VISMEDERI

ANALYSES FOR LIFE IMPROVEMENT

2021

We prove. You improve

THE PRESIDENT AND CHIEF SCIENTIFIC OFFICER

Emanuele Montomoli

Non-Executive President and Scientific Director of VisMederi

President Emanuele Montomoli is the founder and CSO of VisMederi Srl, the innovative Sienese Company established in June 2009 by the Department of Molecular Medicine of the University of Siena. Within a few years, the Company has integrated in the field of Life Sciences and Public Health, gaining the role of a highly qualified and reliable partner at an international level.

VisMederi is today a solid reality that grew year after year in credibility, customer portfolio, human resources and economic results. These are the results of prolific work carried out by a motivated, young and highly competent group, which has found in VisMederi not only a job but also a great opportunity for professional growth. Together, we will continue this journey, strengthened by our international positioning in the development of experimental protocols for the study of vaccines and the provision of qualified food and environmental analysis services.

VISMEDERI SRL HEADQUARTER

Via Franco Ferrini 53
Loc. Tognazza
53035 Monteriggioni (Siena) – Italy

VISMEDERI SRL LABORATORIES

Strada del Petriccio e Belriguardo 35
53100 Siena – Italy

COMPANY PROFILE

VisMederi is a globally skilled, well-resourced Research and Service Company that supports businesses and big pharma industries in improving public health through the development and optimization of safer and more effective drugs and vaccines.

Thanks to the considerable scientific expertise and experience of its management and staff, VisMederi conducts and perfects serological tests to evaluate the immunogenicity of vaccines, creates and validates bioanalytical methods and experimental protocols for the release of therapeutic molecules and vaccines in development phases and performs quality control during the intermediate stages of vaccine production.

VisMederi has its headquarters in Siena, Italy, a city strengthened by its research tradition dating back to the early 20th century and a reference point of international excellence in the field of vaccines and Life Sciences, as well as home to one of the most prestigious Italian universities.

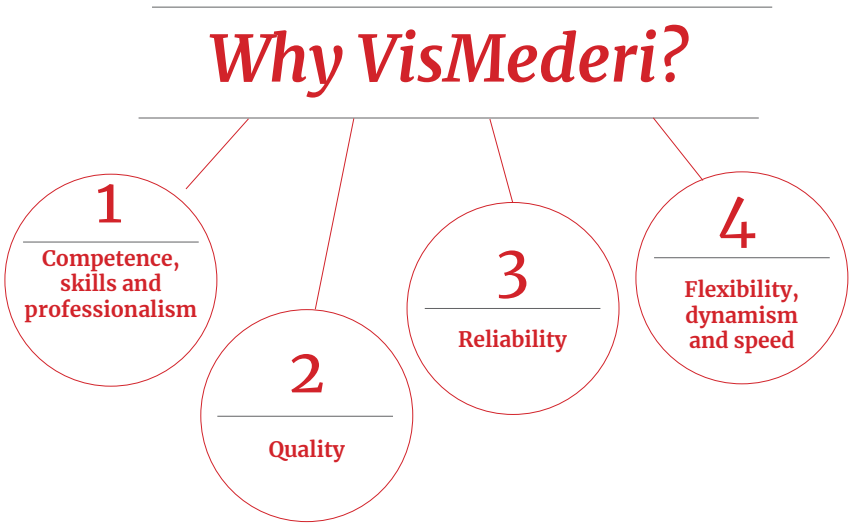
CORE BUSINESS

The Company fits within a complex path leading to the release on the market of new vaccines or new medications through the optimization of analytical tests on biological samples and its application on clinical studies.

VisMederi aims at assisting pharmaceutical companies in the development path of their own products. The logic driving VisMederi's collaboration with key customers is based on creating a long-term partnership based on continuity, trust and stability relationships embodied in a shared commitment to objectives and instruments identifying professional winning solutions.

All the implemented activities are very high quality and internally validated in order to ensure maximum customization upon customer request. VisMederi is thus capable of offering accurate analytical results.

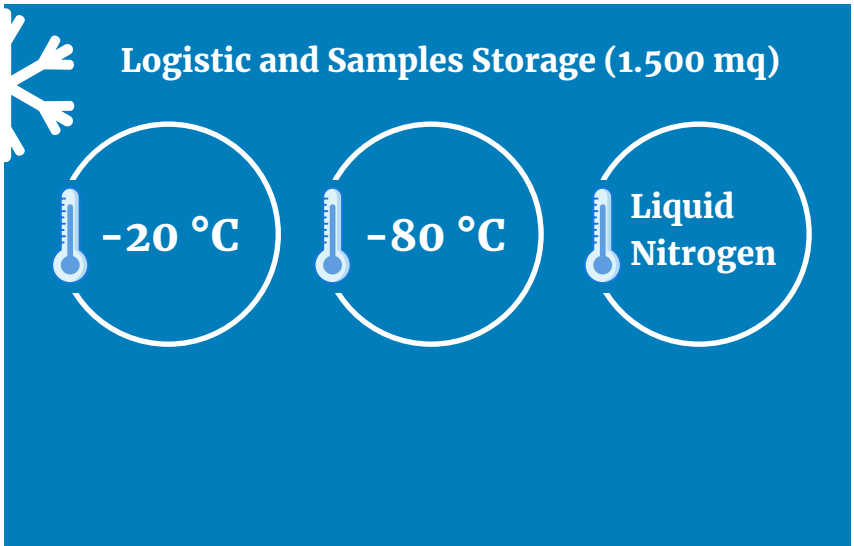
The tests carried out by VisMederi always require a validation process consistent with international guidelines such as "Validation of Analytical Procedures: Text and Methodology (ICH)" and as required by leading international regulatory bodies such as EMA (European Medicines Agency), FDA (Food and Drug Administration) and PMDA (Pharmaceuticals and Medical Devices Agency).



VACCINE DEPARTMENT

In recent years, VisMederi has developed and validated main serological tests for the evaluation of immunogenicity of COVID-19 vaccines, such the Enzyme-Linked Immunosorbent Assay (ELISAs), the wt (wild type) virus Micro-Neutralization CPE-Based assay (MN), the Plaque Reduction Neutralization test (PRNT) and the T Cell mediated immunity assays (ELISpot and ICS). Moreover, VisMederi has continued to develop and consolidate all the serological assays for anti-Influenza and anti-RSV antibodies detection.

Experience gained over the years, together with scientific and methodological accuracy in this field of action represent a guarantee in terms of quality of results and time of execution and delivery. In the philosophy of VisMederi, innovation means making changes in order to produce improvements through a gradual but continuous path of research, planning and transformation permeating every aspect of corporate life. In this area, important results concerning the dosage of IgA flu antibodies have been achieved in the last few years, even from "difficult samples" such as saliva, nasal wash and nasal wick. Up to date, vaccine efficacy has been assessed solely through the serum antibody response and it has been extremely difficult to devise methods for the **dosage of IgA immunoglobulins**, partly due to the difficulty of finding human standard controls on the market. VisMederi has worked on standardizing an innovative method based on the ELISA technique to achieve this goal. Influenza vaccination is gradually deviating towards new types of vaccines: from traditional intramuscular and intradermal vaccines, to live attenuated vaccines administered by nasal sprays and sublingual inactivated vaccines. It is expected that these new vaccines can further stimulate a local (mucosal) response, which is not easily detected through traditional serological tests. In the frame of serological tests, VisMederi has also implemented the development of immunoassays for the evaluation of the response to the second antigenic protein (neuraminidase) present in the vaccine based on international guidelines and implementing its features. Among the various methods developed for this purpose, **the ELLA test** has proved as the most reliable, fast and functional. The platform of **flu pseudotypes**, which has already been part of the corporate portfolio in the last few years, has been further developed thanks to the support by the Tuscany Region through the "Innoviral" project. Through this test, the measurement of functional antibodies can be performed without using any living viruses. The growth activity of influenza viruses in cell cultures and embryonated chicken eggs represented an important sideline in order to reproduce influenza viruses on a large scale usable in conventional serology. Conventional serology tests represent the gold standard of VisMederi's analysis portfolio; however, the growing interest in **Cell Mediated Immunity (CMI)** pushed VisMederi



with a platform devoted to type-B cell response, focusing attention on the "ELISPOT" procedure. In addition, since the beginning of **SARS-CoV-2 pandemic**, Vismederi srl has started to establish the diagnostic and immunological methods for the evaluation of the COVID-19 disease, by swab qPCR analysis and assessment of the immune response against SARS-CoV-2. Several assays aimed at the evaluation of humoral and cell-mediated immune responses in serum samples and peripheral blood mononuclear cells (PBMCs) have been developed for this purpose, including: **ELISA** specific for the evaluation of anti- S1 / S2 / RBD IgG/IgA/IgM antibodies; **Elecsys anti-SARS-CoV-2 S and N** protein antibodies evaluation via COBAS e411 Roche™ platform; **Pseudovirus-based Neutralization Assay** (PNA); Neutralization CPE-based assay and PRNT for both Wild Type (Wuhan-like) SARS-CoV-2 virus and all VOC; **ELISPOT** and **ICS** analyses. Currently, these assays are used to test the samples coming from SARS-CoV-2 pre-clinical / clinical studies as well as for the evaluation of monoclonal antibodies/antiviral drugs.

