

Geneticists should pay attention to urea citrullin-ornithin cycle with some enzymes which deficiencies have genetic nature and result into ammonia improper decomposition. Ammonia possesses significant neurotoxic effect. That is why urine analysis with ammoniuria, uric acid increased release together with possible varicosity of esophageal veins, “head of jelly” on anterior abdominal wall, “vascular stars”, seizures and even losing consciousness at hepatic coma can help to put a proper diagnosis.

Again, theoreticians and clinicians work together and the specialists of Medicine various branches help one another in termed and proper diagnostics, differential diagnostics and therefore encourage to well-aimed therapy and helping the patient.

We presented only the data concerning some urine changes under physiological and pathological conditions. They can accompany blood changes and can appear independently while occurring faster in the second case. Blood as a mirror reflects all processes in alive organism both in norm and pathology and urine can be considered as the second mirror as well. Kidneys pathology can carry not only primary but secondary character while being inheritant, innate and acquired, independent problems or the ones accompanying other systems diseases and syndromes.

### INTERNATIONAL FACULTY STUDENTS' STUDY ARTISTIC APPROACH PECULIARITIES

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Modern studentshood is distinguished by significant increase in left-handed and ambidextrous people amount. Only the students from African, moslemic and hinduistic countries are undergone to cultural-religious pressure leading to forced dexterity and left-handers number lowering by statistics. Right hemisphere is known as intuitive, artistic, irrational, using and understanding non-verbal technologies. Left-handers and ambidexters prefer giving them non-traditional forms of tasks and questions while having difficulties in solving the tests because dominant right hemisphere possesses non-consequent but simultant pathway of the information processing. Although we concluded that International faculty students even while being right-handed prefer using intra- and inter-disciplinary integration at a greater extent than Ukrainian students while demonstrating active work of their subdominant right hemisphere and while using synthesis and induction as thinking operations. Artistic approach in their self-education is in writing the concepts with many colors of pens and markers used. They asked the teacher to mark the main with various chinks on the board and not to unite the letters especially if they receive their education in Ukrainian or Russian. It is known that it is non-desirable to teach left-handed children to unite letters because of right hemisphere simultant pathway of the information processing.

International faculty students at Laboratory Diagnostics lessons had personal tasks to describe the diseases statistics, forms, diagnostics methods

approaches and peculiarities in their native countries. They did it with very good degrees received and with very big interest and desire to work artistically. There were the Indian students who reworked their absences with such an activity and even with presenting the literary sources of Indian references. Their artistic approach in self-study was also expressed in uniting their educative and scientific activity. Scientific activity with possibility to get to know more about purposeful literary search, prepare abstracts, articles, reports at the conferences increases their motivation to gain knowledge and practical skills though it is high even without this activity.

The International faculty students were allowed to be the teachers at Physiology lessons. They prepared their lectures, while using significant intra- and inter-disciplinary integration between Biology, Biochemistry and Physiology, demonstrating and proving the interrelations between the organisms' structure and function at alive matter organization all levels according to Hekkel's biogenetic law while using their knowledge of Anatomy and Histology. We gave them opportunity to create informative multimedia presentations, schemes, figures, graphics on the topics. They were the authors of multi-leveled tests and situational tasks including the ones with elements of clinical thinking. We allowed them to tell the present about given organism functioning peculiarities in people from their countries, in part, organism functioning indices normal ranges, about methods and approaches used to investigate it. Separate attention was paid to these peculiarities backgrounding on the base of the country ethno-climatic distinguishing features (particularly while urbanization taking into account), gender and age typological belonging, additionally for Indian students – temperamental belonging not only by I.P. Pavlov but on the base of humidity (moist and dry temperaments), temperature (cold, warm and hot temperaments). They emphasize to the fact that Eastern Doctors consider one and the same disease or syndrome from various points of view: for example, the Indians think that migraine represents dys-temperament, vagotony and pseudo-allergy expression. It is important to be mentioned because vegetative-vascular dystony or dys-function represents a problem of every second-third person; there are many new substances and the organism does not know how to react to them that leads to allergy morbidity increase; even stress so distributed nowadays leads to pseudo-allergy with histamine-liberation without immune complex formation. There is rather big row of diseases developed as an expression of dys-temperament that was paid attention by our “applicants-teachers” at their lessons significantly. Not only the tests and tasks were encouraging to clinical thinking development in future doctors. They themselves used and use Clinical Physiology, Medical Physiology guidances and demonstrate integration between theory and clinics while considering Physiology as Mother of Medicine. Of course, any integration is based into the students' synthetic approach and artistism in their study.

As a whole, all the students of International faculty were interested in such topic of our Physiological students' scientific group as typological belonging contribution into organism functioning at various levels in norm and disease while thinking its taking into consideration as an obligatory component which allows to put the diagnosis properly and to treat the patient but not a disease, as Hippocrate advised.

To conclude, International faculty applicants are distinguished by expressed individual approach in their self-study, based into perceiving the materials “not by scale” but while using their own, non-standard, educative methods and means, including significant integration between structure and function, theoretical and applied academic disciplines, study and science, while being able to be the tutors of their favorite subjects even at their 1-st courses of education in higher educational establishment. They will unite all these activity types and, correspondingly, acquired competencies and will be Prominent Doctors, Scientists, Tutors in future while glorifying their Alma-mater and its Teachers wherever they are.

### **ПРОФЕСІЙНА ПІДГОТОВКА МАЙБУТНІХ УЧИТЕЛІВ ПРИРОДНИЧОЇ ОСВІТНЬОЇ ГАЛУЗІ ДО ЗАСТОСУВАННЯ ПРОЄКТНИХ ТЕХНОЛОГІЙ**

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Освітній процес у контексті реалізації Концепції «Нова українська школа» не можливий без фахівця, який відповідає вимогам модернізації українського суспільства. Все більшого значення набувають інноваційні підходи до навчання, серед яких проєктні технології займають особливе місце, й спрямовані на розвиток критичного мислення, творчих здібностей і самостійності здобувачів освіти.

Питання щодо застосування проєктних технологій у навчанні природничих дисциплін відображено у працях І. Мироненко, Т. Микитин, Т.Вороненко, Н. Грицай, Т. Засекіної, Л. Міронець, В. Меняйло, І. Сясько, В.Перетятко, Ю. Шапрана, Г. Ягенської, та ін. У своїх працях науковці описують етапи становлення проєктного навчання, обґрунтовують основні типи проєктів, висувають різноманітні визначення сутності проєктного навчання учнів тощо.

Зокрема, І. Мироненко вказує на те, що шляхом використання проєктної технології відбувається впровадження діяльнісного підходу та реалізація концепцій Stem-освіти. Авторка пропонує кілька тем для Stem-проєктів у біології та екології, які можуть бути реалізовані в освітньому процесі, а саме: «Дослідження впливу забруднення на водні екосистеми», «Створення екологічного саду», «Спостереження за поведінкою домашніх тварин (за вибором учнів)» тощо [6, с. 51, 54]. Н. Грицай констатує, що майбутні вчителі природничих наук, мають найбільше можливостей для виконання професійно зорієнтованих проєктів у процесі вивчення різних методик навчання (біології, фізики, хімії та природничих наук), де вони не лише виконують проєкти самостійно, а й вивчають, як ефективно організувати їх проведення для учнів закладів загальної середньої освіти [3, с. 31]. Ми підтримуємо думку В. Перетятка та В. Меняйла, щодо важливості рефлексії у професійній діяльності вчителя, особливо в проєктній роботі. На цьому етапі учасники аналізують процес виконання, досягнуті результати, труднощі та недоліки. Важлива роль у цьому контексті