Milan is a fitting choice for the largest respiratory meeting in the world as it has for a long time been an important scientific centre in Europe.

In 2016 Milan was the most visited tourist destination in Italy

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Ers Congress in the city of Leonardo da Vinci

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### WINDOWS ONITALY

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#### **Fondazione Prada**

In December 2016, the Prada Foundation, whose beautiful offices were designed by the "archi-star" Rem Koolhaas and opened in Milan in May 2015, opened a new exhibition center in Galleria Vittorio Emanuele, in the heart of Milan: its name is "Osservatorio" and is focused mainly on photography. Today, the Prada Foundation in Milan is undoubtedly one of the main cultural centers, attracting contemporary art lovers from around the world.

#### **Hangar Bicocca**

Where once there was the Pirelli pneumatic factory now there is one of the most fascinating exhibition areas of Milan. For more than ten years the Pirelli HangarBicocca has been presenting several free top-level temporary exhibitions thanks to its large spaces that can host even monumental works. An example of them is Anselm Kiefer's permanent installation "The Seven Heavenly Palaces".

#### 2

# Milan, the industrious "capital"





Porta Nuova, area Garibaldi

La Darsena





Triennale

**Hangar Bicocca** 

La Scala

Milano Expo

Fondazione Feltrinelli

n 2016, Milan was the most visited tourist destination in Italy, with 7,6 million visitors and a turnover of 4,1 billion Euros.

In the collective imagination of Italian people, it sounds a little bit strange, since Milan is the hard-working, productive city full of hustle and bustle and factories. The factories, however, are not there anymore, and its hustle and bustle has taken a different direction.

(declared by Napoleon).



Districts like Bicocca - a former industrial area that once was the headquarters of big companies,

dukedom) and even the capital of the Kingdom of Italy





including Pirelli - have been regenerated through an international architecture competition. Today, the Biccoca district hosts a university, the second opera house in the city, several research centers, leafy residential areas, as well as the Pirelli HangarBicocca exhibition center. Milan's hustle and bustle is still there, but it is now the sign of a vibrant city. Today, its people hurry not only to produce but also to go and visit exhibitions, museums, cultural centers, libraries, works of art, shows, concerts, festivals. They hang out in new neighborhoods, new restaurants. In the Navigli neighborhood, the river flows again. There are new

gardens and parks. The Scala opera house remains open all year round. In September, the MITO (Milan-Turin International Music Festival) fills the whole city with music (even during the Ers Congress). During the days of the "Salone del Mobile" furniture fair as well as the Fashion Week, you can breathe a cosmopolitan atmosphere and you have the impression of being in New York. "Milanesi" people are a wonderful mix of different cities, lifestyles, outfits, all of which are interesting, perfectly combined. Milan has managed to combine Italian elegance and

beauty with innovation.



Even Milan has its own green areas.

Parco Lambro, the biggest park of the city, is a well-liked destination for the Milanese. It is located in the eastern side of Milan, and was created in the 1940s along the lines of the typical landscape of the Lombard countryside. Inside, there are forage fields that keep up with the tradition of the "water-meadow"



cultivations (an ancient method of farming invented by Cistercian monks). In these farmlands five "cascine" (farmhouses) can be found, one of which has maintained its original peculiarities and functions. At Cascina San Gregorio Vecchio, around a large square courtyard, there are human settlements, stables, and barns.

## The green lungs 01



n the former Renaissance refectory of the monastery adjoining Santa Maria delle Grazie Sanctuary you can admire (if you book early) Leonardo da Vinci's masterpiece *The Last Supper*, which was included in the list of Unesco World Heritage Sites in 1980.

It is one of the most important preserved masterpieces of Italy, created from 1495 to 1498 in a wall of the dining hall where monks gathered to eat their daily meals. This mural painting aimed at reminding them that the religious community's life had to be an extension of Christ's and his apostles' one. It was commissioned by Ludovico Sforza, Duke of Milan, with the intention of embellishing the monastery, and the city itself, where he had given orders to be buried.

The painter's expert stroke deceives the eye of those who are looking at the painting, giving the impression that the room is deep and large. The technique used by the author (tempera on plaster) enabled him to repaint the images afterwards until they were perfect. Unfortunately, this technique condemned the work of art to deterioration.