In addition, Vismederi srl is also part of the **Coalition for Epidemic Preparedness (CEPI)** interlaboratory network, whose goal is the standardization of bioanalytical assays across laboratories. In the public health crisis due to SARS-CoV-2 pandemic, Vismederi-srl is also supporting the National Health System by analysing swabs from subjects with COVID-19-like symptoms, using its qPCR platform, which includes the use of both RUO and IVD kits.

The company continues to carry out experimental works also on the immune evaluation of **bacterial vaccines**, both through traditional immunoenzymatic assays and through the development and qualification of ad hoc methods. One of these methods is MATS (Meningococcal Antigen Typing System), which is aimed at screening and classifying meningococcal strains circulating and coming from various countries around the world and at evaluating their "reaction" against the strains included in the vaccines. To meet the growing request relating to vaccine testing, VisMederi has designed a platform for preclinical studies using animal models in the course of the past year. Alongside ferrets, already used in previous years, we have introduced another species exceptionally suited to infection with influenza virus and with clinical consequences very similar to human ones: "cotton rats". With these animals, VisMederi took up the exciting challenge to be able to study the pathogenesis of influenza and immune response in humans, testing next generation vaccines also through **"challenge studies"**. VisMederi has finally decided to optimize its **"biological material storage"** capacity, no longer limited to the retention of serum samples related to ongoing studies, but also geared towards a genuine customer service as a **central hub**. To this end, three new temperature-controlled storage areas have been created, with a 24-hour monitoring system. The service is designed to be customized according to the needs of partners including their ability to manage it.

14 LABORATORIES (1.200 MQ)

Biological risk category

5 BIOSAFETY LEVEL 2 LABORATORY

4 BIOSAFETY LEVEL 3 LABORATORY

3 BIOSAFETY LEVEL 2 + LABORATORY

2 CELL CULTURE FACILITY

QUALITY

VisMederi has made Quality one of its hallmarks highly recognized and appreciated by national and international customers. The Quality concept is well-received by the staff and deeply integrated within the company processes.

Continuous improvement, data integrity, attention to details are essential features constantly monitored and reviewed according to our Quality Policy, to adapt and support new scientific innovation and improvement.
Customer satisfaction is the focal point of our company constantly working on customization and new solutions for any needs. The Quality Management System (QMS) involves laboratory activities, equipment and human resources as well as customers and suppliers themselves being active parts in the process.
The integral implementation of VisMederi QMS ensures that the provided services meet the quality standard required for Clinical Trial Studies according to **UNI EN ISO 9001:2015**, the international standard defining the requirements for a QMS, and to the Good Clinical Laboratory Practices - **GCLP** an essential requirement for laboratories conducting tests on samples from clinical studies.
Furthermore, special attention is paid to Data Security; VisMederi is indeed **ISO/IEC 27001:2012** certified.
The ISO 27001 is the most recognized international standard for an ISMS (IT Security Management System) and ensures that clinical or confidential data are correctly managed and stored within the company premises. Continuous improvement is constantly nurtured thanks the additional support of external partners and to the customers themselves.
"Auditing" is considered by VisMederi an important process to challenge itself and evaluate the progress made up to a certain phase; VisMederi is periodically audited by customers, accreditation / certification bodies and external QA experts that actively contribute to Quality growth.
The internal know-how, in combination with qualitative and customised trainings, is the company's winning recipe to develop and implement excellent services.
High-level expertise has been recognized and demonstrated by the successful **UNI EN ISO 15189:2013** accreditation for medical laboratories over two serological analyses released by **Accredia**, the body designated by the Italian government to certify the competence, independence and impartiality of medical laboratories.
ISO 15189 is an effective indicator of compliance with both ethical and scientific international quality standards.

CERTIFICATIONS AND ACCREDITATIONS

The VisMederi Group is recognised worldwide for its excellent certified services. Certifications are considered true quality indicators for customers and represent an effective stimulus for company growth.

VISMEDERI

Quality Management System
UNI EN ISO 9001:2015

Released by TUV Austria

VisMederi is UNI EN ISO 9001:2015 certified for its Quality Management System. Quality is defined by the ISO 9001:2015 as the level in which a series of intrinsic characteristics meet the requirements in a process of continual improvement.

Accreditation for Medical Laboratories
UNI EN ISO 15189:2007

Released by Accredia

VisMederi obtained Accredia's accreditation as a medical laboratory operating in compliance with UNI EN ISO 15189:2007. The standard specifies requirements concerning the quality and competences in terms of methodologies, scientific, technical and technological, organizational and procedural elements, as well as the specialization of the staff. The management system requirements of ISO 15189 naturally meet the principles of ISO 9001:2008 Quality Management System – Requirements.

Accreditation for Good Clinical Laboratory Practices (GCLP)
ISBN 978-1-904610-00-7

Released by Qualogy

VisMederi is GCLP (Good Clinical Laboratory Practices) accredited by the external British independent company Qualogy. The accreditation certifies the compliance with international guidelines from WHO for analysis and management of samples from clinical trials.

IT Security Management System
ISO/IEC 27001:2012

Released by TUV Austria

EN ISO 27001:2013 is an international standard that provides the requirements of an Information Security Management System – ISMS. The Standard includes people, processes and IT systems by applying a risk-based approach. VisMederi obtained this prestigious certification in 2019 in order to meet the contractual requirements of important customers as well as to improve its skills on data and information security.

VISMEDERI RESEARCH

Quality Management System
UNI EN ISO 9001:2015

Released by TUV Austria

VisMederi Research is UNI EN ISO 9001:2015 certified for its Quality Management System.As for its "sister" VisMederi, Quality is synonym for excellence and it is integrated within the whole company management system.

VISMEDERI LIFE SCIENCE

Quality Management System
UNI EN ISO 9001:2015

Released by TUV Austria

Accreditation for Testing and Calibration Laboratories
UNI CEI EN ISO/ IEC 17025:2005

