



BIOSCIENTIA
INTERNATIONAL





- **Bioscientia Healthcare Group** based in Ingelheim near Frankfurt, Germany, is one of Europe's largest providers of reference laboratory services.
- **Bioscientia** - founded in 1970 - has built its reputation around a philosophy of medical excellence and quality leadership.
- **Bioscientia** - Solutions for labs - through our network of local offices and agents in many countries, we are able to assist our clients with any queries they may have directly on their doorstep; just a local phone call away.
- **Bioscientia offers client support** - our extensive 'general' Test List and 'special' Human Genetic Test List offer our clients comprehensive information about the tests we provide and are regularly updated with new test developments and in-house compiled publications.

The Company

Bioscientia is one of Europe's largest providers of reference laboratory services. Our customers include:

- All types of hospitals
- University institutes
- Private clinics
- Physician practices and independent physician networks
- Government clients
- Ministries of defence and health
- Corporate clients
- Manufacturers of drugs and diagnostic devices
- Veterinary clinics

The structure of the Bioscientia group reflects the complex structure of a company which is run by doctors but is nevertheless organized on an industrial basis. This structure enables us to offer our customers a wide range of services over and above high-quality laboratory analyses. These range from interpretation of the findings by a medical specialist and discussion of them with the patient on a consultancy basis through to assisting office based physicians with practice management.



- At **Bioscientia** more than 1000 trained staff is on hand to supply all requested tests rapidly and reliably with the complete service range of an internationally experienced reference laboratory.
- **Bioscientia** is committed to providing the highest quality analytical service and performs more than 2500 different laboratory investigations.
- **Bioscientia** is constantly improving methods and assays in order to provide the latest technical standard.
- If you rely upon rapidness and quality, it takes a well-adjusted organization to meet your demands. With the appropriate facilities, **Bioscientia** has optimized the collecting of samples in order to match the speed of transport with the rapidness of specimen processing.
- **Bioscientia** provides a wide range of support services, from free packing materials, sample containers, and personalized request forms to the storage of samples for two weeks from receipt.
- **Bioscientia** offers specialized and second opinion reports in a wide area of disciplines using a team of resident and associate consultant pathologists.
- All data from registration to analysis is stored in **Bioscientia's** EDP-system to ensure immediate access to information upon request.



Dr. med Oliver Harzer, MBA
CEO and Managing Director
of Bioscientia GmbH laboratories



Jad Ayoub, MBA, ESCP
Managing Director
Bioscientia International

Dear valued customer, Dear patient,

Ever since, collaboration, innovation and quality have been our core values determining our services for and relations with patients and healthcare providers.

Let us add "impact" as another dimension.

This concept encompasses our ambition to deliver sustainable benefits to the healthcare systems and communities we serve.

By furnishing critical information and knowledge from medical analyses performed in our laboratories we create significant value throughout the care continuum.

That way we empower caregivers around the world by enabling them to gain better insights into complex molecular pathways and disease patterns, resulting in more qualified treatment outcomes and better quality of lives.

At this point let us encourage you to join forces with us in our quest to advance medical sciences by leveraging the wealth of diagnostic knowledge.

And feel invited to join us in our pursuit of transforming healthcare delivery through innovative models with societal impact.

