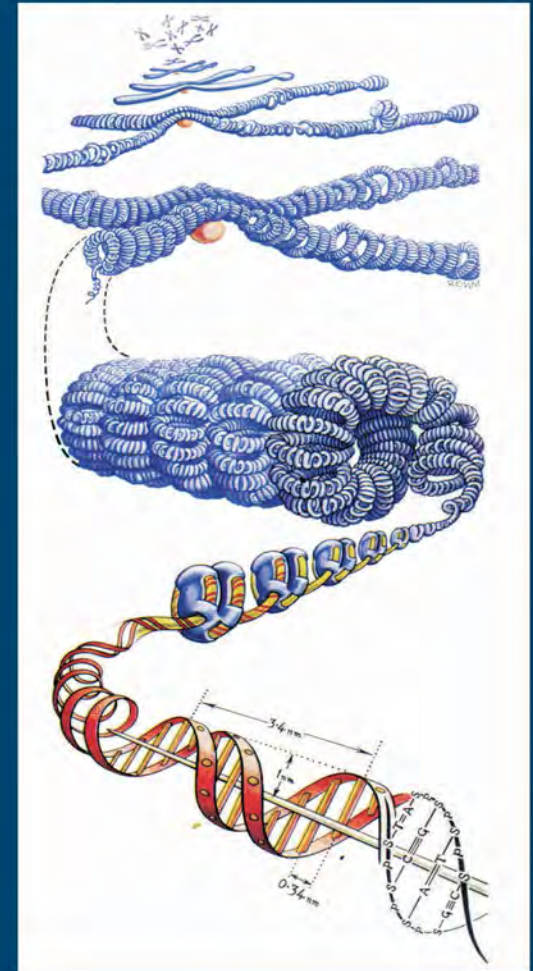


PREDICTIVE MEDICINE

After the discovery of DNA and following research on the DNA structure, a good number of illnesses have been genetically identified. It is this type of knowledge that has made it possible to develop another branch of medicine: predictive medicine. By knowing the individual's genetic heritage it is possible to determine the individual risk factors for developing specific diseases.

Consequently, it is possible to carry out the most effective strategy in order to ward off, or at least to minimize, the actual risk. The goal of this new medical model, therefore, does not only focus on the disease, but it is mainly aimed at the well-being of people and at maintaining such well-being by suggesting lifestyles and eating habits that suit the individual traits at best. In order to preserve our health, medicine must not only act as a therapy, but must also increasingly focus on prevention. As each individual's genetic heritage is unique, in order for prevention to be effective, it needs to be personalized. In other words, it needs to be modulated according to specific knowledge about the individual's genetic traits.



PREDICTIVE GENETICS

Nowadays it is possible for molecular biology to study each individual's genetic profile, i.e. the individual's DNA. It is therefore possible to identify any individual's response to the various types of stress that the body of the individual will be or may be subject to during his/her lifetime. Not only do these analyses make it possible to discover individual predisposition and inclination to developing a disease, but they also reveal how the individual metabolizes the substances absorbed from food and medicine intake.

This has nothing to do with fatalistically predicting destinies that are impossible to escape from.

Furthermore, genetic predisposition interacts with lifestyle and environmental influences. To know one's genetic inclination is a very important cognitive tool for self-defense and it provides all the most suitable indications for effectively achieving and maintaining optimal health and wellness, for removing or mitigating the illness itself, for example by intervening on one's own lifestyle.



