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THE TECNIPLAST GROUP WAS AWARDED WITH THE 2022 TOP INVESTORS IN CHINA AWARD

Tecniplast received the *Top Investors in China 2022* award, during the XVII edition of the *China Awards 2022*, organized by MF – Milano Finanza and the ICCF, Italy China Council Foundation

The award ceremony was held in Milan on December 14, at the Leonardo da Vinci Museum of Science and Technology; **Mr Leopoldo Zauner, Corporate Marketing & Communication Director, received the award on behalf of Tecniplast Group.**

As special guests of the evening, the 2006 world champion soccer player and, today, coach **Fabio Cannavaro**, the Formula One driver, Alfa Romeo stable, **Zhou Guanyu** and the Chinese volleyball champion **Zhu Ting**, who has recently arrived in Italy.

The award ceremony was followed by a Charity Dinner in favor of the Politecnico di Milano, to finance scholarships for students of the University engaged in activities aimed at strengthening relations between Italy and China.

The award was assigned by an authoritative jury composed by:

Mario Boselli, President of the Italy China Council Foundation; Paolo Panerai, Vice President and Chief Executive Officer of Class Editori; Marco Midolo, First Counsellor and Head of the Economic and Commercial Office of the Embassy of Italy at the P.R.C.; Paolo Bazzoni,



Leopoldo Zauner, Corporate Marketing & Communication Director, Tecniplast S.p.A and Ran Wei, General Manager, Tecniplast China



President of the Italian Chamber of Commerce in China; Pierluigi Strepavara, Vice President of the Italy China Council Foundation; Francesco Wu, Honorary President of UNIIC and Counsellor in Confcommercio Milano, Monza, Brianza and Lodi; Roberto Sommella, Director of MF/ Milano Finanza; Marco Barlassina, Director of Capital and Director of Assets.

Tecniplast has been directly present on the Chinese market since 2012, with Tecniplast CHINA, which has its headquarters in Shanghai and operational offices in Beijing and Guangzhou.

Tecniplast CHINA has a turnover of around 30 million euros, with about 60 employees including fifteen salesmen, who constantly cover the national research centers (Universities, Pharmaceutical and Biotech companies) and eighteen employees dedicated to the installation and maintenance of the products.

Tecniplast China is at the forefront of equal opportunities for men and women, with 50% of their employees being women.

READ NEWS



CHENYAN LU
MARKETING MANAGER
TECNIPLAST CHINA

THE FUTURE IN TECNIPLAST IS ALREADY HERE!

THE NEW BUILDING

Tecniplast, despite the current difficulties, shortage of raw materials, cost increases and, not least, the war, is continuing to invest with the aim of increasing product quality, reducing its carbon footprint in production and maximising the efficiency of each and every production process.

We started on December 9th 2022 to build a new construction behind the PL6 department in Buguggiate. Our objective is to extend the metal workshop production site and construct a new building for the Technical Office and Research & Development department. We plan to have the opening day of the building in June 2023.

The expansion of the production department will have a usable area of 1,300 m²/4.300sf², while the new building will develop over two floors and will occupy approximately 1000 m²/3.300sf² per floor.

For the best manufacturing processes in the production flow, we will modify the internal road network, building a new

road that will pass behind the new building, allowing for the optimization of "light" and "heavy" traffic.

Tecniplast grows and needs more and more space for both offices and production departments. This new building will enable us to work in safety, with ever greater and greener efficiency, increasing flexibility and reducing time to market.

The relocation of the Technical Office will allow other corporate functions to optimize their working environments; even recent acquisitions in Tecniplast require space at the "headquarters" for those "corporate" functions that play a transversal role in our group.

WORK IN PROGRESS: THE NEW BUILDING AT TECNIPLAST S.P.A.



THE NEW METALWORKING DEPARTMENT

Quality enhancement, efficiency maximisation and decrease in CO2 footprint – these are the priorities in Tecniplast's production processes

Another important investment (January 2022) is that involving the metalworking department.

We've interviewed **Daniele Pinton**, who was in charge of the metalworking and assembly department until the end of 2022 (today promoted as responsible of production in IWT), and who here sets out for us the changes that have taken place in the firm.



Could you sum up for our readers the investment actions and dimensions of the investments in value terms?

The shift in production activities from the Castronno facility to that of Buguggiate and the ensuing setting up of the new metalworking department has, for some people, been a return to origins, whilst for others it has been a pleasant surprise.

