新型冠状病毒信息快报

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本期看点

新闻扫描

研究专题：药物和疫苗研发进展（二）

医药信息

新闻扫描

国务院出台针对重点场所、单位、人群疫情防控的通知

（来源：中国政府网）

4月8日，国务院出台《关于进一步做好重点场所重点单位重点人群新冠肺炎疫情防控相关工作的通知》（下简称“《通知》”）。

《通知》要求精准实施分区分级差异化的办公场所和公共场所防控措施，强化特殊单位防控和人员防护措施，加强重点场所和重点人群的防护指导。针对各类场所，《通知》提出了具体建议，如针对企事业单位，《通知》要求低风险地区做好室内通风、环境清洁消毒、人员健康监测等日常卫生管理；建议中、高风险地区鼓励采取错时上下班、弹性工作制或居家办公方式，减少人员聚集。

发布时间：2020-04-08

链接地址：http://www.gov.cn/zhengce/content/2020-04/08/content_5500241.htm

世卫组织将推出加速新冠疫苗研发新方案

（来源：人民网）

4月6日，世界卫生组织总干事谭德塞表示，世卫组织将推出有关加速新冠疫苗研发的新方案，并建立相应机制以确保疫苗问世后能在全球范围内得到公平分配。世卫组织将宣布一项加速新冠疫苗研发和生产的“大型方案”。届时，这项方案将由来自发达国家和发展中国家的高级研究人员共同参与。谭德塞表示，自1月初新冠病毒基因组被绘制出来并在全球范围内分享后，检测试剂盒得以开发，疫苗研究得以启动。此前谭德塞曾表示，新冠疫苗研制至少还需要12至18个月。

发布时间：2020-04-07

链接地址：http://world.people.com.cn/n1/2020/0407/c1002-31664314.html

世卫组织回顾新冠疫情暴发以来5大工作

（来源：新华网）

世界卫生组织4月8日回顾了新冠疫情暴发以来已展开的5大抗疫工作。

谭德塞简要回顾了世卫组织在过去100天中经历的一些关键节点，包括1月22日和23日召开紧急委员会会议、1月30日宣布新冠疫情构成国际关注的突发公共卫生事件、2月组织派遣国际专家小组赴华了解疫情等。他还总结了世卫组织自疫情暴发以来开展的5大抗疫工作。

首先，努力支持各国的应对能力建设，包括发布战略准备和应对计划，确定各国需要采取的主要行动以及实施这些行动所需的资源。

其次，与伙伴合作提供疫情准确信息并打击信息犯罪。

第三，努力确保为一线卫生工作者提供必要的医疗设备。

第四，努力培训和动员卫生工作者。

第五，协调加速和疫情有关的研发，包括召集400多名世界领先的研究人员确定研究重点、加快研究进程；启动“团结试验”项目，与90多个国家共同努力尽快找到有效治疗方法；在40多个国家协调制定研究方案，以了解该病毒的传播、流行病学和临床特征。

发布时间：2020-04-09

链接地址：http://www.xinhuanet.com/2020-04/09/c_1125832897.htm

最新计算分析：树鼩、雪貂或是潜在中间宿主

（来源：新浪科技）

4月6日，大连理工大学生物工程学院副教授杨永亮等人在预印本平台bioRxiv在线发表论文（未经同行审议），指出树鼩和雪貂可

能是新冠病毒传播的两种中间宿主。

杨永亮等人采用了分子动力学模拟和自由能计算方法，研究了蝙蝠冠状病毒与 47 个代表动物的 ACE2 蛋白结合情况。结果显示，中国树鼩和雪貂获得了最好的两种结合自由能，RaTG13-CoV-RBD 与树鼩和雪貂的结合力远强于穿山甲。病毒受体与宿主受体结合的计算分析可能有助于快速确定可能潜在的中间宿主。

该研究首先从计算的角度研究了新冠病毒、SARS 病毒、蝙蝠冠状病毒（RaTG13-CoV）和 Bat-CoV 这四种冠状病毒与人 ACE2 的结合。在分子动力学（MD）优化模板结构的基础上，通过同源性建模首次建立了 RaTG13-CoV 和 Bat-CoV 的 RBD 结构。随后，研究人员通过蛋白质对接和 20ns-MD 模拟，预测了 RaTG13-CoV 和 Bat-CoV 与人 ACE2 的复合结构。与其他物种相比，中国树鼩和雪貂获得了最好的两种结合自由能。

发布时间：2020-04-06

链接地址：https://tech.sina.com.cn/d/2020-04-06/doc-iimxxsth3930410.shtml

匹兹堡大学开展贴片式新冠病毒疫苗动物实验

（来源：科技日报）

美国匹兹堡大学研究人员新开发一种通过微针阵列递送的新型冠状病毒疫苗。测试表明，小鼠接种后产生的新冠病毒特异性抗体数量足以中和病毒。

研究人员在《E 生物医学》（EBioMedicine）杂志上发表论文指出，新疫苗的研发得益于此前他们在 SARS 冠状病毒和中东呼吸综合征冠状病毒（MERS-CoV）研究中获得的丰富经验。此前研究他们发现一种特殊的蛋白——刺突蛋白对于诱导免疫至关重要，该发现为此次新疫苗研发奠定了基础。

与不久前进入临床试验的 mRNA 疫苗不同，新疫苗被称作 PittCoVacc（匹兹堡冠状病毒疫苗的简称）通过实验室制造的病毒蛋白片段建立免疫力。这与当前流感疫苗所遵循的方式相同，被认为是一种更为成熟的方法。为了提高药效，研究人员使用了微针阵列来递送药物。指尖大小的贴片上分布着 400 个微针，可将蛋白碎片有效递送到皮肤中。小鼠测试结果显示，PittCoVacc 可产生强而持久的特异性抗体反应，小鼠接种两周后体内即产生了大量针对新冠病毒的抗体。

研究人员指出，新疫苗不仅可大规模生产，还可在室温下保存，在运输或储存过程中无需冷藏，可有效满足应对大规模流行病的需求；更重要的是，新疫苗在经过伽玛射线灭菌后仍能保持效力，满足适用于人类的关键要求。

