

JEN 2020

PROJECT SOLAS

DEVLOPMAN MONDYAL
SYANTIFIK NAN COVID-19

EDISYON 1



RECONNAISSANCE
GROUP

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Kriz COVID-19 la ap gen efè sou nou tout, nan vi pèsònèl nou tankou nan vi pwofesyonèl nou.

Nou te wè enpak la sou ekonomi an ak sou biznis ki nan mond lan pè a nan sa ki ka oswa ka pa rive pwochen fluktue chak jou.

lèw wèl pi fè nwa li pral jou.

De moun nan ekip nou an ki baze nan Dublin te ap travay sou yon pwojè rechèch, Pwojè Solas, ki konsantre sou mezi yo ke syantifik ak doktè atravè mond lan ap pran pou jwenn tretman ak vaksen.

Nouvèl pozitif la se te pwogrè teknolojik nan batay kont COVID-19.

Bravo pou Caroline Tsang (Analis Enfòmasyon sou Biznis) ak Jake Henry (Egzekitif Biznis) pou travay di yo sou pwojè sa a ak mèsitou pou Pierre Caillot Dessources (Manadjè vant) ak Camille Michel (Manadjè Komèsyal) pou sipò yo nan reyalizasyon li..

Dokiman sa a disponib an kreyòl, franse ak angle.



02

REZIME EGZEKITIF

Devlopman medikamen ak vaksen

Imaj nap jwenn pi ba a montre nou devlopman yon medikaman/ vaksen. Premye faz la (faz 0) pi souvan yo relel faz preklinik. Pwosesis prensipal la gen ladan 4 faz, faz I rive IV. Pou Covid-19 la, dire chak faz yo vin pi kout, sa ki ta nòmalman pran plizye lane, kounye a pran kèk mwa jiska yon lane.

Nan dat 14 avril 2020, te gen 171 medikaman nan faz 0, 4 medikaman nan faz mwen, 7 medikaman nan faz II ak 2 nan faz III. Pa ko gen anken medikaman ki rive nan faz IV. (1)



03

CHANJMAN NAN KEK INDISTRI POU EDE LIT KONT COVID-19

Gen kèk konpayi ki fe alkol, ki kòmanse fè pwodwi dezenfektan pou men epi tou genyen ladan yo kap distribye yo gratis bay gwoup ki bezwen yo. (2)

Gwo konpayi famasetik yo te pwomèt pou fè don de milyon grenn sulfate hydroxychloroquine ke nous konnen tankou klorokin (yon medikaman malarya) pou lopital nan Inyon Ewopeyen an ak Etazini. (3)

Detayan manje nan kèk peyi Ewopeyen yo te desann pri yo nan makèt yo epi ofri rabè espesyal pou anplwaye kap travay an kontak direk a maladi a. (4,5,6)

KEK AVANSMAN TEKNOLOJIK

Yon konpayi nan peyi Iland devlope yon nouvo tès ki kapab dyagnostike viris la kay yon pasyan an 15 minit avèk yon ti echantiyon san li. (7)

Yon konpayi Kore di Sid pral lanse yon tès ke ou ka fè pou kont ou, ki ka dyagnostike viris la e ka bay rezilta nan 15-20 minit. Konpayi an kounye a ap chache pèmasyon apwopriye pou Inyon Ewopeyen ak Etazini. (8)

Yon gwoup syantifik Wayòm Ini devlope yon nouvo aparèy pòtab entelijan (\$ 126/aparèy) ki ka itilize nenpòt ki kote ak on fòmasyon minim. Aparèy la pran spesimen nan gòj ak /oswa nan nen, epi nan pi piti pase 30 minit fè dyagnostik maladi yo epi di yo si wi ou non yo gen kowonaviris. (9)

04

Abbott, yon konpayi famasetik mondyal, te lanse yon nouvo aparèy ki ka detekte Covid-19 nan 5 minit, ak yon rezilta negatif nan 13 minit. (10)

Yon aplikasyon lasante ki deja egziste nan Wayòm Ini, ki rele Babylon Health, lanse yon nouvo sèvis gratis pou manb ke yo genyen deja yo ki pèmèt malad yo swiv sentòm yo, kontwole maladi yo epi yo fè konsiltasyon vityèl ak yon doktè si sa nesesè. (11)

Foracare Suisse, yon konpayi kap bay swen lasante, mete sou pye pwòp estasyon siveyans tanperati li pou sipòte sistèm swen sante yo. Nouvo sistèm nan bay lekti egzakt, pa mande pou li gen operatè e li ka kontwole tanperati adistans. (12)

VUNO konpayi lojisyeèl imajri medical mete ansanm ak kowalisyon mondyal pou li ofri 2 solisyon Intelijans Atifisyel (IA). Solisyon IA yo kapab ede doktè yo analize radyografi pwatrin yo ak analiz eskan pasyan yo. (13)



05

ASIE



Dat preparasyon an: Avril 2020

Devlopman medikaman/ vaksen

Peyi Lind te kòmanse esè klinik nan terapi plasma pou trete pasyan ki gen Covid-19. Plasma se yon eleman ki gen antikò ki ka konbat viris Plis pase 500 pasyan Kowonavirus Covid-19 nan de lopital piblik te patisipe nan esè eksperimental terapi plasma. Yap administre terapi plasma a pou pasyan ki malad grav. (14)

