



The Pio Times

il giornalino del Pio XI



la scuola di
don Bosco a Roma

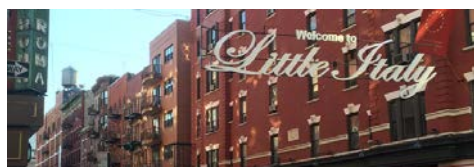
Istituto Salesiano Pio XI
Scuola secondaria di primo grado - Liceo Classico e Scientifico



Cosa puoi trovare:

Cultura	PAG. 3
Attualità	PAG. 12
Rubriche	PAG. 18
Interviste	PAG. 23
Vita di scuola	PAG. 25

Seguici su:



LITTLE ITALY

Situata a nord di Chinatown, **Little Italy** ha rappresentato per decenni il quartiere di Manhattan nel quale migliaia di **famiglie italiane immigrate** si stabilirono dopo l'abbandono della loro amata penisola d'origine.

continua a pag.22



XENOVERSO

"**Xenoverso**", l'inaspettata anteprima dell'album di Rancore uscita il 3 marzo a distanza di quattro anni dal suo ultimo disco, contiene tre brani inediti intitolati: "**Lontano 2036**", "**X Agosto 2048**" e "**Arakno 2100**".

continua a pag.20



INTERVISTE: EPISODIO N.7

In questo episodio verranno intervistati alcuni **studenti**, scopriremo chi si nasconde **dietro le nostre interviste** e alcune curiosità su uno dei **personaggi più importanti** della nostra Opera Salesiana.

continua a pag.28



"GIUDITTA" DI GUSTAV KLIMT

In questo quadro, conservato a **Vienna**, è raffigurata Giuditta, la celebre eroina ebrea di cui si parla anche nella Bibbia, con in mano la testa del nemico **Oloferne**.

continua a pag.10



LA TUTELA DELLA BIODIVERSITÀ ENTRA NELLA COSTITUZIONE

La tutela dell'ambiente e della biodiversità entra tra i **principi fondamentali della Costituzione**. L'8 Febbraio, con una votazione favorevole ad amplissima maggioranza alla Camera, la proposta di legge che modifica l'**articolo 9** è stata approvata.

continua a pag.17



"TICK, TICK... BOOM"

"**Tick, Tick... Boom!**" è un musical cinematografico del 2021 diretto da **Lin-Manuel Miranda**, oramai noto per le sue peculiari doti scritte in ambito musicale ("**Hamilton**" e "**In the heights**", ma anche le canzoni per i film Disney "**Oceania**" ed "**Encanto**").

continua a pag.19

MEDICINE IS THE SCIENCE OF UNCERTAINTY AND THE ART OF PROBABILITY

DI SIMONA STEFANELLI E RITA BUONAIUTO

The training course for the health professions PCTO wants to **train** students on what concerns our health system and it wants to help us **understand** what we would like to do when we grow up, as a matter of fact PCTO means **Path for transversal skills and orientation**.

Artemisia has been working alongside with our school, "Istituto Salesiano Pio XI", for the past 6 years now.

Artemisia Lab was born in Rome in 1970 as an affiliated private medicine company. The company has always invested in technologically advanced diagnostic tools and equipment. In 1970 Artemisia was **among** the **first** companies to carry out **hormone assays** with the **radioimmuno-metric** method. In the 1980s and 1990s it was among the first centers to offer molecular biology diagnostic tests in the field of infections and genetic diseases; at the time an **absolute novelty**. Throughout its history, Artemisia has always sought the optimal mix between business goals and medical-scientific research. Furthermore, it has carried out charitable activities through the Artemisia Onlus association.

In 2011 Artemisia was restructured and the **Artemisia Lab Network** of highly specialized Diagnostic Centers **was born**, which, in the brand, recall the traditional quality and care of the user.

