- 1. Department: "Microbiology, virology and immunology."
- 2. Level of training: Residency
- 3. Educational program: 7R01103 "Allergology and immunology (adults, children)"
- 4. Course: 2
- **5. Name of the elective discipline:** " Allergen-specific immunotherapy (ASIT) in patients with allergic diseases."
- **6.Number of credits:** 5 credits / 150 hours.
- **7. Goal:** improving competencies, increasing professional level within the framework of existing qualifications, obtaining systematized theoretical knowledge, skills and necessary professional skills for the timely detection, diagnosis, treatment of allergic and immunological diseases, when working as allergists and immunologists.

8. Tasks:

- determine the need for special research methods (laboratory, radiological, functional, pathopsychological, medical-genetic), organize their implementation and be able to interpret their results;
- develop a plan for preparing the patient for allergen-specific immunotherapy therapy, determine somatic contraindications .
- **9. Contents of the discipline:** Fundamentals of modern innovative technologies in the diagnosis, treatment of allergic diseases and immunodeficiency conditions. Development of diagnostic and treatment algorithms when providing medical care to patients with allergic diseases. Use of information technology.
- **10. Rationale for the choice of discipline:** Mastery of the basic principles of treatment of allergic diseases (elimination, allergen-specific and non-specific pharmacotherapy) will lead to a decrease in the incidence of allergic diseases, a decrease in its severe forms and the achievement of control over the disease.
- 11.Learning results (competencies).
- **PO 1: Patient supervision:** able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of qualified care;
- **RO 2 : Communication and collaboration :** able to effectively interact with the patient, his relatives, and healthcare professionals in order to achieve the best results for the patient;
- LO3: Safety and Quality: Able to assess risks and use the most effective methods to ensure a high level of safety and quality of qualified care;
- **RO 4: Public health**: able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in providing allergy and immunological care, provide basic care, work as part of interprofessional teams to implement policies to improve the health of the nation;
- **PO5: Research:** able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in the activities of an allergist, participate in the work of a research team.:
- **LO 6: Training and Development:** Able to learn independently and train other members of a professional team, actively participate in discussions, conferences and other forms of continuous professional development.
- 12. Prerequisites: Microbiology and immunology
- 13 Post-requisites: continuing education courses. Scientific information
- 14.Literature:

Main

- $1.\ Clinical\ allergology.\ Favorites\ lectures\ Goryachkina\ L.A.,\ Terekhova\ E.P., Sebekina$
- O.V. Russian, 2017 Publishing house MIA
- 2. Khaitov, R.M. Immunology: [Text]: Textbook / R.M. Khaitov. 3rd ed., revised and supplemented. M.:ГЭОТАР-МЕДИА, 2016.- 496 page: ill.
- 3. Allergology And clinical immunology. Khaitov R.M. Year editions: 2019

Visual immunology. Burmester G.-R., Petzutto ; Per. With English T.P. Mosolova; Under ed. L.V.Kozlova . 2019

Additional:

1. Clinical immunology and allergology: Oxford Handbook/ Spikett G.; Per. With English; Under ed. N.I. Ilyina M: M: ГЭОТАР-МЕДИА 2019г.-832 р

- 2. Tactics diagnostics And treatment allergic diseases And immunodeficiencies : practicalmanagement/ Khaitov R.M. M: GEOTAR-MEDIA 2019 -152p
- .Khaitov, R.M. Immunology [Text]: Atlas / R.M. Khaitov, A.A. Yarilin.- M.: ГЭОТАР-МЕДИА, 2011.- 624р.
- 4. Yarilin , A.A. Immunology [Text]: Textbook / A.A. Yarilin.- Moscow: ГЭОТАР-МЕДИА, 2010.-752p. :i l.
- 5.Klinikalyk allergology. Tandamals lecturer Goryachkina L.A., Terekhova E.P., SebekinaO.In the year 2017
- 6.Udartseva, T.P. Medicinal nutrition at allergies on food products: [Text]: educational allowance /T.P.

Udartseva.- Astana: JSC " Medical " university Astana ", 2018.- 59 p.

7. Zemskov, A.M. Clinical immunology [Text]: Textbook / A.M. Zemskov; V.M. Zemskov,

Karaulov.- M: ГЭОТАР-МЕДИА, 2008.- 432 pp.: ill.