Leonardo did not like the fresco technique, as it implies the need to spread colours rapidly before the plaster dries so that this can entrap them. Such rapid execution was incompatible with his modus operandi, which involved second thoughts, additions and small changes. For The Last Supper he decided to paint on the wall as he painted on canvas: after spreading a layer of almost rough plaster, mostly in the middle, and after spreading the basic lines of the composition with a sort of sinopia, he worked on the painting with a mixture of calcium and magnesium carbonate bound by a protein ligand. Before spreading the colours, the artist interposed a thin layer of white lead to set off the luminous effects. Afterwards he spread colours on the dried surface. They were composed by an oily tempera, which was probably created by emulsifying some fluidizing oils to the egg. This technique enabled him to add a peculiar richness to the painting, excellent see-through and light effects, and extreme care for details. But the dampness of the room, close to the kitchen of the monastery, helped to deteriorate the painting rapidly.

In order to preserve and restore it over the centuries, much restoration work was needed. The last one went on for twenty years. It was not until 1999 that the painting was restored to its former glory.





Detail of Christ before and after restoration

The fully fenced Parco Sempione is a Romantic English garden, which is very rich in arboreal and shrubby plants. There are also a lot of recreational and entertainment areas for grown-ups and children. On its edges some important historic buildings and Milanese institutions rise, such as the Sforza Castle



and its museums, Arena Gianni Brera, the Arch of Peace and the Triennale of Milan, as well as the Municipal Aquarium, designed in Art-Nouveau style, which hosted the Universal Exhibition in 1906, and the Branca Tower (or Park Tower, formerly Littoria Tower), designed by Giò Ponti in 1932.

The green lungs









Gae Aulenti Square

**Unicredit Tower** 

**Diamond Tower** 

ess is more" was the main rule of 20<sup>th</sup>-century Milanese architecture. Iron, glass, steel and concrete. No dominant façades nor motifs.

If you were in Milan some years ago, you can remember that between Corso Como and the Isola District, above Garibaldi railway station, there was a large neglected open space where the circuses sometimes made camp. Today, the area has been replaced by piazza Gae Aulenti, and its skyscrapers make Milan look like it has always wanted to be: a vertical city.

Opened on the 8th of December 2012, piazza Gae Aulenti has become the symbol of the architectural and cultural revival of Milan. Designed by César Pelli, its circular shape evokes the ancient Roman squares. It is 6 metres above street level and 100 metres across. In the middle, there is a fountain with no more than a few centimetres depth, constantly filled and emptied, where it is possible to bathe in summer; on one side, a building with some stairwells that lead to the floor below where a supermarket is located. All around, skyscrapers that finally give Milan a skyline fit for a real metropolis. Unicredit Tower towers among them. César Pelli designed it too. It is the tallest skyscraper of Italy and stands out for its futurist harmony and its spire, which is over 78 metres high.

There are also the Diamond Tower, with its 600,000 metres of managerial offices, and the Solaria residential towers, which you can enter by crossing a walkway above Melchiorre Gioia street.

#### The Vertical Forest

Of all the buildings rising near Gae Aulenti square, the Vertical Forest is the most famous one. It is a residential structure that has recently won the International Highrise Award, the prize for the most innovative skyscraper of the world: two tall towers, one white and the other black, designed by Stefano Boeri, whose balconies are wholly covered with trees, flowers and bushes. The Vertical Forest tries to meet the modern man's inner need of living in a natural ecosystem without renouncing the

comfort and a lifestyle that combines the history of the place with a contemporary vision. The two residential towers are respectively 111 and 76 metres high and host 900 trees (each of them is 3, 6 or 9 metres high), as well as more than 2,000 plants (a great variety of bushes and flowering plants), placed on the façades of both buildings in relation to their exposure to sunlight. The buildings, covered with terraced gardens, have been designed to meet the sustainability standards and to provide for the highest standards of living to the residents.