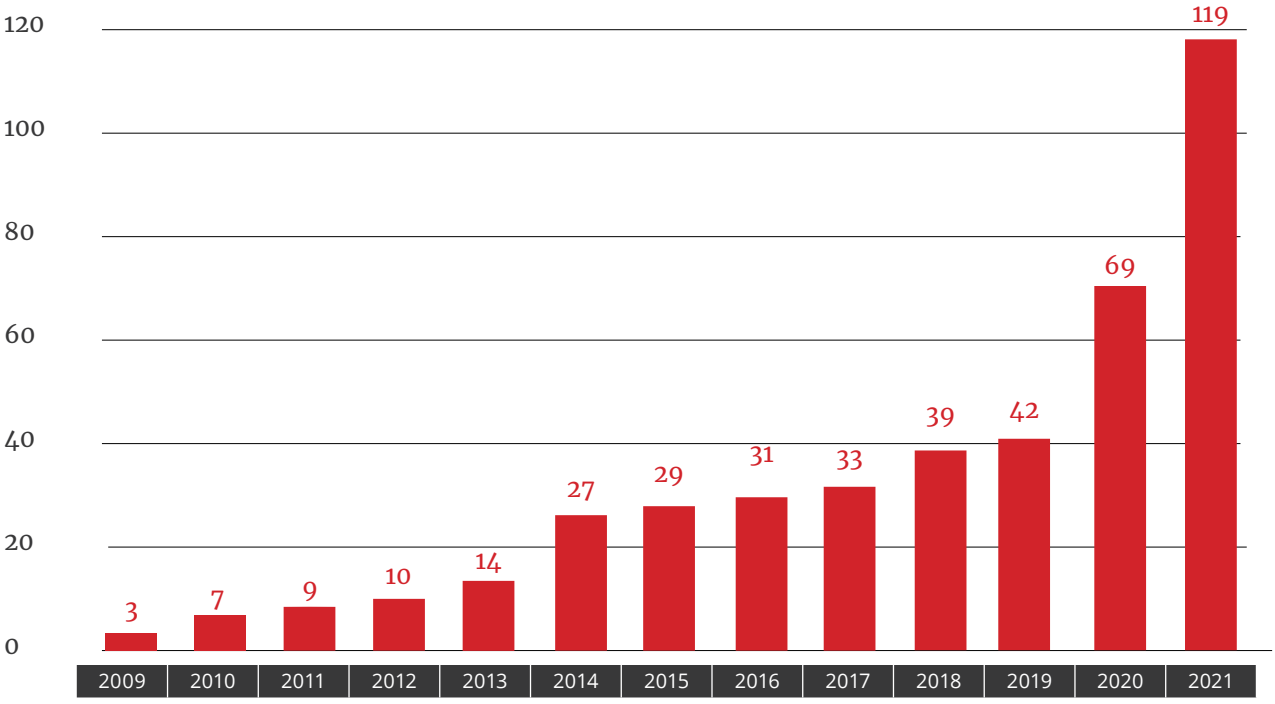
Released by Accredia

VisMederi Life Sciences is UNI EN ISO 9001:2015 certified for its Quality Management System and it is also registered into the Tuscany regional list of laboratories that carry out analysis in the context of self-monitoring procedures for the food industry with N. 065. In 2013, the Company obtained the accreditation as a laboratory that operates in compliance with UNI CEI EN ISO/IEC 17025:2005 for the food industry. Accreditation certifies and guarantees the competence and professionalism of a test laboratory, according to objective criteria. Gaining accreditation means for the company to be reckoned for its reliability and its professional expertise as an internationally and officially recognized company.

HUMAN RESOURCE

People are the most important asset for VisMederi today and for its growth and development tomorrow. The success of VisMederi originates from the human capital investing its own skills and professionalism in this Company: strongly motivated women and men sharing the ideal of the Company, its steady rooting on the territory combined with its international perspective.

Over the years, the workgroup has been enriched by highly qualified professional technical figures who have recognized VisMederi as a stimulating reality and an opportunity to test and deepen their knowledge. The Business Departments work alongside an Administrative Department, a Finance and Management Control Department, a Legal Department and a Communications Department that play an important role in supporting Research activities.In line with a growth trend that has never stopped since the foundation year of the company, VisMederi has continued to increase its human resources and to stabilize existing jobs, achieving excellence in a forward-looking perspective of sharing its goals and preserving its values.



The growth of the staff from 2009 to 2021

RESEARCH PROJECTS

PAST PROJECTS

Innovation and technological development represent for VisMederi two important goals, which the Company daily pursues.

01 Aditec

The High Impact Project ADITEC, was launched in October 2011 to develop new vaccination strategies. The scope of the project, funded through the 7th Framework Programme for R&I of the European Union, was to accelerate the development of novel and powerful immunization technologies for the next generation of human vaccines. Scientists from 42 partner institutions in 13 different European countries and the USA joined forces in the ADITEC project. With a budget of about €30 million over 6 years, ADITEC has made significant advances in the development of novel immunisation technologies, adjuvants, vectors and delivery systems, formulations and vaccination methods optimised for different age groups. At the end of the 6 years funding from the European Commission, ADITEC had become a symbol of vaccine innovation with the ability to bring together most of the leading scientists in the field. For this reason, the ADITEC members decided to continue the mission of ADITEC and to sustain the ADITEC network organizing every year an ADITEC scientific meeting to exchange the latest results in vaccine innovation. The ADITEC 2018 Meeting was held in Siena on 1-3 October with the participation of over 120 participants from the EU and the USA. www.aditecproject.com

02 Flucop

The human influenza virus is the causative agent of one of the most important infectious diseases in the world, causing frequent (seasonal) epidemics as well as pandemics, both of which cause significant morbidity and mortality worldwide. Influenza virus infects all age groups but children and adults over the age of 65 are most at risk of severe morbidity and mortality. Vaccination is recommended for these age groups. Vaccination remains the most effective method to control seasonal infections and the most important strategy to prepare for a possible pandemic. Despite the development and licensure of influenza vaccines along with clinical evidence of their ability to protect against influenza, the potential correlates of protection induced by these vaccines are still not fully elucidated The availability of a tool-box of standardised, validated serological assays for human influenza vaccines, agreed and used by key parties in the private and in the public sector will have tremendous impact on the R&D process globally, and will pave the way for future investigation and definition of correlates of protection for these vaccines. The FLUCOP project is supported by the Innovative Medicines Initiative Joint Undertaking (IMI JU), with funding from the European Union's Seventh Framework Programme. The FLUCOP project started in March 2015 with a five-year duration ending in February 2020. After two no-cost one-year extensions approved by IMI, one being due to the COVID-19 pandemic, the project ended in February 2022, with a total budget of €13,999,164 in equal contribution from the IMI and the European Federation of Pharmaceutical Industries and Associations (EFPIA).

03 BioVacSafe

Vaccination is one of the greatest triumphs of modern medicine, and new technologies now allow us to describe in great detail how individuals respond to vaccines at a cellular, genetic and molecular level. The BIOVACSAFE project, the first IMI project on vaccines, carried out a five-year investigation into new ways to identify and better understand the causes of adverse reactions to vaccines at all stages of development, and showed that it is possible to identify signals in the body (biomarkers) that can predict their long-term safety and tolerability. They carried out 14 studies of well-known vaccines in different groups of people and identified new biomarkers of adverse reactions to licensed antiviral vaccines. They have produced a wealth of publicly-available data that can help researchers make decisions about the safety and tolerability of vaccines in development, which will in turn make vaccines more acceptable to people, and potentially even help reduce the number of animals used in research. www.biovacsafe.eu

04 Innoviral

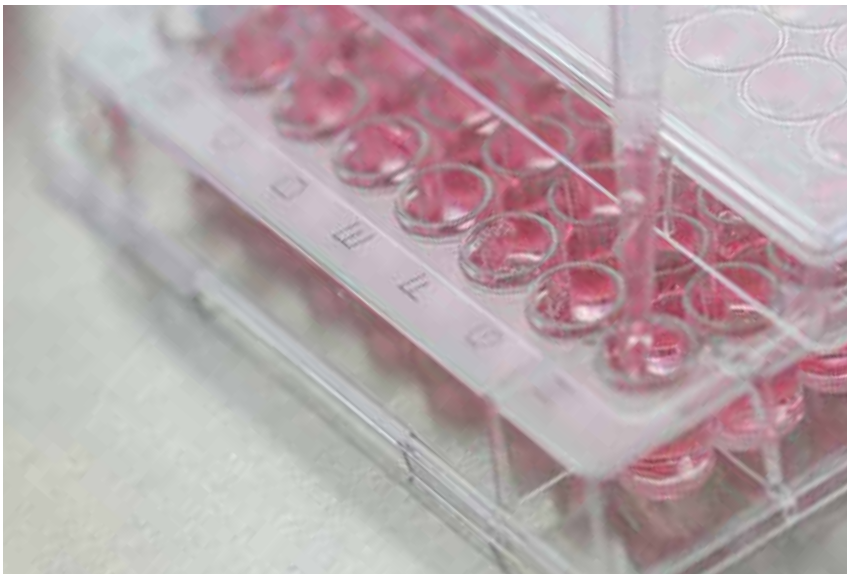
Influenza is a top public health priority due to its impact on global well-being and the threat of pandemic events. The serological tests currently in use, used for the licensing of influenza vaccines, are now outdated and are becoming obsolete and unsatisfactory. The latest update of EMA (European Medicines Agency, European regulatory body) guidelines for the anti-influenza vaccine highlighted the need to introduce innovative tests for the evaluation of vaccines. The micro neutralization test (NM), to perform which the live virus is used, and the cell-mediated immunity analysis (CMI) are some examples of new tests. The INNOVIRAL project is focused on the development and validation of a new and innovative test to evaluate influenza vaccines, both pandemic and non-pandemic, rapid and reliable, which uses pseudo viral particles (PPN test) that will be prepared in the VisMederi laboratories according to procedures described in the literature.

05 Inside

Development of diagnostic and theranostic Targeting based on nano systems and / or engineered lymphocytes for the early detection and treatment of melanoma and multiple sclerosis.

06 Panvir.net

Recent demographic and climatic changes have led to a greater spread of arboviruses such as Dengue, Chikungunya, Zika, West Nile and new influenza virus subtypes, as well as to an increased risk of new infections or reactivation of persistent ones, including herpes infections from cytomegalovirus, Epstein-Barr, herpes simplex type -1 and -2 and varicella-zoster. Broad-spectrum antiviral drugs targeting components shared by multiple viruses are an innovative strategy to fight viral infections for which there are no specific drugs and to limit the selection of drug-resistant viral variants. The goal of the PANVIR. NET (Preclinical development of novel panviral agents within a specialized regional network) project is to develop new therapies based on broad-spectrum antiviral agents against those viruses that cause outbreaks with potential epidemic or pandemic evolution, within a public and private network located in Tuscany and able to support and guide the development pathway of antiviral drugs.