But for the whole team it has been a really important project where, right from the word go, two key words have

been buzzing in our heads during the whole course of our activities: **CHALLENGE** and **OPPORTUNITY**.

The main challenge has proved to be the need to keep up production continuity during the entire project time. With this in mind, organisation and planning have been the most delicate phases and the result obtained is an acknowledgement of the effort and belongs to a team that stretches right across all the company functions.

The strong co-operation among the various teams has resulted in the **OPPORTUNITY** to build up a new department that has led on to an optimisation of existing production flows and actively shown the way forward to the future.

Let me cite one or two numbers to give an idea of the size of the project:

- 43 machines involved
- 41 external firms involved in carrying out the work
- 145 resources –of which 94 external – involved in the work
- 2,600 square metres transformed from warehouse to production area
- 3 months from project development to project realisation



BEFORE



Here following, we can see some photos of the same area at a distance of 3 months where the results can be seen and how far teamwork, safety, determination and the will to change have been the lodestar of this remarkable professional and human trek.

AFTER



In your view, what are the advantages that the products will have thanks to this new department?

Thanks to the new department we count on getting these improvements:

- **Greater flexibility**
- **Smaller carbon footprint**
- **Optimisation of production times and processes**

How does the new department fit into the TPS (Tecniplast Production System)?

With an eye on standardisation, the TPS has been implemented in the new metalworking department, just as for other departments. Daily analyses of the processes and the situations that characterise the work place has allowed us to identify any eventual losses and waste that damage production. Such analyses are then followed up by opening specific **"PDCA procedures"** which, through the direct involvement of all operative personnel facilitate continuous improvement process and allow fitting solutions to be put in place so as to guarantee full customer satisfaction and product quality.

As you see it, what are the benefits our customers can have from this new organisation?

- **Greater productivity**, as the production reorganisation

allows an optimisation of material throughput times within the department which translates into less time needed for the manufacture of the product.

- **Quicker reaction time to customers' requests**, because a specific area has been created that is dedicated to the prototype with an associated workshop that allows studying/testing/working in unison on specific customer requests.

- **Optimisation of material throughput flows** thanks to the setting up of specific areas for stocking and calling for materials that allows the speeding up and simplification of use on the part of the department operatives.

Thank you, Daniele, both for your enthusiasm and attention to detail. We would recommend that our readers take advantage of the easing of travel restrictions to come and visit us. The new department is part of our Factory Tour and a call on Daniele is just what is needed to get an idea of enthusiasm and innovation.

As always our Pay Off is "always greener".

LEOPOLDO ZAUNER
**CORPORATE MARKETING &
COMMUNICATION DIRECTOR**
TECNIPLAST S.P.A.

AUTOMATION MAKING THE DIFFERENCE IN A MODERN VIVARIUM

It's not unusual to see robotics in Vivariums today: many facilities are already using automation to improve efficiency and flows, as well as to increase occupational health, and even more are planning to install robots in the future. Cage handling is a repetitive activity with many nuances, and the use of robotics in these tasks significantly reduces the exposure of staff to allergens, as well as occupational diseases, to the benefit of operators' welfare.

Panorama meets Dr. Anja Beierfuß, Director of the animal facilities and designated veterinarian, as well as the elected chairwoman of the animal welfare body at the Medical University of Innsbruck.



*CCB, Center for Chemistry and
Biomedicine / Tierhauseinrichtungen
Medical University of Innsbruck
Innrain 80, A-6020 Innsbruck*

The CCB research building is one of the biggest and modern animal facilities in Austria, which went into operation 10 years ago approximately. "We implemented our barrier unit with the CCB animal facility, which enabled us to house our unique and immunocompromised GA mouse colonies under controlled hygienic conditions" explains Dr. Beierfuß "Over the past 10 years, the barrier unit developed into our core breeding unit of GA mouse strains, currently housing approximately 6.000 mice. In our CCB animal facility, we have a team of 8 animal technicians and 2 technicians responsible for cage washing and equipment supply. Scientists have no physical access to the barrier unit, and they depend on animal technicians for all animal-related tasks in the unit".

Coming to the cage cleaning process, 5.000 IVC cages to be cleaned weekly is quite a task, meaning a big requirement of human resources. Fortunately, more than 10 years ago it was decided to use automation in the washing area. Because of the limited space, the APOLLO, which processes integral GM500 cages, was the choice.

