



SCP Workshop

Licensing & Health



The real life

2018-12-04 / D. Immler





Bayer is proud of its long-standing commitment to R&D

Continuous Investment in R&D Projects

Input

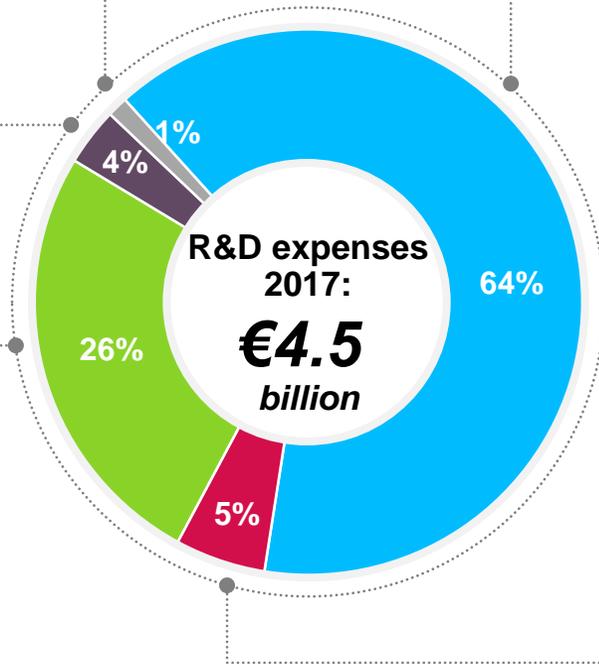
Other
€55 million

Animal Health
€155 million

R&D staff:
333

Crop Science
€1,166 million

R&D staff:
5,174



Pharmaceuticals
€2,888 million

R&D staff:
8,138

Consumer Health
€240 million

R&D staff:
368

Output

// Pharmaceuticals

Ten new molecular entities transferred from research pipeline into preclinical development in 2017

// Consumer Health

50 new products developed from new delivery forms and formulations

// Crop Science

Integrated product pipeline for crop protection and seeds technology with launch of a major biological, numerous broad acre and vegetable seed varieties, plus 90 new formulations in 2017

As of December 31, 2017 (without Monsanto)

