開課班級: 博觀賞魚專班二A **授課老師: 張永富** **學分數: 3**

課程大綱:

本課程旨在講述病毒、細菌、原蟲、蠕蟲對素主所引起之免疫反應及宿主對上述之免疫防禦機轉。病原體如何逃避宿主免疫免疫系統之辨認、攻擊之策略。由此瞭解病原體之免疫學之特性，以茲提供傳染病防治之道。

outline:

The host immunity to pathogens, including virus, bacteria, protozoa and helminthes as well, are concerned. Particularly, the mechanism of immunological defense of host cells against an attack due to adhesion, invasion and damages by pathogens. In view of immunopathology, the strategies of escape mechanisms performed by pathogens will be discussed in this course, so that the prevention from infectious disease will be mentioned also.

教學型態:

遠距教學(非同步)

成績考核方式:

平時成績:%
期中考:%
期末考:%
其它:%

本科目教學目標:

參考書目:

課程進度表：

週次	起訖月日	授課單元(內容)	備註
第1週	9.09~9.16	The power of bacteria On-demand biomanufacturing of protective;conjugate vaccines	8日正式上課。8~12日課程加退選，轉學(系)生、復學生及延修生選課，雙主修、輔系申請，12日申辦抵免學分截止日
第2週	9.16~9.23	Skin and Mucosa: the First Lines of Defense against Bacterial Infections On-demand biomanufacturing of protective;conjugate vaccines	
第3週	9.23~9.30	The Innate Immune System: Always on Guard Synthesis and delivery of Streptococcus pneumoniae;capsular polysaccharides by recombinant attenuated Salmonella vaccines	28日(日)孔子誕辰紀念日/教師節(放假),29日(一)補假
第4週	9.30~10.07	The Second Line of Defense: Antibodies and Cytotoxic T Cells Synthesis and delivery of Streptococcus pneumoniae;capsular polysaccharides by recombinant attenuated Salmonella vaccines	29日成績優異提前畢業者提出申請截止日
第5週	10.07~10.14	The Norma Microbiota Group B Streptococcus chimeric capsular polysaccharides as novel multivalent vaccine candidates.	6日(一)中秋節(放假)，10日(五)國慶日(放假)
第6週	10.14~10.21	Microbes and Disease: Establishing a Connection Group B Streptococcus chimeric capsular polysaccharides as novel multivalent vaccine candidates	14日學生宿舍安全輔導暨複合式防災疏散演練。18日多益測驗
第7週	10.21~10.28	Mechanisms of Genetic Modification and Exchange: Role in Pathogen Evolution Development of an automated platform for the optimal production of glycoconjugatevaccines expressed in;Escherichia coli	24日(五)補假，25日(六)光復暨古寧頭大捷日(放假)。
第8週	10.28~11.04	Review Development of an automated platform for the optimal production of glycoconjugatevaccines expressed in;Escherichia coli	30日校課程委員會
第9週	11.04~11.11	Midterm examination Uncoupling of invasive bacterial mucosal immunogenicity from pathogenicity	3~9日期中考試
第10週	11.11~11.18	Identification of Virulence Factors: Measuring Infectivity and Virulence Uncoupling of invasive bacterial mucosal immunogenicity from pathogenicity	13日教務會議,16日教師期中成績上網登錄截止日

第11週	11.18~11.25	Identification of Virulence Factors: Molecular Approaches for Bacterial Factors Improving cell-free glycoprotein synthesis by characterizing and enriching native membrane vesicles	
第12週	11.25~12.02	Identification of Virulence Factors: Molecular Approaches for Host Factors Improving cell-free glycoprotein synthesis by characterizing and enriching native membrane vesicles	24~28體育運動週。24日校園路跑。27日運動大會夜間開幕，28日運動大會活動，29日101週年校慶活動日，照常上班
第13週	12.02~12.09	Toxins and Other Toxic Virulence Factors Cell-Free Glycoengineering of the Recombinant SARS-CoV-2 Spike Glycoprotein	
第14週	12.09~12.16	Delivery of Virulence Factors Cell-Free Glycoengineering of the Recombinant SARS-CoV-2 Spike Glycoprotein	12日申請停修課程截止日
第15週	12.16~12.23	Antimicrobial Compounds Engineering orthogonal human;O-linked glycoprotein biosynthesis in bacteria	
第16週	12.23~12.30	How Bacteria Become Resistant to Antibiotics Engineering orthogonal human;O-linked glycoprotein biosynthesis in bacteria	22日校務會議。25日行憲紀念日(放假)
第17週	12.30~1.06	Vaccination—anUnderappreciated Component of the Modern Medical Armamentarium The single-cell epigenomic and transcriptional landscape of immunity to influenza vaccination	1日(四)開國紀念日(放假)
第18週	1.06~1.13	Final examination Exploration of Recombinant Fusion Proteins YAPO and YAPL as Carrier Proteins for Glycoconjugate Vaccine Design again stStreptococcus pneumoniae Infection	5~11日期末考試，10~11日學生退宿