虽然因为时间有限，研究人员无法对这些实验小鼠进行长期跟踪，但他们指出，此前研究表明，贴片式 MERS-CoV 疫苗能让接种小鼠在至少一年时间内保持足以中和病毒的抗体水平，而到目前为止，接种 PittCoVacc 的小鼠体内的抗体水平似乎也有同样的趋势。

发布时间：2020-04-07

链接地址：

http://digitalpaper.stdaily.com/http_www.kjrb.com/kjrb/html/2020-04/07/content_442817.htm?div=-1

首款新冠病毒 DNA 候选疫苗将进入临床试验

（来源：澎湃新闻）

4 月 7 日，Inovio Pharmaceuticals 公司宣布，美国食品药品监督管理局（FDA）已经接受该公司为新冠病毒候选 DNA 疫苗 INO-4800 递交的新药临床试验（IND）申请。这是全球第三款进入临床试验阶段的新冠疫苗，也是第一个 DNA 候选疫苗。该公司计划本周启动 1

期临床试验，第一名志愿者计划在 4 月接种疫苗。1 期 INO-4800 研究将在宾夕法尼亚大学佩雷尔曼医学院和密苏里州堪萨斯城药物研究中心招募 40 名健康的成人志愿者，每名参与者将在相隔四周的时间内接受两剂 INO-4800，此项研究的初始免疫反应和安全性数据预计将在今年夏末公布。INO-4800 是全球首个进入临床试验阶段的新冠病毒 DNA 候选疫苗。在此之前，另有两款疫苗进入了临床试验阶段，分别是中国人民解放军军事科学院科学团队与康希诺公司联合研发的腺病毒载体疫苗，以及美国国家卫生院（NIH）资助的生物科技公司 Moderna Therapeutics 研发的 mRNA 疫苗。新冠疫情暴发以后，Inovio Pharmaceuticals 公司获得了比尔及梅琳达-盖茨基金会(Bill & Melinda Gates Foundation)向该公司资助的 500 万美元，用以加速 CELLECTRA 3PSP 的测试和中试放大。CELLECTRA 3PSP 是一款由 INOVIO 自主研发的智能设备，用于皮下递送疫苗 INO-4800。另外，INO-4800 还已获得流行病防范创新联盟(CEPI)高达 900 万美元的资金支持。力求到 2020 年底实现 INO-4800 的大规模生产。

发布时间：2020-04-07

链接地址：https://www.thepaper.cn/newsDetail_forward_6859830

研究专题：药物和疫苗研发进展（二）

洛匹那韦/利托那韦治疗对 SARS-CoV-2 感染患者病毒消除的影响

（来源：medRxiv）

2020 年 3 月 30 日，江汉大学湖北省第三人民医院以及郑州大学第一附属医院的研究人员在 medRxiv 预印本平台发表论文，介绍了洛平那韦/利托那韦（LPV/r）治疗对于 SARS-CoV-2 感染患者病毒消除的潜在影响。在该研究中，研究人员收集了 2020 年 1 月 31 日至 3 月 9 日在湖北省第三人民医院接受隔离并进行 RT-PCR 转化的所有 SARS-CoV-2 感染患者数据，比较了接受 LPV/r 治疗的患者和未接受 LPV/r 治疗患者的临床特征和 SARS-CoV-2 RNA 消除情况，并使用逻辑回归分析来评估与病毒相关的因素。该试验中，120 例患者的中位年龄为 52 岁，其中 54 例（45%）为男性，78 例（65%）接受 LPV/r 治疗。分析结果表明，LPV/r 治疗组（n = 78）的中位病毒消除持续时间短于无 LPV/r 治疗组（n = 42）（中位 22 天 vs. 28.5 天，p = 0.02）。表明早期给予 LPV/r 治疗可缩短病毒消除的时间。

文献信息：Factors associated with prolonged viral shedding and impact of Lopinavir/Ritonavir treatment in patients with SARS-CoV-2 infection. medRxiv. 2020-03-30;

链接地址：https://www.medrxiv.org/content/10.1101/2020.03.22.20040832v2

5 例 COVID-19 重症患者的血浆治疗研究

（来源：The Journal of the American Medical Association）

2020 年 3 月 27 日，深圳市第三人民医院、中国国家感染性疾病临床研究中心的研究人员在《The Journal of the American Medical Association》杂志发表文章，分享了恢复期血浆用于 5 例 COVID-19 危重症患者的初步临床经验。在该研究中，5 例患者年龄在 36-65 岁，

2 例为女性，均经实验室确诊为 COVID-19，且经抗病毒治疗后疾病进展快速，病毒载量持续在高水平，出现急性呼吸窘迫综合征（ARDS），需要机械通气，属于危重症患者。所有 5 例患者在住院的第 10-22 天期间接受了分别来自另 5 名康复患者的恢复期血浆输血治疗。血浆中具有治疗价值的新冠病毒（SARS-CoV-2）特异性抗体 IgG 达到抗体效价要求，稀释 1000 倍后抗体定性检测仍呈阳性反应。经血浆输注后：有 4 例患者在 3 天内体温恢复正常；器官衰竭评分（SOFA）降低，提示器官功能恢复；呼吸症状得到改善，患者的动脉血氧分压/吸氧浓度都在 12 天内逐渐恢复，输血后 12 天 4 例患者已经不再表现为 ARDS，在治疗 2 周内 3 例患者不再需要机械通气。患者病毒载量逐渐降低，并在 12 天内病毒核酸检测结果转阴。而且，患者体内的新冠病毒特异性抗体浓度也增加了。在这 5 例患者中，有 3 例已经出院（住院时间分别为 53、51 和 55 天），另外 2 例在血浆治疗 37 天后，病情也都转为稳定。这些结果表明，恢复期血浆中的抗体可能有助于清除病毒并改善患者症状。

文献信息：Treatment of 5 Critically Ill Patients With COVID-19 With Convalescent Plasma. The Journal of the American Medical Association. 2020-03-27;