RESEARCH PROJECTS

CURRENT PROJECTS

01 PEDVAC-iNTS

The PEDVAC-iNTS project, funded for 4 years by the European Union, within the EDCTP2 - European & Developing Countries Clinical Trial Partnership 2 program, involves international experts from 7 institutions including academies, research institutes, small and medium-sized enterprises (SMEs) and non-profit organizations from Europe and Africa.

The research team, coordinated by the Sclavo Vaccines Association of Siena together with the University of Siena, will conduct a phase I / II paediatric study in Ghana, a country where the disease is endemic. The project also aims at strengthening international collaboration, including partners from African countries, to improve disease awareness in resource-limited endemic countries where the disease represents a significant public health burden.

02 CEPI

CEPI establishes a global network of laboratories to centralise assessment of COVID-19 vaccine candidates. Five laboratories initially selected to work together as part of a centralised network to reliably assess and compare immunological responses generated by COVID-19 vaccine candidates.

Global group will minimise variation between individual lab analyses to enable uniform way of evaluating and identifying the most successful candidates.

All COVID-19 vaccine developers (both CEPI-funded and non-CEPI funded) can use the network.

03 Inno4Vac

Vaccines are a huge public health achievement, saving an estimated 2.5 million lives every year and protecting millions more from illness and disability. However, developing new vaccines is extremely time consuming, costly and risky; on average it takes over 10 years and costs more than EUR 800 million to bring a vaccine to the market. However, in recent years, researchers in academia and biotech companies have made huge strides in fields such as immunology, big data and artificial intelligence. These advances could potentially speed up the development of new vaccines and make the whole process more efficient.

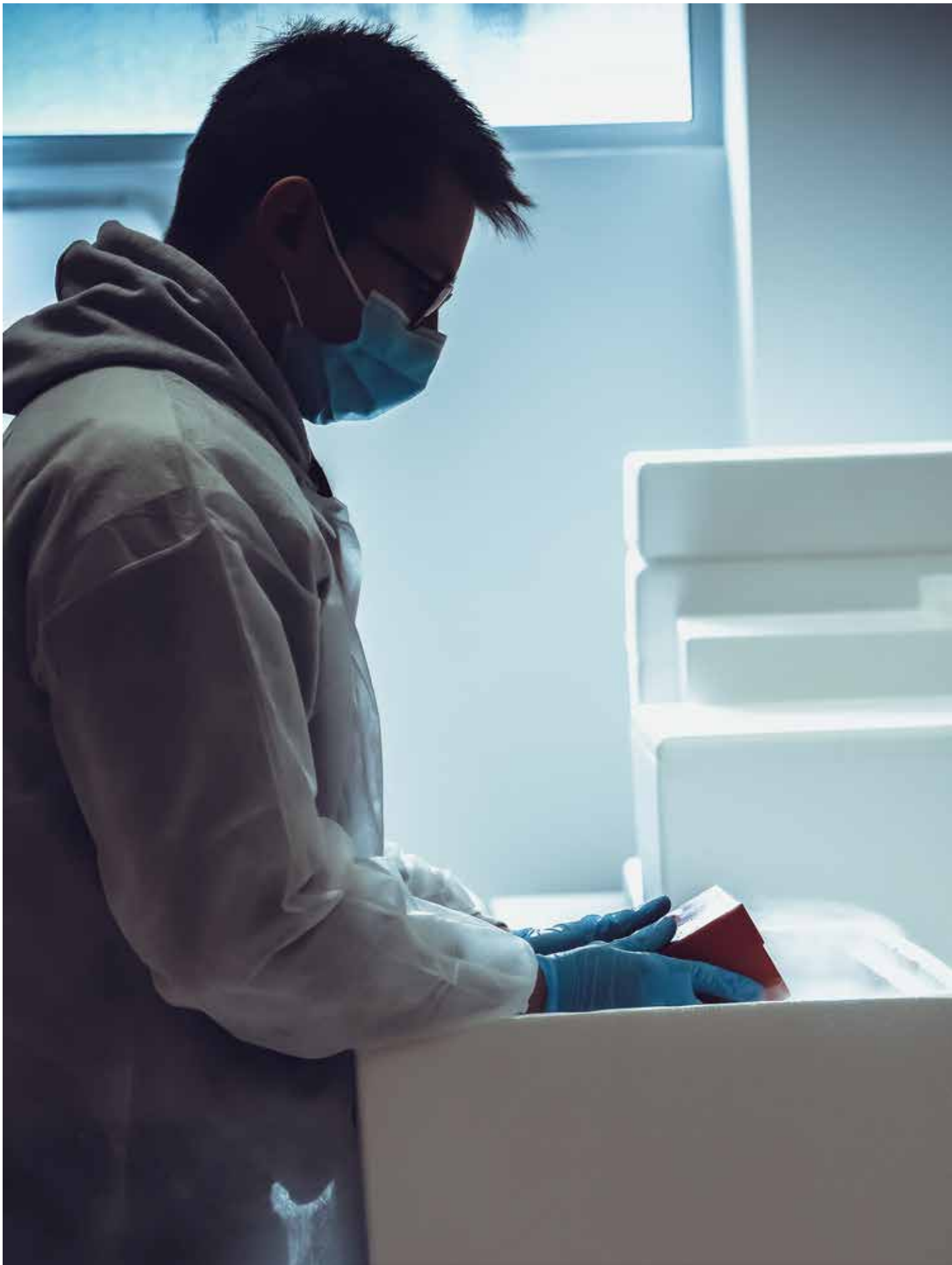
The aim of Inno4Vac is to harness these advances and incorporate them into the vaccine industry. The project brings together experts in clinical research, immunology, microbiology, systems biology, mathematical models, and regulatory issues.

This diverse team will focus on four key areas. Two areas focus on in silico (i.e., computer-based) tools. The first area uses artificial intelligence, big data analysis and computational modelling to build an open access, cloud-based platform to develop vaccines and assess their efficacy in silico. The second in silico area focuses on developing a modular computational platform to model the manufacture and stability testing of vaccines.

The other two areas focus on lab-based tools. The first will develop new and improved models of certain diseases such as flu that can be used to study vaccine efficacy early in the development process. The other aims at delivering models based on human cells that offer a more reliable view of the level of immune protection a vaccine could offer.

Throughout the project, the partners will develop strategies and roadmaps to ensure that their models meet the needs of medicine regulators and integrate them into vaccine development processes.

Ultimately, the models developed by the project should help to make vaccine development both faster and more efficient.



SYNERGIES PARTNERSHIPS

The synergy with the University of Siena has continued both within the framework of European projects and with the Molecular Epidemiology Research Laboratory directed by Prof. Emanuele Montomoli. Intense collaboration has continued with the Toscana Life Sciences incubator in Siena.

UNIVERSITY OF SIENA

Collaborating to various research projects, the University of Siena is for VisMederi also an important think tank, in the form of PhD studies in business. The Company contributed to a PhD in Life Sciences funding supporting the project. Several researchers have carried out their PhD in VisMederi, helping to enrich the knowledge and skills of the Company. VisMederi has also contributed to various initiatives promoted by the University, from scientific dissemination activities to activities supporting active job search and introduction of high school students to the world of Sciences and Research.

VisMederi is also part of the Institute for Global Health that is the natural evolution of the University of Siena's tradition in science, infectious diseases, its prevention and treatment, vaccines and public health. The IFGH offers internationally recognized programs delivered by global academic and industry leaders in selected areas of global health, equipping program participants with the practical and professional expertise they need to lead the next generation of scientists, researchers, and health practitioners across the globe.

FONDAZIONE TOSCANA LIFE SCIENCES

VisMederi has set up its own laboratories in the Bioincubator and has collaborated in science projects promoted by the TLS Foundation with the aim to introduce people to the world of research, science, innovation and business culture.