The **principles** on which the commitment of Artemisia Lab is based are:

Equality: ensure equality of treatment in the offer of services provided to all citizens without distinction of age, sex, race, language, nationality, religion, political opinions, physical conditions, mental conditions, economic conditions, personality structure;

Impartiality: to ensure that all citizens behave equally both on the part of the services and on the part of the staff working in the facility;

Continuity: ensure qualitative-quantitative continuity and regularity of services, therapies and assistance: if there are irregularities or discontinuities in the service;

Right of choice: every citizen has the right to choose, in the context of similar services, the structure to which to contact. At the same time, the health and administrative staff provide the patient with information, in a complete, clear and understandable way, on the state of health, on possible care paths and on their effectiveness;

Participation: guaranteeing citizens the opportunity to collaborate with observations and suggestions for the correct provision of the service and the improvement of the service provided by the structure and, giving priority to information, the weighted choice of treatments and therapeutic methods;

Efficiency and effectiveness: to pursue the continuous improvement of the quality and efficiency of services by adopting every suitable measure to achieve these objectives, keeping the patient and her needs at the center.

Doctor **Elena Pollari**, **director** of Artemisia Onlus, explained to us public and private health in correlation with the national health system.

She began by explaining the concept of **supplementary health** by saying that the latter represents a form of protection that allows the integration or replacement of public health with regard to health services and medical-health services, through the intervention of supplementary health funds.

We then moved on to the **historical** part. The doctor told us that the **national health system** has been alive **since 1980** and that previously it was called the Mutualistic System in which every worker had the opportunity to enroll in a health insurance system. Once this was done, he and his family were guaranteed treatment, which meant that the right to health was reserved for workers. Subsequently, the doctor listed the **three fundamental principles** of the national health system: **Equity, Equality and Universality**.

Then the doctor explained the various **organs** of the **NHS**.

The **first** is the **State** that must ensure the LEA (the essential levels of existence), a document where it is written what the State and the NHS guarantee to citizens.

The **second** body is the **Regions** which must regulate health services in their region, that is, they have their own regional autonomy.

The **Regions finance** the **ASL** (local health company) that provides the service.

Other bodies are the Ministry of Health, the Higher Council of Health, the Higher Institute of Health and AIFA (Italian drug agency).

At an **economic level**, the doctor explained to us that the **resources** for the NHS come from our **Tickets** but also from the regions with special status (Valle d'Aosta, Friuli-Venezia Giulia, Trentino, Sicily and Sardinia).

These regions have autonomy in health management so the economic resources also come from them.

There are scientific **hospitalization institutes**, the **IRCCS** (for example the "Spallanzani").

Then there are the private structures that can be accredited or affiliated, both must have the recognition of public bodies. Many times they cooperate with the public body and offer any types of service.

Doctor **Carla Leandro**, **surgeon** and **psychoneuroimmunologist**, talked about viruses and virions. In the Earth's atmosphere, there are $10^{31} - 10^{32}$ viruses, so every living organism is constantly interacting with viruses. They are obligate intracellular parasites and to live and reproduce they need host cells and induce them to change their metabolism. They cause effects of various valence for the infected cells, for the whole organism, and for the environment. **Viral cell infection causes significant alterations** and modifications in various host metabolic pathways such as photosynthesis, glycolysis, fatty acid metabolism and nucleotide biosynthesis.

The new metabolism is determined by the metabolic characteristics of the host, the type of viral genes and dynamic environmental factors (nutrients, light, etc.).

The **metabolism** of the **infected cell** influences the viral characteristics and the **life cycle** of the host; moreover, it acts on the properties of the surrounding environment.

Virus, host and environment influence each other. **Virobiota** has a fundamental function for the adaptive capacity and evolution of bacteria and higher organisms.

Multicellular organisms can no longer be considered individuals according to the classic definition of the term, but every natural animal and plant is a **holobiont** (host + symbionts).

Bacteria viruses symbiont to anatomy, physiology, development, innate and adaptive immunity, behavior and finally also to genetic variation, to the origin and evolution of species.