PARTNERS

RESEARCH AND ANALYSIS



University of Milan



University of Bologna



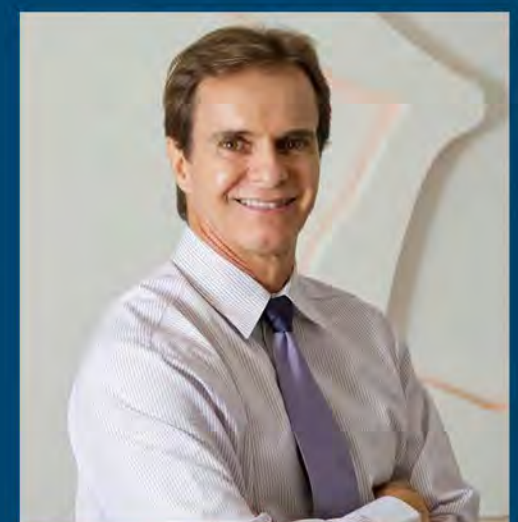
University of Ferrara



University of Modena and
Reggio Emilia

Dr. Julio Cesar Tavares Ferreira, M.D., Ph.D.

Graduated from the Federal University of Rio Grande do Sul (UFRS - Porto Alegre) Brazil;
General Surgeon;
Member of the Brazilian Board of Surgeons;
Specialization in Aesthetic Medicine at the International Association of Aesthetic Medicine;
Professor for the Specialization Course in Aesthetic Medicine at the International Association of Aesthetic Medicine;
Coordinator for the specialization courses in Aesthetic Medicine and Dermatology at the Farias Brito Faculty – Fortaleza;
Actual member of the Brazilian Aesthetic Medicine Society;
Member of the International Study Group on Carboxytherapy;
Holding member of the Brazilian Intradermotherapy Medical Society;
Specialized in Mesotherapy at the Argentinian Mesotherapy Society;
Member-Director of the Bodybuilding, Pilates and Complete Mixed Martial Arts Gym;
Owner of the Bioesthetic Clinic;
Dr. J. Tavares has held national and international conferences;
Dr. J. Tavares has published 5 Scientific articles and 1 book chapter ;
Scientific research studies mainly concerning techniques for collagen production stimulation, facial rejuvenation without resorting to surgery; studies concerning healthy nutrition combined to physical activity with the purpose of granting health together with quality of life.



THE LABORATORY

ngb | GENETICS

NGB Genetics S.r.l., Spin-off of the University of Ferrara, was established in 2006. It had been conceived by university researchers specialized in genetics and molecular biology that wished to create a DNA analysis company for the human, environmental, veterinary and agro-nutritional fields. The company also collaborates with Universities and public and private research institutes as a technical and scientific partner in research projects.

INTERNATIONAL TESTS

NGB Genetics frequently takes part in international comparisons, during which reference samples are randomly analyzed. Such samples are sent by the GEDNAP laboratory (German DNA Profiling Group), leader in Europe and in the world for the evaluation of analytical data produced by laboratories that operate in the forensic genetics field. These tests performed by an independent institute are an additional evaluation of the work carried out by the laboratory.

ngb | GENETICS
University of Ferrara spin-off



ISO/IEC 17025 ACCREDITED LABORATORY

LABORATORIO ACCREDITATO ISO/IEC 17025



LAB N° 3183



UNIVERSITY OF FERRARA

The University of Ferrara is one of the oldest universities in Italy: it was founded in 1391 by Marquis Alberto V d'Este.

PERSONALITIES THAT HAVE STUDIED IN FERRARA:

- Nicolaus Copernicus
- Giovanni Pico della Mirandola
- Paracelsus

LOCATIONS

FERRARA

University of Ferrara

RESEARCH AND DEVELOPMENT

BOLOGNA

Via Grieco, 5

EXPERIMENTATION

SMALL PRODUCTIONS

LODI

Parco Tecnologico Padano

LARGE PRODUCTIONS



NGB GENETIC SCIENTIFIC BOARD

Alessandra Bordoni MD, PhD

Professor of Human Nutrition and Applied Nutrition for the degree courses of Food Technologies, Faculty of Agricultural Sciences, University of Bologna (Italy).

Researcher for the Faculty of Agricultural Sciences, University of Bologna (Italy).

Member of the Board of the Italian Society of Human Nutrition (SINU).