Celltrion, yon konpayi biofamasetik nan peyi Kore di Sid, te anonse plan pou kòmanse tretman pou vaksen kowonavirus Covid-19 sou moun nan mwa jiyè. Kalandriye a mete Celltrion sou rout dwat, kòm youn nan anpil konpayi yo ki ap kòmanse esè klinik pandan ete sa a. (15)

De konpayi, Samsung Biologics ak Vir Biotechnology siyen yon akò \$ 362 milyon dola ameriken pou Samsung Biologics ka bay sèvis manifakti yon pakèt kantite pou pwosesis kreyasyon potansyèl vaksen kont Kowonavirus Covid-19. Vir gen plan pou yo avanse dirèkteman nan faz 2 esè klinik nan pwochen twa a senk mwa. Samsung Biologics ta dwe kòmanse manifakti nan mwa Oktòb ak potansyèl lo komèsyal yo dwe pwodwi kòmanse nan 2021.(16)

06

Peyi Lachin kounye a gen twa diferan esè klinik sou pye pou twa vaksen posib kont kowonavirus. Enstiti pwodwi Byolojik nan Wuhan (Wuhan Institute of Biological Products) te devlope de vaksen anba responsablite gwoup famasetik Nasyonal Lachin (Sinopharm) ak Sinovac Research and Development Co., Ltd yon konpayi rechèch ak devlopman ki baze Beijing. (17) Twazyèm vaksen an devlope pa CanSino Bio ki te pase nan faz II baze sou done preliminè sekirite. (18)

Chanjman nan kek indistri pou ede lit kont COVID-19

New World Development, pwopriyetè gwo sant komèsyal atravè Lachin, te asosye avèk 8 òganizasyon non-gouvènmantal epi lanse 35 machin ki distribye mask gratis nan Hong Kong. New World Development kounye a gen 2 liy pwodiksyon mask lokal yo epi yo pral louvri 2 lòt mwa pwochen ak objektif fabrike 7 milyon mask. Gwoup la te deja bay HK \$ 10 milyon dola (\$ 1.3 milyon dola ameriken) pou kreye yon fon "kominotè kont epidemi" ki ofri plis pase 2 milyon mask ak 10,000 kit ijyenik pou fanmi ki gen ti revni Hong Kong. (19)

07

Carousell, yon konpayi Anons Sosyal, ofri jiska \$ 2 milyon dola (\$ 1.3 milyon dola ameriken) piblisite gratis pou òganizasyon a bi non lukatrif kap bay sevis nan kominote ki afekte nan epidemi kowonavirus. Oganizasyon nan Singapore, Malezi, Hong Kong ak Filipin angaje nan inisyativ ki sipòte moun ki afekte ak pandemi a ap kalifye pou pwogram lan. (20)

Sitwayen peyi Taiwan kapab kòmande jiska twa mask pou chak semèn sou entènèt epi ale chache yo soti nan magazen atravè tout zile a, yon efò ki dirije pa gouvènman an ki ap chache kwape panik acha apre otorite ki mete ansanm ak manifaktirè pou ogmante manifakti a 12 milyon mask pa jou. (21)

Gouvènman Japonè a te kreye yon nouvo lisans ki pral pèmèt plis distilri Japonè pwodwi bwason ki gen alkòl fò kòm yon ranplasan dezenfektan Coronavirus. Mezi sa a gen pou objektif pou bouche mank pwodwi dezenfektan ke pandemi Kowonavirus la te lakòz. (22)

Toyota Moto Corp. te fè konnen ke li pral pwodwi vizyè pwoteksyon epi lap pataje ekspètiz manifakti li pou yo ki ekipe travayè medikal nan premye liy yo. Yo annonse tou ke yap pataje konesans Toyota Production System (TPS) ak konpani ki fe ekipman medikal pou ogmante pwodiksyon respiratè. Konpayi an planifye pou ofri modèl taksi JPN li yo pou transpòte pasyan ki pa gen sentòm trò grav nan lopital, sant karantèn pwoviswa, tounen lakay yo ak lòt kote. Toyota (23)

08

Infosys, yon miltinasyonal peyi Lend, te konsakre fon pou lopital ki gen kapasite tretman, respiratè, twous tè ak ekipman pwoteksyon pou travayè sante premye liy yo pou diminye enpak Covid-19 nan peyi a. Fondasyon Infosys te asosye avèk Narayana Health City nan Bengaluru pou lanse yon etablisman karantèn ki gen 100 chanm pou pasyan Kowonavirus Covid-19 yo. Etablisman an pral benefisye pasyan ki nan bezwen nan kouch pi vilnerab yo – yap resevwa vizit regilye doktè, enfimyè ak medikaman esansyèl gratis. Konpayi an kounye a distribye anbalaj manje pou 21-jou ki gen ladan machandiz kòm diri, pwa lantiy, lwil pou kwit manje ak lòt esansyèl. (24)

Nan Odisha, eta lès peyi Lend, misyon entre èd Mission Shakti (SHG) fè mask en gwo pou evite mank. A dat, apeprè 605 SHG te pwodwi 1.5 milyon mask koton, pou ede kominote ak doktè pwoteje tèt yo. Plis pase 7,000 SHG travay lajounen kou lannwit pou pwodwi ekipman pwoteksyon pou moun ki nan pwemye ran epi mete sou pye kwizin ki prepare manje pou moun ki nan bezwen: a dat plis pase 325,000 moun. (25)