WORLDWIDE BUSINESS

1. Africa
2. Australia
3. Austria
4. Belgium
5. Breazil
6. Canda
7. Germany
8. Italy
9. Japan
10. Korea
11. Netherland
12. South
13. South
14. Sweden
15. Switzerland
16. UK
17. USA
18. Vietnam

VISMEDERI GROUP

VISMEDERI HOLDING SRL

VisMederi Holding is the company that holds a qualified share of the companies that are part of the VisMederi Group. The Group operates in various business areas all related to Research and Innovation in the fields of Public Health, Life Sciences and Biotechnologies and is composed of VisMederi Srl, VisMederi Research Srl, VisMederi Life Sciences Srl, VisMederi Textyle Srl, VisMederi Pharma Srl and ETHS – Education and Training for Health Sciences Srl with single shareholder.

www.vismederiholding.com

VISMEDERI RESEARCH SRL

Founded in 2014, and based in Siena, VisMederi Research is VisMederi's "sister company" that is deputy to performing basic and applied research activities, supporting the development and optimization of new protocols. Among various activities, Vismederi Research handles culturing and storage of various human and animal cell lines; growth and propagation of influenza viruses in the cell and embryonated chicken eggs platforms; production of pseudotyped viral particles along with many assays optimised to be applied in research studies for Influenza and for newly emerging infectious diseases.

www.vismederiresearch.com

VISMEDERI LIFE SCIENCES SRL

VisMederi Life Sciences offers professional chemical-physical and microbiological analysis services within the scope of food and environmental self-control procedures through investigation on food, work surfaces, water and soil. It also carries out validation and drafting of HACCP self-control plans, training courses on current regulations, internal and supplier inspections and qualified consultancy.

Today the VisMederi Life Sciences laboratory is able to carry out tests for the detection of Coronavirus on different types of surfaces and in any structure, detecting the presence of SARS COV-2 virus RNA using a Real Time PCR technique.

www.vismederilifesciences.com

VISMEDERI TEXTYLE SRL

Born from the collaboration between VisMederi and CCT Centro Controllo Tessile of Prato, the laboratory is configured as a Qualified Centre capable of carrying out all the main analyses necessary to certify the quality of textile materials, as well as the conformity and quality of raw materials and semi-finished products in the tanning sector with the verification of CITES certificates through DNA analysis. Another strength of the Vismederi Textyle offer are the tests for determining the ANTIVIRAL and ANTIBACTERIAL activity of textile products and suitably treated surfaces.

www.vismederitextyle.com

VISMEDERI PHARMA SRL

VisMederi Pharma is a pharmaceutical company operating in the field of research, development, production and marketing of pharmaceutical products, vaccines, diagnostics and medical devices.

www.vismederipharma.com

FONDAZIONE VISMEDERI

The VisMederi Foundation is a non-profit organization which exclusively works in the field of social solidarity, training and scientific research of particular social interest. It aims at improving the global health conditions of humanity by supporting and promoting the knowledge, development and production of new vaccines, especially against neglected diseases, accelerating their introduction for the benefit of the poorest populations and countries.

The VisMederi Foundation promotes and encourages, also through the establishment of Research Centres, initiatives aimed at deepening and disseminating knowledge of these disciplines for the purposes of scientific, social, economic and cultural progress.

ECONOMIC AND FINANCIAL INDICATORS

2017/2021

Index	2021	2020	2019	2018	2017
Net Sales	14.439.095	5.982.692,95	3.662.079,09	2.628.924,62	
EBITDA / Net Sales	40,56%	14,13%	13,13%	19,69%	13,27%
EBIT	5.620.274,58	683.251,08	370.516,00	248.770,00	293.133,69
EBITDA	5.856.681,35	845.652,59	481.007,00	347.005,00	371.930,40
ROE	89,88%	37,06%	24,29%	16,51%	25,76%
ROI	42,07%	10,82%	11,09%	7,61%	8,41%
ROS	38,92%	11,42%	10,12%	9,46%	10,21%
ROA	82,98%	16,53%	13,95%	10,04%	18,32%
ROCE	67,88%	22,02%	14,50%	11,26%	10,72%
Capitalization rate	0,49	0,39	0,59	0,54	0,49
Operating Profit Margin Normal (OPM)	39,92%	10,12%	9,46%	9,46%	10,21%
Net Profit Margin (NPM)	28,01%	9,11%	7,77%	6,87%	8,54%
Debt Ratio	51,18%	40,65%	46,01%	46,01%	50,50%
Debt to Equity	1,05	1,55	0,68	0,89	1,02
Leverage	2,05	2,55	1,68	1,85	2,02
Total solvency ratio	1,95	1,65	2,46	2,10	1,98
Current Ratio	1,88	1,48	4,25	3,48	8,06
Acid Test	1,80	1,40	3,80	2,80	6,25

SCIENTIFIC PUBLICATIONS

2019/2022

Efficacy and safety of a quadrivalent influenza vaccine in children aged 6-35 months: A global, multiseasonal, controlled, randomized Phase III study.
Esposito S, Nauta J, Lapini G, Montomoli E, van de Witte S.
Vaccine. 2022 Mar 18:S0264-410X(22)00263-8. doi: 10.1016/j.vaccine.2022.02.088. PMID: 35315323

A serological investigation in Southern Italy: was SARS-CoV-2 circulating in late 2019?
Trombetta CM, Marchi S, Viviani S, Manenti A, Casa E, Dapporto F, Remarque EJ, Bollati V, Manini I, Lazzeri G, Montomoli E.
Hum Vaccin Immunother. 2022 Mar 15:1-9. doi: 10.1080/21645515.2022.2047582. PMID: 35289714

Yellow Fever: Origin, Epidemiology, Preventive Strategies and Future Prospects.
Gianchecchi E, Cianchi V, Torelli A, Montomoli E.
Vaccines (Basel). 2022 Feb 27;10(3):372. doi: 10.3390/vaccines10030372.PMID: 35335004. Review.

Evaluation and correlation between SARS-CoV-2 neutralizing and binding antibodies in convalescent and vaccinated subjects.
Manenti A, Gianchecchi E, Dapporto F, Leonardi M, Cantaloni P, Fattorini F, Piu P, Bollati V, Pastorino U, Apolone G, Sozzi G, Montomoli E.
J Immunol Methods. 2022 Jan;500:113197. doi: 10.1016/j.jim.2021.113197. Epub 2021 Nov 26. PMID: 34843712

Timeline of SARS-CoV-2 Spread in Italy: Results from an Independent Serological Retesting.
Montomoli E, Apolone G, Manenti A, Boeri M, Suatoni P, Sabia F, Marchianò A, Bollati V, Pastorino U, Sozzi G.
Viruses. 2021 Dec 30;14(1):61. doi: 10.3390/v14010061. PMID: 35062265

Epidemic Preparedness-Leishmania tarentolae as an Easy-to-Handle Tool to Produce Antigens for Viral Diagnosis: Application to COVID-19.
Varotto-Boccazzi I, Manenti A, Dapporto F, Gourlay LJ, Bisaglia B, Gabrieli P, Forneris F, Faravelli S, Bollati V, Rubolini D, Zuccotti G, Montomoli E, Epis S, Bandi C.
Front Microbiol. 2021 Dec 13;12:736530. doi: 10.3389/fmicb.2021.736530. eCollection 2021. PMID: 34966362

Immunity to measles in Italian children and adolescents: a persistent problem in view of measles elimination.
Marchi S, Monti M, Viviani S, Remarque EJ, Esposito S, Principi N, Ruggiero L, Montomoli E, Trombetta CM.
J Public Health (Oxf). 2021 Dec 10;43(4):e601-e609. doi: 10.1093/pubmed/fdaa153. PMID: 32915205

Hybrid immunity improves B cells and antibodies against SARS-CoV-2 variants.
Andreano E, Paciello I, Piccini G, Manganaro N, Pileri P, Hyseni I, Leonardi M, Pantano E, Abbiento V, Benincasa L, Giglioli G, De Santi C, Fabbiani M, Rancan I, Tumbarello M, Montagnani F, Sala C, Montomoli E, Rappuoli R.
Nature. 2021 Dec;600(7889):530-535. doi: 10.1038/s41586-021-04117-7. Epub 2021 Oct 20. PMID: 34670266

Detection of antibodies against influenza D virus in swine veterinarians in Italy in 2004.
Trombetta CM, Montomoli E, Di Bartolo I, Ostanello F, Chiapponi C, Marchi S.
J Med Virol. 2021 Nov 23. doi: 10.1002/jmv.27466. Online ahead of print. PMID: 34811769

System-oriented optimization of multi-target 2,6-diaminopurine derivatives: Easily accessible broad-spectrum antivirals active against flaviviruses, influenza virus and SARS-CoV-2.
Vicenti I, Martina MG, Boccuto A, De Angelis M, Giavarini G, Dragoni F, Marchi S, Trombetta CM, Crespan E, Maga G, Eydoux C, Decroly E, Montomoli E, Nencioni L, Zazzi M, Radi M.
Eur J Med Chem. 2021 Nov 15;224:113683. doi: 10.1016/j.ejmech.2021.113683. Epub 2021 Jul 5. PMID: 34273661

Antibodies specific to SARS-CoV-2 proteins N, S and E in COVID-19 patients in the normal population and in historical samples.
Szymczak A, Jędruchniewicz N, Torelli A, Kaczmarzyk-Radka A, Coluccio R, Kłak M, Konieczny A, Ferenc S, Witkiewicz W, Montomoli E, Miernikiewicz P, Bąchor R, Dąbrowska K.
J Gen Virol. 2021 Nov;102(11):001692. doi: 10.1099/jgv.0.001692. PMID: 34816794

The theory and practice of the viral dose in neutralization assay: Insights on SARS-CoV-2 "doublethink" effect.
Manenti A, Molesti E, Maggetti M, Torelli A, Lapini G, Montomoli E.
J Virol Methods. 2021 Nov;297:114261. doi: 10.1016/j.jviromet.2021.114261. Epub 2021 Aug 14.PMID: 34403775

Estimation of Reduction in Influenza Vaccine Effectiveness Due to Egg-Adaptation Changes-Systematic Literature Review and Expert Consensus.
Ortiz de Lejarazu-Leonardo R, Montomoli E, Wojcik R, Christopher S, Mosnier A, Pariani E, Trilla Garcia A, Fickenscher H, Gärtner BC, Jandhyala R, Zambon M, Moore C.
Vaccines (Basel). 2021 Oct 29;9(11):1255. doi: 10.3390/vaccines9111255. PMID: 34835186. Review.