Milan is undoubtedly the capital of Italian and international fashion, the pulsing heart of the prêt-à-porter fashion. This part of the city is called 'quadrilatero della moda' ('fashion quadrilateral') because its boundaries are marked by four famous streets of shops and ateliers owned by the most important fashion labels - via Montenapoleone, via Alessandro Manzoni, via della Spiga and Corso Venezia. It hosts jeweller's shops, boutiques, as well as design and decor showrooms. During the haute couture parade taking place in Milan, many models usually walk along the streets of Quadrilateral - a symbol of style and beauty. The area is also a cultural gathering, thanks to the presence of several museums, including the Bagatti Valsecchi, one of the opulent house-museums in the city, and Palazzo Morando, which hosts a museum dedicated to costume, fashion and image.

### Via Montenapoleone and the Quadrilateral of fashion

#### Via Montenapoleone

Immediately evoking the charm of the designer labels, Via Montenapoleone is a calling card renowned at international level. In this street you will find haute couture clothes, jewels, watches and all the items representing excellence available on the market. But it can also surprise you with a posh "boutique of taste" where you can experience new holistic emotions.

#### Via Sant'Andrea

Via Sant'Andrea, crossing via Della Spiga and running parallel to via Del Gesù, is in the very heart of the celebrated "fashion quadrilateral". It hosts "Palazzo Morando - Costume Moda Immagine", a museum dedicated to the city of Milan, to the exhibition of clothes and costumes belonging to the Municipal Historic Collections, and where many shows and events are organized as well.

#### Via della Spiga

The atmosphere of this street, a pedestrian space of tranquillity, allows you to enjoy the shop windows. Via Della Spiga hosts the boutiques and ateliers of Dolce&Gabbana, Prada, Roberto Cavalli, Moschino, Giorgio Armani and many other brands on the international fashion scene. Its paved pavement and its luxurious buildings enrich it with a sophisticated flair.

#### Via del Gesù

It is one of the inner streets of the Quadrilateral. It hosts both the shops owned by famous international stylists and some unique workshops, which are the result of the great Italian manufacturing tradition. Not in all cities it is possible to find such uniqueness. Here you can visit the Bagatti house-museum, which hosts a great collection of modern art.



#### Via Manzoni

Starting from piazza Della Scala, Via Manzoni is one of the most sought-after destinations for shopping in the city thanks to a wide range of offers and its typical Milanese elegance. In this street running along the ancient Roman route that led to Porta Nuova, you can find neoclassicshaped buildings and the Poldi Pezzoli Museum, which keeps some important collections and artworks. The Skyscrapers

"High" buildings have always embodied modernity. The Italian culture, which in Milan has surely its spearhead - since the 1920s it is the melting pot of the most advanced national architectural projects -, has often showed some reluctance, if not just a clear aversion to this vertical contemporaneity. It was not until the years of the economic miracle



that most of the Milanese skyscrapers were built. Among those built in the 1950s and 1960s, the two most emblematic ones are the Pirelli Tower by Giò Ponti and Velasca Tower by Ernesto Nathan Rogers.



Velasca Tower

**Railing Houses** 

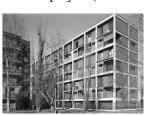
Harar Area

n Milan, houses are different from those in Rome, Turin, Florence or Venice. They show some features typical of the city.

For instance, the "railing houses" - closed courts crossed by balconies through which you can enter the flats - have become a symbol of the city.

Built in the early 20th century as council houses, these buildings not only represented an architectural model, but also a lifestyle and a family model as well, with children playing in the courts and young people falling in love along the balconies. Everything was shared in those buildings, from the chats of women to the noise produced by the first electrical appliances then appearing in Italy, which was slowly recovering from the war. Today, the railing houses are about 70,000; some of them were demolished to give space to new urban projects, some others were divided, and finally some others were united and restored, thus becoming luxurious houses in the most fashionable parts of the city.

Of all the examples of the Milanese architectural heritage there is also the *public housing*. Intended for the worse-off citizens and built by the State over the  $20^{th}$  century, these houses can be now considered as a 'popular museum' on a metropolitan scale. In the history of Milan's public housing, ideological issues (the idea of the human right to housing) have been interwoven with architectural ones. Among the most relevant projects, there is the Harar area (1951-1966),



characterised by terraced multi-storey buildings and scattered detached houses, respectively known as 'horizontal skyscrapers' and 'insulae'.



