编号：**YY015-20221212001**

标题：**Strep A: Allow pharmacists to change prescription formulations, says GP leader**

简介：Officials are considering a proposal to give pharmacists more flexibility to change the formulation of a prescription to combat antibiotic shortages, a senior GP leader has said.In a joint statement issued on 8 December, the heads of the Royal Colleges of General Practitioners, Paediatrics and Child Health, and Emergency Medicine noted that demand for penicillin and amoxicillin had recently increased after a spike in scarlet fever and group A streptococcal infections.1

全文链接：https://www.bmj.com/content/379/bmj.o2984

编号：**YY015-20221212002**

标题：**Research and Development of a Artificial Intelligence based Smart Medicine Box**

简介：The fundamental reason for the venture "AI-Based Smart Medical Box '' is to propose the essential thought of programmed medication update, which will help patients take their recommended medication suitably with appropriate dosages. It is a clever plan to help the patient take as much time as is needed and, thus, lessen an opportunity to recuperate from their infection. Specifically, the matured patient takes some unacceptable medication and some unacceptable measurements mistakenly, causing a serious issue. This framework isn't only useful for an individual but can likewise make a significant commitment to medical clinics. In the present occupied, pushed, and booked life, individuals are experiencing loads of illnesses but can't recall their medication and timing of it, and here this framework can be of genuine use. This framework utilizes an LCD (fluid precious stone showcase), keypad (press button), ARDUINO module, RTC framework, and an alert framework. As per the odder gadgets, this smart medicine box is planned in light of a lower cost. Thus, this convenient and monetarily cheaper framework would be useful to each age group.

全文链接：https://pan.ckcest.cn/rcservice//doc?doc_id=108186

编号：**YY015-20221212003**

标题：**Genetics and Vaccine Development for SARS-CoV2 in the Era of Personalized Medicine**

简介：Since the emergence of SARS-CoV-2 in late December 2019, scientists have been racing against time to effectively develop a vaccine. As the techniques of personalized medicine are becoming more understood and approachable for mankind, vaccinations using such technologies could advance the treatment of all patients taking into consideration their genetic and biochemical background. As such, we anticipate that patients will be treated more effectively and potentially have fewer symptoms and side effects. This perspective aims to raise awareness of the oncoming novel treatment of diseases, especially during the coronavirus pandemic.

全文链接：https://pan.ckcest.cn/rcservice//doc?doc_id=108187

编号：**YY015-20221212004**

标题：**Deep learning tools for advancing drug discovery and development**

简介：A few decades ago, drug discovery and development were limited to a bunch of medicinal chemists working in a lab with enormous amount of testing, validations, and synthetic procedures, all contributing to considerable investments in time and wealth to get one drug out into the clinics. The advancements in computational techniques combined with a boom in multi-

omics data led to the development of various bioinformatics/pharmacoinformatics/cheminformatics tools that have helped speed up the drug development process. But with the advent of artificial intelligence (AI), machine learning (ML) and deep learning (DL), the conventional drug discovery process has been further rationalized. Extensive biological data in the form of big data present in various databases across the globe acts as the raw materials for the ML/DL-based approaches and helps in accurate identifications of patterns and models which can be used to identify therapeutically active molecules with much fewer investments on time, workforce and wealth. In this review, we have begun by introducing the general concepts in the drug discovery pipeline, followed by an outline of the fields in the drug discovery process where ML/DL can be utilized. We have also introduced ML and DL along with their applications, various learning methods, and training models used to develop the ML/DL-based algorithms. Furthermore, we have summarized various DL-based tools existing in the public domain with their application in the drug discovery paradigm which includes DL tools for identification of drug targets and drug-target interaction such as DeepCPI, DeepDTA, WideDTA, PADME DeepAffinity, and DeepPocket. Additionally, we have discussed various DL-based models used in protein structure prediction, de novo design of new chemical scaffolds, virtual screening of chemical libraries for hit identification, absorption, distribution, metabolism, excretion, and toxicity (ADMET) prediction, metabolite prediction, clinical trial design, and oral bioavailability prediction. In the end, we have tried to shed light on some of the successful ML/DL-based models used in the drug discovery and development pipeline while also discussing the current challenges and prospects of the application of DL tools in drug discovery and development. We believe that this review will be useful for medicinal and computational chemists searching for DL tools for use in their drug discovery projects.

全文链接：https://pan.ckcest.cn/rcservice//doc?doc_id=108230

编号：YY015-20221212005

标题：**Prospects of a Transdermal Dosage Form (Microneedles) and Justification of the Active Substance Selection for Development of a New Medicine**

简介：Prospects for the development of a transdermal dosage form (DF) based on microneedles were considered. Methods for obtaining such systems, the application areas, and data from the pharmaceutical market were examined. A wide sample of INNs that are used to reduce pain in osteoarthritis patients was formed based on clinical guidelines. The market capacity, sales by Anatomical Therapeutic Chemical (ATC-2) groups, and sales depending on the DF were discussed. Criteria for the choice of active ingredients with market potential were defined. An analysis of a short list revealed that meloxicam has sufficient market potential to create a microneedle DF. A forecast of meloxicam consumption based on time series models indicated stable sales-growth dynamics and a potential market size of 4.6 billion Russian rubles by 2030. Results of the study indicated good market prospects and justification of pharmaceutical development of a new transdermal DF including meloxicam microneedles as the active ingredient.

全文链接：https://pan.ckcest.cn/rcservice//doc?doc_id=108189

编号：YY015-20221212006

标题：**Human organs-on-chips for disease modelling, drug development and personalized medicine**

简介：This Review discusses the types of single and multiple human organ-on-a-chip (organ chip) microfluidic devices and their diverse applications for disease modelling, drug development and personalized medicine, as well as the challenges that must be overcome for organ chips to reach their full potential. The failure of animal models to predict therapeutic responses in humans is a major problem that also brings into question their use for basic research. Organ-on-a-chip (organ chip) microfluidic devices lined with living cells cultured under fluid flow can recapitulate organ-level physiology and pathophysiology with high fidelity. Here, I review how single and multiple human organ chip systems have been used to model complex diseases and rare genetic disorders, to study host-microbiome interactions, to recapitulate whole-body inter-organ physiology and to reproduce human clinical responses to drugs, radiation, toxins and infectious pathogens. I also address the challenges that must be overcome for organ chips to be accepted by the pharmaceutical industry and regulatory agencies, as well as discuss recent advances in the field. It is evident that the use of human organ chips instead of animal models for drug development and as living avatars for personalized medicine is ever closer to realization.

全文链接：https://pan.ckcest.cn/rcservice//doc?doc_id=108188