Reply to comments on: Unexpected detection of SARS-CoV-2 antibodies in the prepandemic period in Italy.
Sozzi G, Manenti A, Boeri M, Sabia F, Montomoli E, Pastorino U, Apolone G.
Tumori. 2021 Oct;107(5):472-473. doi:

10.1177/03008916211009688. Epub 2021 Apr 20.PMID: 33877026

Unexpected detection of SARS-CoV-2 antibodies in the prepandemic period in Italy.
Apolone G, Montomoli E, Manenti A, Boeri M, Sabia F, Hyseni I, Mazzini L, Martinuzzi D, Cantone L, Milanese G, Sestini S, Suatoni P, Marchianò A, Bollati V, Sozzi G, Pastorino U. Tumori. 2021 Oct;107(5):446-451. doi: 10.1177/0300891620974755. Epub 2020 Nov 11. PMID: 33176598

Progress on Seasonal and Pandemic Influenza Vaccines.
Trombetta CM, Montomoli E.
Vaccines (Basel). 2021 Sep 24;9(10):1068. doi: 10.3390/vaccines9101068. PMID: 34696176

Measles immunity over two decades in two large Italian Regions: How far is the elimination goal?
Marchi S, Remarque EJ, Viviani S, Rizzo C, Monteverde Spencer GT, Coluccio R, Montomoli E, Trombetta CM.
Vaccine. 2021 Sep 24;39(40):5928-5933. doi: 10.1016/j.vaccine.2021.08.001. Epub 2021 Aug 26. PMID: 34456073

Epidemiological and virological surveillance of Severe Acute Respiratory Infections in the 2019/2020 season in Siena, Tuscany, Italy.
Capitani E, Montomoli E, Camarri A, Bova G, Capecchi PL, Mercone A, Nante N, Manini I.
J Prev Med Hyg. 2021 Sep 15;62(3):E782-E788. doi: 10.15167/2421-4248/jpmh2021.62.3.2297. eCollection 2021 Sep. PMID: 34909509

SARS-CoV-2 escape from a highly neutralizing COVID-19 convalescent plasma.
Andreano E, Piccini G, Licastro D, Casalino L, Johnson NV, Paciello I, Dal Monego S, Pantano E, Manganaro N, Manenti A, Manna R, Casa E, Hyseni I, Benincasa L, Montomoli E, Amaro RE, McLellan JS, Rappuoli R.
Proc Natl Acad Sci U S A. 2021 Sep 7;118(36):e2103154118. doi: 10.1073/pnas.2103154118. PMID: 34417349

Seroprevalence of antibodies to cytomegalovirus in pregnant women in the Apulia region (Italy).
Trombetta CM, Viviani S, Montomoli E, Marchi S.
J Prev Med Hyg. 2021 Jul 30;62(2):E372-E376. doi: 10.15167/2421-4248/jpmh2021.62.2.1800. eCollection 2021 Jun. PMID: 34604575

Evaluation of the automated LIAISON® SARS-CoV-2 TrimericS IgG assay for the detection of circulating antibodies.
Bonelli F, Blocki FA, Bunnell T, Chu E, De La O A, Grenache DG, Marzucchi G, Montomoli E, Okoye L, Pallavicini L, Streva VA, Torelli A, Wagner A, Zanin D, Zierold C, Wassenberg JJ.
Clin Chem Lab Med. 2021 Mar 15;59(8):1463-1467. doi: 10.1515/cclm-2021-0023. Print 2021 Jul 27. PMID: 33711225

Serum Neutralizing Activity against B.1.1.7, B.1.351, and P.1 SARS-CoV-2 Variants of Concern in Hospitalized COVID-19 Patients.
Trombetta CM, Marchi S, Viviani S, Manenti A, Benincasa L, Ruello A, Bombardieri E, Vicenti I, Zazzi M, Montomoli E.
Viruses. 2021 Jul 12;13(7):1347. doi: 10.3390/v13071347. PMID: 34372553

West Nile Virus Seroprevalence in the Italian Tuscany Region from 2016 to 2019.
Marchi S, Montomoli E, Viviani S, Giannecchini S, Stincarelli MA, Lanave G, Camero M, Alessio C, Coluccio R, Trombetta CM.
Pathogens. 2021 Jul 5;10(7):844. doi: 10.3390/pathogens10070844. PMID: 34357994

Characterization of antibody response in asymptomatic and symptomatic SARS-CoV-2 infection.
Marchi S, Viviani S, Remarque EJ, Ruello A, Bombardieri E, Bollati V, Milani GP, Manenti A, Lapini G, Rebuffat A, Montomoli E, Trombetta CM.
PLoS One. 2021 Jul 2;16(7):e0253977. doi: 10.1371/journal.pone.0253977. eCollection 2021. PMID: 34214116

Surveillance for Severe Acute Respiratory Infections among Hospitalized Subjects from 2015/2016 to 2019/2020 Seasons in Tuscany, Italy.
Manini I, Camarri A, Marchi S, Trombetta CM, Vicenti I, Dragoni F, Lazzeri G, Bova G, Montomoli E, Capecchi PL.
Int J Environ Res Public Health. 2021 Apr 7;18(8):3875. doi: 10.3390/ijerph18083875. PMID: 33917106

Extremely potent human monoclonal antibodies from COVID-19 convalescent patients.
Andreano E, Nicastri E, Paciello I, Pileri P, Manganaro N, Piccini G, Manenti A, Pantano E, Kabanova A, Troisi M, Vacca F, Cardamone D, De Santi C, Torres JL, Ozorowski G, Benincasa L, Jang H, Di Genova C, Depau L, Brunetti J, Agrati C, Capobianchi MR, Castilletti C, Emiliozzi A, Fabbiani M, Montagnani F, Bracci L, Sautto G, Ross TM, Montomoli E, Temperton N, Ward AB, Sala C, Ippolito G, Rappuoli R.
Cell. 2021 Apr 1;184(7):1821-1835.e16. doi: 10.1016/j.cell.2021.02.035. Epub 2021 Feb 23. PMID: 33667349

Detection of IgM, IgG and SARS-CoV-2 RNA among the personnel of the University of Milan, March through May 2020: the UNICORN study.
Milani GP, Rota F, Favero C, Dioni L, Manenti A, Hoxha M, Pariani E, Albetti B, Pesatori AC, Montomoli E, Bollati V; UNICORN Consortium investigators.
BMJ Open. 2021 Mar 24;11(3):e046800. doi: 10.1136/bmjopen-2020-046800. PMID: 33762247

Effect of Repeated Freeze-Thaw Cycles on Influenza Virus Antibodies.
Torelli A, Gianchecchi E, Monti M, Piu P, Barneschi I, Bonifazi C, Coluccio R, Ganfini L, La Magra LM, Marconi S, Marzucchi G, Pace R, Palladino L, Biagi B, Montomoli E.
Vaccines (Basel). 2021 Mar 17;9(3):267. doi: 10.3390/vaccines9030267. PMID: 33802846

Immunogenicity of Calvenza-03 EIV/EHV® Vaccine in Horses: Comparative In Vivo Study.
Pavulraj S, Bergmann T, Trombetta CM, Marchi S, Montomoli E, Alami SSE, Ragni-Alunni R, Osterrieder N, Azab W.
Vaccines (Basel). 2021 Feb 17;9(2):166. doi: 10.3390/vaccines9020166. PMID: 33671378

Comparative analyses of SARS-CoV-2 binding (IgG, IgM, IgA) and neutralizing antibodies from human serum samples.
Mazzini L, Martinuzzi D, Hyseni I, Benincasa L, Molesti E, Casa E, Lapini G, Piu P, Trombetta CM, Marchi S, Razzano I, Manenti A, Montomoli E.
J Immunol Methods. 2021 Feb;489:112937. doi: 10.1016/j.jim.2020.112937. Epub 2020 Nov 28. PMID: 33253698

Correlation of Influenza B Haemagglutination Inhibiton, Single-Radial Haemolysis and Pseudotype-Based Microneutralisation Assays for Immunogenicity Testing of Seasonal Vaccines.
Carnell GW, Trombetta CM, Ferrara F, Montomoli E, Temperton NJ.
Vaccines (Basel). 2021 Jan 28;9(2):100. doi: 10.3390/vaccines9020100. PMID: 33525543

Maraviroc as a potential HIV-1 latency-reversing agent in cell line models and ex vivo CD4 T cells.
Vicenti I, Dragoni F, Monti M, Trombetta CM, Giannini A, Boccuto A, Saladini F, Rossetti B, De Luca A, Ciabattini A, Pastore G, Medaglini D, Orofino G, Montomoli E, Zazzi M.