What were the main reasons behind the investment in such an automated cage-cleaning system?

The main reason for the investment was occupational health. We have numerous academic staff at our university,



suffering from laboratory rodent allergies and **we aimed to reduce the exposure time of animal facility staff to allergens.**

Are your expectations fulfilled?

We have been able to improve operator protection and reduce the time that must be spent with high allergen concentrations. The capability of the automated system is not sufficient to take care of all cages that must be cleaned weekly. Manual processing is still necessary for our facility.

Would you recommend colleagues from other facilities to invest in automation?

In our facility, we hit the occupational health-related goal. Facilities with a similar focus could benefit from the robotic assistant. The reason why I like to name the system **“robotic colleague”, or “robotic assistant”**, is that technical defects may lead to sick leave. During that time there is the need to empty cages by hand, leading to unexpected work loading increase for animal facility staff.

Do the operators find the software user-friendly?

The operating system is simple and provides a good overview. There is a general design and structure of the operating systems used on all Tecniplast devices, that is self-explaining and operator friendly.

Based on your experiences, would you prefer to work with many different suppliers considering the complexity and required integration in your very big animal facility, or to cooperate with only one integrated solution provider?

There are pros and cons on both sides, but I would prefer to work with one provider, as this will ensure smoother integration and will reduce constant service costs.

What is your general opinion about Tecniplast as one of your major partners to keep your “benchmark facility” successfully working?

Tecniplast is not only a supplier of animal facility equipment. **The Tecniplast team acts as a reliable partner, supporting our team with a lot of expertise and knowledge.** I appreciate that, as a leading company on





the market, Tecniplast always tries to support animal facilities as well as scientists to design customized solutions for small projects and budgets, which is quite important in academia.

In some of our older facilities, Tecniplast IVC systems run 24/7 for almost 20 years, now. So, I would like to honor the technical staff, that helps us to keep the systems going over such a long period. Even if they have a tight schedule, they always try to fix all technical problems they come across and provide some technical insight to our staff. Over the years, an excellent working partnership has been developing and our team is always excited to announce the regular service site visit.

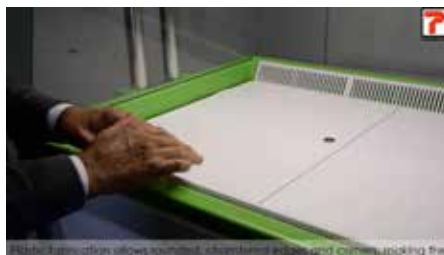
GABY DORNER
AREA SALES MANAGER
TECNIPLAST DEUTSCHLAND GMBH

BEHIND THE MASTERWORK

Our mission was to create a video series to describe our products and create an in-depth explanation for key product features to highlight product design. Our tagline is "Innovation through Passion", and these videos will showcase just that with insight from our marketing and product managers.

It's helpful for us to have this type of content readily available for product demonstrations as well as educating the public on the work and thought that goes into creating these products.

Follow our "Behind the Masterwork" series!



In this first video, Giovanni Tartaglia, Marketing Manager – Flow Solutions at Tecniplast S.p.A. is showing us ***"Why do we make the changing station in plastic?"***

SKYE PREZIO
MARKETING COORDINATOR
TECNIPLAST USA

WATCH THE VIDEO



HOME CAGE MONITORING: 2022 WRAP UP

Home cage monitoring in preclinical research is the use of technology to continuously monitor the behavior and welfare of laboratory animals in their home cages. This can include using cameras, sensors, and other devices to collect data on the animals' activity levels, social interactions, and other behaviors. The data collected can be used to assess the animals' welfare and to improve the conditions in which they are housed. It can also study animals' behavior, physiology, and neuroscience. The use of home cage monitoring allows for a more natural and less invasive way of studying the animals, as they can move freely within their cages and interact with their environment.

Digital ventilated cages, also known as DVC[®], provide several advantages over traditional cage systems in preclinical research. One advantage is that they allow for continuous monitoring of the animals' behavior and physiology. The sensors in the cages can capture a wide range of data in the real home cage where the mice spend 99% of their time. Additionally, it is the only very scalable solution with 1,000+ cages that can be monitored simultaneously for high throughput phenotyping, cost reduction, and heightened animal welfare via AI-based assessment in cage-by-cage settings.

