins, and a variety of microorganisms. Student will conduct a literature search on how Leaky Gut Syndrome is linked with autoimmune diseases and their possible treatment options.	T	Beril GÜNEY	Assist. Prof. Dr. Beril KADIOĞLU YAMAN
37. The risks and benefits of iron supplements during pregnancy and lactation Iron supplementation is important in pregnancy to fulfill the increased demands for hematopoiesis. However, both low and high iron levels may be related with adverse health outcomes. Student will conduct a literature search and evaluate the risks and benefits of iron supplements during pregnancy and lactation.	T	Başak TURAN	Assist. Prof. Dr. Beril KADIOĞLU YAMAN
38. Role of pharmacist during the COVID-19 pandemic Since the start of the new Coronavirus (COVID-19) outbreak in December 2019, pharmacists worldwide are playing a key role adopting innovative strategies to minimize the adverse impact of the pandemic, we will identify and describe core services provided by the pharmacist during the COVID-19 pandemic	T	Volkan BOLAT	Dr. Ahmad Khaled RADI
39. Incretin Mimetic Drugs for the Treatment of Type 2 Diabetes Literature review of the most recent data about Incretin mimetic drugs used for the treatment of type 2 diabetes	T	Kamil Furkan KAYA	Dr. Ahmad Khaled RADI
40. Clinically Significant Drug Interactions of Phenytoin Clinically significant drug interactions of Phenytoin and how to minimize them	T	İlkim GÜRBÜZ	Dr. Ahmad Khaled RADI
41. Evaluations of Bioequivalency of Topical Dermatological Formulations with Recent Approaches The assessment of the bioequivalence (BE) of topical dermatological formulations is a long-standing challenge. There are only a limited number of acceptable methods for determining BE between the generic topical dermatological products and reference list products. To establish the BE of most topical dermatological products, barring dermatological corticosteroids, the only method to-date has been to undertake tedious, time consuming and expensive clinical endpoint trials. Therefore, significant efforts are being made to find alternative approaches for BE assessment of topical dermatological formulations. The pharmaceutical scientists, dermatologists and regulatory agencies are considering promising surrogate approaches like derma to pharmacokinetic study (DPK), dermal micro dialysis (DMD) and in vitro studies as prospective strategies for establishing BE of topical dermatological products. In this project we will search latest developments and approaches for evaluation of bioequivalance of generic topical drug formulations.	T	İlayda ESENKAL	Prof. Dr. Çetin TAŞ

42. Future Perspective of Microneedle Systems - In Clinical Trials or on The Market Microneedle systems are a rapidly growing and promising technology for delivery of drugs, such as vaccines, small molecules, or biologics and for aesthetic skin treatment in local clinics; however, they remain relatively new from a regulatory perspective. There are strong demands for established procedures, test requirements for approval, and recent trends that industries/researchers related to microneedle systems can refer to. Some microneedle systems are commercially available, many are currently undergoing clinical trials, and some are pending approval for commercialization. This review focuses on microneedle systems that are either on the market or in clinical trials, their applicability and characteristics, and the critical evaluation and test methods necessary for their development and approval.	T	Tuğba ÖZDEMİR	Prof. Dr. Çetin TAŞ
43. Recent Developments of Microsponges for Skin Disorders: Perspectives and Challenges Dermatological disorders have a huge psychosocial impact, causing significant impairment of patient's life. Topical therapy plays a pivotal role in management of such disorders. Conventional topical delivery systems result in overmedication/ undermedication, leading to adverse effects and reduction in therapeutic efficacy. Consequently, researchers have been striving towards the development of alternative delivery systems for dermatological applications. In the last decade, microsponges emerged as an attractive option for topical delivery. Their characteristic particle size offers enhanced benefits, making them superior to the contemporary microcarriers. The present review furnishes a comprehensive account of state of the art, important factors affecting the performance and mechanism of drug release from topically applied microsponges, along with characterization techniques. Further, a list of marketed products and their applications for common dermatological disorders has been presented. All in all, this paper is an attempt to lay a bibliographic foundation for researchers working in this field and foster further investigations in this arena.	T	Merve ŞENTÜRK	Prof. Dr. Çetin TAŞ
44. 3D Printing and Pharmaceutical Applications The introduction of 3D printing technology in the pharmaceutical industry has opened new horizons in the research and development of printed materials and devices. The main benefits of 3D printing technology lie in the production of small batches of medicines, each with tailored dosages.	T	Göksun TÜMAY	Assist. Prof. Dr. Gülengül DUMAN
45. Nanorobots and Microrobots as Targeted Drug Delivery The recent progresses made in the fields of nanotechnology and microfabrication methods have created programmable nanorobots and microrobots (NMRts) as innovative drug delivery products. The NMRts represent a promising option to improve the therapeutic efficacy of drugs (small or large molecules) and personalized biomedical applications.	T	Sema Aybüke ÖNDEŞ	Assist. Prof. Dr. Gülengül DUMAN