PWOGRÈ TEKNOLOGIK

Kore di sid te ogmante ekspòtasyon kit tè s Kowonavirus Covid-19 pou ede le mond fè fas ak pandemi mondyal la. Nan mwa Mas la, yon total de 27 konpayi Kore di Sid ekspòte kit tè s, ki gen ladan senk konpayi bioteknoloji lokal ki gen kit yo apwouve pou itilize ijans pa Sewoul. Plis pase 120 peyi te kontakte peyi a yo achte kit tè s yo oswa mande yon don imanité. (26)



10

Youn nan metòd yo itilize pou lite kont Kowonavirus Covid-19 pa gouvènman Chinwa a se yon aplikasyon mobil ki rele Health Code. Li travay lè itilizatè li antre enfòmasyon pèsònèl yo, kote yo te ye ak nenpòt ki sentòm Coronavirus yo resenti. Lè sa a, aplikasyon an bay itilizatè a youn nan twa koulè: vèt, jòn oswa wouj. Vèt pèmèt moun yo ale nenpòt kote, jòn vle di ke moun nan dwe mete tèt li nan karantèn pou 7 jou; epi wouj mande pou moun nan metel nan karantèn pou 14 jou. (27)

Megvii, yon konpayi Chinwa entelijans atifisyèl (EA), te lanse yon AI- sistèm depistaj tanperati konpatib ak plizye system entelijans atifisyèl nan plizyè kote nan peyi Lachin ak aletranje. Sistèm lan ka pran tanperati jiska 15 moun ansam pa segond, ak yon nivo presizyon plis ou mwens 0.3°C , aparey la ka pran tanperati yon moun ki a twa mètr distans. Li ka deklanche yon alèt lè yon moun gen tanperati ki wo pase, swa endike ke moun na dwe filtre manyèlman oswa refize antre nan yon kote. Li kapab deplwaye nan zòn ki gen anpil trafik moun tankou èpòt, estasyon métro ak koulwa lopital. (28)

Enjenyè nan Inivèsite Entènasyonal Islamik nan peyi Malezi yo te kreye yon robo pou ede doktè trete pasyan yo ak pran tanperati yo, yo espere ke yo ka redwi risk pou yo pran Kowonavirus Covid-19. Robo ki rele "Medibot" se yon robo blan ki fè 1.5 mètr, ki ekipe ak yon kamera ak yon ekran ki pèmèt pasyan yo kominike adistans ak doktè. (29)



11

AFRIK & MWAYEN ORYAN

Dat preparasyon an: Me 2020

Devlopman medikaman/ vaksen



Depi 1ye me 2020, gen 269 medikaman nan Faz 0, 5 medikaman nan Faz I, 14 medikaman nan Faz II, ak 2 nan Faz III. Pa gen okenn medikaman ki pase Faz IV. (30)

Anonse nan komansman mwa avril, yon medikaman peyi Letiopi fini al etap tè s nan laboratwa e li pare pou esè klinik yo. Medikaman la ap trete pasyan pa ranfòsman sistèm iminitè yo epi yo te jwenn ke li pa gen anken toksin (yon sibstans toksik). (31)

Nan peyi Kenya, yon ekip rechèch ki soti Kenya AIDS Vaccine Initiative Institute for Clinical Research nan Inivèsite Nairobi ap idantifye kandida pou yon komanse pwosè esè vaksinasyon nasyonal. Sant rechèch Nasyonal Moun peyi Lejip nan kapital peyi a Caire ap kòmanse travay tou sou yon vaksen. (32)

9 Mas pase, chèchè moun peyi Lejip yo te kòmanse devlope yon vaksen pou kowonaviris COVID-19 ki ta dwe disponib kote piblik la nan 5 mwa. (33)

12

Chanjman nan kek indistri pou ede lit kont Covid-19

Depatman sante Lafrik di Sid la devlope sèvis WhatsApp li an ak yon òganizasyon bi likratif baze nan Lafrik di sid ki Praekelt.org, ki sèvi avèk teknoloji aprantisaj machin (yon pati nan entèlijans atifisyèl). Itilizatè ki voye pawòl "bonjou" nan yon nimewo WhatsApp la ka jwenn reponn a kesyon sou sijè tankou kisa ki mit, sentòm ak tretman kowonaviris la. Òganizasyon mondyal sante (OMS) ke sèvis la te attire atensyon'l fè yon patenarya ak Praekelt.org pou li lanse pwòp vèsyon pa li nan dat 20 mas pase.(34)

Konpayi ki aktif nan tout peyi Afrik de Lwès ap pataje enfòmasyon epi kowòdone repons yo atravè yon platfòm sektè prive Afrik Lwès Coronavirus (WAPSCON19). Estrikti WAPSCON19 pèmèt chak peyi kontribye epi kèk manm kle peyi Liberya ak Gana deja pote tèt yo volontè po upran lidèship diskisyon. Yon egzekitif sektè prive pou chak peyi ap dirije travay la nasyonalman, òganize apèl e ap kòmanse koperasyon ak lòt biznis ki opere nan menm peyi a. (35)

Manifakti otomobil Uganda Kiira Motors Corporation te asosye ak lekòl Makerere Sante Piblik pou devlope yon aparey respiratè ak yon pri ki ba ki ka rapidman itilize pou pasyan kowonaviris yo. Aparey respiratè sila an ki baze sou konsepsyon aksè lib nan Enstiti Teknoloji nan Massachusetts, Inivèsite nan Florid ak lòt Lisans pou Piblik Envantè Teknoloji Devlopè. (36)