链接地址：https://jamanetwork.com/journals/jama/fullarticle/2763983?resultClick=1

重症 COVID-19 患者恢复期血浆治疗的可行性研究

（来源：medRxiv）

2020 年 3 月 23 日，中国生物技术股份有限公司、武汉生物制品研究所有限责任公司、武汉市江夏区第一人民医院等机构的研究人员在 medRxiv 预印本平台发表文章，对 10 例经 RNA 检测确诊 COVID-19 重症患者的治疗进行了前瞻性研究。该研究所采用的治疗方法是来自已治愈患者的 200 ml 恢复期血浆（CP），经检测其中和抗体滴度在 1:640 以上，将该血浆作为最大支持治疗和抗病毒剂的补充品输送给

患者。CP 输注后，有 5 例患者中和抗体水平迅速上升至 1:640，而其他 4 例中和抗体的水平则维持在较高水平（1：640）。同时，在 3 天内，随着氧合血红蛋白饱和度的增加，患者临床症状得到了明显改善。与输血前相比，一些参数也趋于改善，包括淋巴细胞计数增加（0.65 * 109/L 与 0.76 * 109/L）和 C 反应蛋白减少（55.98 mg/L 与 18.13 mg/L）。7 名先前有病毒血症的患者在输血后无法检测到病毒载量，同时也没有观察到严重的不良反应。该研究表明，CP 疗法耐受性良好，可以通过中和严重 COVID-19 病例的病毒血症来改善临床效果。但 CP 疗法的最佳剂量、注射时间以及具体的临床收益，还需要在更大规模的对照试验中进行进一步研究。

文献信息：The feasibility of convalescent plasma therapy in severe COVID-19 patients: a pilot study. medRxiv. 2020-03-23;

链接地址：https://www.medrxiv.org/content/10.1101/2020.03.16.20036145v1

高剂量静脉免疫球蛋白作为 COVID-19 患者的治疗选择

（来源：Open Forum Infectious Diseases）

2020 年 3 月 21 日，北京协和医院、清华大学及武汉金银潭医院的科研人员在《Open Forum Infectious Diseases》杂志发表文章，描述了针对重症 COVID-19 患者进行大剂量静脉免疫球蛋白（IVIg）治疗的效果。该研究中主要涉及 3 例重度 COVID-19 患者，采用每天每公斤体重 0.3-0.5 g 的高剂量 IVIg，作为有效且安全的免疫调节剂进行治疗。结果表明：用药后不久，所有患者的临床状况均得到改善，体温在 1-2 天内恢复正常，并在 3-5 天内呼吸困难状况明显缓解。研究人员建议，可以考虑开展对 COVID-19 重症患者进行大剂量 IVIg 的随机试验。

文献信息：High-Dose Intravenous Immunoglobulin as a Therapeutic Option for

Deteriorating Patients With Coronavirus Disease 2019. Open Forum Infectious Diseases. 2020-03-21;

链接地址：https://academic.oup.com/ofid/article/7/3/ofaa102/5810740

人工肝血液净化系统阻断新冠细胞因子风暴

（来源：Engineering）

2020 年 3 月 20 日，浙江大学研究团队在《Engineering》杂志发表文章，描述了人工肝血液净化系统作为针对 COVID-19 抗细胞因子风暴靶向治疗的可行性。文章表明，“细胞因子风暴”（也称为高细胞因子血症）在 SARS、MERS、H5N1 流感、H7N9 流感重症感染中均存在，并与疾病的严重程度相关，可作为死亡的预测因子。前期的研究表明，在 COVID-19 中存在细胞因子风暴；ICU 住院患者的细胞因子/趋化因子显著高于非 ICU 住院患者，显示细胞因子风暴与疾病严重程度相关。之前研究表明，人工肝血液净化系统通过类似的阻断细胞因子风暴的作用，对于 H7N9 患者救治具有良好效果，因此也能在 COVID-19 重症、危重症患者的救治中发挥重要的作用。同时，应用人工肝血液净化治疗方案也被纳入《新型冠状病毒肺炎诊疗方案（试行第七版）》。鉴于此，研究人员建议进一步开展新型人工肝血液净化系统（如 Li-ALS）治疗发生细胞因子风暴的 COVID-19 患者的多中心临床研究；同时可以开展 COVID-19 患者的细胞因子风暴产生的关键免疫细胞类型和分子通路的基础研究，以阐明人工肝血液净化系统通过阻断细胞因子风暴，逆转重症 COVID-19 患者的疾病进程的机制。

文献信息：A Promising Anti-Cytokine-Storm Targeted Therapy for COVID-19: The Artificial-Liver Blood-Purification System. Engineering. 2020-03-20;

链接地址：

https://www.sciencedirect.com/science/article/pii/S209580992030062X?via%3Dihub

血清热灭活会干扰针对 SARS-CoV-2 抗体的免疫分析

（来源：medRxiv）

2020 年 3 月 16 日，南方医科大学南方医院、武汉市汉口医院等机构的研究人员在 medRxiv 预印本平台发表文章，报道了热灭活对于 SARS-CoV-2 抗体免疫效果的影响。研究人员通过定量荧光免疫色谱法比较 56℃下热灭活 30 分钟前后血清中 SARS-CoV-2 抗体的水平，发现热灭活显著干扰了 SARS-CoV-2 抗体的免疫效果。实验结果显示，来自 COVID-19 患者的 34 个血清样品中 IgM 水平平均降低了 53.56%，其中 22 个（64.71%）样品的 IgG 水平降低了 49.54%。同时，在非 COVID-19 疾病组（n = 9）中也可以观察到类似的变化。因此研究人员不建议在免疫分析之前进行热灭活，如果样品通过加热进行了预灭活，则应考虑出现假阴性结果的可能性。

文献信息：Heat inactivation of serum interferes with the immunoanalysis of antibodies to SARS-CoV-2. medRxiv. 2020-03-16;

