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# PERSONALISED MEDICINE

## - CURRICULUM OF THE LECTURES –

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**COURSE COORDINATORS:**

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**Assoc. Prof. Dr. Adrian Sturza**

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### **1. Introduction To Personalised Medicine (2 hours)**

- a. Health Information Used in Personalised Medicine*
- b. Biomarkers and Genetics*
- c. Evidence and Documentation for Clinical Efficacy of  
Personalised Medicine*
- d. Communication in Personalised Medicine*
- e. Ethical, Legal and Social Aspects of Personalized Medicine*

## **2. Personalized Medicine for Patients with Chronic Pain and Chronic Inflammation (2 hours)**

- a. Precision Medicine in Chronic Inflammation*
- b. Biomarkers in Chronic Inflammation*
- c. Understanding the Mechanisms of Pain*
- d. Personalized Treatment for Chronic Pain Relief?*
- e. Pharmacogenetics of Chronic Pain And Its Treatment*

## **3. Personalized Medicine for Pulmonary Rehabilitation in Patients With Obstructive and Restrictive Pulmonary Diseases (2 hours)**

- a. Impact of Pulmonary Rehabilitation Programs in Patients Pulmonary Diseases*
- b. Outcomes and Measures of Pulmonary Rehabilitation*
- c. Personalised Pulmonary Rehabilitation in COPD*
- d. Personalised Pulmonary Rehabilitation in Asthma*
- e. Personalised Pulmonary Rehabilitation in Pulmonary Fibrosis*

## **4. Personalized Medicine for the Treatment of Hypertension (2 hours)**

- a. A Framework for Understanding Personalized Treatment of Hypertension*
- b. Personalization Approach for Hypertension Treatment*
- c. Pharmacogenomics-Guided Personalized Treatment of Hypertensive Patients*
- d. Heterogeneity in Response to Hypertension Treatment*
- e. Personalised Blood Pressure Goals*

## **5. Personalized Medicine in Coronary Artery Disease (2 hours)**

- a. Diagnostic Pathways*
- b. Biomarkers*
- c. Treatment*
- d. Indications for Endovascular Interventions or Bypass Surgery*
- e. Prevention*

## **6. Personalized Management for Heart Failure (2 hours)**

- a. Diagnostic Challenges*
- b. Clinical phenotyping*
- c. Personalized Therapy*



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*d. Clinical Outcomes*

*e. Technology and Care*

## **7. Personalized Medicine in The Management of Diabetes Mellitus**

**(2 hours)**

*a. Diabetes Pathogenesis and Genetics*

*b. Challenges in Diabetes Care*

*c. Personalized Medicine in Diabetes Treatment*

*d. Algorithms and Guidelines on Personalized Diabetes Therapy*

*e. Effect of Pharmacogenetics on Antidiabetic Medications*

## **8. Personalised Medicine in Lipid Disorders**

*a. Genetics of Lipid Disorders*

*b. Personalisation Lipid Disorders Treatment*

*c. Novel LDL-cholesterol-lowering Therapies*

## **9. Personalised Medicine for Obesity (2 hours)**

*a. Genetic and Metabolic Pathways Associated with Obesity*

*b. Role of Environment Interactions*

*c. Personalised Therapeutic Challenges*

*d. Pharmacogenomics*

**10. Personalised Medicine in Haematology (2 hours)**

- a. Diagnostic PCR-Based Technologies and Sequencing*
- b. Genome Profiling Techniques*
- c. Targeted Therapies in the Treatment of Haematologic Malignancies*
- d. Pharmacogenomics and Drug Response*
- e. Future Directions*

**11. Personalized Medicine in Chronic Kidney Disease (2 hours)**

- a. Epigenetics*
- b. Pathophysiologic Pathways*
- c. Predictive Biomarkers*
- d. Individual Variability*
- e. Treatment Challenges*

**12. Personalized Medicine for Liver Disease (2 hours)**

- a. Molecular Mechanisms and Potential Targeted Therapies*
- b. Genetics And Liver Diseases*

*c. Management of Metabolic-Associated Liver Disease*

**13. Introduction to Personalized Medicine in Dentistry (2 hours)**

- a. Definition and principles of personalized medicine.*
- b. Historical evolution and current trends in dentistry.*

**14. Role of Genetics and Epigenetics in Oral Health (2 hours)**

- a. Genetic predisposition to oral diseases (e.g., periodontitis, caries).*
- b. Role of epigenetics in dental tissue regeneration and disease progression.*
- c. Applications of genetic testing in dental practice.*

**15. Microbiome and Oral Health (2 hours)**

- a. Overview of oral and gut microbiomes.*
- b. Influence of microbiome diversity on oral diseases.*



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