Majed M. Al Tahan, ko-fondatè & direktè jeneral nan Danube Online te di jounalis nan CNBC ke gwo makèt ak chèn makèt baze an Arabi ke li sèvi avèk Entelijans Atifisyèl pou ede yo bese tan livrezon. Graz ak teknoloji "kat-rayon" a anbalè ka jwenn atik ki nan komand kliyan fè sou entènèt, ki yo swiv avèk yon aplikasyon nan magazen an. (37)

13

PWOGRÈ TEKNOLOJIK

Nan peyi Gana, yon jen konpani ameriken ki rele Zipline ap itilize ti dron pou transpòte echantyon tè COVID-19 nan sant medikal ak laboratwa nan vil Accra ak Kumasi. Konpayi an te deja itilize sèvis sa yo pou transfizyon san nan Rwanda nan lane 2016. Dron yo tou bay PPE (ekipman pwoteksyon pèsònèl) ak lòt vaksen medikaman nan sant sante rural yo. Zipline ap fè menm jan travay nan peyi Rwanda. (38)

Chèchè nan Enstiti Pasteur bò lanmè Senegal yo di ke nan twa mwa yap lage twous dyagnostik ki van \$ 1 ki ka detekte kontajyon respiratwa a nan 10 minit. Ekip Senegalè a, ki te ede OMS nan epidemi Ebola nan rejyon an nan soti nan lane 2014 rive 2016, te youn nan de premye laboratwa sou kontinan an kit e rive idantifye kowavavirus, ak echantyon ki soti nan lòt peyi. (39)

Komisyon Inyon Afriken an ak Sant Afrik pou Kontwòl ak Prevansyon Maladi (CDC Lafrik) te lanse yon nouvo inisyativ, Patenarya pou akselere depistaj COVID-19 (PACT): Jwen, Teste epi swiv (CDC-T3). PACT pral konsantre sou teste pi piti pase 10 milyon Afriken nan sis pwochen mwa yo epi etabli sant distribisyon epi deplwaye 1 milyon travayè swen sante, ak estandadize teknoloji komen. (40)

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konpayi livrezon medikal Nijeryen Lifebank te lanse de sant tès mobil gichè chofè pou ranfòse nonb tès kowonaviris ki fèt nan peyi a. Sant tès sayo, ki konstwi tankou gichè chofè yo sitiye nan Lagos, sant komèsyal Nijerya, ak Oyo, nan sidwès peyi a. Lifebank di li te lanse sant egzamen gratis yo nan yon patenarya ak Enstitiwite Nijeryen nan rechèch medikal. (41)



15

"Solas" vle di **nan limyè a** an Ilandè, ak platfòm nouwèl ak medya sosyal ki chita sou reyalite dezagreyab COVID-19 lan, bilten sa a la pou pote nouwèl **pozitif** sou diferan rejyon yo.

EWÒP

Dat preparasyon an: Me 2020

Devlopman medikaman/ vaksen

Chèchè soti nan Bèljik ak Etazini deklare ke yon lama kat lane yo te rele Winter ak 130 lòt lama ka gen solisyon pou bloke netralize efè viris la ki lakòz COVID-19. Yo te jwenn ke Winter te pran vaksen kont soti nan 2003 SARS ak 2016 viris MERS, kòm lama ka pwodwi antikò yon ti kras diferan pase sa moun ka pwodwi. Sepandan, rechèch la nan etid yo lama se toujou nan premye etap preliminè. (42)

16



Nan Oxford (UK), premye jijman imen an Ewòp nan yon vaksen coronavirus te kòmanse. De volontè soti nan 800 rekrite a yo te enjekte 23 avril 2020. Yo te vaksen an devlope nan anba twa mwa pa yon ekip nan Oxford University.(43)

Konpayi Alman BioNTech ak US Pfizer te kòmanse esè klinik Faz I / II moun sou vaksen potansyèl COVID-19 nan Almay. Sa a pral make premye jijman Almay la nan klinik pou yon vaksen kont COVID-19.(44)



Konpayi Alman BioNTech ak US Pfizer te kòmanse esè klinik Faz I / II moun sou vaksen potansyèl COVID-19 nan Almay. Sa a pral make premye jijman Almay la nan klinik pou yon vaksen kont COVID-19.(45)

Toiletten
Toilets



CHANJMAN NAN KEK INDISTRI POU EDE LIT KONT COVID-19

Nan Sweden, BGI Group ki te travay ak Karolinska Enstiti a yo bati yon laboratwa je Ponpye nan stockholm. Li pral fè tou de deteksyon viris ak rechèch syantifik pou siveyans konplè sou mitasyon viris. (46)

Robo, ki te pwodwi pa Veso depi 2018, yo te furnir Pwodwi pou fè makèt nan vil la nan Milton Keynes nan UK a, pandan y ap peyi a rete sou fèmèn pòt. Plis pase 100,000 livrezon otonòm te kounye a te fè lè l sèvi avèk robo yo. Depi gouvènman an enpoze strik distans mezi sosyal sou Mas 23, aparèy yo te pi chaje pase tout tan, furnir pou gratis nan Sèvis Sante Nasyonal (NHS) anplwaye yo ak fè fas a ogmante demand nan men piblik la an jeneral. (47)