链接地址：https://www.medrxiv.org/content/10.1101/2020.03.16.20036145v1

阿比多尔联合 LPV/r 与 LPV/r 单独治疗 COVID-19 的对比研究

（来源：Journal of Infection）

2020 年 3 月 11 日，中山大学的研究团队在《Journal of Infection》杂志发表文章，对仅用洛匹那韦/利托那韦（LPV/r）和联合使用阿比多尔及 LPV/r 治疗 COVID-19 进行了对比研究。研究使用的患者样本都是在 2020 年 1 月 17 日至 2020 年 2 月 13 日之间确诊为 COVID 的成年人患者。分别分为仅口服 LPV/r 的单药治疗组和口服阿比多尔及 LPV/r 的联合治疗组，用药时间为 5-21 天，判断患者是否转为阴性，并通过胸部 CT（第 7 天）评估肺炎是恶化还是好转。结果表明：7

天后，联合组 16 例鼻咽标本中 12 例（75%）未检测到 SARS-CoV-2，而单药组中 17 例中有 6 例（35%）SARS-CoV-2 未检测到（p <0 05）；14 天后，联合组和单药组分别有 16 例中的 15 例（94%）和 17 例中的 9 例（52 9%）无法检测到 SARS-CoV-2（p <0 05）。同时，在用药 7 天后，联合组 16 例患者中 11 例（69%）胸部 CT 扫描显示肺炎明显改善，而单药组 17 例中有 5 例（29%）有所改善（p <0 05）。因此，联合使用阿比多尔和 LPV/r 药效要优于单独使用 LPV/r。

文献信息：Arbidol combined with LPV/r versus LPV/r alone against Corona Virus Disease 2019:a retrospective cohort study. Journal of Infection. 2020-03-11;

链接地址：https://www.sciencedirect.com/science/article/pii/S0163445320301134

托珠单抗治疗重症 COVID 患者的有效性

（来源：ChinaXiv）

2020 年 3 月 5 日，中国科学技术大学及其第一附属医院、安徽阜阳第二人民医院的研究团队在 ChinaXiv 预印本平台发表文章，对托珠单抗治疗新冠重症患者的疗效进行了研究。研究人员对 2020 年 2 月 5 日至 2 月 14 日期间确诊的新冠重症或危重症患者在常规治疗的基础上加入了托珠单抗。结果表明，在接受治疗几天后，所有患者的体温恢复正常，所有其他症状也得到显著改善，且没有观察到明显的不良反应。在平均接受托珠单抗治疗 13.5 天后，有 19 名患者康复出院，剩下一名恢复良好。研究人员推测，使用托珠单抗治疗新冠重症患者可能是解决了炎症因子风暴问题。

文献信息：Effective Treatment of Severe COVID-19 Patients with Tocilizumab. ChinaXiv. 2020-03-05;

链接地址：http://www.chinaxiv.org/abs/202003.00026

医药信息

Derwent Innovation 近 20 年有关冠状病毒疫苗的重点专利

（来源：科睿唯安生命科学与制药）

科睿唯安的专业人员利用 Derwent Innovation 检索出近 20 年全球公开的与冠状病毒相关的专利 6,757 件（专利家族数），此处选取了有关冠状病毒疫苗的 20 条重点专利并呈现技术摘要，详情如下。

DWPI 标题：Immunostimulatory composition useful to treat disease, e.g. cancer, cold, AIDS comprises adjuvant component consisting of (messenger)RNA complexed with (poly)cationic compound, and free messenger RNA encoding protein, antigen and antibody

申请号：WO2009EP7032A 申请日：9/30/2009

公开/公告号：WO2010037539A1 公开/公告日：4/8/2010

申请人： CUREVAC GMBH,DE | FOTIN-MLECZEK Mariola,DE | VOSS S?hnke,DE

发明人： FOTIN-MLECZEK, Mariola | VOSS, S?hnke

DWPI 摘要 - 新颖性： Immunostimulatory composition comprises an adjuvant component consisting of at least one (messenger)RNA ((m)RNA), complexed with a cationic or polycationic compound, and at least one free mRNA, encoding at least one therapeutically active protein, antigen and/or antibody, where the immunostimulatory composition is capable to elicit or enhance an innate and optionally an adaptive immune response in a mammal.

DWPI 摘要 - 优势：The composition allows eliciting or enhancing an innate and optionally an adaptive immunostimulatory response in mammal; hence ensures an efficient adjuvant (immunostimulatory) property and an efficient translation of the mRNA to be administered.

DWPI 标题：New pre-fusion respiratory syncytial virus F polypeptide comprising introduced cysteine residues, where cysteines are close to one another and form disulfide bond that stabilizes polypeptide, used to induce immune response in subject

申请号：WO2012US37773A 申请日：5/14/2012

公开/公告号：WO2012158613A1 公开/公告日：11/22/2012

申请人： NOVARTIS AG,CH | SWANSON Kurt,US | CARFI Andrea,US

发明人： SWANSON, Kurt | CARFI, Andrea

DWPI 摘要 - 新颖性：A pre-fusion respiratory syncytial virus (RSV) F polypeptide

(P1) comprising at least two introduced cysteine residues, where the cysteines are in close proximity to one another and form a disulfide bond that stabilizes the pre-fusion RSV F polypeptide, is new.

DWPI 标题：Composition, useful for e.g. treating cancer or tumor diseases including melanomas, malignant melanomas, colon carcinomas, lymphomas, sarcomas or infectious diseases, comprises adjuvant component, antigen, and carrier molecule

申请号：WO2012EP614A 申请日：2/10/2012

公开/公告号：WO2012113513A1 公开/公告日：8/30/2012

申请人： CUREVAC GMBH,DE | BAUMHOF Patrick,DE | KALLEN Karl-Josef,DE | FOTIN-MLECZEK Mariola,DE

发明人： BAUMHOF, Patrick | KALLEN, Karl-Josef | FOTIN-MLECZEK, Mariola

DWPI 摘要 - 新颖性： Vaccine composition comprises: an adjuvant component comprising at least one immunostimulatory nucleic acid sequence, complexed with a complexing agent; an antigen, preferably a protein or peptide antigen and/or a nucleic acid sequence encoding the antigen; and a carrier molecule for combined packaging the adjuvant component and the antigen.

