



PhD in Biology

...as diverse as life

Plant development and stress tolerance

Climate change and evolution

Protein spectra and behavior

Social conflicts in insect communities

Metabolic signaling in plants

Evolution of genetic regulation

Transgene yeast models for medical research

Stress biology

Brain research: recovery after lesions

Ecology of rare species



Aquatic Ecology and Evolution

Evolutionary ecology of risk spreading by delayed development – a case study with anostracan crustaceans from Australian temporary rock pools.

Where: Laboratory of Aquatic Ecology and Evolutionary Biology
Who: Prof. Luc Brendonck
Fund.: Pending scholarship but contract funding available
Contact: luc.brendonck@bio.kuleuven.be

Risk spreading strategies in African killifish from temporary ponds.

Where: Laboratory of Aquatic Ecology and Evolutionary Biology
Who: Prof. Luc Brendonck
Fund.: Pending scholarship but contract funding available
Contact: luc.brendonck@bio.kuleuven.be

Impact of land use on Mediterranean temporary ponds - a first step towards their sustainable management in Morocco.

Where: Laboratory of Aquatic Ecology and Evolutionary Biology
Who: Prof. Luc Brendonck
Fund.: Pending scholarship but contract funding available
Contact: luc.brendonck@bio.kuleuven.be

Global change and evolution

Evolutionary ecology.

Ecology and evolution of (meta)communities

Eco-evolutionary dynamics in predator-prey communities.

Where: Laboratory of Aquatic Ecology and Evolutionary Biology

Who: Prof. Luc De Meester

Fund.: Pending scholarship but contract funding available

Contact: luc.demeester@bio.kuleuven.be

Metacommunity ecology of microbial communities in biofilms.

Where: Laboratory of Aquatic Ecology and Evolutionary Biology

Who: Prof. Luc De Meester

Fund.: Pending scholarship but contract funding available

Contact: luc.demeester@bio.kuleuven.be

Evolution, priority effects and the structure of natural communities.

Where: Laboratory of Aquatic Ecology and Evolutionary Biology

Who: Prof. Luc De Meester

Fund.: Pending scholarship but contract funding available

Contact: luc.demeester@bio.kuleuven.be

Ecological and evolutionary genomics and transcriptomics of stress responses.

Where: Laboratory of Aquatic Ecology and Evolutionary Biology

Who: Prof. Luc De Meester

Fund.: Pending scholarship but contract funding available

Contact: luc.demeester@bio.kuleuven.be

Aquatic Ecology and Evolutionary Biology

Evolutionary ecology, Ecotoxicology & Global warming

Effects of pollutants under global warming: a case study using damselflies.

Where: Laboratory of Aquatic Ecology and Evolutionary Biology

Who: Prof. Robby Stoks

Fund.: Pending scholarship

Contact: robby.stoks@bio.kuleuven.be

Evolution and Ecological interactions in edge populations of a northward moving damselfly.

Where: Laboratory of Aquatic Ecology and Evolutionary Biology

Who: Prof. Robby Stoks

Fund.: Pending scholarship

Contact: robby.stoks@bio.kuleuven.be

Animal Diversity and Systematics

Co-evolution among vertebrates and their parasites.

Where: Laboratory of Animal Diversity and Systematics

Who: Prof. Filip Volckaert

Fund.: Pending scholarship

Contact: filip.volckaert@bio.kuleuven.be

Historical and current connectivity of fishes.

Where: Laboratory of Animal Diversity and Systematics

Who: Prof. Filip Volckaert

Fund.: Pending scholarship

Contact: filip.volckaert@bio.kuleuven.be

Natural and anthropogenic genetic adaptation of marine fishes in a high gene flow environment.

Where: Laboratory of Animal Diversity and Systematics

Who: Prof. Filip Volckaert

Fund.: Pending scholarship

Contact: filip.volckaert@bio.kuleuven.be

Diversification of the most species rich freshwater fish family in the most species rich lake: the phylogeny of Lake Malawi cichlids (Africa).

Where: Laboratory of Animal Diversity and Systematics

Who: Prof. Jos Snoeks

Fund.: Pending scholarship

Contact: jos.snoeks@bio.kuleuven.be

Changes in the fish fauna of the Scheldt basin during the last 1000 years.

Where: Laboratory of Animal Diversity and Systematics

Who: Prof. Wim Van Neer

Fund.: Pending scholarship

Contact: Willem.VanNeer@bio.kuleuven.be



Social Insects

Deformed wing virus: a contributory factor of Colony Collapse Disorder in honeybees?