Philips Foundation te delivwe de inite swen mobil izolasyon nan Lakwa Wouj Italyen pou pasyan ki afekte nan COVID-19. Objektif la se pou elaji kapasite swen sante lokal sante yo, sipòte depistaj pasyan yo ak entèn lopital la, ansanm ak bay premye swen ak asistans kalite moun yo sispèk oswa konfime yo dwe enfekte ak COVID-19. (48)



Gwoup L'Oréal ak fanmi li yo ki gen mak ap bay 50,000 pwodwi ijyèn ak sanitiz men travayè swen sante nan Iland ansanm ak 27,000 dezenfektan men nan famasi ak anplwaye makèt. Pandan se tan, an Frans, Clarins konvèti liy pwodiksyon li yo pou fabrike men ki baze sou alkòl ak plis pase lotion men pou sipòte efò entènasyonal yo. Nan Iland, yo te distribye 300 pamper pake liy pèsònèl medikal soti nan biznis la Dun Laoghaire HQ.(49)

Pwoje teknologik

Ayewopò Vyèn pral ofri tès coronavirus sou plas pou pèmèt pasaje yo antre nan Otrich pou fè pou evite gen izòlman pou 14 jou. Tès ayewopò yo, ki koute € 190 (US \$ 201), kapab tou pran pa pasaje kite Vyèn yo demontre estati viris-gratis yo nan destinasyon yo. (50)

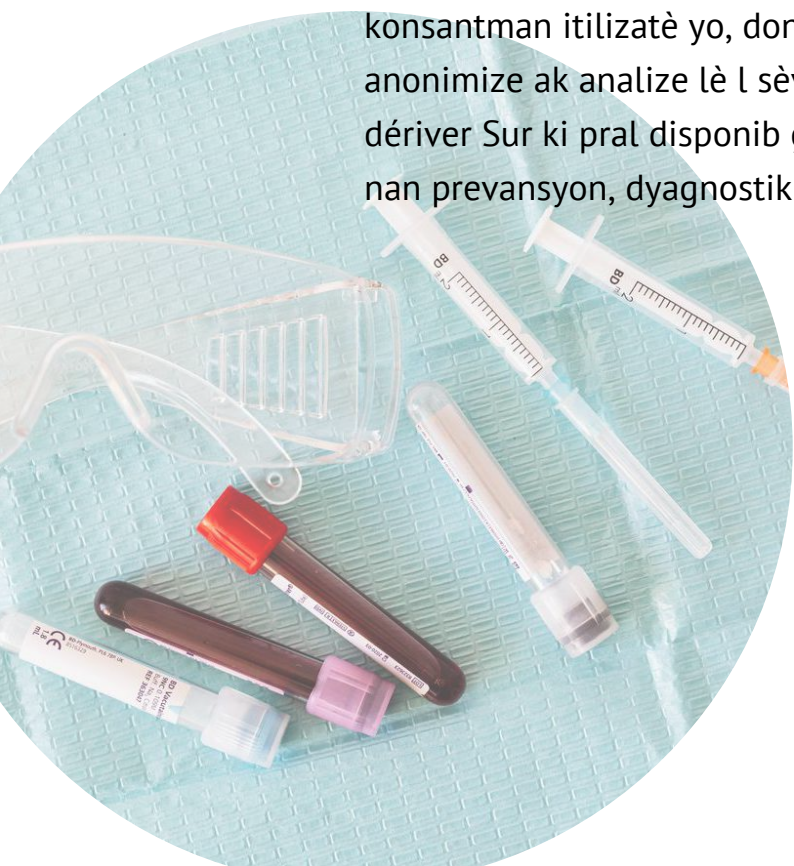
Yo te lanse yon nouvo zouti sipò klinik ki rele Evalyasyon risk COVID-19 pou deteryorasyon Respiratwa (ACORRD) nan Iland pou ede lopital yo optimize ak echèl swen respiratwa egi pou pasyan COVID-19. ACORRD pèmèt lopital yo visualized tandans, swiv pwogresyon maladi, idantifye pasyan deteryorasyon bonè epi yo bay alè konsèy nan ekip swen sou konsiderasyon klinik ki apwopriye yo. Sistèm lan, ki se CE make kòm yon klas medikal aparèy mwen, ale nan konsèp nan deplwaman nan 10 jou.(51)

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Coronavirus ka idantifye otomatikman nan reyon X nan poumon malad ki itilize entèlijans atifisyèl (AI) devlope nan Brunel University London. Algorithm lan, ki detekte maladi coronavirus ki gen ladan COVID-19, SARS ak MERS, sèvi ak analytics imaj tach siy ak aprantisaj gwo twou san fon yo klase yo. Idantifikasyon maladi a ak klasifikasyon algorithm a se trè egzat e li te teste sou X-ray imaj ki soti nan pasyan reyèl ak konfime ka yo. Modèl la ka kontwole ki jan viris la devlope plis predi rezilta a pou moun ki enfekte. (52)

Britanik entèlijans atifisyèl (AI) konpayi Sensyne Sante te lanse CVM-Sante, yon app ki baze sou wèb pou moun ki nan dosye COVID-19 ki gen rapò siy ak sentòm vital ki soti nan kay la. Itilizatè yo ka kontwole sentòm yo tou sou non yon lòt moun. App a gratis pou nenpòt moun ki nan UK a, ak plan pou li yo dwe disponib entènasyonalman. Li te bati lè l sèvi avèk Sensyne a valide lojisyèl sante dijital, e se konplètman GDPR ak ISO konfòme. Avèk konsantman itilizatè yo, done yo te pwodwi pa aplikasyon an pral anonimize ak analize lè l sèvi avèk sofistike machin aprantisaj teknik dériver Sur ki pral disponib gratis nan NHS yo ak pou rechèch medikal nan prevansyon, dyagnostik ak tretman nan COVID-19.(53)



