ugichem

Antisense for Inflammation

Ugimers:

Novel Antisense Drugs with an Unique Efficacy Profile

ugichem: Antisense for Inflammation

Company

- Spin-off from group of Professor Ugi (Technical University of Munich)
- Founded 2003
- 9 employees
- Funding to date: € 9.7m

Technology

- Novel antisense drugs: Ugimers®
- IP: 4 Patent Families, exclusively owned, FTO
- Now enabling application of Antisense for Immune Mediated Inflammatory
 Diseases (IMIDs)
- Initial focus: Rheumatoid arthritis

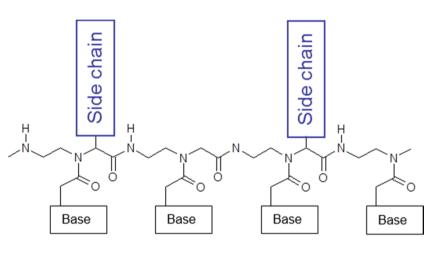
Ugimers

Innovative chemical design

- Non RNA based
- Based on peptide nucleic acids (PNAs) + side chains

Ugimer:

- Good water solubility
- Unassisted delivery into tissues and cells
- Tissue/disease specific customization
- Strong efficacy
- High specificity
- High stability
- Non-toxicity
- No immune system stimulation



PNA:

- Strong efficacy
- High specificity
- High stability
- Non-toxicity
- No immune system stimulation

Ugimers

Innovative chemical design

- Non RNA based
- Based on peptide nucleic acids (PNAs) + side chains



Breakthrough advantages

- Tissue/disease-specific and cost-effective developability
- Opening up inflammatory diseases for Antisense

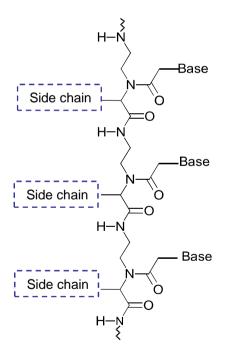
Tissue/disease-specific and cost-effective developability

Ugimers: Small modification → significant impact

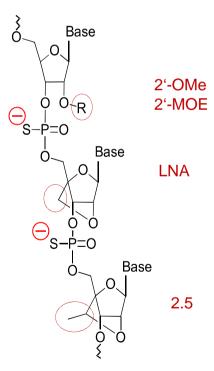
significant significant significant Efficacy
Tissue Delivery
Intracellular Delivery

significant

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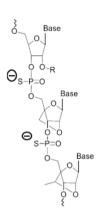
Ugimer



RNA based antisense drugs

Opening up inflammatory diseases for Antisense

RNA based antisense therapeutics



Safety concerns

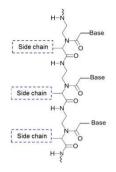
- Dose limiting toxicities due to high liver and kidney accumulation
- Unspecific stimulation of the immune system



Limitation to tissues (diseases) with sufficient local concentration

- Liver
- Tumor
- Muscle (Duchenne Muscular Dystrophy)
- Local administration

Opening up inflammatory diseases for Antisense



Ugimers

Favorable efficacy profile for IMIDs

- No stimulation of the immune system
- Modifiable distribution profile to immune cells
- Efficacy in immune cells
- Excellent bioavailability and tissue half lives in immune system relevant tissues

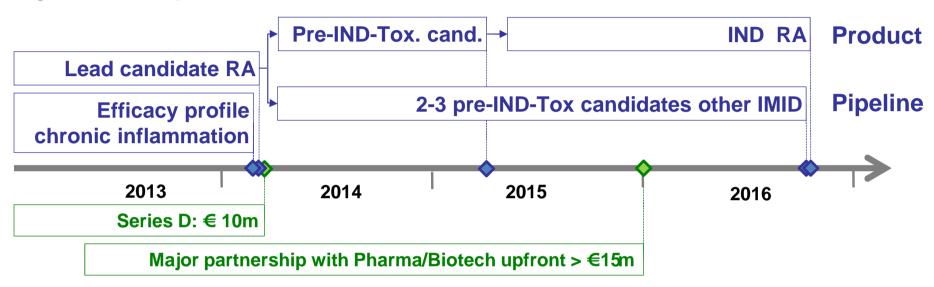


Unique efficacy profile confirmed for <u>acute</u> inflammation in vivo

Significant anti-inflammatory efficacy in multiple tissues in mouse:
 Spleen, thymus, lymph nodes, kidney, liver, heart, lung, skin

Ugimer and Business Development

Ugimer Development



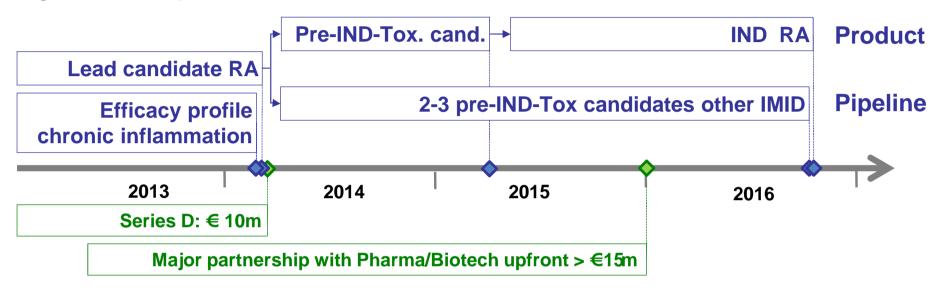
Business Development

Regulus/Sanofi (2010) In vivo p.o.c. fibrosis \$ 25m upfront

Miragen/Servier (2011) In vivo p.o.c. cardiovascluar diseases \$ 45m upfront

Ugimer and Business Development

Ugimer Development



Business Development

Join us to convert the ground-breaking Ugimer approach into therapeutics and business success!