DWPI 摘要 - 优势：The composition shows improved resistance to agglomeration due to the reversible addition of hydrophilic polymer chains (polyethylene glycol-monomers) particularly to the terminal ends of the polymeric carrier molecule.

DWPI 标题：Modifying target structure e.g. cell, which mediates/is associated with biological activity, comprises placing nanoparticle in vicinity of target structure in subject and applying initiation energy from initiation energy source to subject

申请号：WO2010US31898A 申请日：4/21/2010

公开/公告号：WO2010123993A1 公开/公告日：10/28/2010

申请人： VO-DINH Tuan,US | SCAFFIDI Jonathan P.,US | CHADA Venkata Gopal Reddy,US | LAULY Benoit,US | ZHANG Yan,US | GREGAS Molly K.,US | STANTON Ian N.,US | STECHER Joshua T.,US | THERIEN Michael J.,US | AYRES Jennifer,US | ZHANG Zhenyuan,US | NORTON Stephen John,US | BOURKE Frederic A.,US | WALDER Harold,US | FATHI Zak,US | SIMMONS Joseph H.,US

发明人： VO-DINH, Tuan | SCAFFIDI, Jonathan, P. | CHADA, Venkata, Gopal Reddy | LAULY, Benoit | ZHANG, Yan | GREGAS, Molly, K. | STANTON, Ian, N. | STECHER, Joshua, T. | THERIEN, Michael, J. | AYRES, Jennifer | ZHANG, Zhenyuan | NORTON, Stephen, John | BOURKE, Frederic, A. | WALDER, Harold | FATHI, Zak | SIMMONS, Joseph, H.

DWPI 摘要 - 新颖性： Modifying a target structure (I), which mediates or is associated with a biological activity, comprises: placing a nanoparticle (II) in a vicinity of (I) in a subject, where: (II) is configured, upon exposure to a first wavelength λ 1 , to generate a second wavelength λ 2 of radiation having a higher energy than the first wavelength λ 1 ; and applying the initiation energy including the first wavelength λ 1 from an initiation energy source to the subject.
DWPI 摘要 - 优势：The method is non-invasive; and provides more effective treatment that can more precisely target the diseased cells without causing substantial side-effects or collateral damages to healthy tissues. The method avoids the need for ex vivo treatment of subject tissues or cells.

DWPI 标题： New immunogenic or vaccine composition comprises an oil-in-water emulsion comprising metabolizable oil, tocol, emulsifying agent, and immunostimulants, useful for treating or preventing disease, e.g. bacterial and viral diseases

申请号：WO2007EP60743A 申请日：10/10/2007
公开/公告号：WO2008043774A1 公开/公告日：4/17/2008
申请人： GLAXOSMITHKLINE BIOLOGICALS S.A.,BE | BALLOU William Ripley Jr.,BE | HANON Emmanuel Jules,BE
发明人： BALLOU, William, Ripley, Jr. | HANON, Emmanuel, Jules
DWPI 摘要 - 新颖性： An immunogenic, preferably a vaccine composition comprising an antigen or antigen composition and an adjuvant composition comprising an oil-in-water emulsion, where the oil-in-water emulsion comprises 0.5-10 mg metabolizable oil, 0.5-11 mg tocol, 0.1-4 mg emulsifying agent, and one or more immunostimulants, per human dose, is new.
DWPI 摘要 - 优势： The vaccine or immunogenic composition comprising lower amounts of each component of the oil-in-water emulsion can be used while still maintaining a comparable immune response against an antigen or antigenic composition within the composition. This carries the advantage of maintaining the level of immunogenicity against an antigen while the reactogenicity within the host recipient is reduced.

DWPI 标题： New isolated aspartyl-tRNA synthetase polypeptide having a non-canonical biological activity, or its active variant useful for treating condition e.g. inflammatory diseases, autoimmune diseases, neoplastic diseases or neurological diseases

申请号：WO2010US29377A 申请日：3/31/2010
公开/公告号：WO2010120509A2 公开/公告日：10/21/2010

申请人：ATYR PHARMA INC.,US | ADAMS Ryan A.,US | HONG Fei,US | ZHAO Ji,US | PIEHL Kristi,US | ARMOUR Eva R.,US | D'ARIGO Kenny,US | GREENE Leslie A.,US | MERRIMAN Eve,US
发明人： ADAMS, Ryan, A. | HONG, Fei | ZHAO, Ji | PIEHL, Kristi | ARMOUR, Eva, R. | D'ARIGO, Kenny | GREENE, Leslie, A. | MERRIMAN, Eve
DWPI 摘要 - 新颖性： An isolated aspartyl-tRNA synthetase (AspRS) polypeptide (p1) having a non-canonical biological activity, or its active variant is new.
DWPI 摘要 - 优势： The polypeptide stimulates innate immune response; possess non-canonical biological activities of therapeutic relevance.

DWPI 标题： Use of vaccine comprising messenger RNA encoding antigen for prophylaxis and/or treatment of disease e.g. viral/bacterial/protozoological diseases, autoimmune diseases, allergies in an elderly patient exhibiting age of at least 50 years

申请号：WO2012EP878A 申请日：2/29/2012
公开/公告号：WO2012116811A1 公开/公告日：9/7/2012
申请人： CUREVAC GMBH,DE | KALLEN Karl-Josef,DE | KRAMPS Thomas,DE | SCHNEE Margit,DE | PETSCH Benjamin,DE | STITZ Lothar,DE
发明人： KALLEN, Karl-Josef | KRAMPS, Thomas | SCHNEE, Margit | PETSCH, Benjamin | STITZ, Lothar
DWPI 摘要 - 新颖性： In the prophylaxis and/or treatment of a disease in an elderly patient exhibiting an age of at least 50 years, a vaccine comprising at least one messenger RNA (mRNA) (A1) encoding at least one antigen is used, where the treatment involves vaccination of the patient and eliciting an immune response in the patient.
DWPI 摘要 - 优势：The vaccine leads to good immune response; and allows inducing Th1 immune responses in elderly patients (preferably without leading to a shift from Th1 to Th2 immune responses subsequent to administration). The RNA vaccines elegantly integrate adjuvanticity and antigen expression, thus mimicking relevant aspects of viral infections. This increases their efficacy compared to other inactivated (dead) vaccines that require the use of advanced adjuvants in the elderly, simplifying handling and production. Also, RNA vaccines exhibit safety features that make them superior for use in the elderly e.g. the increased reacto- genicity of live attenuated vaccines generally prevents use in this highly relevant target group, i.e. persons of at least 50 years of age, but also persons suffering from chronic conditions such as asthma or from a severe disease, such as cancer.