The blocks of flats are the favourite architectural model of the industrial middle class in Milan. If in Rome the middle-class housing has shaped the 'palazzina' model, on the other hand, in Milan, the traditional system of façade, rear and

courtyard was perpetuated at least until the Second World War, gradually adjusting both the façade and the common spaces (such as the entrance hall and the stairs) to the new style and taste.

### Food, between the cotoletta and the risotto alla milanese

Each Italian town has its own traditional and local food. In Milan, the problem is that its most famous dish, the 'cotoletta alla milanese', (a thick veal cutlet thick rigorously fried in butter), is claimed by the Viennese people as their own invention, under the name of Wiener Schientzel, which generates identity disputes. The Milanese cuisine, however, has many other dishes worthy to taste: the 'ossobuco con il risotto giallo' - braised veal or beef served with saffron rice - or the 'cassoeula', a cabbage soup with the leftover of pork (legs, pork rind, ribs, head), flavoured with tomato sauce.



# How to live Milan at night: The Navigli



istory, culture and tradition, but also entertainment and the desire to look ahead with optimism: while walking along the canals of Milan you can breathe a particular atmosphere, totally different from the rest of the city.

The term 'Navigli' refers to two canals belonging to the complex old fluvial system of Milan: the *Naviglio Grande* and the *Naviglio Pavese*, and in particular the stretch between the wet dock and the ring road. This part of Milan has become famous for its countless restaurants, bars, clubs and attractions. The progressive closure to car traffic, the opening of new commercial activities and the recent restoration of the ancient wet dock (opened on the occasion of Expo 2015), have literally brought the whole area to life. Now it is one of the coolest areas of the city, where both tourists and the Milanese like to hang out. Along the canals and on the streets, lots of people constantly bustle around, and many events are held in the whole area, bringing a European and metropolitan vibe.

One of first places to visit is the *wet dock*, which is full of history and linked to many important historical events of Milan. After being in a state of neglect for many years, the wet dock has been restored to its former glory, but with a different function: a municipal market has been created where the merchant ships had been berthed for centuries. Local culinary products, street food, cocktails and music are the underpinnings of this space. The market is open every

day late into the night. Besides it, the construction of a new pedestrian crossing and the requalification of the docks and banks have made the area an ideal place for walking, chatting and have an *aperitivo*. The wet dock is at the confluence between two marvels: the Naviglio Grande, which flows into Ticino River, and the Naviglio Pavese, which flows out of it to run towards Pavia. The first one is better known and more vibrant, with its venues open late into the night. On the Naviglio Pavese the scene slightly changes. As you walk away from the wet dock streamside, the bars become fewer and fewer and you can see the traditional boats moored in front of the restaurants. Here, where everything is quieter, you can feel the soul of the place. As the music grows faint, the sound of water is perceived more distinctively, with the stream occasionally crossed by some boats full of tourists. The sound grows gradually sharper to the closure of the Conchetta, one of the ingenious devices designed by Leonardo to level out the typical sudden level changes of the ship canals.







Naviglio Grande

The closure of the Conchetta

La Darsena

Naviglio Pavese 7

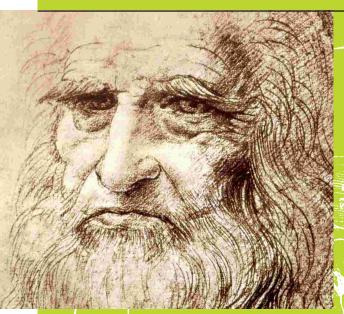
#### Key topics in respiratory medicine

Covering key topics in respiratory medicine from across the spectrum of disease areas including TB, lung cancer, pneumonia, cystic fibrosis, COPD, and asthma amongst others, the ERS International Congress 2017 programme is set to deliver the best advances in both science and education.

The programme aims at providing a complete set of knowledge about recently published topics. Educational skills workshops are designed to allow participants to gain practical skills in different disciplines. The workshops will revolve around workstations and use interactive demonstrations instead of presentations and lectures.