J Gen Virol. 2021 Jan;102(1). doi: 10.1099/jgv.0.001499. PMID: 33048041

SARS-CoV-2 escape in vitro from a highly neutralizing COVID-19 convalescent plasma.
Andreano E, Piccini G, Licastro D, Casalino L, Johnson NV, Paciello I, Dal Monego S, Pantano E, Manganaro N, Manenti A, Manna R, Casa E, Hyseni I, Benincasa L, Montomoli E, Amaro RE, McLellan JS, Rappuoli R.
bioRxiv. 2020 Dec 28:2020.12.28.424451. doi: 10.1101/2020.12.28.424451. Preprint. PMID: 33398278

Serological follow-up of SARS-CoV-2 asymptomatic subjects.
Milani GP, Dioni L, Favero C, Cantone L, Macchi C, Delbue S, Bonzini M, Montomoli E, Bollati V; UNICORN Consortium.
Sci Rep. 2020 Nov 18;10(1):20048. doi: 10.1038/s41598-020-77125-8. PMID: 33208819

Development and Assessment of a Pooled Serum as Candidate Standard to Measure Influenza A Virus Group 1 Hemagglutinin Stalk-Reactive Antibodies.
Carreño JM, McDonald JU, Hurst T, Rigsby P, Atkinson E, Charles L, Nachbagauer R, Behzadi MA, Strohmeier S, Coughlan L, Aydillo T, Brandenburg B, García-Sastre A, Kaszas K, Levine MZ, Manenti A, McDermott AB, Montomoli E, Muchene L, Narpala SR, Perera RAPM, Salisch NC, Valkenburg SA, Zhou F, Engelhardt OG, Krammer F.
Vaccines (Basel). 2020 Nov 9;8(4):666. doi: 10.3390/vaccines8040666. PMID: 33182279

Serologically-Based Evaluation of Cross-Protection Antibody Responses among Different A(H1N1) Influenza Strains.
Marchi S, Manini I, Kistner O, Piu P, Remarque EJ, Manenti A, Biuso F, Carli T, Lazzeri G, Montomoli E, Trombetta CM.
Vaccines (Basel). 2020 Nov 5;8(4):656. doi: 10.3390/vaccines8040656. PMID: 33167390

A review of COVID-19 vaccines in development: 6 months into the pandemic.
Sanicas M, Sanicas M, Diop D, Montomoli E.
Pan Afr Med J. 2020 Oct 5;37:124. doi: 10.11604/pamj.2020.37.124.24973. eCollection 2020. PMID: 33425157. Review.

Evaluation of SARS-CoV-2 neutralizing antibodies using a CPE-based colorimetric live virus micro-neutralization assay in human serum samples.
Manenti A, Maggetti M, Casa E, Martinuzzi D, Torelli A, Trombetta CM, Marchi S, Montomoli E.
J Med Virol. 2020 Oct;92(10):2096-2104. doi: 10.1002/jmv.25986. Epub 2020 May 17. PMID: 32383254

Measles Susceptibility in Apulia: The Italian Mirror?
Marchi S, Viviani S, Montomoli E, Trombetta CM.
J Infect Dis. 2020 Sep 14;222(8):1414-1415. doi: 10.1093/infdis/jiaa212. PMID: 32343809

Characterisation of SARS-CoV-2 Lentiviral Pseudotypes and Correlation between Pseudotype-Based Neutralisation Assays and Live Virus-Based Micro Neutralisation Assays.
Hyseni I, Molesti E, Benincasa L, Piu P, Casa E, Temperton NJ, Manenti A, Montomoli E. Viruses. 2020 Sep 10;12(9):1011. doi: 10.3390/v12091011. PMID: 32927639

Pathogenic signature of invasive non-typhoidal Salmonella in Africa: implications for vaccine development.
Piccini G, Montomoli E.
Hum Vaccin Immunother. 2020 Sep 1;16(9):2056-2071. doi: 10.1080/21645515.2020.1785791. Epub 2020 Jul 21. PMID: 32692622. Review.

The impact of candidate influenza virus and egg-based manufacture on vaccine effectiveness: Literature review and expert consensus.
Rajaram S, Wojcik R, Moore C, Ortiz de Lejarazu R, de Lusignan S, Montomoli E, Rossi A, Pérez-Rubio A, Trilla A, Baldo V, Jandhyala R, Kassianos G.
Vaccine. 2020 Aug 27;38(38):6047-6056. doi: 10.1016/j.vaccine.2020.06.021. Epub 2020 Jun 26. PMID: 32600916

SARS-CoV-2 infection among asymptomatic homebound subjects in Milan, Italy.
Milani GP, Montomoli E; UNICORN Consortium investigators, Bollati V, Albetti B, Bandi C, Bellini T, Bonzini M, Buscaglia M, Cantarella C, Cantone L, Carugno M, Casartelli S, Cavaletti G, D'Alessandro S, De Chiara F, Delbue S, Dioni L, Eberini I, Favero C, Ferrari L, Ferraroni M, Galastri L, Galli C, Hoxha M, Iodice S, La Vecchia C, Macchi C, Manini I, Marchi S, Mariani J, Pariani E, Pesatori AC, Rota F, Ruscica M, Schioppo T, Tarantini L, Trombetta CM, Valsecchi MG, Vicenzi M, Zanchetta G.
Eur J Intern Med. 2020 Aug;78:161-163. doi: 10.1016/j.ejim.2020.06.010. Epub 2020 Jun 9. PMID: 32564906

Moderate Vaccine Effectiveness against Severe Acute Respiratory Infection Caused by A(H1N1)pdm09 Influenza Virus and No Effectiveness against A(H3N2) Influenza Virus in the 2018/2019 Season in Italy.
Rizzo C, Gesualdo F, Loconsole D, Pandolfi E, Bella A, Orsi A, Guarona G, Panatto D, Icardi G, Napoli C, Orsi GB, Manini I, Montomoli E, Campagna I, Russo L, Alfonsi V, Puzelli S, Reale A, Raucci U, Piccioni L, Concato C, Ciofi Degli Atti ML, Villani A, Chironna M, Tozzi AE.
Vaccines (Basel). 2020 Jul 30;8(3):427. doi: 10.3390/vaccines8030427. PMID: 32751584

Seroprevalence of Hepatitis E Virus in Forestry Workers from Trentino-Alto Adige Region (Northern Italy).
Monini M, Ostanello F, Dominicis A, Tagliapietra V, Vaccari G, Rizzoli A, Trombetta CM, Montomoli E, Di Bartolo I.
Pathogens. 2020 Jul 14;9(7):568. doi: 10.3390/pathogens9070568. PMID: 32674277

Immunogenicity Measures of Influenza Vaccines: A Study of 1164 Registered Clinical Trials.
Domnich A, Manini I, Panatto D, Calabrò GE, Montomoli E.
Vaccines (Basel). 2020 Jun 19;8(2):325. doi: 10.3390/vaccines8020325. PMID: 32575440

Zika Virus in West Africa: A Seroepidemiological Study between 2007 and 2012.
Marchi S, Viviani S, Montomoli E, Tang Y, Boccuto A, Vicenti I, Zazzi M, Sow S, Diallo A, Idoko OT, Bhat N, Trombetta CM.
Viruses. 2020 Jun 13;12(6):641. doi: 10.3390/v12060641. PMID: 32545775

The enemy at home: leishmaniasis in the Mediterranean basin, Italy on the focus.
Gianchecchi E, Montomoli E.
Expert Rev Anti Infect Ther. 2020 Jun;18(6):563-577. doi: 10.1080/14787210.2020.1751611. Epub 2020 Apr 17. PMID: 32249634 Review.

