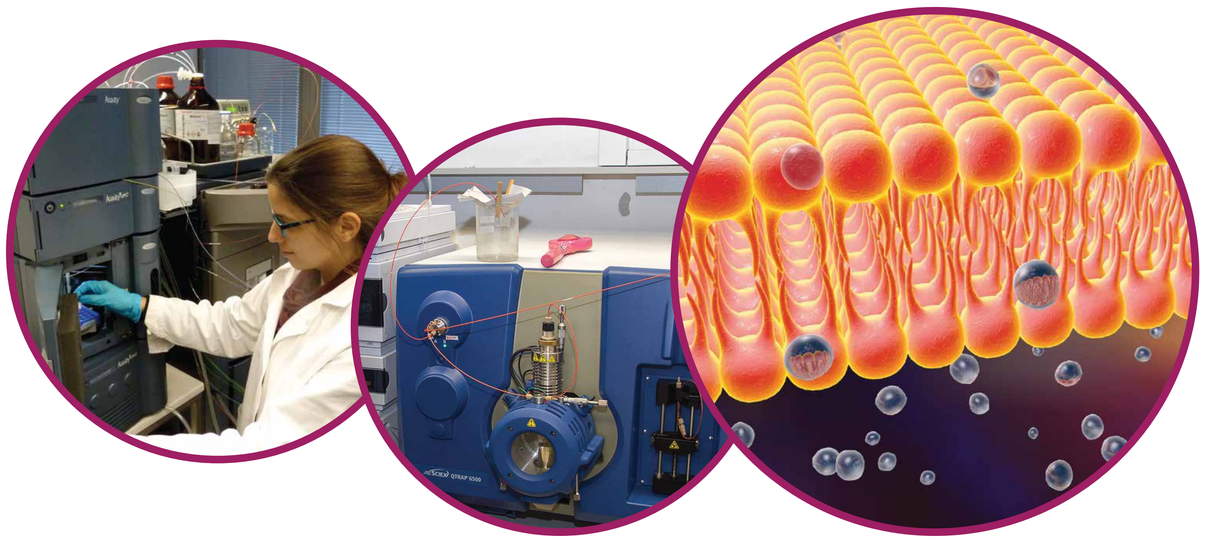
University
of Pardubice
Faculty
of Chemical Technology

ONCOLIPIDOMICS FOR EARLY DETECTION OF CANCER

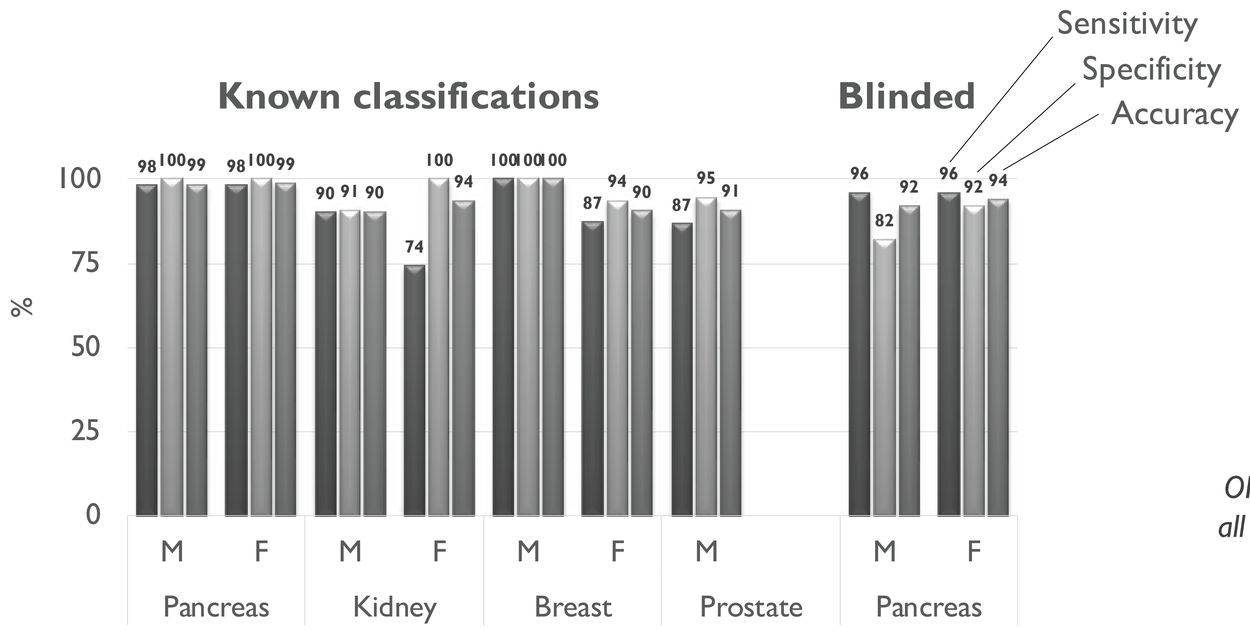
INTENDED USE

- **MS lipidomic profiling** of human serum or plasma
- high-throughput **screening test** for **multiple** cancers
- **accurate supporting** information to the clinicians
- **improved** overall **prognosis** of patients



CLINICAL STUDIES

Discovery retrospective studies performed on a limited sample sets.