Three scenarios for the origin of viruses try to **explain** the achievement of partial **replicative autonomy** and **parasitic genetic elements**: descent from primordial pre-cellular genetic elements, reductive evolution from cellular ancestors and gene escape from cellular hosts.

Viruses that infect cells of the three life domains, Archaea, Bacteria and Eukarya, are homologous features, suggesting that viruses appeared early in the evolution of life.

Most evolutionists agree that our current **RNA / DNA / protein world** originated from a simple world in which **RNA** played both the role of **catalyst** and **genetic material**.

4-10% of vertebrate DNA consists of retroviral residues, plus a small number of fragments of other viruses. The human genome contains at least **31** distinct **groups** of **ERVs** (Endogenous Retroviruses). Since ERVs can cause disease in various ways, we repress their transcription, especially in embryonic stem cells.

Virus reproduction cycle:

- an **intracellular phase**: the virus reprograms the infected cell to produce viral particles or virions (viral particle that can be purified and visualized). The nucleus of a virion comprises the virus's nucleic acid (DNA or RNA) enclosed within a protein shell called a capsid;
- an **extracellular phase**: the virions escape the infected cells and persist in the external environment (similar to plant seeds);

Virions are metabolically inert infectious particles that do not meet any of the criteria we can use to define "life" or living organisms. But how can we define "life"? The biological definitions are: A living **organism** is "a **set** of **integrated organs** (systems / structure molecular) that produce individuals that evolve through natural selection"

Life can be defined as a chemical-physical self-maintenance system, **far from equilibrium**, capable of processing, transforming and accumulating.

Mutation is a primary source of genetic variation, that is, of the raw material on which natural selection operates. The **greater** the number of **mutations**, the **greater** the **likelihood** that some will **prove beneficial** (and at the same time the greater the chance of lethal ones, which places an upper limit on the sustainable rate of mutations).

We then talked about the **Eigen Paradox**... what is it about? **RNA** viruses **evolve** rapidly inside cells and infect just as quickly to avoid becoming extinct due to their frequent mutations.

An **epidemic never ends** because the virus has become harmless over time. The resolution depends on the hygienic and medical measures adopted and on the particular conditions of the infected population, which can be evaluated with epidemiological parameters.

We then talked **specifically** about the **SARS-COV-2 life cycle**.

SARS-CoV-2 has four structural proteins: the spike protein (S), the envelope protein (E), the membrane protein (M) and the nucleocapsid protein (N).

Protein S binds to the human angiotensin converting enzyme 2 (ACE2) receptor.

This bond leads to fusion between cell and viral membranes for virus entry into cells.

The positive sense single-chain viral RNA is released into the cytoplasm and can be readily translated into proteins.

Viral RNA is used for the synthesis of complementary negative-sense RNA strands which, in turn, will be used for the production of new copies of the positive-sense RNA to be incorporated into virions in production.

The synthesis of structural proteins and RNA strands is followed by the assembly and release of viral particles.

So **what is health**? "Health is a **state** of complete **physical, mental** and **social well-being** and not simply the absence of disease and infirmity" Dr. Leandro subsequently added: "Thanks to a good level of health, the individual and the group must be in able to identify and develop their aspirations, satisfy their needs, modify the environment and adapt to it".

Doctor **Antonio Di Mauro, nutritionist biologist**, explained to us the health profession today and the academic path to enter to the Faculty of Medicine. He explained to us that it takes six years of the course to enter the medical school.

Then you have to do the specialization, there are three areas: the medical area, the surgical area and the clinical services area.

The three-year diploma of training in general medicine allows you to become a general practitioner, family doctor.

The doctor told us that **general practitioners** are decreasing more and more but according to him they are essential for a direct relationship with the patient.

He also told us that there is an **abandonment** of **public** places, often in **favor** of **private** structures and that the most requested categories are pediatrician, internal medicine and surgery.

