

 **B·R·A·I·N – The white biotech company**

B·R·A·I·N discovers and develops novel BioActives, natural compounds and proprietary enzymes for its customers in the chemical and pharmaceutical as well as in the food and cosmetics industries. B·R·A·I·N was founded in 1993 and has evolved into a leading industrial biotech company.

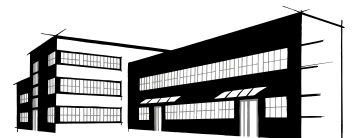
With a technology offer validated in more than 70 industrial co-operations and partnerships with market leaders like BASF, Bayer Schering Pharma, Celanese, Clariant, Evonik Degussa, Genencor, Henkel, Nutrinova, RWE, Sandoz, Südzucker, Symrise and further undisclosed partners. B·R·A·I·N provides innovative solutions from novel and tailor-made biologics. This facilitates proprietary applications and IP for its customers and adds to the strategic value of their product lines.

In a unique approach to the discovery and production of new biological compounds and biocatalysts the company harnesses creative solutions from nature's untapped biodiversity, optimised by 3.5 billion years of evolution. B·R·A·I·N's success is built on its proprietary BioArchive comprising millions of genes, proteins and metabolic pathways from microbial isolates and metagenome libraries.

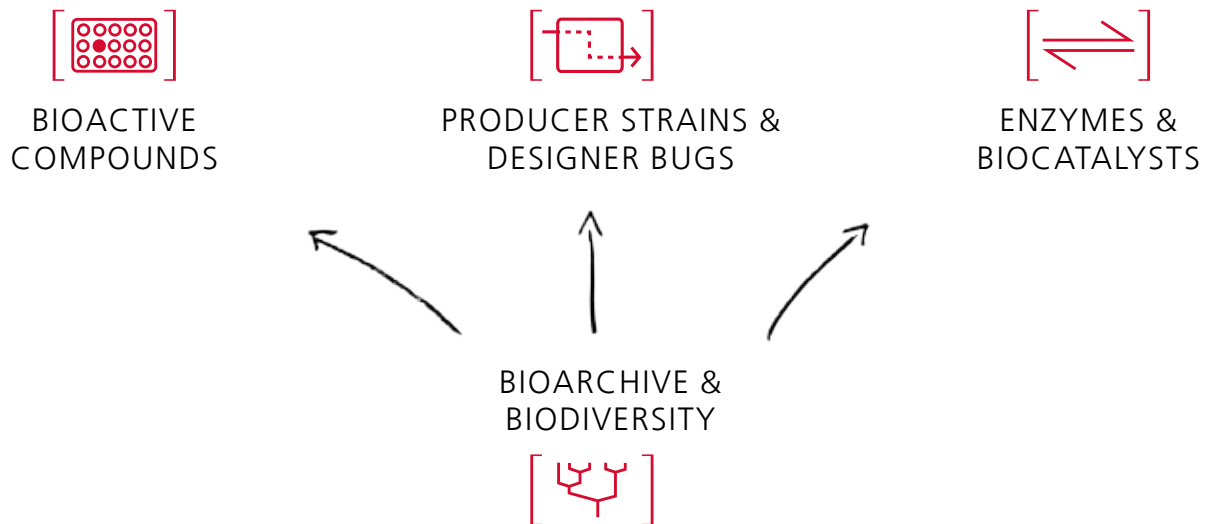
Mission

B·R·A·I·N provides innovative biotechnological solutions from natural biodiversity for novel products and successful applications in the chemical, pharmaceutical, cosmetics and food industries.

EvoSolution®: for novel BioActives and novel Enzymes



B·R·A·I·N



BRAIN's technologies: EvoSolution® METAGENOME® BRAINzyme® LIL® ABEL® CompActives® Bio CompActives®



BioActive Compounds

B·R·A·I·N identifies novel BioActive compounds, recombinant peptides and proteins from its BioArchive enabling product development for the nutraceutical, cosmetics, and pharmaceutical industries.

Biodiversity Screening

- Novel BioActives, pharmaceuticals, nutraceuticals and cosmetics
- Application of proprietary modular cell-based assay toolbox

Recombinant Biologics

- From gene to process: heterologous expression in improved production strains
- Combinatorial biosynthesis and compound modification



Producer Strains & Designer Bugs

Producer strain development is performed to enable or optimise multi-step bioconversion routes and to provide tailor-made designer bugs for optimised high-value industrial production processes.

Optimised producer strains for whole cell chemical conversions

- pathway engineering for the chemical-, bio-energy- and bio-polymer markets
- designer bugs comprising novel synthetic pathways and artificial operons from metagenome resources

Producer Strain Development

- strain optimisation and pathway engineering
- multistep bioconversion for high production yield



Enzymes & Biocatalysts

Building on its BioArchive B·R·A·I·N provides novel natural and optimised enzymes and biocatalysts meeting its customers process and application requirements.

From Soil to Activity

- Novel natural and optimised enzymes from cultivated and uncultivated diversity
- Screening of LIL® and ABEL® DNA libraries Enzymes for Industrial Applications
- Ready-to-screen candidate libraries of biocatalysts
- Identification of novel sequence variants
- Enzyme expression, fermentation & production

Designer-Microorganisms

- Pathway-engineering for multi-step chemical conversions and high production yields



BioArchive & Biodiversity

B·R·A·I·N's proprietary BioArchive contains microbial strains from diverse habitats, new isolates and enriched bio-communities – all laid down in ready-to-screen formats.

Culture Collections and Habitats

- Proprietary strain-collection of aerobe, anaerobe and diverse extreme habitats
- Enriched biodiversity of defined habitats

METAGENOME® Libraries

- DNA libraries of uncultivated biodiversity
- Activity-Based Expression Libraries (ABEL®)
- Large Insert Libraries (LIL®)