- 8. Visual immunology [Text]: Per. with English-Ed. 2nd add. And corrected / Cheyne
- В.М.PlayfairJ.H.L.- М: ГЭОТАР-МЕДИА, 2008.- 120р. :i l.
- 9. Basics clinical immunology [Text]: Per. With English-Ed. 5th.- M: ГЭОТАР-МЕДИА, 2008.-416р. :A
- 1. Department: "Microbiology, virology and immunology."
- 2. Level of training: Residency
- 3. Educational program: 7R01103 "Allergology and immunology (adults, children)"
- 4. Course:1
- **5. Name of the elective discipline:** "Diet therapy for allergic diseases and immunopathology."
- **6.Number of credits:** 5 credits / 150 hours.
- **7. Goal:** Acquisition of knowledge, skills and abilities in the methods of cell therapy and immunotherapy in immunocompromised patients and patients with immunological diseases, necessary for the professional activity of an allergist-immunologist.

8.. Tasks:

- Expanding knowledge about the general patterns of development of transplantology as a branch of science and practical medicine with an emphasis on basic clinical and laboratory research methods;
- Improve a complete and structured understanding of clinical and laboratory diagnostics in transplantology, characterize the latest scientific achievements in this area, determine the main directions for the introduction of innovative technologies into clinical practice at the current stage of development of biomedicine;
- To develop knowledge about transplantation immunity in oncohematological , autoimmune, autoinflammatory diseases, hereditary and acquired immunodeficiencies.
- **9. Contents of the discipline:** Fundamentals of modern dietetics in the treatment of allergic diseases and immunodeficiency conditions. Practicing treatment tables when providing medical care to patients with immunopathologies. Content of cross-allergens in food products. Use of information technology.
- **10. Justification for choosing the discipline:** Diet therapy for allergic diseases and immunopathology is the timely correction of metabolic disorders. When examining a patient, the first priority is to assess nutritional status in accordance with the data of anthropological, biochemical and immunological examination methods. Following these treatment tactics, you can not only take an individual approach to the formation of a diet, but also provide effective treatment for a particular patient.

11.Learning results (competencies).

- **RO 1: Patient supervision:** Determine the presence of indications and contraindications for organ transplantation based on immune status, laboratory and instrumental parameters, response to therapy, prognosis for various diseases of internal organs;
- **RO 2 : Communication and collaboration :** able to effectively interact with the patient, his relatives, and healthcare professionals in order to achieve the best results for the patient;
- LO3: Safety and Quality: Able to assess risks and use the most effective methods to ensure a high level of safety and quality of qualified care;
- **RO 4: Public Health**: able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in providing immunological care to patients before and after transplantation, provide basic care, work as part of interprofessional teams to implement policies to improve the health of the nation;

- **PO5: Research:** able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in the activities of an immunologist, participate in the work of a research team.;
- **LO 6: Training and Development:** Able to learn independently and train other members of a professional team, actively participate in discussions, conferences and other forms of continuous professional development.
- 12. Prerequisites: Microbiology and immunology
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- 14.Literature:

Main:

- Macharadze D. Sh. Food allergies in children and adults. Clinic, diagnosis, treatment / D. Sh. Macharadze . Moscow : GEOTAR-Media, 2020.–392 p. URL: https://www.rosmedlib.ru/book/ISBN9785970455012.html. Text : electronic.
- 2. Food allergy / edited by: A. A. Baranova, L. S. Namazova Baranova, T. E. Borovik, S. G. Makarova [and others]. Moscow: Pediatrician, 2013. 160 p. (Childhood diseases from A to Z).

Additional literature:

- 1. Borovik T.E., Revyakina V.A., Makarova S.M. Modern ideas about therapeutic nutrition for food allergies in young children // Doctor. RU . –2004. –No. 2. –P. 2 –8.
- **2.** New possibilities of diet therapy for allergic skin lesions in young children: Method . r recommendations / Balabolkin I.I., Sentsova T.B., Denisova S.N. et al. –M., 2005. –19 p.
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- 3. Educational program: 7R01103 "Allergology and immunology (adults, children)"
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- **RO 4: Public health:** able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in providing allergy and immunological care, provide basic care, work as part of interprofessional teams to implement policies to improve the health of the nation;
- **PO5: Research:** able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in the activities of an allergist, participate in the work of a research team.;
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- **12. Prerequisites :** Microbiology and immunology
- 13 Post-requisites: continuing education courses. Scientific information
- 14.Literature:

Main:

- 3. Macharadze D. Sh. Food allergies in children and adults. Clinic, diagnosis, treatment / D. Sh. Macharadze . Moscow : GEOTAR-Media, 2020.–392 p. URL: https://www.rosmedlib.ru/book/ISBN9785970455012.html. Text : electronic.
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- **4.** New possibilities of diet therapy for allergic skin lesions in young children: Method . r recommendations / Balabolkin I.I., Sentsova T.B., Denisova S.N. et al. –M., 2005. –19 p.