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# Ers in the city of Leonardo



It was during this period that it started to develop an advanced technological and scientific sector, and to found numerous academies and institutions».

In the wide spectrum of the Italian research, with some areas more advanced than others, Milan stands out as one of the most innovative cities and hosts some of the best scientific institutions. The level of the scientists who study here or choose this city to make a carrier is very high, and they are also included in the Thomson Reuters Institute's list of the most influent researchers worldwide.

Today, Milan and the wider Lombardy region plays host to over 800,000 firms, divided into 16 industrial districts, that count, among others, fashion, electronics and robotics industries. Crucial to these sectors is the value of research and innovation, and the region invests 1.4% of its GDP in research, making it one of the most innovative regions in Europe. Higher education is also a major sector of the regional economy, with 12 universities in Lombardy and 7 in Milan itself.

From 9 to 13 September, 2017, the ERS International Congress will be held in Milan. «Milan – the congress chair Francesco Blasi and the co-chair Stefano Centanni wrote – is a fitting choice for the largest respiratory meeting in the world as it has for a long time been an important scientific centre in Europe».

From 1452, Leonardo Da Vinci spent over 23 years in the city. Renowned for his contributions to human anatomy, it was during Da Vinci's time in Milan that he reached new heights of scientific discovery and deepened his understanding of human anatomy. As an early-industrialised city in Italy, Milan became one of the so-called 'laboratory cities' during the late-19th and early-20th centuries.



In Milan, not far from the basilica of Sant Ambrogio, the "Leonardo da Vinci" national museum of science and technology, one of the most important scientific museums in Europe, is located. It keeps a considerable collection of items witnessing the Italian industrial transformation.





N-Acetylcysteine protects human bronchi via inhibiting neurokinin A



NAC elicits anti-inflammatory and antioxidant effect but this protective mechanism wasn't investigated. The study shows that NAC high concentrations significantly inhibited the release of neurokinin A, inversely correlated with pro-oxidant factors levels (eg H2O2, NO) IL6 and positively correlated with GSH. NAC modulates the airway anti-inflammatory/antioxidant response inhibiting NKA release in COPD exacerbation model.

The Zambon Panels

Zambon is delighted to welcome friends and colleagues to our home city of Milan for the ERS International Congress 2017. These are the posters that will be displayed during the Congress.

**Antimicrobial and** antibiofilm activity of N-acetylcysteine against combination with Stenotrophomonas maltophilia (SM) and Burkholderia cepacia complex (BCC)

**Activity of** N-acetylcysteine in colistin against a collection of colistin resistant Acinetobacter baumannii (AB) clinical isolates.

Synergistic activity of colistin and N-acetylcysteine against Stenotrophomonas maltophilia (SM)

Long term treatment with high dose n-acetylcysteine. Effects of blood eosinophils and smoking history

NAC is mucolytic used for lower respiratory tract infections and cystic fibrosis management. We show for the first time in vitro antimicrobial/ antibiofilm NAC activity against SM and BCC clinical isolates grown in planktonic phase and biofilm. NAC via topical route exerts antimicrobial activity vs SM, BCC, shows efficacy to prevent biofilm formation.

AB is relevant respiratory pathogen causing severe pneumonia and found in cystic fibrosis. Colistin is last-line agent to treat largely drug resistant AB. Concerns are due to AB colistin resistance. The study confirmed synergism inhaled colistin/NAC, susceptibility restoration, NAC/colistin bactericidal effect and AB colistin resistance prevention.

SM infections treatment is complicated by multidrug resistance and increasing trend of resistance. In this study synergism NAC/ colistin was observed and NAC/colistin combination bactericidal effect was demonstrated. NAC via topical route shows in vitro synergy with colistin against SM. The combination is a valid option to treat difficultto-treat SM respiratory infections.

NAC 600 mg bid reduces exacerbations defined by Anthonisen criteria in Chinese moderate/severe COPD pts (PANTHEON study). Post-hoc analysis showed that this effect was also present in GOLD defined moderate/severe exacerbations, including ex and current smokers. Furthermore, analyses by eosinophil counts showed decreasing exacerbation pattern frequency with increasing eosinophil count in NAC pts.



