**Complex examination’s major and minor subjects at the Gyula Petrányi Doctoral School of Allergy and Clinical Immunology**

**Majors:**

1. Immunpathomechanisms of systemic autoimmune disorders
2. Immunpathomechanisms of organ specific autoimmune diseases
3. Immunpathomechanisms of different types of allergies and their modern therapies
4. Genetic, environmental and intrinsic factors that play role in the development of autoimmune diseases
5. Primary defects of innate and adaptive immunity
6. Innate and adaptive immunity
7. Skin immunology (structure and function)
8. Mucous membrane immunology (structure)
9. Pathomechanism of ophthalmic immunological diseases

10. Immunopathathomechanism of inflammatory bowel diseases.

**Minors:**

1. Systemic autoimmune diseases (clinical characteristics, therapy)
2. Immune-mediated inflammatory disorders (characteristics and therapy) (incl. those that are not classified to well-known autoimmune and allergy mechanisms)
3. Allergic diseases (characteristics and therapy) (mucous membrane, skin)
4. Organ-specific autoimmune diseases (characteristics and therapy) (mucous membrane, skin)
5. Therapies modifying immune system mechanisms
6. Tumour immunology
7. Immunological protective mechanisms against infections
8. The clinical and genetic forms of autoinflammatory diseases
9. Molecular genetic methods and their role in disease pathomechanism and diagnostics
10. The use of clinical immunology laboratory parameters in the follow-up of immune diseases and monitoring therapy.
11. The role of CD4+ T-helper cell subgroups in the development of autoimmune diseases
12. The relationship of the local (mucosa) and the systemic immunity
13. Role of pattern recognition receptors in innate immunology
14. Cytokines and their receptors
15. The antigen presenting cells and the antigen presentation
16. B-cell development and differentiation (function of different subgroups)
17. The subgroups of T-reg cells, their functions, and roles in immunological regulations
18. Immuncomplex diseases and pathological deviations
19. Antibody-based radionuclide therapy and molecular imaging.
20. Ophthalmic manifestations of autoimmune diseases.