46. Aptamers as targeted therapeutics: current potential and challenges Nucleic acid aptamers are short, single-stranded DNA or RNA molecules that can specifically bind to a molecular target via three-dimensional structures. There are three aptamers designated for use in ophthalmology, including one drug approved by the US Food and Drug Administration (FDA) (pegaptanib (Macugen)), and two in late-stage development (ACR-1905 and E-10030)	T	Berra KÖKOĞLU	Assist. Prof. Dr. Gülengül DUMAN
47. pH-responsive Drug Delivery Systems The site and time control of drug release from delivery systems offers the opportunity of increasing efficacy, and minimizing potential side effects and off-target toxicities. Many (bio)materials are reported to be tailor-designed and stimuli-responsive. pH is one of the chemical stimuli that can affect their behaviour. The purpose of this graduation project is to review the drug delivery systems that are pH-responsive.	T	Hale Feyza BÜYÜKHELVA CIGİL	Assist. Prof. Dr. Muhammed Abdur RAUF
48. Acoustic-responsive Drug Delivery Systems The site and time control of drug release from delivery systems offers the opportunity of increasing efficacy, and minimizing potential side effects and off-target toxicities. Many (bio)materials are reported to be tailor-designed and stimuli-responsive. Ultrasound is one of the physical stimuli that can affect their behaviour. The purpose of this graduation project is to review the drug delivery systems that are sound-responsive.	T	Serra UBUZ	Assist. Prof. Dr. Muhammed Abdur RAUF
49. Photo-responsive Drug Delivery Systems The site and time control of drug release from delivery systems offers the opportunity of increasing efficacy, and minimizing potential side effects and off-target toxicities. Many (bio)materials are reported to be tailor-designed and stimuli-responsive. Light is one of the physical stimuli that can affect their behaviour. The purpose of this graduation project is to review the drug delivery systems that are light-responsive.	T	Ece Naz BULĞAK	Assist. Prof. Dr. Muhammed Abdur RAUF
50. Nanofiber-mediated drug delivery strategies for localized cancer chemotherapy Electrospun nanofiber-based implantable drug-delivery systems have been established as one of the most effective approaches for localized cancer treatment, allowing the on-site delivery of anticancer agents and reducing systemic toxicities and side effects to normal cells. In this theoretical project, the latest cutting-edge research on applications of electrospun-based systems for local chemotherapy will be reviewed from the latest available literature.	T	İpek ŞAHAN	Assist. Prof. Dr. Juste BARANAUSKAITE-ORTASÖZ

51. Polymeric Nanocapsules for Drug Delivery System Polymer nanocapsules can serve as nano-sized drug carriers to achieve controlled release as well as efficient drug targeting. Their release and degradation properties largely depend on the composition and the structure of the capsule walls. Nanocapsules can be prepared by four principally different approaches: interfacial polymerization, interfacial precipitation, interfacial deposition, and self-assembly procedures. In combination with efficient preparation procedures, nanocapsule dispersions allow for new and promising approaches in many kinds of pharmaceutical therapies. In the theoretical project, various types of nanocapsules will be reviewed from the latest available literature, based on their composition and drug-release properties.	T	Saida MOHAMED	Assist. Prof. Dr. Juste BARANAUSKAITE-ORTASÖZ
52. The design and development of "fast-dissolving" electrospun nanofibers based drug delivery systems The electrospun nanofiber based drug delivery systems have shown tremendous advancements over the controlled and sustained release complemented from their high surface area, tunable porosity, mechanical endurance, offer compatible environment for drug encapsulation, biocompatibility, high drug loading and tailorable release characteristics. The dosage formulation of poorly water-soluble drugs often faces several challenges including complete dissolution with maximum therapeutic efficiency over a short period of time especially through oral administration. In this context, challenges associated with the dosage formulation of poorly-water soluble drugs can be addressed through combining the beneficial features of electrospun nanofibers. In the theoretical project, will be reviewed major developments progressed in the preparation of electrospun nanofibers based "fast dissolving" drug delivery systems by employing variety of polymers, drug molecules and encapsulation approaches with primary focus on oral delivery.	T	Yavuz Selim ÇELİK	Assist. Prof. Dr. Juste BARANAUSKAITE-ORTASÖZ
53. Determination of acid dissociation constant values some sulphur containing benzoxazolinone derivatives by using spectrophotometric method in buffered solutions The purpose of this study is to determine the acid dissociation constant values of some sulphur containing benzoxazolinone derivatives by using spectrophotometric method. There will be experimental part in this project.	P	Hüsniye Birnur Güzeldağ	Assoc. Prof. Dr. Hayati ÇELİK
54. Formation of imine intermediates in the course of reduction of hydrazone derivatives The purpose of this study is to review the reduction mechanisms of hydrazone derivatives. The formation of an imine intermediate will be investigated based on literature survey. There will be literature research parts in this project.	T	Merve KABAOĞLU	Assoc. Prof. Dr. Hayati ÇELİK