20

AMERIK SID

Dat preparasyon an: Jen 2020

Devlopman medikaman/ vaksen



Kòm nan 8 jen 2020, gen 333 medikaman nan Faz 0, 7 dwòg nan Faz I, 31 dwòg nan Faz II, ak 7 nan Faz III. Pa gen okenn medikaman ki te deplase sou Faz IV. (54)

Syantis brezilyen nan Enstiti Kè nan Inivèsite Lekòl Medikal Sao Paulo ap fè rechèch sou yon nouvo apwòch ki diferan ak lòt moun ki fè inivèsite ak konpayi pharmaceutique yo. Nouvo apwòch sa a nan kreye yon vaksen enplike itilizasyon patikil atifisyèl ki sanble ak COVID-19. (55)

Retounen nan mwa mas, Ajantin Joined yon etid mondyal de-etap yo te rele Solidarite ansanm ak Bahrain, Kanada, Lafrans, Iran, Nòvèj, Lafrik di sid, Espay, Swis ak Thailand. Objektif etid la se pou kreye yon vaksen kont COVID-19 pa kowòdone diferan analiz ak konpare rezilta ant chak peyi. (56)

Biyagri famasi ki baze nan Etazini yo ap fè yon jijman nan klinik nan Brezil pou wè si medikaman anti-viral investigasyon li an efikas pou trete kowavavirus COVID-19. Medikaman an, Galidesivir, te demontre potansyèl kòm yon tretman pou yon varyete de maladi grav, ki gen ladan Ebola, Marburg, Lafyèy jòn, Zika ak coronavirus. (57)

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Avans Teknolojik

Yon startup sante brezilyen ki rele Hi Technologies pwodwi twous rapid tès pou COVID-19 ak lage nan dezyèm mwatye nan mwa avril. Rezilta yo ka pran nan lespas 15 minit ak pou yon pri nan pri nan BRL 130 (US \$ 25). Pwosedi a ofri nan Hi fè adistans, ak echantiyon san an kolekte nan yon kapsil ak melanje nan réactifs nan yon aparèy pòtab. Done yo te rasanble transmèt imedyatman nan yon laboratwa fizik, kote li se Lè sa a, trete lè l sèvi avèk algoritm kabinè avoka a la anvan yo bay yon rapò. (58)

Yon enstriman dyagnostik COVID-19 tès te devlope pa yon inivèsite nan Santiago, Chili ki teste pasyan senptomik yo wè si yo te pèdi sans nan sant. Youn nan sentòm yo nan COVID-19 se pèt la nan sans nan pran sant nan mitan pasyan ki pa montre okenn lòt siy viris la. Tès la ka ede fè dyagnostik pasyan coronavirus pi bonè ak pou yon fraksyon nan pri an. (59)

Chanjman nan kek indistri pou ede lit kont COVID-19

Konpayi brwayè brezilyen an, Ambev, ap kòmanse itilize youn nan brasri brasè byè li yo pou pwodui mwatye milyon milyon boutèy dezenfektan pou lopital piblik yo pou konbat pwopagasyon coronavirus. Ambev plan yo delivre 5,000 boutèy jèl dezenfektan nan tout lopital piblik nan Sao Paulo, Rio de Janeiro ak Brasilia, kote pifò nan ka coronavirus nan peyi a konsantre. (60)



22

Copper 3D, yon konpayi Chilyen, ap itilize kwiv pou fè mask soti nan enprimant 3D akòz mank mask la. Copper gen pwopriyete anti-bakteri ak antiviral epi yo te itilize kòm sa yo pou syèk. Konpayi an lage patant lan sou yon platfòm sous louvri epi li te telechaje plis pase 7 milyon fwa. (61)

Yon ekip nan Kolonbi se pou teste yon vantilasyon ki fèt ak yon òdinatè Franbwaz Pi (yon ti òdinatè, pri ki ba) ak pati ki fasil pou sous. Yo te afiche konsepsyon ak kòd òdinatè a sou entènèt nan mwa mas pa yon nonm nan Kalifòni, ki moun ki pa te gen okenn eksperyans anvan nan kreye ekipman medikal. Ap machin nan ap teste nan de inivèsite - Lopital la Inivèsite nan Pontifikal Xavierian Inivèsite a ak Los Andes Inivèsite. (62)

Konpayi an Sid Ameriken Yo Vann an Detay, Grupo Exitó, pral fè pèman davans nan plis pase 60 milya dola pesos 867 ti ak mwayen founisè gwo sèlaj pwoblèm koule lajan kach ki te kreye pa pandemi COVID-19. (63)

Nan Brezil, Heineken mete tèt ansanm ak Unilever pou pwodwi ak delivre Cif santizer ak alkòl ki baze nan men santizer a 210 kominote nan São Paulo.(63)



AMERIK DI NÒ

Devlopman medikaman/ vaksen

Dat preparasyon an: Jen 2020



18 Me, Kanada te apwouve premye tès vaksen COVID-19 nan peyi a ki te devlope pa konpayi Chinwa CanSino Biologics. Nou espere jwenn plis kandida vaksen COVID-19 pou fè tès klinik O Kanada nan semèn kap vini yo. (64)