Then the doctor explained to us the **concept** of **hyperactivation** (anxiety, impulsivity) and hypoactivation (cold, detached).

Then he explained the **4 steps** to **identify stress** symptoms: pay attention to symptoms identify the symptoms and emotions we feel stress level identify the cause or causes.

The doctor wanted to clarify that there is no person without stress and listed 4 categories of neurotransmitters (Dopamine, Oxytocin, Serotonin and Endorphin).

Finally, the doctor explained the **Triangle of health: physical, social and mental**.

Doctor **Gianluca Bruti**, **specialist in neurology**, PhD in neuroscience and PhD in maxillofacial surgery for this project dealt with drug addiction, the negative effects and damage to health from the abuse of alcohol, cigarettes and drugs.

The European Monitoring Center for Drugs and Drug Addiction in 2018 established that the consumption of drugs and especially cannabis among young people in Europe is **increasingly** on the **rise**.

The polydrug use of substances of abuse with methods of use ranging from experimental to habitual up to leading to real forms of addiction, represents an increasingly critical social emergency. Among the illicit ones, the **prevalence** of cannabis use is **about five substances** to that of other substances.

In the **analysis** of cannabis among young people, it is estimated that in the European Union between the ages of 15 and 64, **87.6 million** adults have tried cannabis in their lifetime, of which about 17.2 million are young adults (15-34 years) with 9.8 million subjects aged 15 to 24 who reported having used cannabis in the last year.

Even in **Italy**, cannabis remains the **most common** illicit **substance** of abuse in the general population with a trend of use that is increasingly on the rise and which mainly affects adolescents and adults. In fact, it is estimated that in the age group between 15 and 34 years, 20.7% of the population made use of it during the previous year.

The most **affected age group** is between **15-24** years, with a prevalence of males over females (25.8% and 15.5% respectively).

The **polydrug** use of substances of abuse with methods of use ranging from experimental to habitual up to leading to real forms of addiction, represents an increasingly critical social emergency. In fact, it is hypothesized that a **deficit** of the cca determined in the adolescent phase is **responsible** for the chronicization of the disorder of abuse from cannabis (DDC).

Furthermore, the alteration of the connections between the cca and the COF always determined by the abuse of cannabis among young people, in the adolescent phase would be at the basis of the relapses that can occur at the base as well as these boys after the cessation therapy of the "**amotivational syndrome**" often observed in these patients.

Other contents in the memory of the irreversible cognitive term. Cannabis use is associated with a wide range of acute and chronic psychiatric disorders such as anxiety, depression, and an increased risk of psychotic disorders such as schizophrenia.

In conclusion, it is necessary to invest to delay the start of cannabis use among young people, beyond the period of greatest sensitivity for the brain (i.e. at 25 years of age). More than ever, it is urgent to **encourage** prevention through **information** and **scientific dissemination** and screening of the adolescent population in order to intervene early on habitual cannabis users and especially in those who are in the most sensitive age group.

What have we learned? Being two female students intrigued by medicine, thanks to this path for transversal skills and orientation?

By participating in this course we have learned that it is possible to develop skills including divergent thinking and an **approach** to **multidisciplinarity**, useful in order to activate a reflection on the possible path beyond school. Through this discussion and work activity we have understood how fundamental it is to focus on one's physical and emotional well-being.

A **sentence** that Doctor Elena Pollari pronounced during the first meeting remained impressed: "**Study, research and curiosity** are the **most important resources** of the person in the **development** of **civilization**. Satisfaction is improving the life of each and everyone."

This path, in addition to having taught us cultural concepts that we did not know before, has made us understand that future life choices will owe the good to us and to those around us.

It doesn't matter if we are doctors, beauticians or lawyers, the **important** thing is that **we will be happy**.