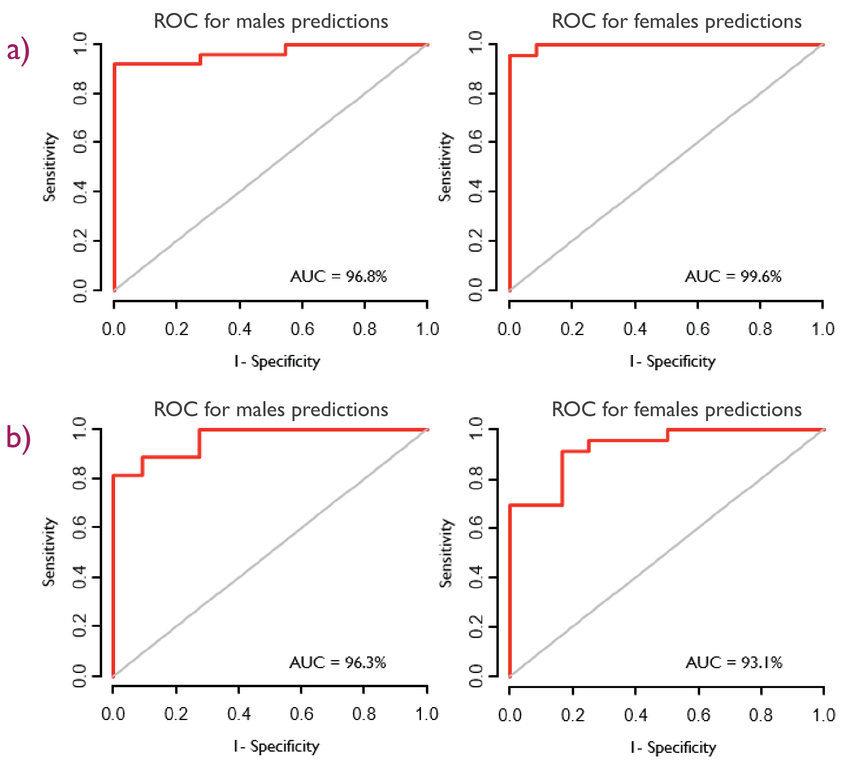


STUDY	SAMPLES	SAMPLE
Pancreatic cancer	372*	serum
Kidney cancer	112**	plasma
Breast cancer	103**	plasma
Prostate cancer	67**	plasma

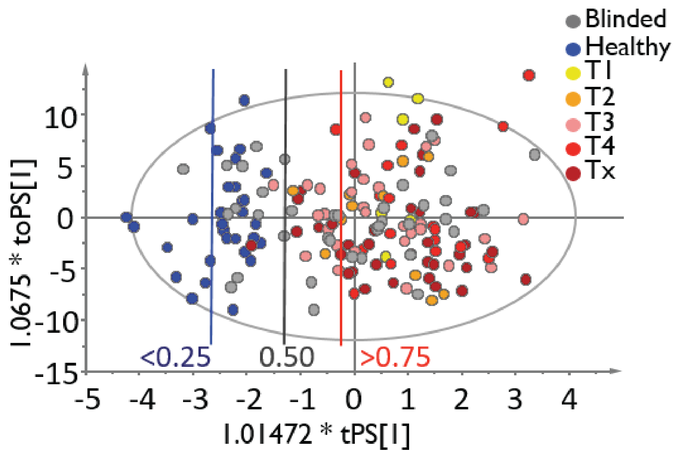
* *213 pancreatic cancer, 7 pancreatitis, 79 controls, 72 blinded; pancreatitis samples correctly determined as healthy;*

** *112+103+67 multi-cancer samples, 180 healthy controls*

Receiver operating characteristic (ROC) and area under the curve (AUC) values for blinded samples (PDAC), a) UHPSFC/MS and b) Shotgun MS.



OPLS-DA prediction model for UHPSFC/MS measurements of male samples of all tumor stages. Predicted response values show the probability of PDAC: >0.75 very likely PDAC, >0.5 PDAC, ≤0.5 healthy, and <0.25 very likely healthy.



R2X[1] = 0.0477 R2X[XSide Comp. 1] = 0.406

DEVELOPMENT PLANS

The pilot clinical lab – to verify and optimize the OncoLipidomics tests.

Prospective multi-site study – to verify the clinical relevance on a larger sample set.

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PATENT SITUATION

EP and PCT applications were filed in 2018
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