DWPI 标题：Use of vaccine comprising messenger RNA encoding antigen for

prophylaxis and/or treatment of a disease such as viral, bacterial or protozoological infectious diseases, autoimmune diseases, allergies or cancer in newborns and/or infants

申请号：WO2011EP1047A 申请日：3/2/2011

公开/公告号：WO2012116715A1 公开/公告日：9/7/2012

申请人： CUREVAC GMBH,DE | KALLEN Karl-Josef,DE | KRAMPS Thomas,DE | SCHNEE Margit,DE | PETSCH Benjamin,DE | STITZ Lothar,DE

发明人： KALLEN, Karl-Josef | KRAMPS, Thomas | SCHNEE, Margit | PETSCH, Benjamin | STITZ, Lothar

DWPI 摘要 - 新颖性：Prophylaxis and/or treatment of a disease in newborns and/or infants exhibiting an age of ≯ 2 years involves using a vaccine comprising at least one mRNA encoding at least one antigen.

DWPI 摘要 - 优势：Administration of the present vaccine allows eliciting T helper 1 (Th1) immune response in the newborn and/or infant, preferably without leading to a shift from Th1 to Th2 immune responses subsequent to administration.

DWPI 标题：New recombinant specific respiratory syncytial virus polypeptide in which specific amino acids are replaced with specific amino acid sequences useful for inducing immune response in a subject to specific respiratory syncytial virus

申请号：WO2010US42161A 申请日：7/15/2010

公开/公告号：WO2011008974A2 公开/公告日：1/20/2011

申请人： NOVARTIS AG,CH | SWANSON Kurt,US | DORMITZER Philip R.,US

发明人： SWANSON, Kurt | DORMITZER, Philip, R.

DWPI 摘要 - 新颖性： A recombinant respiratory syncytial virus F (RSV F) polypeptide (p1) in which specific amino acids are replaced with specific amino acid sequences or recombinant polypeptide selected specific amino acid sequences is new.

DWPI 摘要 - 优势：The composition comprising uncleaved RSV F protein ecto-domain polypeptides is free of lipids and lipoproteins. The cleaved RSV F protein ecto-domain polypeptides are free of lipids and lipoproteins. The (RSV F) polypeptides provide beneficial characteristics, such as stabilized prefusion or intermediate (non-post fusion) conformation, reduced or eliminated exposure of the fusion peptide, improved stability (e.g. reduced aggregation or degradation, and more closely resemble active F1/F2 viral protein, thus provide non-post fusion conformations of RSV F protein (i.e. prefusion conformation, intermediate conformations) can be better immunogens and elicit a better neutralizing antibody response. Reducing or eliminating the exposure of the fusion peptide, e.g. by introducing mutations or deletions into the furin cleavage sites, reduces the

hydrophobicity of the polypeptide and facilitate purifications, and also reduce or eliminate the RSV F protein from associating with cell membranes in a subject to whom the protein is administered.

DWPI 标题：New antibody specifically binding human lymphocyte-activation gene 3 useful e.g. in composition for e.g. treating cancer, comprises complementarity determining regions of variable light and heavy chain domain of immunoglobulin chain

申请号：WO2015US45481A 申请日：8/17/2015

公开/公告号：WO2016028672A1 公开/公告日：2/25/2016

申请人： MERCK SHARP & DOHME CORP.,US | LIANG Linda,US | FAYADAT-DILMAN Laurence,US | MALEFYT Rene De Waal,US | RAGHUNATHAN Gopalan,US

发明人： LIANG, Linda | FAYADAT-DILMAN, Laurence | MALEFYT, Rene De Waal | RAGHUNATHAN, Gopalan

DWPI 摘要 - 新颖性： An antibody (A1) or its antigen-binding fragment that specifically binds human lymphocyte-activation gene 3 (LAG3) comprising (a) complementarity determining region(CDR)1, CDR2, and CDR3 of a variable light chain (VL) domain of an immunoglobulin chain and/or (b) CDR1, CDR2, and CDR3 of a variable heavy chain (VH) domain of an immunoglobulin chain, is new. The antibody or its antigen-binding fragment comprises a light chain immunogoblin, a heavy chain immunogoblin, or both a light and heavy chain immunoglobulin.

DWPI 摘要 - 优势：The antibody or its antigen-binding fragment causes no adverse side effects.

DWPI 标题：Combination for preventing/treating tumor/cancer disease or infectious disease e.g. AIDS comprises RNA vaccine comprising RNA comprising open reading frame coding for antigen and composition comprising a programmed death-1 pathway inhibitor

申请号：WO2014EP461A 申请日：2/21/2014

公开/公告号：WO2014127917A1 公开/公告日：8/28/2014

申请人： CUREVAC GMBH,DE

发明人： FOTIN-MLECZEK, Mariola | KALLEN, Karl-Josef | PROBST, Jochen

DWPI 摘要 - 新颖性： Vaccine/inhibitor combination comprises: as vaccine an RNA vaccine comprising at least one RNA comprising at least one open reading frame (ORF) coding for at least one antigen and as inhibitor a composition comprising a programmed death-1 (PD-1) pathway inhibitor.

DWPI 摘要 - 优势：The combination is safe and effective for a therapy based on

immune checkpoint inhibitors (ICIs), particularly based on PD-1 pathway inhibitors; inhibits tumor growth resulting in an improved survival of tumor challenged mice in a synergistic manner as evidenced by the occurrence of 50% complete responses.