Where: Laboratory of Entomology / Onderzoeksgroep
Functionele Genomics en Proteomics /
Who: Prof. Tom Wenseleers & dr. Peter Verleyen

Fund.: Pending scholarship but contract funding
available

Contact: tom.wenseleers@bio.kuleuven.be,
peter.verleyen@bio.kuleuven.be

BrainResearch:

towards recovery of function after lesions

A role for multimodal input in lesion-induced visual cortex plasticity in mammals - a structure function analysis.

Where: Research Group Neuroplasticity and Neuroproteomics

Who: Prof. Lut Arckens

Fund.: Pending scholarship

Contact: lut.arckens@bio.kuleuven.be

Functional Genomics and Proteomics

Molecular genetic analysis of food preference: a forward and reverse genetic approach.

Where: Research Group Functional Genomics and Proteomics

Who: Prof. Liliane Schoofs

Fund.: Pending scholarship but contract funding available

Contact: liliane.schoofs@bio.kuleuven.be

Analysis of neuronal circuits in the brain of the model organism, *Caenorhabditis elegans*, a combined genomics and microfluidics approach.

Where: Research Group Functional Genomics and Proteomics

Who: Prof. Liliane Schoofs

Fund.: Pending scholarship but contract funding available

Contact: liliane.schoofs@bio.kuleuven.be

Identification of active components from medicinal plants using chromatography and mass spectrometry.

Where: Research Group Functional Genomics and Proteomics

Who: Prof. Liliane Schoofs & Prof. Walter Luyten

Fund.: Pending scholarship but contract funding available

Contact: liliane.schoofs@bio.kuleuven.be,
walter.luyten@bio.kuleuven.be

Study of behavioural effects of candidate bioactive peptides in mice.

Where: Research Group Functional Genomics and Proteomics

Who: Prof. Liliane Schoofs & Prof. Walter Luyten

Fund.: Pending scholarship but contract funding available

Contact: liliane.schoofs@bio.kuleuven.be,
walter.luyten@bio.kuleuven.be

Insect Physiology and Molecular Ethology

Cloning and deorphanization of the orexin-like receptor of the honeybee *Apis mellifera*.

Where: Research Group Insect Physiology and
Molecular Ethology

Who: Prof. Roger Huybrechts

Fund.: Support GOA/FWO

Contact: roger.huybrechts@bio.kuleuven.be

Molecular Developmental Physiology and Signal transduction

Mechanisms of systemic RNA interference (RNAi) in insects and possible strategies for pest control.

Where: Research Group Molecular Developmental Physiology and Signal transduction

Who: Prof. Jozef Vanden Broeck

Fund.: Pending scholarship but contract funding available

Contact: jozef.vandenbroeck@bio.kuleuven.be

Endocrine control of phase transition and reproduction in locusts.

Where: Research Group Molecular Developmental Physiology and Signal transduction

Who: Prof. Jozef Vanden Broeck

Fund.: Pending scholarship but contract funding available

Contact: jozef.vandenbroeck@bio.kuleuven.be

G protein-coupled receptors and signal transduction mechanisms in model organisms.

Where: Research Group Molecular Developmental Physiology and Signal transduction

Who: Prof. Jozef Vanden Broeck

Fund.: Pending scholarship but contract funding available

Contact: jozef.vandenbroeck@bio.kuleuven.be

Hormones and embryonic development

Role of thyroid hormone responsive genes during brain development in chicken.

Where: Research Group of Comparative Endocrinology

Who: Prof. Veerle Darras

Fund.: Pending scholarship

Contact: veerle.darras@bio.kuleuven.be

Effect of knockdown of thyroid hormone (in)activating enzymes on early development in zebrafish.

Where: Research Group of Comparative Endocrinology

Who: Prof. Veerle Darras

Fund.: Pending scholarship

Contact: veerle.darras@bio.kuleuven.be

Neural Circuit Development and Regeneration

Axon pathfinding and nerve regeneration in the damaged brain.

Neuronal survival and plasticity in degenerative diseases.

Survival of retinal ganglion cells: insights for treatment of glaucoma, a neurodegenerative disease.

Where: Research Group Neural Circuit Development and Regeneration

Who: Prof. Lieve Moons

Fund.: Pending scholarship

Contact: lieve.moons@bio.kuleuven.be

Neuronal plasticity in the cerebellum: a role for matrix metalloproteinases.

