

CONCORSO PUBBLICO, PER ESAMI, A N. 1 POSTO DI CATEGORIA D, POSIZIONE ECONOMICA D1, AREA TECNICA, TECNICO-SCIENTIFICA ED ELABORAZIONE DATI, PER LE ESIGENZE DEL DIPARTIMENTO DI SCIENZE MEDICHE TRASLAZIONALI DELL'UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II (COD. RIF. 2235), INDETTO CON DECRETO DEL DIRETTORE GENERALE N. 1029 DEL 25.10.2022.

TRACCE NON ESTRATTE ALLA PROVA ORALE DEL 07.02.2023

PROVA 1

Primo quesito – Conoscenza degli argomenti previsti per la prova scritta e declinati nell'art. 6 del bando DG/2022/1029 del 25/10/2022 (Albo Ufficiale N.R. 8533/2022)

Il/La candidato/a descriva la tecnica della PCR e le sue applicazioni nella diagnostica di laboratorio.

Secondo quesito – Conoscenza delle apparecchiature e delle applicazioni informatiche

Il/La candidato/a descriva i principali utilizzi del software Excel della suite Microsoft Office.

Terzo quesito – Conoscenza della lingua inglese

Il/La candidato/a legga il seguente testo in inglese e poi traduca in italiano.

Since the first cases of COVID-19 were documented in Wuhan, China in 2019, the world has witnessed a devastating global pandemic, with more than 238 million cases, nearly 5 million fatalities and the daily number of people infected increasing rapidly. Here we describe the currently available data on the emergence of the SARS-CoV-2 virus, the causative agent of COVID-19, outline the early viral spread in Wuhan and its transmission patterns in China and across the rest of the world, and highlight how genomic surveillance, together with other data such as those on human mobility, has helped to trace the spread and genetic variation of the virus and has also comprised a key element for the control of the pandemic. We pay particular attention to characterizing and describing the international spread of the major variants of concern of SARS-CoV-2 that were first identified in late 2020 and demonstrate that virus evolution has entered a new phase.

<https://doi.org/10.1038/s41586-021-04188-6>

PROVA 5

Primo quesito – Conoscenza degli argomenti previsti per la prova scritta e declinati nell'art. 6 del bando DG/2022/1029 del 25/10/2022 (Albo Ufficiale N.R. 8533/2022)

Il/La candidato/a descriva le principali tecniche di Next Generation Sequencing e le loro applicazioni nella diagnostica di laboratorio.

Secondo quesito – Conoscenza delle apparecchiature e delle applicazioni informatiche

Il/La candidato/a descriva i principali utilizzi del software PowerPoint della suite Microsoft Office.

Terzo quesito – Conoscenza della lingua inglese

Il/La candidato/a legga il seguente testo in inglese e poi traduca in italiano.

There are several hypotheses regarding the origin and emergence of SARS-CoV-2 that have been thoroughly clarified in the WHO–China joint report. These contradictory hypotheses have raised standing debates, with the central point being two competing hypotheses: zoonotic emergence (including direct zoonotic introduction or introduction through an intermediate host) and a laboratory escape. The discovery of more and more SARS-CoV-2-related coronaviruses from wild animals provides evidence for a zoonotic origin of SARS-CoV-2. Notably, all of the SARS-CoV-2-related coronaviruses mentioned above are evidently not the direct ancestor of SARS-CoV-2. Any such direct ancestral virus—which has yet to be identified—would be expected to exhibit more than 99% similarity to SARS-CoV-2 across the genome as a whole. However, the discovery of these viruses again highlights that more-closely related viruses in bats and other wildlife species will be identified with enhanced sampling in a broader geographical region, including most parts of Southeast Asia, which has a high diversity of *Rhinolophus* species.

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PROVA 7

Primo quesito – Conoscenza degli argomenti previsti per la prova scritta e declinati nell'art. 6 del bando DG/2022/1029 del 25/10/2022 (Albo Ufficiale N.R. 8533/2022)

Il/La candidato/a descriva le procedure da effettuare per la corretta preservazione dei campioni di sangue intero.

Secondo quesito – Conoscenza delle apparecchiature e delle applicazioni informatiche

Il/La candidato/a descriva le modalità di importazione di un'immagine in una presentazione del software PowerPoint della suite Microsoft Office.

Terzo quesito – Conoscenza della lingua inglese

Il/La candidato/a legga il seguente testo in inglese e poi traduca in italiano.

Mutations are a natural part of the replication cycle of any RNA virus, leading to the diversification of viral lineages when coupled with inter-host transmission. This is also true for SARS-CoV-2, even though coronaviruses contain certain proofreading mechanisms that enhance genome fidelity. Genomic surveillance has generated an unprecedented amount of sequencing data for a single virus, and has proven an essential tool for tracing the spread of SARS-CoV-2 at various scales, from individual transmission events to the intercontinental spread of the virus. In addition, it has had a central role in monitoring the evolution of SARS-CoV-2 and identifying new variants with enhanced transmissibility and/or pathogenicity, decreased susceptibility to therapeutic agents and that are capable of evading natural or vaccine-induced immunity. Genomic surveillance has demonstrated the effectiveness of tracking local transmission events, recognizing importation sources and superspreading events in Australia, for informing public-health decision-making in the Netherlands, and for adopting social-distancing measures to reduce viral spread in Israel.

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PROVA 13

Primo quesito – Conoscenza degli argomenti previsti per la prova scritta e declinati nell'art. 6 del bando DG/2022/1029 del 25/10/2022 (Albo Ufficiale N.R. 8533/2022)

Il/La candidato/a descriva la tecnica del Western Blot e la sua applicazione per lo studio delle malattie umane.

Secondo quesito – Conoscenza delle apparecchiature e delle applicazioni informatiche

Il/La candidato/a illustri l'utilizzo della modalità "revisione" all'interno del software Word della suite Microsoft Office.

Terzo quesito – Conoscenza della lingua inglese

Il/La candidato/a legga il seguente testo in inglese e poi traduca in italiano.

From China to other regions. The global spread of SARS-CoV-2 shows how rapidly geographically disparate countries can be reached by an emerging pathogen. Two distinct transmission phases of international exportations of SARS-CoV-2 were identified at the early stage of the pandemic. In the first phase, many international airline passengers left Wuhan for hundreds of destinations across the world during the two weeks before the Wuhan lockdown. Cities across Asia, Europe and North America were the main destinations and reported several imported cases during the early stage of the COVID-19 outbreak, and the WHO declared a Public Health Emergency of International Concern on 30 January 2020. Containment of the outbreak in China and, in particular, the implementation of travel restrictions since late January 2020 considerably reduced the further spread of SARS-CoV-2 outside China.

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Il Presidente della Commissione

F.to Prof. F Beguinot