REPORT ABOUT DRUG AND ITS DAMAGES TO HEALTH

DI ELISABETTA CASPARIELLO E MATTEO GRANDI

On **april 22**, at our school Pio XI Institute, we had the opportunity to participate in a very interesting meeting organized by **Artemisia Onlus**. It was about addictions and low resilience that is the human ability of adapting to adversity, trauma, strong events, significant sources of stress or addictions to drugs and alcohol. So if you are very resilient you are less addicted. The neurologist **Gianluca Bruti** explained us the damages and the effects of narcotic substances on the brain, in particular on the **teenagers**. We learned that the brain has three membrane layers that cover and protect it and they are the dura mater, arachnoid mater and pia mater. They provide a support system for blood vessels, nerves, lymphatics and the cerebrospinal fluid that surrounds our central nervous system. It includes the **amygdala**, the **hypothalamus**, and the **hippocampus**. In addition there is the **lambic sistem** which is a brain area located between the brain stem and the two cerebral hemispheres that govern emotion and memory. During teen ages this part and the frontal cerebral cortex aren't completely formed so guys can't totally control instincts and inhibitory impulses. The development of those areas takes place from ten to twenty-five years but for girls it's advanced by six months. As they mature there is also a rapid increment in dopamine therefore pleasure increases and also the urge to do new experiences that however can carry risks like the use of drugs. An adult instead has a better control of behavior and emotions which allow him to control all other functions of the body. What is an addiction? It is a **chronic disorder**, characterized by an uninterrupted drug search and it causes brain disorder with irreversible damages. There are multiple factors that can contribute to drug addiction and they include biological conditions, genetic, environment, educational opportunities, beliefs and attitudes. The use of narcotic substances during pregnancy can lead to genetic and epigenetic problems and when the infant becomes an adult he could have heart disease and develop cancer. Also the possibility to have a low resilience, that is characterized by an altered neuro circuit in the early stages of development, can predispose the person to addictions. **Childhood stress** can lead to various pathologies and therefore reduce the resilience of the child that can entails chronic brain disorders that can last longer after guys stop taking drugs. There are some narcotic substances like cocaine that attaches to the dopamine transporter and blocks the normal recycling process, resulting in a buildup of dopamine in the synapse, which contributes to the pleasurable effects of the substance. In addiction, even after one month of abstention from cocaine, the receptors to feel pleasure won't still be recovered. In **Italy** people mainly between 15 and 24 years use drugs, which makes it the second country with the most addicts in that age range in Europe, the most widespread drug is cocaine that is about 43% than there is Cannabis 28% and Eroine 16%. These narcotic substances aren't the only responsible to producing brain changes but also nicotine is unhealthy in particular for teenager, because their brain is still developing and it can cause its inflammation. There are long-term effects for people that started using nicotine since they were young, there is an over-excitement and the pyramidal neurons in the cerebral cortex can reduce concentration, cognitive functions, attention or memory. Alcohol is also dangerous because it affects the hippocampus that is a complex brain structure deep embedded into the temporal lobe and it has a major role in learning and memory. The excessive use of alcohol leads to irascibility, anguish, paranoia and anxiety. In order to prevent the use of drugs or cigarettes, it would be necessary to start from young age giving the child a lovable, stress-free childhood with parents affection. We really want to thank Doctor Gianluca Bruti for teaching us about such **an important topic** and we hope to participate soon to some more meetings about the huge world of medicine.

VITA DI SCUOLA

LANTERNA DI DIONISO

laboratorio teatrale



PIO'S ACADEMY

laboratorio musicale

GRUPPI APOSTOLICI

cammini di maturazione
umana e spirituale



PROGETTO MISSIONARIO

progetto di solidarietà

LA LANTERNA DI DIONISO

Laboratorio Teatrale

Il laboratorio teatrale “**La Lanterna di Dioniso**” è ormai una decennale realtà dell’Istituto Salesiano Pio XI di Roma. Nasce nell’ A.S. 2011/2012 dalla più totale sinergia di professori, attori e registi professionisti. Da quel momento svolge con continuità attività laboratoriale per gli studenti delle **Medie** (dal 7 ottobre 2021) e per i ragazzi del **Liceo Classico e Scientifico** (dall'8 ottobre 2021).