55. Electrochemical behavior of some benzoxazolinone derivatives The purpose of this study is to elucidate the oxidation mechanism at glassy carbon electrode (GCE) by cyclic voltammetry (CV) for some benzoxazolinones derivatives in aqueous buffered solutions pH between 1 and 12. Based on experimental evidences, electrochemical behavior of these derivatives will be investigated and oxidation mechanism will be proposed. There will be experimental part in this project.	P	Oğuz BÖLÜKBAŞI	Assoc. Prof. Dr. Hayati ÇELİK
56. Investigation of residue chemicals on disinfected surgical instruments This project is a practical project. The student should investigate literature for disinfection methods and used chemicals. Then, student is going to apply some basic chemical test such as titrimetric or spectrophotometric tests on disinfected surgical instruments to determine the residue chemicals on these instruments.	P	Gamze Gizem YILDIRIM	Assist. Prof. Dr. Ebru TÜRKÖZ ACAR
1. Studies of brain renin angiotensin system changes in Parkinson's disease to find new treatments The brain Renin Angiotensin System (RAS) has emerged as a likely pathway that may be implicated in PD, based on similarities between Alzheimer's disease (AD) and PD and where RAS has been found to be significantly involved. Currently PD has no cure and has only a limited number of symptomatic treatments that have a short duration of effect due to the progressive nature of the underlying pathology. There remains urgent need for disease-modifying and neuroprotective therapies.	T	Burak Serhat ARDA	Assist. Prof. Dr. Ebru TÜRKÖZ ACAR
2. Usage of nanodots in pharmaceuticals This is a theoretical project. The student should investigate the literature about nanodots and their usage in pharmaceutical products.	T	Ece ÖZÜZÜMCÜ	Assist. Prof. Dr. Ebru TÜRKÖZ ACAR
3. Hypoxia and cell movement in human tumors Maintenance of oxygen homeostasis in mammalian cells is fundamental to the survival of the organisms. Low oxygen conditions aka, Hypoxia, has been identified as a common symptom in many diseases, such as cancer, obesity, atherosclerosis. In common, solid tumors exhibit hypoxic microenvironments. Hypoxia has been thought to be one trigger for metastasis. Hypoxic conditions within the tumor mass are thought to activate signaling pathways that stimulate invasiveness of cancer cells spreading the disease. However, the molecular basis of this process is not well understood. In this study we aim to review literature to evaluate hypoxia caused cell movement which result in metastasis, in different human origin tumors.	T	Elvin AGHAYEV	Assist. Prof. Dr. Burçin GÜNGÖR
4. The emerging roles of liver X receptor ligands and potential therapeutic approaches Liver X receptors (LXRs) are nuclear receptors with well-known functions in cholesterol transport and fatty acid metabolism, and modulation of immune responses. LXRs are activated	T	Elif YİĞİT	Assist. Prof. Dr. Burçin GÜNGÖR

by their physiological ligands; oxysterols, metabolites of cholesterol, and therefore act as intracellular sensors of this lipid. LXRs interact with regulatory sequences in target genes as heterodimers with retinoid X receptor. Such direct targets of LXR actions include important genes implicated in the control of lipid homeostasis. Additionally, LXRs attenuate the transcription of genes associated with the inflammatory response indirectly. There is now, accumulating evidence pointing to functional roles for LXRs in a variety of malignancies, and the potential therapeutic efficacy of their natural and synthetic ligands. In this study, our aim is to find out generate a pool which can pave the way for new developing therapeutic approaches targeting LXRs.			
5. Analysis of Rac1 protein and mRNA levels in human breast cancer The Rho family small GTPase Rac1 is an important integrator of signals from growth factor receptors, integrins and altered signaling related to cell transformation, tumor invasion, and metastasis. Recent studies report that Rac1 can be a promising target for breast cancer treatments. In this study we aim to understand the Rac1 levels in different breast cancer cell lines in comparison with mammalian epithelial cell line. For this, we will work with human origin breast cancer cell lines and we will investigate the expression levels of rac1 gene quantitively using qRT-PCR and Rac1 protein levels using western blot.	P	Zeynep Ceren ERİM	Assist. Prof. Dr. Burçin GÜNGÖR

Kalan Projeler

1. Cytotoxic and immunologic profiles of finger paints Finger paints are aqueous semi-solid or liquid, colored mixture specially designed for children to apply directly to suitable surfaces with their fingers and hands. The risks associated with prolonged skin contact or possible ingestion of paint materials cannot be ruled out. The aim of the study is to evaluate cytotoxic effect of finger paints by using direct contact test method and nitric oxide inducing profiles.	P		Assoc. Prof. Hande SİPAHİ