

MICROARRAYS

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Bremen

SARKA MIKOLAJSKA



Czech Republic

Commercial activities

- oligonucleotide synthesis**
- real-time PCR probes**
- molecular genetic service**
- paternity testing**

Research activities

- real-time PCR systems**
- gene therapy**
- siRNA silencing**
- recombinant protein expression and purification**

Cloning and analysis



Real-time and microarray



siRNA silencing project „COX“

- Cyclooxygenase is involved in the process of inflammation
- Biosynthesis of mediators such as prostaglandins, thromboxane, prostacyclin

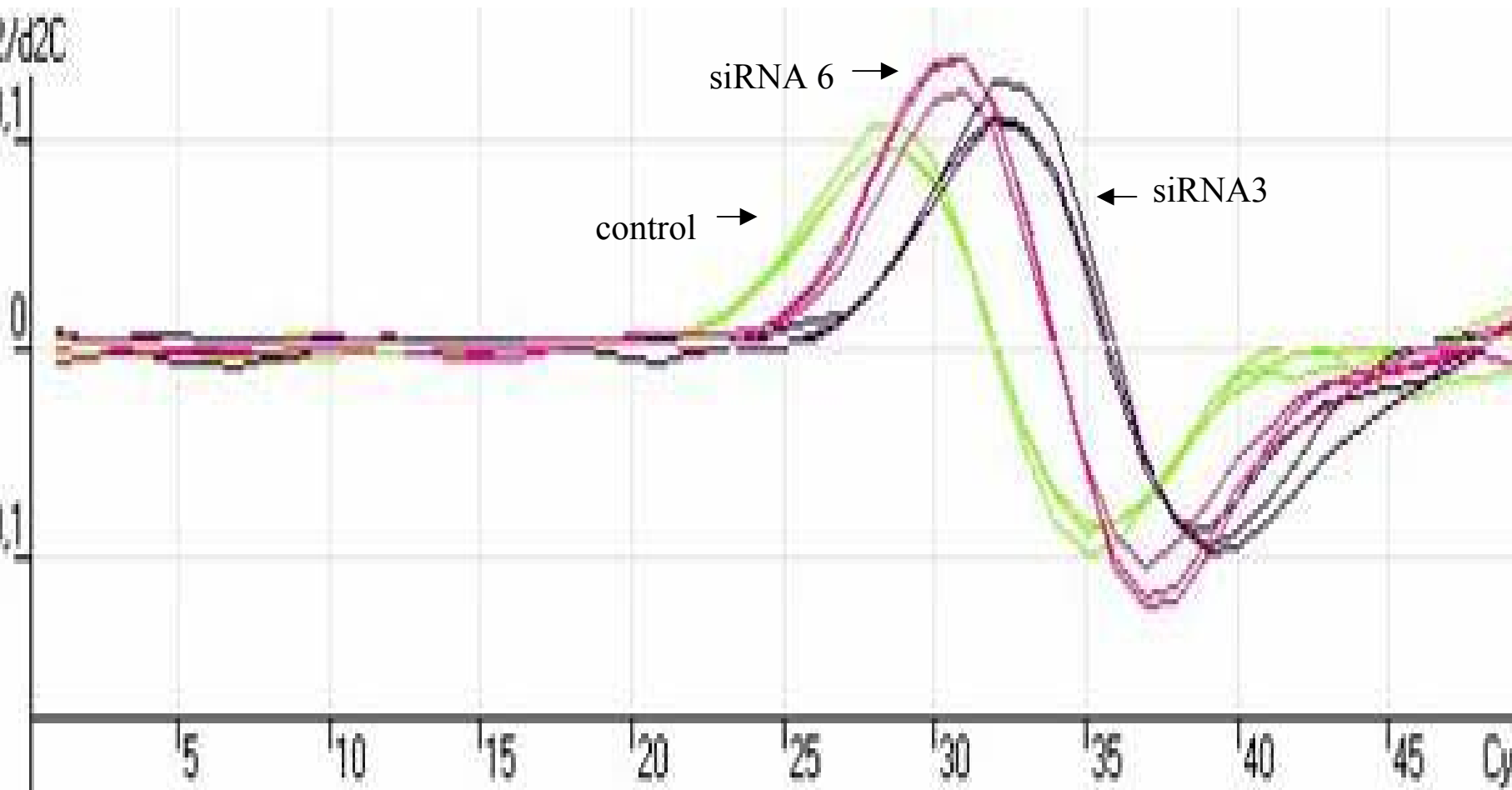
Cloning and transfection

- ↓ Design of siRNA for COX1 and COX2
- ↓ Cloning into the vector with U6 promotor
- ↓ Stable transfection
- ↓ RNA isolation and reverse transcription

Real-time PCR

- Real-time PCR in duplex reaction with housekeeping
- $\Delta \Delta CT$ relative quantification
(M.W. Pfaffl and G.W. Horgan, Nucleic Acid Res., 29(9), 2001)

QRT-PCR COX



Microarrays project „COX“

- Screening of the gene expression involved in the cascade of inflammation
- Screening of the gene expression involved in the cascade of apoptosis
- Nonspecific effects of siRNA