The knowledge of DVC[®] is steadily increasing across the community. As part of the community, our team organized both an in-person event called Digital Vivarium Forum 2 and several webinars across Europe with the topic of refining models for better translatability and the highest welfare automated assessment that can be reached via automated technologies.



SERIES OF NATIONALLY ACCREDITED WEBINARS FOR SCIENTISTS/ LABORATORY ANIMAL OFFICIALS OR OPERATORS

Started in 2020 during the pandemic, the work to continue promoting animal welfare and refinement, one of the 3R missions globally, reached its peak.

We performed around **10 webinars in Spain, Germany, Switzerland, Portugal, France** and other countries with local hosts including national 3R centers with speakers of different variety including welfare specialists, advocacy specialists (e.g. EARA) and scientists with the main topic of how welfare and science have to go hand-in-hand.

Additionally, all the webinars offered the possibility in most cases to gain continuing education hours/credits necessary for all people working with laboratory animals to extend their permits.

DIGILAB SCIENTIFIC PROMOTION

Journal Articles

- Nature: Monitoring Mice to Improve Reproductive
- Nature: Automated Mouse Cages Help Reveal Sickle Disease Signs
- Nature: The Hidden Hellion that could cost found mouse studies
- Nature: Automated recording in the home cage

Round Tables

- Roundtable: Mary Ann Liebert: Home-Cage Monitoring and its Effects on Research Capability and Outcomes
- Innovation talks by Technipar with Marc Hub - ARAAS president

Webinars

- Webinar 1 - September 2018 Home Cage Monitoring 24/7: Improving Research Productivity and Outcomes - Mary Ann Liebert - Just Lippert, Malin Lohr
- Webinar 2 - April 2020: Accelerating Animal Model Research by Unmuzzling Home Cage Monitoring - Mary Ann Liebert - Peter Lauer, Silvia Mandile, Maximilian Weissmann
- Webinar 3 - May 2020: DVC[®] From a Standard Cage to a Smart Cage - Mike Dornik
- Webinar 4 - May 2020: Inside Scientific - Improving Animal Modeling with 24/7 Home Cage Monitoring in Biotechnology (Re)placements: Mouse Housing Systems - Inside Scientific - Stefano Galzani, John Heenan
- Webinar 5 - September 2020: Case Studies in Home Cage Monitoring: Rodent Behavior, Circadian Biology and Animal Welfare - Kenneth Dyer, Joanna Moore
- Webinar 6 - November 2020: Monitoring mouse activity to highlight the impact of disease progression and improve animal welfare - Joanna Moore, Just Lippert Agusti

LATEST NEWS

7 Webinars 2022: Human mesenchymal stem cells and derived extracellular vesicles reduce sensory neuron hyperexcitability and pain

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2nd International DIGITAL VIVARIUM FORUM

September 6-8, 2022 | Tecniplast Congress Centre, Buguggiate (VA) - Italy



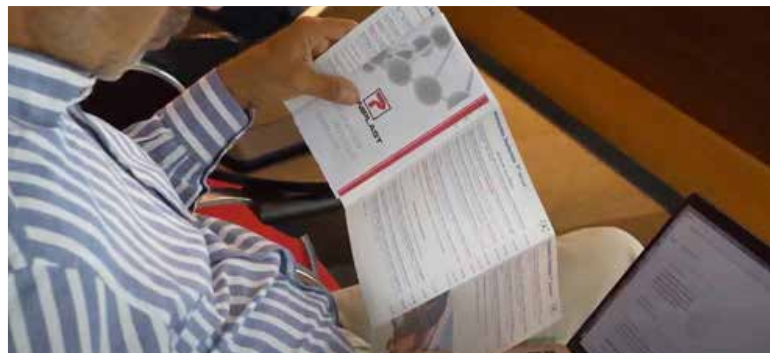
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2ND DIGITAL VIVARIUM FORUM

The biannual Digital Vivarium Forum revolves around the applications of DVC® in facilitating operation and saving costs, increasing animal welfare, and ultimately finding better biomarkers in pathological animal models both in academic and pharma settings. We had a series of **25+ speakers** and also **commercial partnering** in the field of home cage monitoring to offer a very inclusive event. The Forum days and the culinary experience are always very well appreciated by our guests, including the Alfa Romeo Museum visit.

STEFANO GABURRO

**SCIENTIFIC DIRECTOR DIGILAB SOLUTIONS
TECNIPLAST S.P.A.**



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 **TECNIPLAST**
innovation through passion

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