DWPI 标题： Preventing, ameliorating or treating symptom of cancer against cancer antigen e.g. Bacillus, comprises administering immunotherapy composition of recombinant vaccinia virus and another composition of yeast vehicle with e.g. cancer antigen

申请号：WO2010US31460A 申请日：4/16/2010

公开/公告号：WO2010121180A1 公开/公告日：10/21/2010

申请人： GLOBEIMMUNE INC.,US | THE UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY DEPARTMENT OF HEALTH AND HUMAN SERVICES,US | HODGE James,US | SCHLOM Jeffrey,US | FRANZUSOFF Alex,US

发明人： HODGE, James | SCHLOM, Jeffrey | FRANZUSOFF, Alex

DWPI 摘要 - 新颖性： Preventing, ameliorating or treating at least one symptom of a cancer in an individual to increase survival of an individual with cancer and/or to induce an immune response against at least one cancer antigen in the individual, comprises administering: a first immunotherapy composition containing a recombinant vaccinia virus comprising nucleic acid sequences; and a second immunotherapy composition containing a yeast vehicle comprising at least one cancer antigen or its immunogenic domain.

DWPI 摘要 - 优势：The recombinant poxvirus in the first immunotherapy composition exhibits: efficient delivery of genes to multiple cell types, which includes antigen presenting cells and tumor cells; high level of protein expression; optimal presentation of antigens to the immune system; and transient, rather than permanent, genetic modification of cells. The recombinant poxvirus elicits cell-mediated immune responses and antibody responses. The recombinant poxvirus can be used in combination with other poxviruses from different genera, as they are not immunologically cross-reactive.

DWPI 标题：Live attenuated virus composition used to reduce the onset of or prevent health condition e.g. West Nile infection and dengue fever, comprises live attenuated virus, high molecular weight surfactant, proteins agent, and carbohydrate agent

申请号：US200898077A 申请日：4/4/2008

公开/公告号：US20080248551A1 公开/公告日：10/9/2008

申请人： Stinchcomb, Dan T. | Osorio, Jorge E. | Wiggan, O'Neil

发明人： Stinchcomb, Dan T. | Osorio, Jorge E. | Wiggan, O'Neil
DWPI 摘要 - 新颖性： A live attenuated virus composition comprises live attenuated virus(es), high molecular weight surfactant(s), proteins agent(s), and carbohydrate agent(s).
DWPI 摘要 - 优势 :The composition greatly enhances the stability of live attenuated viruses; reduces the need for lower temperatures (e.g. refrigerated or frozen storage) while increasing the shelf life of aqueous and/or reconstituted live attenuated virus; and is capable of maintaining 100% of the live attenuated virus for greater than 24 hours. The live attenuated virus composition remains at 100 or 80% viral titer after 7 days at ~ 21 °C and after 50 days at refrigeration temperatures of 4 °C. It remains at 3-10x the concentration of viral titer after hours (e.g. 20 hours) at ~ 37 °C, compared to other compositions known in the art. Liquid composition containing trehalose, recombinant human serum albumin, and Pluronic F127 (RTM: poly(ethylene oxide)-poly(propylene oxide) block copolymer) was used to stabilize a West Nile chimeric flavivirus stored at 25 or 4 °C. Chimeric DEN-2/WN vaccine virus (1x 10 4 pfu) was incubated at each temperature and viral activity was assessed at 1 or 2 week intervals. The resulting liquid composition significantly improved the thermal stability of DEN-2/WN vaccine virus during storage at 25 and 4 °C, respectively. At 25 °C, loss of viral activity was less than 1 log over 7 days. At 4 °C, viral inactivation was negligible for up to 12 weeks.

DWPI 标题：New nucleic acid sequence comprising coding region encoding peptide or protein, histone stem-loop, and poly(A) sequence or polyadenylation signal, useful for treating infectious diseases e.g. HIV, dengue fever, cold and rabies

申请号：WO2013EP460A 申请日：2/15/2013
公开/公告号：WO2013120628A1 公开/公告日：8/22/2013
申请人： CUREVAC GMBH,DE | THESS Andreas,DE | SCHLAKE Thomas,DE | PROBST Jochen,DE
发明人： THESS, Andreas | SCHLAKE, Thomas | PROBST, Jochen
DWPI 摘要 - 新颖性： Nucleic acid sequence comprising or coding for (a) a coding region encoding at least one peptide or protein; (b) at least one histone stem-loop, and (c) a poly(A) sequence or a polyadenylation signal, is new, where the peptide or protein comprises a pathogenic antigen or its fragment, variant or derivative, preferably an antigen from a pathogen associated with infectious disease.
DWPI 摘要 - 优势：The nucleic acid sequence has good synergistic effect.

DWPI 标题：Preserved product useful as a vaccine in the prophylaxis or

treatment of e.g. viral-induced toxicity comprises viral particles, one of sugar, and polyethyleneimine, where the product is in amorphous solid form

申请号：WO2008GB987A 申请日：3/19/2008

公开/公告号：WO2008114021A1 公开/公告日：9/25/2008

申请人： STABILITECH LTD.,GB | DREW Jeffrey,GB

发明人： DREW, Jeffrey

DWPI 摘要 - 新颖性： A preserved product comprises viral particles, at least one sugar and polyethyleneimine (PEI). The product is in the form of an amorphous solid.

DWPI 摘要 - 优势： The preserved viral particles demonstrate improved thermal and desiccation resistance allowing extension of shelf life, ease of storage and transport and obviating the need for a cold chain for distribution. The method enables virus structure and function to be preserved during the drying step. The product provides protection as a cryoprotectant (protection against freeze damage), lyoprotectant (protection against desiccation) and/or a thermoprotectant (protection against temperatures higher or lower than 4 °C). The polyethyleneimine with at one sugars leads to improved preservation of viral infectivity and immunogenicity.