*Beh!!! Bando alle ciance!!!
Basta con la teoria, è ora di passare alla pratica.
Sì, dico a te, proprio a te che leggi!*

TI ASPETTIAMO AL LAB PER UNA NUOVA AVVENTURA
TEATRALE DI GIOCO, IMPEGNO E DIVERTIMENTO
ALLO STATO PURO.

LANTERNADIDIONISO@PIOUNDICESIMO.ORG





PIO'S CUP

Torneo Di Calcio



ASPIRANTI CAPOCANNONIERI:

1. **Andrea Pelullo** (28 goal)
2. **Simone Vizzoca** (17 goal)
3. **Filippo Civitelli** (16 goal)



PIO'S ACADEMY

Laboratorio Musicale

La **Pio's Academy** è una realtà del Pio XI, nata con l'idea di coltivare la **passione per la musica** e tutto ciò che gira intorno, un gruppo per crescere insieme lavorando ad un laboratorio completo di **canto, musica, scrittura creativa, scenografia**. Le prove del gruppo sono aperte alla presenza e alla collaborazione degli studenti ed essi potranno semplicemente assistere o anche partecipare attivamente alla crescita della band; costituire un necessario uditorio in itinere per proporre giudizi critici e correzioni nella regolazione di mixer, amplificatori ed effetti e dare una mano alla manutenzione della strumentazione e della sala-prove.

*Rinnoviamo i nostri più calorosi auguri con un video realizzato in collaborazione con la scuola media, il **flashmob di Natale 2020**, disponibile in rete sul canale YouTube del PioXI.*



VI ASPETTIAMO IN SALA PROVE!

GIANLUCACAETANI@PIOUNDICESIMO.ORG



SAVIO CLUB IL GRIGIO CLUB BOSCO CLUB

Gruppi Apostolici

Il Savio club (per le medie), Il Grigio club (per il biennio) e il Bosco club (per il triennio) sono gruppi per ragazzi e ragazze che vogliono crescere in un cammino di maturazione umana e spirituale, scoprendo la bellezza del **camminare fianco a fianco di don Bosco** fino a diventare i suoi primi collaboratori! È un cammino fatto in una comunità, per scoprire passo dopo passo la bellezza del servizio nello stile dell'animazione salesiana!

Animazione, formazione, gioco, allegria, impegno, servizio, sono gli ingredienti di questa esperienza tutta salesiana!

Ci incontriamo ogni sabato, subito dopo la fine delle lezioni con i ragazzi del Liceo e ogni venerdì pomeriggio con i ragazzi delle medie.

TI ASPETTIAMO AL LAB PER UNA NUOVA AVVENTURA TEATRALE
DI GIOCO, IMPEGNO E DIVERTIMENTO ALLO STATO PURO.

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PROGETTO MISSIONARIO

Anche quest'anno, come il precedente, c'è la possibilità di sostenere il progetto missionario! Durante l'a.s.2020-21 i fondi raccolti per le borse di studio, per un totale di 2.930€, sono stati devoluti all'**Opera salesiana di Alessandria...** tutto ciò grazie a voi! Quest'anno abbiamo l'obiettivo di donare altre 10 borse di studio del valore di 365,00€ l'una all'**Opera salesiana del Cairo, Rod El-Farag**, dove si trova il nostro caro Don Luca.



"Se vuoi farti buono, pratica queste tre cose e tutto andrà bene: allegria, studio, pietà. È questo il grande programma, il quale praticando, tu potrai vivere felice, e fare molto bene all'anima tua."

Don Bosco



Per chi vuole contribuire può contattare Don Marco Frecentese all'indirizzo:
marcofrecentese@pioundicesimo.org





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IL GIORNALINO
DEL PIO XI

THE PIO TIMES

ALLA PROSSIMA EDIZIONE!

