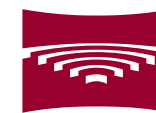


Laboratory of Biochemistry
is open for cooperation!



RĪGA STRADIŅŠ
UNIVERSITY

LABORATORY EQUIPMENT

Our laboratory is equipped with standard instruments:

- absorbance reader Sunrise™, Multimode reader Infinite F200, TECAN, Switzerland;
- fully automated clinical chemistry analyzer RX Daytona™, Randox Laboratories Ltd, UK;
- fluorescence Spectrophotometer Cary Eclipse, Varian Australia Pty Ltd;
- UV Spectrophotometer Cary 50, Varian Australia Pty Ltd;
- refrigerated bench-top centrifuges.

Analyses are performed using both diagnostic kits (either for automated analyzer or for manual use) and other standardized and widely used techniques. The range of laboratory techniques is being improved all the time.

Contact us and together we will find the solution.



CONTACTS

Laboratory of Biochemistry
Rīga Stradiņš University

Address: Dzirciema Str. 16, Rīga,
LV-1007, Latvia

E-mail: BL@rsu.lv

Web page: www.rsu.lv

LABORATORY OF BIOCHEMISTRY

Rīga Stradiņš University



The laboratory is certified according to the quality standard for medical laboratories and is competent in biochemistry. The laboratory participates in the external quality assessment program provided by Labquality Oy (Finland).



IEGULDĪJUMS TAVĀ NĀKOTNĒ

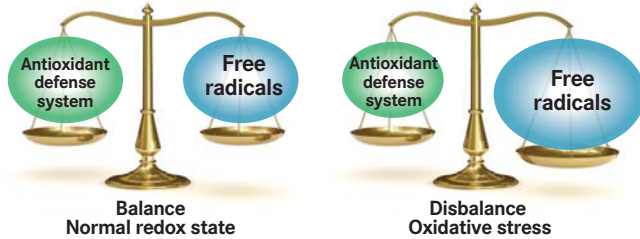


EIROPAS SAVIENĪBA

Prospect was printed by ERDF Project
No 2010/0200/2DP/2.1.1.2.0/10/APIA/VIAA/006

Research fields

ANTIOXIDATIVE DEFENSE SYSTEM OF THE ORGANISM

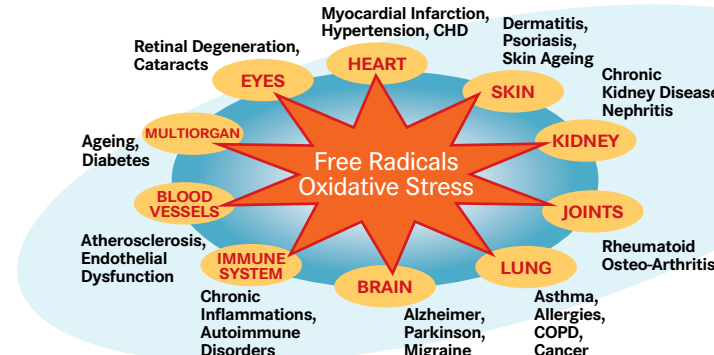


Antioxidants are molecules that may protect your cells and reduce the effect of harmful free radicals, decreasing their destructive power and keeping redox state in balance.

Our laboratory offers to determine a variety of parameters characterizing the antioxidative defense of the organism:

- Antioxidant enzymes:
 - Cu/Zn – superoxide dismutase,
 - Glutathione peroxidase,
 - Catalase
- Vitamin E and vitamin C
- Selenium, Zinc, Magnesium
- Reduced glutathione
- Total antioxidant status

OXIDATIVE STRESS IN THE ORGANISM



Oxidative stress describes the state of the body in which the production of reactive oxygen species (ROS), including free radicals, overwhelms the body's antioxidant defenses.

Our laboratory offers to determine a variety of parameters characterizing the intensity of oxidative stress:

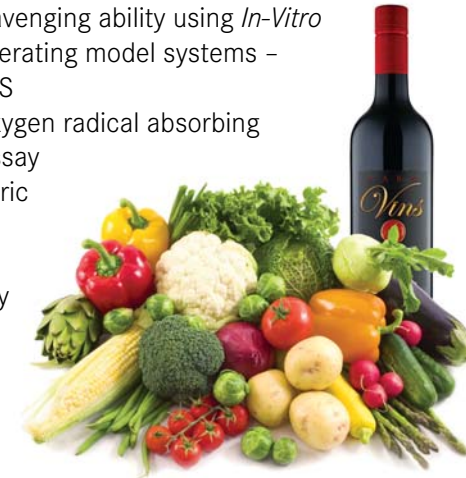
- Markers of lipid peroxidation:
 - Malondialdehyde
 - 4-Hydroxynonenal
 - Lipid hydroperoxides
- Protein carbonyls
- Other biochemical markers in agreement with the client

ANTIOXIDATIVE POTENTIAL OF NATURAL PRODUCTS

One of the most important things you can do to protect your body from oxidative stress, is using antioxidant-rich products for your everyday life. To be able to inform consumers about the good properties of their products, our laboratory offers manufacturers to evaluate the antioxidative ability of different kinds of products, e.g. juices, wines, cosmetic products, etc.

Various *In-Vitro* methods used for detection of the antioxidative properties of the product:

- Radical scavenging ability using *In-Vitro* radical generating model systems – DPPH, ABTS
- ORAC – Oxygen radical absorbing capacity assay
- FRAP – Ferric reducing antioxidant power assay
- Total flavonoids and phenols



Main research experience

- “**Connection between Se-deficiency with chronic hepatic structural disturbances and mutability and aggressiveness of hepatitis C RNA-virus**”, National research project (duration 2004-2009)
- “**Effects of ibuprofen alone and with antioxidant mixture in Chernobyl clean-up worker patients at risk of developing prostate symptoms**”, National research project (duration 2005-2009)
- “**Determination of biochemical, immunological and functional indices of Latvia high risk group population and the feasibility correction using long-term antioxidative therapy**”, National research project (duration 2007-2009)
- “**Free radicals and elements in inflammatory diseases and tumors**”, Latvia-Hungary bi-lateral cooperation project (duration 2010 -2012)
- “**Creation of the methodology for the effects of natural antioxidants on the development of Diabetes Mellitus complications**”, EUREKA project (duration 2009-2011)
- “**Assessment of local origin cereal species’ potential and development of varieties for specific dietary foods production**”, ERDF project (duration 2011-2013)