Exploring the Implication of DDX3X in DENV Infection: Discovery of the First-in-Class DDX3X Fluorescent Inhibitor.
Brai A, Boccuto A, Monti M, Marchi S, Vicenti I, Saladini F, Trivisani CI, Pollutri A, Trombetta CM, Montomoli E, Riva V, Garbelli A, Nola EM, Zazzi M, Maga G, Dreassi E, Botta M.
ACS Med Chem Lett. 2020 Apr 9;11(5):956-962. doi: 10.1021/acsmedchemlett.9b00681. eCollection 2020 May 14. PMID: 32435411

Evaluation of Varicella Immunity during Pregnancy in Apulia Region, Southern Italy.
Trombetta CM, Montomoli E, Viviani S, Coluccio R, Marchi S.
Vaccines (Basel). 2020 May 10;8(2):214.

doi: 10.3390/vaccines8020214. PMID: 32397576

Elimination of congenital rubella: a seroprevalence study of pregnant women and women of childbearing age in Italy.
Marchi S, Viviani S, Montomoli E, Trombetta CM.
Hum Vaccin Immunother.
2020 Apr 2;16(4):895-898. doi: 10.1080/21645515.2019.1688041. Epub 2019 Nov 26. PMID: 31674859

Comparison of influenza-specific neutralizing antibody titers determined using different assay readouts and hemagglutination inhibition titers: good correlation but poor agreement.
Sicca F, Martinuzzi D, Montomoli E, Huckriede A.
Vaccine. 2020 Mar 4;38(11):2527-2541. doi: 10.1016/j.vaccine.2020.01.088. Epub 2020 Feb 7. PMID: 32044163

Immunogenicity and safety of quadrivalent versus trivalent inactivated subunit influenza vaccine in children and adolescents: A phase III randomized study.
Vesikari T, Nauta J, Lapini G, Montomoli E, van de Witte S.
Int J Infect Dis. 2020 Mar;92:29-37. doi: 10.1016/j.ijid.2019.12.010. Epub 2019 Dec 12. PMID: 31838217 Clinical Trial.

A Phase 2/3 double blinded, randomized, placebo-controlled study in healthy adult participants in Vietnam to examine the safety and immunogenicity of an inactivated whole virion, alum adjuvanted, A(H5N1) influenza vaccine (IVACFLU-A/H5N1).
Duong TN, Thiem VD, Anh DD, Cuong NP, Thang TC, Huong VM, Chien VC, Phuong NTL, Montomoli E, Holt R, Scorza FB, Flores J, Tewari T.
Vaccine. 2020 Feb 5;38(6):1541-1550. doi: 10.1016/j.vaccine.2019.11.059. Epub 2019 Dec 4. PMID: 31812464 Clinical Trial.

Influenza Anti-Stalk Antibodies: Development of a New Method for the Evaluation of the Immune Responses to Universal Vaccine.
Manenti A, Maciola AK, Trombetta CM, Kistner O, Casa E, Hyseni I, Razzano I, Torelli A, Montomoli E.
Vaccines (Basel). 2020 Jan 24;8(1):43. doi: 10.3390/vaccines8010043. PMID: 31991681

Toxoplasma gondii in women of childbearing age and during pregnancy: seroprevalence study in Central and Southern Italy from 2013 to 2017.
Fanigliulo D, Marchi S, Montomoli E, Trombetta CM.
Parasite. 2020;27:2. doi: 10.1051/parasite/2019080. Epub 2020 Jan 14. PMID: 31934847

Influenza D Virus: Serological Evidence in the Italian Population from 2005 to 2017.
Trombetta CM, Marchi S, Manini I, Kistner O, Li F, Piu P, Manenti A, Biuso F, Sreenivasan C, Druce J, Montomoli E.
Viruses. 2019 Dec 27;12(1):30. doi: 10.3390/v12010030. PMID: 31892120

Mapping Host-Related Correlates of Influenza Vaccine-Induced Immune Response: An Umbrella Review of the Available Systematic Reviews and Meta-Analyses.
Domnich A, Manini I, Calabrò GE, Waure C, Montomoli E.
Vaccines (Basel). 2019 Dec 13;7(4):215. doi: 10.3390/vaccines7040215. PMID: 31847273

Recombinant Haemagglutinin Derived From the Ciliated Protozoan Tetrahymena thermophila Is Protective Against Influenza Infection.
Jawinski K, Hartmann M, Singh C, Kinnear E, Busse DC, Ciabattini A, Fiorino F, Medaglini D, Trombetta CM, Montomoli E, Contreras V, Le Grand R, Coiffier C, Primard C, Verrier B, Tregoning JS.
Front Immunol. 2019 Nov 13;10:2661. doi: 10.3389/fimmu.2019.02661. eCollection 2019. PMID: 31798589

Pertussis over two decades: seroepidemiological study in a large population of the Siena Province, Tuscany Region, Central Italy.
Marchi S, Montomoli E, Remarque EJ, Monteverde Spencer GT, Azzarello A, Viviani S, Trombetta CM.
BMJ Open. 2019 Oct 30;9(10):e032987. doi: 10.1136/bmjopen-2019-032987. PMID: 31666278

Use of lentiviral pseudotypes as an alternative to reassortant or Triton X-100-treated wild-type Influenza viruses in the neuraminidase inhibition enzyme-linked lectin assay.
Biuso F, Palladino L, Manenti A, Stanzani V, Lapini G, Gao J, Couzens L, Eichelberger MC, Montomoli E.
Influenza Other Respir Viruses. 2019 Sep;13(5):504-516. doi: 10.1111/irv.12669. PMID: 31411006

How to assess the effectiveness of nasal influenza vaccines? Role and measurement of sIgA in mucosal secretions.
Gianchecchi E, Manenti A, Kistner O, Trombetta C, Manini I, Montomoli E.
Influenza Other Respir Viruses. 2019 Sep;13(5):429-437. doi: 10.1111/irv.12664. Epub 2019 Jun 21. PMID: 31225704. Review.

Challenges in the development of egg-independent vaccines for influenza.
Trombetta CM, Marchi S, Manini I, Lazzeri G, Montomoli E.
Expert Rev Vaccines. 2019 Jul;18(7):737-750. doi: 10.1080/14760584.2019.1639503. Epub 2019 Jul 22. PMID: 31265333 Review.

Low prevalence of antibodies against pertussis in pregnant women in Italy.
Marchi S, Viviani S, Montomoli E, Trombetta CM.
Lancet Infect Dis. 2019 Jul;19(7):690. doi: 10.1016/S1473-3099(19)30269-5. PMID: 31250813

Effectiveness of the trivalent MF59 adjuvated influenza vaccine in preventing hospitalization due to influenza B and A(H1N1)pdm09 viruses in the elderly in Italy, 2017 - 2018 season.
Bella A, Gesualdo F, Orsi A, Arcuri C, Chironna M, Loconsole D, Napoli C, Orsi GB, Manini I, Montomoli E, Alfonsi V, Castrucci MR, Rizzo C.
Expert Rev Vaccines. 2019 Jun;18(6):671-679. doi: 10.1080/14760584.2019.1627206. Epub 2019 Jun 13. PMID: 31159616

Vaccine Production in Africa: A Feasible Business Model for Capacity Building and Sustainable New Vaccine Introduction.
Makenga G, Bonoli S, Montomoli E, Carrier T, Auerbach J.
Front Public Health. 2019 Mar 20;7:56. doi: 10.3389/fpubh.2019.00056. eCollection 2019. PMID: 30949465

Measles in pregnancy: a threat for Italian women?
Marchi S, Monti M, Viviani S, Montomoli E, Trombetta CM.
Hum Vaccin Immunother.
2019;15(12):2851-2853. doi: 10.1080/21645515.2019.1621146. Epub 2019 Jun 20. PMID: 31184988

The use of cell-mediated immunity for the evaluation of influenza vaccines: an upcoming necessity.
Gianchecchi E, Torelli A, Montomoli E.
Hum Vaccin Immunother.
2019;15(5):1021-1030. doi: 10.1080/21645515.2019.1565269. Epub 2019 Feb 20. PMID: 30614754

VISMEDERI
ANALYSES FOR LIFE IMPROVEMENT

VISMEDERI SRL Headquarter
Via Franco Ferrini 53
Loc. Tognazza – 53035 Monteriggioni
(Siena) – Italy
Phone: +39 0577 1520990

VISMEDERI SRL Laboratories
Strada del Petriccio e Belriguardo 35
53100 Siena – Italy
Phone: +39 0577 381253 / 55
Fax: +39 0577 381258

info@vismederi.com
www.vismederi.com