Where: Research Group Neural Circuit Development and Regeneration

Who: Prof. Lieve Moons

Fund.: Pending scholarship

Contact: lieve.moons@bio.kuleuven.be

Regenerative retinotectal axon pathfinding in zebrafish: a role for matrix metalloproteinases.

Where: Research Group Neural Circuit Development and Regeneration

Who: Prof. Lieve Moons

Fund.: Pending scholarship

Contact: lieve.moons@bio.kuleuven.be

Plant Conservation Biology

Conservation of species and genes in anthropogenically altered landscapes

Conservation of plant species and genes in anthropogenically altered landscapes.

Where: Laboratory for Plant Ecology

Who: Prof. Olivier Honnay

Fund.: Pending scholarship

Contact: olivier.honnay@bio.kuleuven.be

Regulatory Evolution

Molecular basis of plant diversity

The evolutionary presence/absence and Diversification of a master regulatory Gene.

Where: Laboratory for Plant Systematics

Who: Prof. Koen Geuten

Fund.: Pending scholarship

Contact: koen.geuten@bio.kuleuven.be

Ancestral Proteins and the Origin of the Flower.

Where: Laboratory for Plant Systematics

Who: Prof. Koen Geuten

Fund.: Pending scholarship

Contact: koen.geuten@bio.kuleuven.be

The origin of a stem cell maintaining feedback loop: gene targeting for quantitative imaging in a moss.

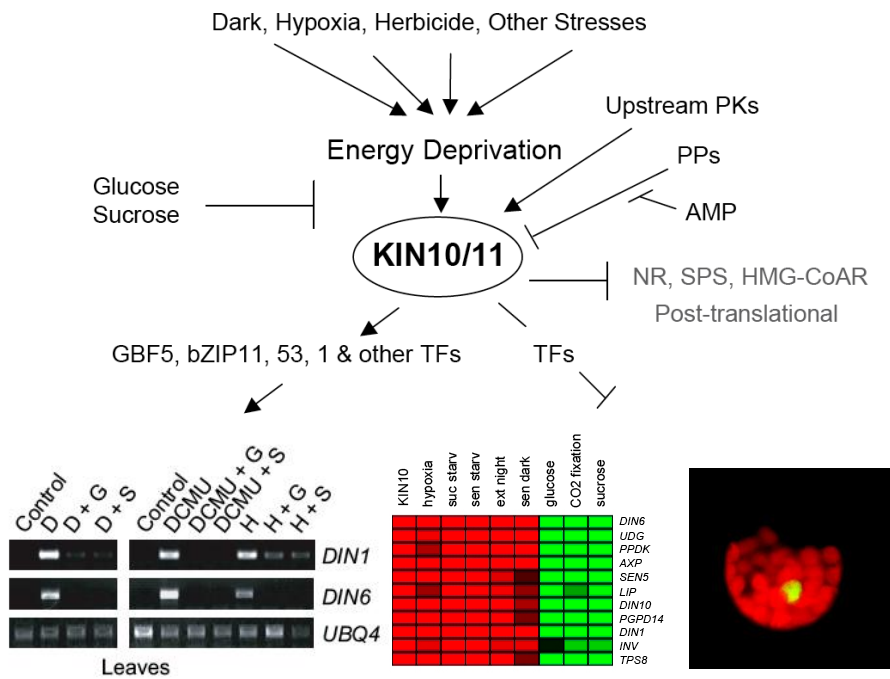
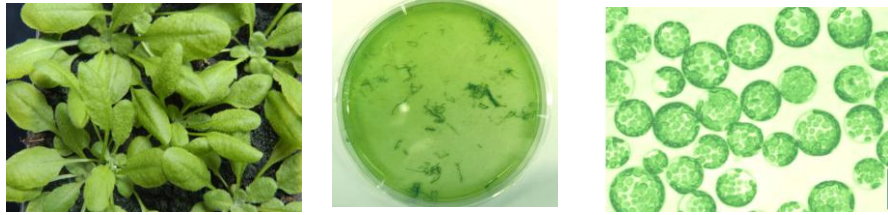
Where: Laboratory for Plant Systematics

Who: Prof. Koen Geuten

Fund.: Pending scholarship

Contact: koen.geuten@bio.kuleuven.be

Metabolic signaling in plants



Where: Laboratory for Functional Biology

Who: Prof. Filip Rolland

Fund.:

Contact: filip.rolland@bio.kuleuven.be

Functional Biology

Humanised yeast models for medical en medicinal use. Stress- en nutrient induced signaaltransduction in yeast

Unraveling the role of the protein kinase Sch9/PKB in nutrient sensing and signaling in yeast cells.