Dr. Bordoni's research activity focuses on several topics concerning Nutrition, Nutritional Biochemistry, Nutrigenomics and Nutrigenetics. In these fields special attention was devoted to lipid metabolism, especially essential fatty acid metabolism, by performing studies on both humans and animals. In the early '90s, Dr. Bordoni began to use primary cell cultures as an experimental model system and started focusing her attention on cardiac cells and on the possibility of modifying their composition, lipid metabolism and response to exogenous agents by altering the lipid environment. She devoted special attention also to the study of oxidative damage and its prevention thanks to the intake of supplements containing exogenous antioxidants.

She studied the effect of the supplementation with green tea and selenium in humans, animals and cultured cardio myocytes. More than 100 contributions to the topics mentioned above were published on national and international journals.

Federico Licastro MD

Associate professor of Immunology, Department of Experimental Pathology, Faculty of Medicine, University of Bologna (Italy).

Member of International Association of Biomedical Gerontology.

Member of International Society of Neuro Immunology.

A.R.A.D. founder (Associazione per la Ricerca e l'Assistenza ai Dementi – Italian Association for Research and Assistance for the Mentally Infirm).

Research interests: Genetic inflammatory biomarkers in Myocardial Infarction;

Immune senescence in animal models and elderly Modulation of immune defects by dietary manipulations;

Immune mechanisms associated to Alzheimer's disease;

Genetic markers associated to the risk of Alzheimer's disease and cognitive deterioration;

Molecular biology of proteins associated to Neuro-degeneration and Neuro-protection.

Prof. L. Licastro was Immunopathology consultant for the Neuropathology Core at the Department of neurosciences, University of California, San Diego and member of the International Board for anti-inflammatory therapy in Alzheimer's disease.

Prof. Licastro is author of 250 publications and has held lectures and scientific presentations to Italian and International congresses and meetings.

Giorgio Bertorelle PhD

Associate Professor in Genetics, Department of Biology and Evolution, University of Ferrara (Italy).

President of the Italian Society for Evolutionary Biology.

Member of the Council of the Italian Genetics Association (AGI).

Dr. Bertorelle's research interests focus on the reconstruction of selective and demographic processes that shape the current and past patterns of genetic variation in different species.

In particular:

the development and analysis of statistical methods useful to understand genetic variation;

the analysis of genetic variation in different human groups;

the analysis of genetic variation in animal species with implications for their preservation and management. Dr. G. Bertorelle is author of more than 50 publications on peer-reviewed journals, 10 publications in peer-reviewed books and has presented lectures and scientific communications to Italian and International congresses and meetings.

He was invited as a speaker in the following foreign Universities: Geneva (Switzerland), Berna (Switzerland), Montpellier (France), Berkeley (USA), Los Angeles (USA), Cardiff (UK), Chiang Mai (Thailand), Edmonton (Canada).

Silvia Fuselli PhD

Assistant Professor, Laboratory of Population Genetics, University of Ferrara (Italy).

Dr. Fuselli's research interests focus primarily on the study of genetic structure of variable response to pharmaceuticals in a worldwide population sample, in collaboration with professor Antti Sajantila, Laboratory of Forensic Biology, University of Helsinki (Finland) and professor Guido Barbujani, University of Ferrara (Italy).

She is investigating the role of Pharmacogenetics for the prediction of anticholinesterase treatment in Alzheimer's patients, in collaboration with the Neuroscience Department, Azienda Ospedale-Università S. Anna, Ferrara (Italy).

She was involved in the development of new high-throughput methodology for CYP2D6 genotyping as a part of a collaboration project on population and evolution between the Molecular Population Genetics Laboratory of the University of Ferrara and the Laboratory of Forensic Biology of the University of Helsinki (Prof. Antti Sajantila).