O Kanada, chèchè nan inivèsite Waterloo ap devlope yon vaksen ke yo ka bay nan nen pou pwoteje kont enfeksyon COVID-19. Objektif la se delivre vaksen an nan selil tisi ke yap cheche yo epi deklanche pwodiksyon an nan yon patikil viris ki tankou (VLP) ki pral pwovoke yon repons iminitè a. (65)

Yon lojisye entelijans atifisyèl (AI), BenevolentAI (yon startup Lond) idantifye yon medikaman kont atrit rimatoyid (baricitinib) pa Eli Lilly Pharmaceuticals ki ta ka redwi kèk nan efè ki pi grav nan viris la. Eli Lilly te anonse ke li tap travay ak Enstiti Nasyonal Etazini pou Alèji ak Maladi Enfektye yo sou yon paket esè klinik ak medikaman an sou pasyan COVID-19 ki te entène lopital yo. (66)

Inivèsite Otonòm nan Meksik (UNAM) ap travay sou yon vaksen COVID-19 ki chita sou rechèch anvan yo pou yo devlope yon vaksen pou deng ak viris Zika. (67)

24

Chanjman nan kek indistri pou ede lit kont COVID-19

Danone Meksik fè kado 800kg yogout chak semèn bay 4 prensipal lopital piblik ki konsakre nan COVID-19 la selman nan Meksik pandan 3 mwa. (68)

Next Generation Manufacturing Canada (NGen), òganizasyon ke Canada's Advanced Manufacturing Supercluster ap dirije, te anonse li investi plis pase \$ 21 milyon nan pwojè kap pwodwi O Kanada teknoloji kritik, ekipman, ak aparèy medikal pou ede nan batay kont COVID-19. Pwojè sa yo ki te apwouve tap travay jiska prezan nan devlopman ak pwodwi vantilatè ak pyès vantilatè, twous tès, kach nen, ak yon materyèl ki touye bakteri yo ak viris yo si yo touche ak yo. (69)

Kroger, yon chèn makèt Ameriken, achte 200,000 galon lèt nan men pwodiktè lèt ki te gen difikilte pou jwenn nouvo achtè pou achte pwodiksyon anplis ke yo te genyen yo (anpil nan yo te destine pou kantin lekòl yo anvan pandemi an te frape). Lèt la pral jwenn kounye a rezo bank manje Feeding America nan tout peyi a. (70)

Konpayi manje Gwatemalyen, Mahler, te delivre 200 laptops bay Ministè Edikasyon Gwatemalyen an, nan objektif pou fasilite travay pwofesè lekòl piblik yo pandan pandemi an. (71)

25

Pwoje teknolojik

Lopital Mon Sinayi nan New York se premye lopital Ameriken ki sèvi ak AI (entelijans atifisyèl) pou fè dyagnostik pasyan COVID-19 yo. Avèk anpil posibilite pou jwenn fo negatif, AI a ka bay doktè yo yon 'dezyèm opinyon' si jamè CT analiz yo te swa negatif (nan kòmansman enfeksyon an) oswa bay rezilta ki pa gen okenn rapò, sa ki ka rive. (72)

Boston Dynamics te ede Brigham ak Lopital fanm nan Boston lel te kreye yon wobo chen yo te rele Spot. Spot gen yon tablèt pou figi ki te pèmèt anplwaye lopital kontwolel a distans epi pale ak pasyan yo nan yon distans ki san danje. Enjenyè Boston Dynamics yo espere yon jou konsa yo va rive itilize yon kamera tèmik pou pran tanperati pasyan yo oswa atache yon limyè UV nan do li pou dezenfekte chanm lopital.(73)



26

Yon ekip rechèch, ki gen ladan syantis rechèch nan Brezil ak Vyetnam, nan Inivèsite nan Kanada te resevwa finansman nan men gouvènman federal la Kanadyen yo devlope yon pri ki ba, pòtab sistèm tès pou COVID-19. Tès pòtab la se gwosè yon Tostè ta kapab li 384 echantiyon pasyan nan yon fwa epi yo bay yon "kapasite vag" pou fè tès nan pi piti, plis kominote aleka. Dezyèm eleman an pral yon tès papye ki ta ka itilize nan èpòt oswa nan sant granmoun aje yo. Ti tankou yon kat kredi, papye a ta chanje koulè, vire klere koulè wouj violèt lè viris la se prezan nan yon echantiyon.(74)

Spiro Wave, "Bridge" yon vantilatè ki ede pasyan yo respire lè kondisyon yo pa pi kritik pase sa, lè ka yo pa nesite yon vantilatè estanda, te apwouve pa FDA epi yo te kòmanse vann li yon mwa apre New York City te reyalize li te yon mank kritik nan vantilatè. (75)

Pharmatech (US) devlope yon tès COVID-19 rapid ki ka detekte antikò viral yo nan san, serom oswa nan plasma. Tès la ka bay rezilta yo nan 10 minit epi pwofesyonèl laswenyaj yo ka fè apati de echantiyon san yo jwenn lè fin pike dèt moun lan lèl vin konsilte a. (76)



27

AUSTRALASIA

Dat preparasyon an: Jen 2020

Devlopman medikaman/ vaksen

Depi 29 me 2020, gen 317 medikaman nan Faz 0, 5 medikaman nan Faz I, 26 medikaman nan Faz II, ak 85 nan Faz III. Pa gen okenn medikaman ki te deplase sou Faz IV. (77)