The Management



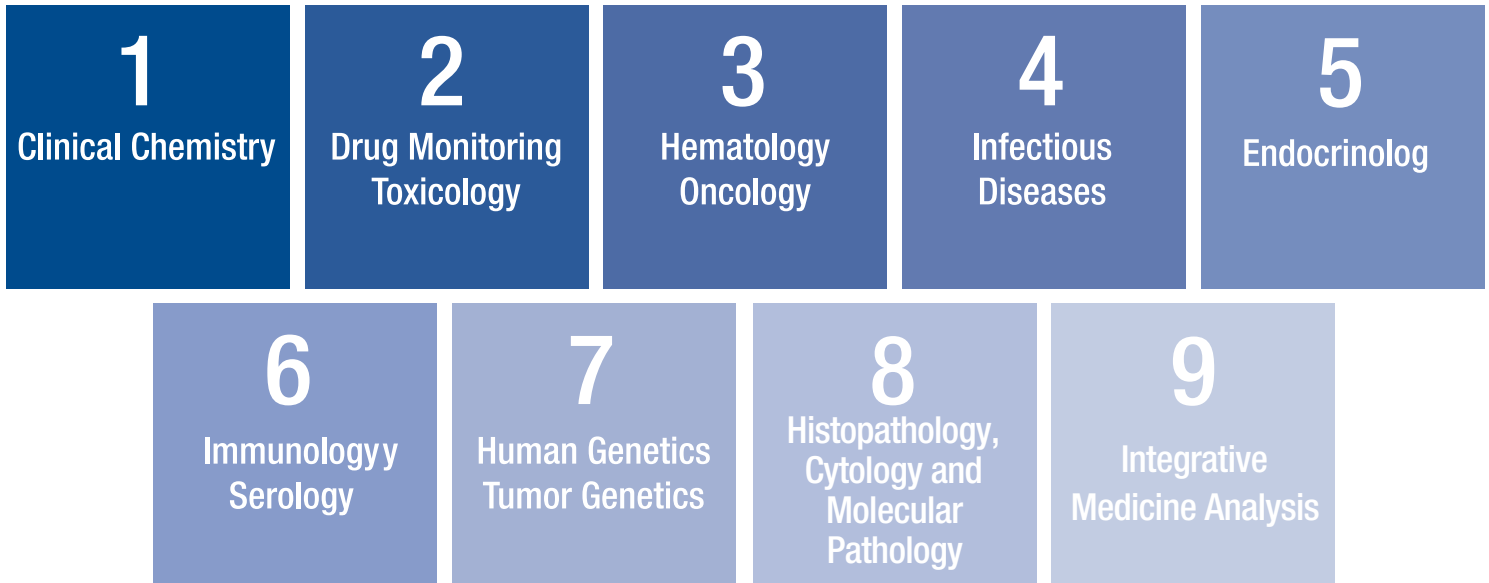
The highest standard of results is ensured by various internal and external quality controls and by cooperation and sample exchange with recognized international reference laboratories. **The Bioscientia Laboratory is accredited by the College of American Pathologists and participates in the CAP survey program.**

It is certified by the following bodies:

- CAP accreditation (*College of American Pathologists*)
- CLIA accreditation (*Clinical Laboratory Improvement Amendments*)
- INSTAND (*Institute for Standardization and Documentation*)
- German Society of Clinical Chemistry
- Reference Centre for Hormone Receptors
- German Society of Human Genetics
- EARL (*European Association of Reference Laboratories*)
- ISO 15189



Bioscientia GmbH Laboratory Services



1. Clinical Chemistry

The Clinical Chemistry section comprises a wide range of analysis methods. Atomic absorption spectrometry (ASS) is used for the analysis of trace elements, e.g. in employment medicine. Colorimetry, electrophoresis, enzyme immunoassays are used for the analysis of a broad range of enzymes, isoenzymes and proteins. Carbohydrate-deficient transferrin (CDT), a marker of chronic alcohol abuse, is one of the subjects of scientific work. The laboratory is considered an international reference laboratory for this analysis.



2. Drug Monitoring – Toxicology

The Drug Monitoring – Toxicology section comprises mainly chromatographic analysis methods, e.g. HPLC, GC, GC-MS, and LC-MS/MS. Typical scopes of work are screening and confirmatory analysis of drugs of abuse in forensic, employment and traffic medicine; therapeutic drug monitoring, and determination of vitamins and hormones. Results from scientific work in these fields are regularly published in peer-reviewed journals.



3. Hematology – Oncology

Hematology:

Routine as well as highly specialized investigations are performed; Thalassemia is one of the focuses here. In 1991, specific research in this area resulted in the description of an Hb Ingelheim.

Oncology:

A variety of tumor markers are tested for application in early cancer detection or in the monitoring of cancer treatment.



4. Infectious Diseases

The services of this department cover the complete range of the diagnostic microbiology of bacterial, fungal, mycobacterial and parasitological infections and a limited range of viral antigen detections.

Bacteriology and Mycology combine automated and basic culture methods with rapid automated identification and susceptibility testing as applicable in antimicrobial susceptibility batteries or for drugs of special request. Antigen detection with enzyme immunoassays are done for toxins and some pathogens from human fecal specimens. For *Chlamydia trachomatis* and *N. gonorrhoeae* antigen detection nucleic acid amplification techniques are used.



5. Endocrinology

Measurement of hormones for the diagnosis of endocrinological diseases and the determination of tumor markers is a major focus. Detection of IgE-specific antibodies against approximately 500 different allergens provides the diagnosis of a variety of allergies. Automated immunoassays and radio-immunoassays are predominantly used

6. Immunology – Serology

In this laboratory our main work is the detection of antibodies against bacteria and viruses. We use the classical methods, e.g. complement fixation and agglutination, as well as enzyme immunoassay and western blot / immunoblot.