Where: Laboratory for Functional Biology

Who: Prof. Joris Winderickx

Fund.: Pending scholarship but contract funding available

Contact: joris.winderickx@bio.kuleuven.be

Development of yeast models to study protein folding diseases such as Alzheimer and Parkinson.

Where: Laboratory for Functional Biology

Who: Prof. Joris Winderickx

Fund.: Pending scholarship but contract funding available

Contact: joris.winderickx@bio.kuleuven.be

Fructan and sucrose metabolism

Stress tolerance in plants. Renewable energy from plants. Healthy food

Role of defect invertases in plants.

Where: Laboratory of Molecular Plant Physiology

Who: Prof. Wim Van den Ende

Fund.: Pending scholarship

Contact: wim.vandenende@bio.kuleuven.be

Sugars: antioxidants in plants?

Where: Laboratory of Molecular Plant Physiology

Who: Prof. Wim Van den Ende

Fund.: Pending scholarship

Contact: wim.vandenende@bio.kuleuven.be

Fructan metabolism in Buxaceae and Boraginaceae.

Where: Laboratory of Molecular Plant Physiology

Who: Prof. Wim Van den Ende

Fund.: Pending scholarship

Contact: wim.vandenende@bio.kuleuven.be

Nutrient sensing in *Candida albicans* and trehalose metabolism in plants

Characterization of mechanism by which methionine affects morphogenesis in the human fungal pathogen *Candida albicans*.

Where: VIB Department of Molecular Microbiology

Who: Prof. Patrick Van Dijck

Fund.: Pending scholarship

Contact: patrick.vandijck@mmbio.vib-kuleuven.be

Investigation of the adhesion properties of *Candida glabrata*, an upcoming fungal pathogen, and the role of the G protein coupled receptor Gpr1 in this process.

Where: VIB Department of Molecular Microbiology

Who: Prof. Patrick Van Dijck

Fund.: Pending scholarship

Contact: patrick.vandijck@mmbio.vib-kuleuven.be

Use of the newly developed *C. albicans* two-hybrid system for analysis of protein-protein interactions at a genome-wide scale in a human fungal pathogen.

Where: VIB Department of Molecular Microbiology

Who: Prof. Patrick Van Dijck

Fund.: Pending scholarship

Contact: patrick.vandijck@mmbio.vib-kuleuven.be

Moss as a bioreactor for the production of heterologous proteins.

Where: VIB Department of Molecular Microbiology

Who: Prof. Patrick Van Dijck

Fund.: Pending scholarship

Contact: patrick.vandijck@mmbio.vib-kuleuven.be

Investigation of the trehalose biosynthesis gene family and the role in plant development and stress tolerance in the moss *Physcomitrella patens*, which is considered as the green yeast.

Where: VIB Department of Molecular Microbiology

Who: Prof. Patrick Van Dijck

Fund.: Pending scholarship

Contact: patrick.vandijck@mmbio.vib-kuleuven.be

Molecular Cell Biology

Nutrient sensing and signal transduction in yeast. Development of improved industrial yeast strains

Bioethanol production with yeast adapted for lignocellulosic substrates.

Where: VIB Department of Molecular Microbiology

Who: Prof. Johan Thevelein

Fund.: Fellowship application

Contact: johan.thevelein@mmbio.vib-kuleuven.be

Novel mechanisms for nutrient signaling in yeast.

Where: VIB Department of Molecular Microbiology

Who: Prof. Johan Thevelein

Fund.: Fellowship application

Contact: johan.thevelein@mmbio.vib-kuleuven.be

Polygenic analysis of commercially-important traits of bioethanol production yeast.

Where: VIB Department of Molecular Microbiology

Who: Prof. Johan Thevelein

Fund.: Fellowship application

Contact: johan.thevelein@mmbio.vib-kuleuven.be

Sugar sensing in yeast as a model for the relation between nutrition and cancer at the cellular level.

Where: VIB Department of Molecular Microbiology

Who: Prof. Johan Thevelein

Fund.: Fellowship application

Contact: johan.thevelein@mmbio.vib-kuleuven.be

Transceptors (transporter/receptors) for nutrient sensing in yeast.

Where: VIB Department of Molecular Microbiology

Who: Prof. Johan Thevelein

Fund.: Fellowship application

Contact: johan.thevelein@mmbio.vib-kuleuven.be