Novavax, yon konpayi biyoteknoloji ameriken, te kòmanse enjekte yon vaksen tès coronavirus nan 131 volontè nan Ostrali avèk espwa pou yo bay yon vaksen fini ane sa a. Nou ta dwe konnen rezilta premye faz nan esè klinik ke yap fè Melbourne ak Brisbane nan mwa Jiyè. (78)

Inivèsite Queensland nan Ostrali te rapòte rezilta pozitif ki soti nan premye tès preklidik pou vaksen tès COVID-19 li an. Daprè done yo, vaksen tès li an te ogmante nivo antikò yo pou metrize viris la. Inivèsite Queensland ap travay tou avèk Viroclinics Xplore nan Lawoland pou akselere devlopman vaksen an. (79)



CHANJMAN NAN KEK INDISTRI POU EDE LIT KONT COVID-19

Gouvènman Fidji a te resevwa mask figi an 3 dimansyon ki te fèt nan peyi a pou ede travayè lasante nan Fidji yo kont pandemi COVID-19 la. Daprè yon pòst Facebook sou paj 'Ostrali nan Fidji', Wo Komisyonè ostralyen nan Fidji, ke yo rele John Feakes la, te prezan nan moman yo tap livre mask pou figi an 3D yo bay minis sante a Dr Ifereimi Waqainabete - Se premye fwa sa te rive Fidji. ak Pasifik la. (80)

Konpayi kap travay nan zafè eksplorasyon ak devlopman lò ke yo rele Newcrest Mining lan ap sipòte yon inisyativ pou achte ekipman pwoteksyon pèsònèl (PPE) pou distribiye bay travayè lasante nan peyi Papwazi Nouvèl Gine (PNG a). Li te investi AUD600,000 (\$ 392,303) nan yon inisyativ UNICEF kap bay ekipman pwoteksyon endividyèl bay travayè lasante nan peyi PNG. Exploratè lò a ap travay ak Depatman Ostralyen Afè Etranjè ak Komès, Bank Mondyal ak Gouvènman Japonè pou sipòte acha UNICEF yo. (81)

29



Royal Flying Doctor Service (yon Seksyon Queensland) te livre yon pakèt koli ki te enpò anpil gras a brasri Ostralyen yo rele Carlton & United Breweries (CUB). Yo te bay plis pase 1000 boutèy ki gen chak 500ml dezenfektan, pwodwi sa yo dwe distribye bay travayè RFDS ak baz aeromedikal nan tout Queensland. Don saa fè pati de yon inisyativ ke Carlton & United Breweries pou bay omwen 30,000 lit sanitizè men bay moun ki pi bezwen yo, sitou doktè ak enfimiyè kap batay kont COVID-19 la. (82)



Foodstuffs ki se yon Konpayi sipèmakèt nan peyi Nouvèlzeland, te pran yon angajman poul bay plis pase \$ 1 milyon dola pou ede Neyozelandè ki ap fè fas a moman difisil sa yo akòz COVID-19. Jiska jodi a Foodstuffs te pwomèt poul te soutni lapoula anplis de sa plis pase plis pase 30 òganizasyon ki prezan nan tout Nouvèlzeland pou yo ka kontinye ede moun ki nan bezwen yo. (83)



Pou pèmèt apranti yo ak stajyè yo amelyore kalifikasyon yo, konpayi ostralyen kap travay nan zafè min yo rele Rio Tinto a te angajel poul finanse fòmasyon apranti ki pap travay yo nan divès kalite endistri lel peye yon kou nan automatization pou yo. Sa ap pèmèt yo enskri jiska 200 apranti ke fòmasyon yo an te kanpe oswa anile akòz COVID-19 lan. (84)

30



Avans Teknolojik

Chèchè nan Otago University nan peyi Nouvelzeland prezante nou Sistèm 'Bonm Bio' tankou yon metòd pi bon mache pou tès COVID-19. Li retire ADN echantiyon yo apati de yon mab mayetik tou piti piti - epi yo itilize atravè lemond pandan ke lòt peyi yo ap fè mache prese ak tès yo. 'Bonm Bio' se yon platfòm kominotè - epi li koute apeprè 1% nan pri tès tradisyonèl yo. Li te itilize an Angletè, Etazini, ak Kolonbi kote kit yo ra e gouvènman yo ap ogmante tès kominote yo. (85)

Konsiltan nan zafè otomatizasyon ke yo rele Blackbook.ai fè yon èd vityèl pou ede pwofesyonèl lasante nan peyi Lostrali jere yon pakèt kantite rechèch kontak. Wobo a trete tout enfòmasyon yo epi li jwenn nimewo kontak moun yo pou enfimyè yo rele yo epi poze yo kesyon ki enpòtan, kesyon yo tou anrejistre. (86)

konpayi kap fè rechèch ak dyagnostik nan peyi Nouvelzeland ke yo rele Dnature te kòmanse devlope yon tès dyagnostik ADN sou plas, ki ka bay rezilta nan 15 minit epi detekte diferans ki genyen ant grip ak COVID-19. Kounye a li pran jiska 48 èdtan pouw jwenn rezilta tès COVID-19 nan anpil kote nan tout Nouvelzeland, e tès la dwe fèt nan yon laboratwa ki fèt pou sa. (87)

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