The latter are especially important in the diagnosis and confirmation of infectious diseases, such as HIV, Hepatitis C or Parvovirus.



7. Human Genetics – Tumor Genetics

Center for Human Genetics

All genetic diagnostic services are performed in one specialized department by highly qualified staff.

The Molecular Genetic Laboratory

Performs all important DNA analyses in-house. Requests for other molecular genetic tests are referred to reputable laboratories and institutes worldwide. More than 400 molecular genetic tests are offered.

The Cytogenic Laboratory

Offers high-resolution chromosome analyses and molecular cytogenetic diagnoses by fluorescence in situ hybridization.

Medical geneticists and genetic counselors evaluate all laboratory requests and results of analyses. Consultation and interpretation of results and recommendations for any additional analysis is given in accordance with the latest international standards.

Bioscientia Center for Human Genetics offers you the complete spectrum of genetic testing:

- Molecular Genetics
- WES / WGS
- Next Generation Sequencing
- Cytogenetics
- Molecular Cytogenetics / FISH
- Array-CGH
- Tumor Genetics
- Biochemical Genetics
- Genetic Counseling / Clinical Genetics

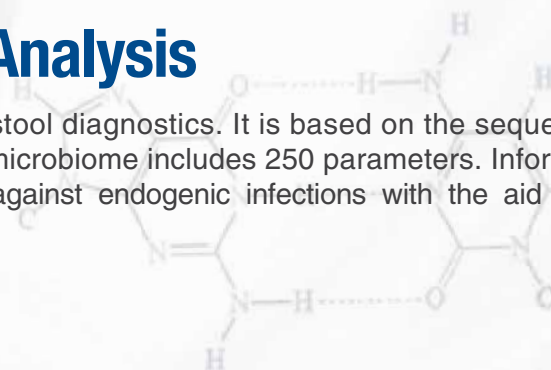


8. Histopathology, Cytology and Molecular Pathology

Besides all histopathological and histochemical staining methods, also our spectrum includes immunohistochemistry with numerous antibodies. We apply molecular pathology tests not only to tumor tissues but have also a variety of test systems for viral, bacterial and fungal infections which can be diagnosed on FFPE tissue. NGS and MALDI-TOF technology are applied to our samples, these samples include FFPE-tissues, PAP-smears and liquid biopsy samples.

9. Integrative Medicine Analysis

We offer a complete microbiome analysis of stool diagnostics. It is based on the sequencing of isolated bacteria DNA from stool samples. The analysis of the microbiome includes 250 parameters. Information about the intestinal bacteria diversity required for the protection against endogenous infections with the aid of microbiome analysis is also provided.





OUR VALUES

1 | Quality

We offer a comprehensive medical diagnostic service in the fields of laboratory medicine, microbiology, human and tumor genetics. We work to the highest quality standards and are committed to constantly improving them.

2 | Innovation

We understand quality as making medical progress constantly available to our customers. That is why we are actively introducing these advances into everyday diagnostics.

3 | Service

We regard our work as a service and, in addition to our medical service, we also provide as wide a range as possible of other services. These include short turnaround times and the expertise, pleasant manner and attention of our professional staff.

4 | Ethics

Patient data protection is of major importance to us. We avoid anything that could mislead, pressurize a patient, or that could be detrimental to the patient.

5 | Integrity

We comply with all laws and regulations, particularly those governing the medical profession and environmental issues. We strictly oppose illegal, unwarranted donations from our business partners or to our customers.



6 | Sustainability

Our actions are governed by our endeavours to achieve cost-effectiveness and sustainability. In the interests of customers and funding institutions, we ensure that processes are effective and resources used sparingly.

7 | Culture

Our qualified and motivated staff are our company's most important resource and its greatest potential. Health and safety at work are just as important to us as an open and friendly working environment.

8 | Management

Our managers ensure that the objectives of our company match its strategic alignment. They create and maintain the environment in which employees can devote their efforts wholeheartedly to the objectives of our company.

9 | Structure

To be able to achieve our objectives, we need adequate prerequisites and conditions of the health care system. We therefore emphatically support the creation of efficient structures while retaining tried and tested parts of the healthcare system.

10 | Environment

Bioscientia exercises a systematic approach to environmental management. The measures we apply today will also protect tomorrow's world.



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We are a member of Sonic Healthcare and are also members of The European Association of Reference Laboratories