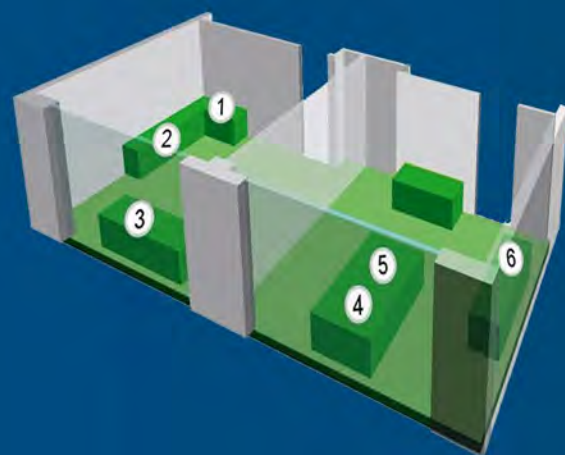
Dr. S. Fuselli is author of more than 10 publications on peer-reviewed journals and presented lectures and scientific communications to Italian and International congresses and meetings.

LODI



PTP GENOMICS PLATFORM (PGP) PRESENTATION

The PTP Genomics Platform (PGP) was set up in collaboration with European leaders in the field of genomics analysis and automation. A high level of instrument automation and a sophisticated traceability system for the analyzed samples and obtained results, allows to process up to 800 samples and to perform up to 5.000 analysis a day. Therefore, PGP represents as a powerful new centre for the genomic and molecular analysis.



1 - AB 7900 Quantitative gene expression analysis (Real-Time PCR) and genotyping (allelic discrimination)

2 - AB 3730 High-throughput genotyping analysis using molecular markers (SNPs, SSRs, TILLING)

3 - TECAN FREEDOM EVO-150G High-throughput preparation of samples for molecular genomics analysis

4 - ABI 9700 Amplification of nucleic acids

5 - EPPENDORF MASTERCYCLERS Amplification of nucleic acids

6 - TECAN FREEDOM EVO-150E Automated extraction and quantification of DNA and RNA



ILLUMINA BEADXPRESS
can analyse up to 3.072 SNP
loci simultaneously
and generate over 300.000
genotypes in few hours

ION PROTON SEQUENCER
is based on the next
generation of the
semiconductor sequencing
technology



HUMAN



MOLECULAR DIAGNOSTICS

Pre-implantation Genetic Diagnosis (PGD)
Prenatal Diagnosis
Reproductive genetics
Molecular diagnosis of Infectious Diseases
Paternity and Consanguinity testing

PREDICTIVE AND ANTI-AGE MEDICINE

Predictive Genetics
Pharmacogenetics
Nutrigenetics

FORENSIC GENETICS

Individual genetic Profiles identification
DNA Identification
Paternity Analysis

AGRIFOOD



QUALITY CONTROL

Identification of species in food products
Genetic traceability of food products
Identification of species contents in food products

SAFETY CONTROL

Identification of pathogens in food and water

BIODIVERSITY PRESERVATION

Preservation of the genetic diversity of domestic animals and natural stocks of fish as a food resources

ANIMAL



VETERINARY(Horses, Birds of Prey, etc.)

Diagnosis of genetic diseases
Diagnosis of infectious
Diagnosis of infectious diseases
Paternity analysis

CONSERVATION GENETICS

Conservation genetics studies to preserve natural populations or to manage captive breeding programs

FORENSIC GENETICS

Identification of individual genetic profiles
DNA Bank
Poaching



IS IN COMPLIANCE WITH THE STANDARD

UNI EN ISO 9001:2008

FOR THE FOLLOWINGS ACTIVITIES



EA: 29a

Sales of human genetic test: ADN - ARN analisys for standard deviations identifications. Sales of food supplements and cosmetics

ngb | GENETICS

University of Ferrara spin-off



**Parco
Tecnologico
Padano**

La ricerca si fa impresa

Entrepreneurial research in ag-biotech

ISO/IEC 17025 ACCREDITED LABORATORY

LABORATORIO ACCREDITATO ISO/IEC 17025



LAB N° 1183

The software needed for working out personalised diets is available on request

NUTRIDIETA

The software was developed in collaboration with the Department of Food Science at the University of Bologna.

MEDICAL DEVICE

*Registered with the
Italian Ministry of Health*

