

# PIPE PHARMACEUTICS

## Biomarkers for diagnosis and therapy

These technology offers originate from the different partners of the project PIPE. If you are interested in one or more of these offers, please contact the responsible person named below. We are looking forward to providing you more detailed information.

### ***Biomarker for the diagnosis of Parkinson's disease (U60017)***

Expression analysis of several novel biomarkers in skin probes of patients allows the prognosis and diagnosis of all variants of Parkinson's disease, monitoring of the disease progression and the response to medical treatment. Determined is the strength of gene expression of a group of newly identified markers which allow a clear diagnosis. Probes of biological material can be taken from various parts of the patient's body, especially advantageous is a probe taken from the patient's skin which provides very easy an uncomplicated probe extraction

**Status:** German patent was applied for.

### ***Biomarker for the diagnosis of different types of cancer (2002/4/1, 2007/24)***

In a co-operation of the departments of human genetics and bioinformatics, sponsored by the "Deutsche Krebshilfe", new markers for the specific diagnosis of gliom, meningiomas and lung cancer were developed. For these types of cancer so far no selective, specific and particularly early stage diagnosis is available, so these new biomarkers offer a big opportunity. Especially the combination of several of the new markers for one disease allow an differentiated analysis and therefore diagnosis.

**Status:** German and European patents were applied for.



***Biomarker for the diagnosis of COPD and multiple Sklerosis (2008/16, 2008/17)***

In the same, above mentioned cooperation biomarkers for the diagnosis of chronicle obstructive pulmonary disease (COPD) were developed. An early diagnosis is especially important since irreversible impairment of the lung is a consequence of late treatment. Developed were on the one hand markers that lead to a clear diagnosis of COPD and on the other hand markers that allow the exclusion of COPD. In a combination a differentiated and selective diagnosis of diseases of the lung is possible.

**Status:** European patent was applied for.

***In-vitro-method for the diagnosis of acute leukemia (U30096)***

The diagnosis with the new developed method is carried out on the basis of the detection of chromosomal translocations, deletions and duplications on the MLL-gene. The in-vitro technique identifies translocations with genomic DNA via Long Distance Inverse-PCR. Present techniques have a maximum detection limit of  $10^{-4}$ , which is now exceeded. One cancer cell in 100.00 to 1.000.000 normal cells can be detected. The method can be used for diagnosis as well as for monitoring of therapy. Based on the method a kit was developed which includes all necessary oligonucleotides, enzymes and solutions for performing the procedure. Therefore a matter of routine application is possible.

**Status:** German patent was applied for.