DWPI 标题：New vaccine comprising at least two distinct optimized viral polypeptides useful to treat or reduce the risk of viral infection caused by e.g. retrovirus, preferably HIV-1, reovirus, picomavirus, togavirus, orthomyxovirus and paramyxovirus

申请号：WO2009US64999A 申请日：11/18/2009

公开/公告号：WO2010059732A1 公开/公告日：5/27/2010

申请人： BETH ISRAEL DEACONESS MEDICAL CENTER,US | LOS ALAMOS NATIONAL LABORATORY,US | BAROUCH Dan H.,US | KORBER Bette T.,US | FISCHER William M.,US

发明人： BAROUCH, Dan, H. | KORBER, Bette, T. | FISCHER, William, M.

DWPI 摘要 - 新颖性：Vaccine comprising at least two distinct optimized viral polypeptides is new, where the optimized viral polypeptides correspond to the same viral gene product.

DWPI 摘要 - 优势：The vaccine substantially increases the diversity, breadth and/or depth of the virus-specific cellular immune responses compared to conventional vaccines. The recombinant adenovirus as vector for the expression of the optimized viral polypeptides is highly beneficial because they do not integrate their DNA into the host genome and thus reduces the risk of inducing spontaneous proliferative disorders.

DWPI 标题：Generating pharmaceutical agent for cancer immune therapy

comprises using matched normal omics data of tumor to generate in silico, set of n-mers containing patient- and cancer-specific cancer neoepitope, and filtering n-mers to in silico

申请号：WO2016US29244A 申请日：4/25/2016

公开/公告号：WO2016172722A1 公开/公告日：10/27/2016

申请人： NANTOMICS LLC,US | NANT HOLDINGS IP LLC,US

发明人： NGUYEN, Andrew | NIAZI, Kayvan | SOON-SHIONG, Patrick | RABIZADEH, Shahrooz | BENZ, Stephen Charles

DWPI 摘要 - 新颖性： Generating a pharmaceutical agent for cancer immune therapy, comprises using matched normal omics data of tumor to generate in silico, a set of n-mers that contain patient- and cancer-specific cancer neoepitope; filtering in silico the n-mers to so obtain subset of neoepitope sequences; preparing synthetic n-mer peptide using sequence information from the subset of neoepitope sequences; using synthetic n-mer peptide to isolate a recombinant antibody; obtaining sequence information of the complementarity determining region of the recombinant antibody; and generating a synthetic antibody.

DWPI 摘要 - 优势：Provided are systems and methods that allow for rapid identification of patient-specific antigens of a tumor and accelerated production of antibodies targeting such antigens for diagnostic or therapeutic use.

DWPI 标题：New cyclosporin derivatives are cyclophilin binders, useful for treating or preventing e.g. hepatitis C virus infection, hepatitis B virus infection, HIV virus infection, stroke, traumatic brain, spinal cord injury and Alzheimer's disease

申请号：WO2011US47571A 申请日：8/12/2011

公开/公告号：WO2012021796A2 公开/公告日：2/16/2012

申请人： S&T GLOBAL INC.,US | SU Zhuang,US | LONG Zhengyu,US | HUANG Zhennian,US | YANG Suizhou,US

发明人： SU, Zhuang | LONG, Zhengyu | HUANG, Zhennian | YANG, Suizhou

DWPI 摘要 - 新颖性：Cyclosporin derivatives (A) are new.

DWPI 标题：New nucleic acid sequence comprising coding region encoding peptide or protein, histone stem-loop, and poly(A) sequence or polyadenylation signal, useful for treating infectious diseases e.g. HIV, dengue fever, cold and rabies

申请号：WO2012EP673A 申请日：2/15/2012

公开/公告号：WO2013120499A1 公开/公告日：8/22/2013

申请人： CUREVAC GMBH,DE | THESS Andreas,DE | SCHLAKE Thomas,DE |

PROBST Jochen,DE
发明人： THESS, Andreas | SCHLAKE, Thomas | PROBST, Jochen
DWPI 摘要 - 新颖性： Nucleic acid sequence comprising or coding for (a) a coding region encoding at least one peptide or protein; (b) at least one histone stem-loop, and (c) a poly(A) sequence or a polyadenylation signal, is new, where the peptide or protein comprises a pathogenic antigen or its fragment, variant or derivative, preferably an antigen from a pathogen associated with infectious disease.
DWPI 摘要 - 优势：The nucleic acid sequence has good synergistic effect.

DWPI 标题：New attenuated virus comprises genome having modified protein-coding sequence with lower codon pair bias than parent sequence, useful for inducing protective immune responses and delaying onset or progression of virus related diseases
申请号：WO2008US58952A 申请日：3/31/2008
公开/公告号：WO2008121992A2 公开/公告日：10/9/2008
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DWPI 摘要 - 新颖性： An attenuated virus comprising a viral genome comprising a modified protein-encoding sequence having a codon pair bias less than the codon pair bias of a parent protein-encoding sequence from which it is derived, is new.
DWPI 摘要 - 优势：The attenuated live viruses have practically no possibility of reversion due to hundreds or thousands of small defects modified in them. The method for designing these viruses thus provides a fast, efficient, and safe method of manufacturing anti-viral vaccines.
链接地址：http://clarivate.com.cn/coronavirus-resources/patent043.htm

重要网址链接：

中科院成都文献情报中心新型冠状病毒（2019-nCoV）集成信息平台：

http://www.clas.ac.cn/xwzx2016/163486/xxfysjpt2020/

Wiley 数据库新冠病毒专区：

https://novel-coronavirus.onlinelibrary.wiley.com/

说明：

2019 新型冠状病毒（SARS-CoV-2）已经在全球蔓延，全球各类研究机构纷纷行动起来，开展疫情防治、病毒研究、疫苗与药品研制等工作。成都文献情报中心学科咨询服务部与昆明动物所图书馆携手，聚焦我国及全球防疫一线，及时、准确地提供重点科技信息，支撑工作在防疫一线科研人员的信息需求。

诚挚邀请科研人员及相关人员与我们联系，提出更多有针对性需求与建议，以便进一步提供个性化的服务与产品。我们希望与科研人员一起众志成城，争取这场防疫抗疫攻坚战的全面胜利！

本期所有摘编信息均有原始出处，请在使用过程中通过“链接地址”获取原始信息，并自行甄别和使用。

《新型冠状病毒信息快报》

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