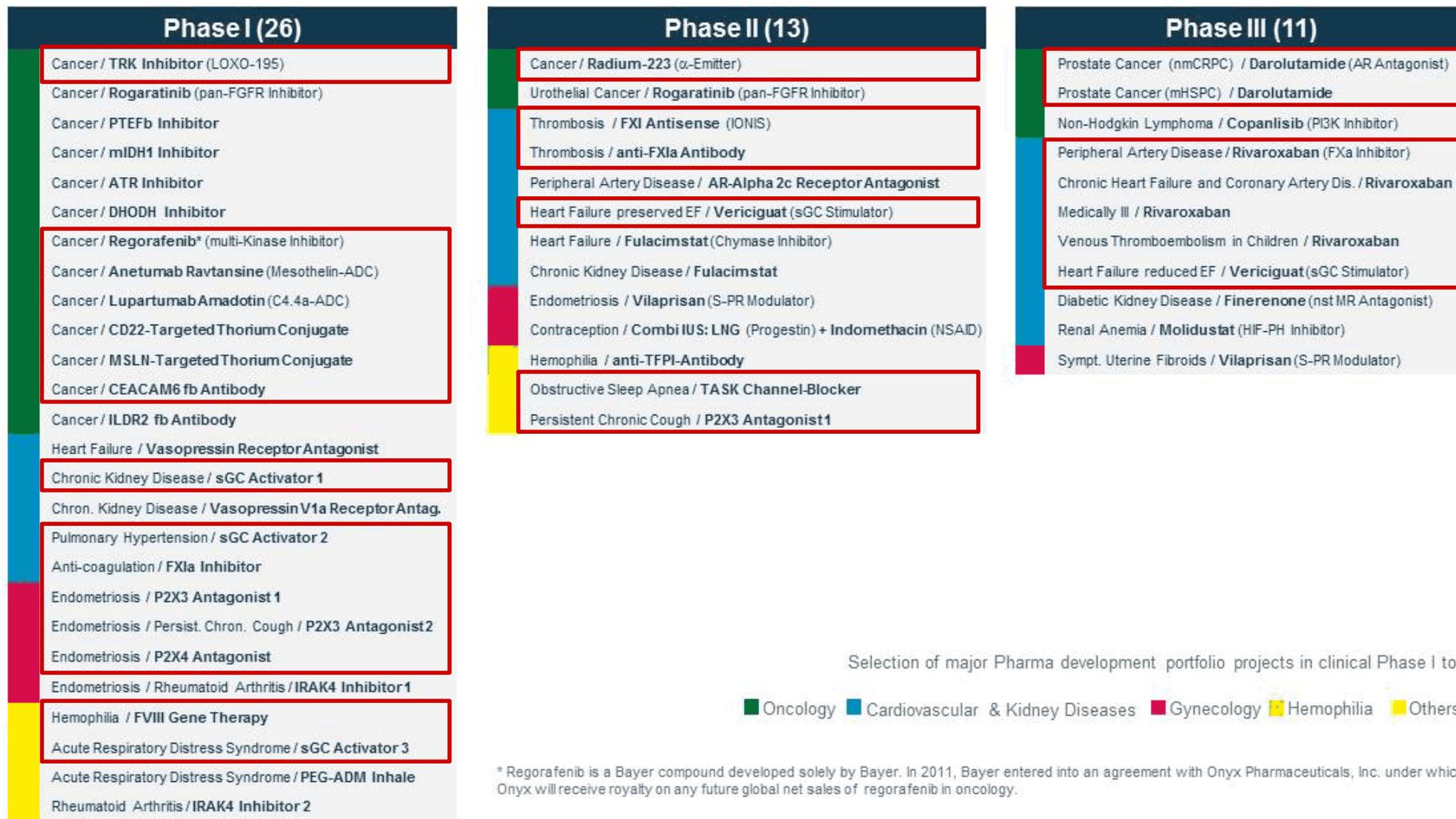


But for every clinical study we do, 100 studies are done by others



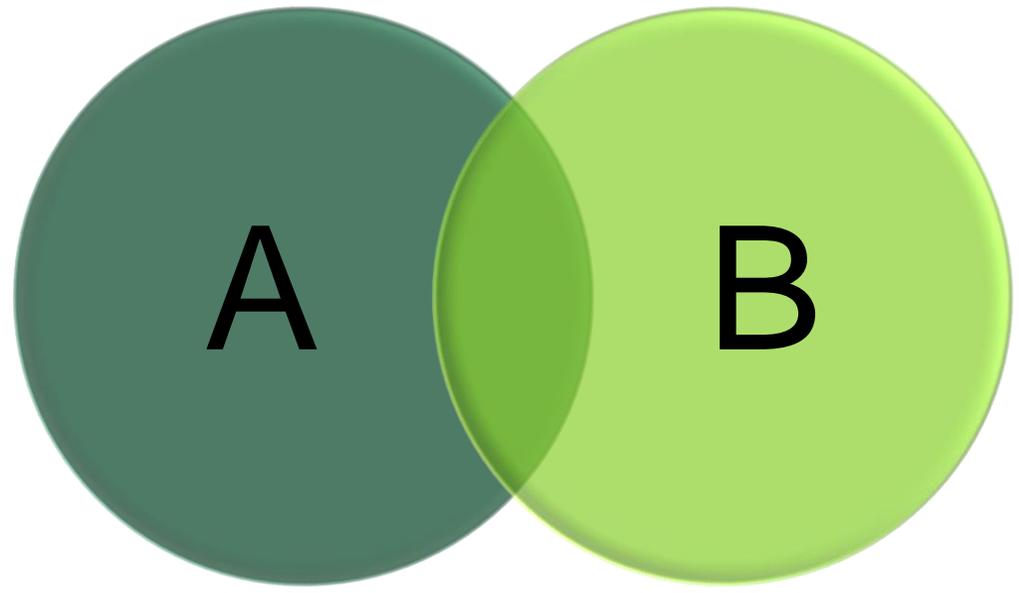


A significant portion of our pipeline assets is either a partnered Bayer invention or an in-licensed/acquired external asset

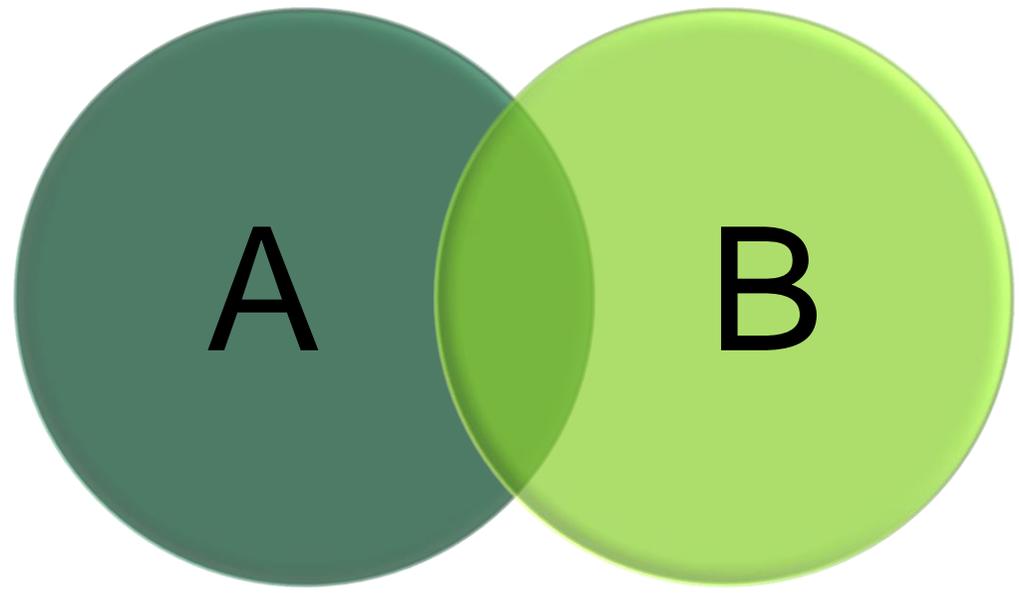




Partnering makes sure that an asset has the highest probability to be launched and thus to benefit patients



Capabilities



Capacities



Partnering happens at all stages and with diverse partners

Early Research

Research & Development

Commercialization

What

Research Technologies

Therapeutic Principles

Lead Structures

Development Candidates

Animal Model

Developed Assets

With whom?

Academia

Start-Ups

Academia

Start-Ups

SME

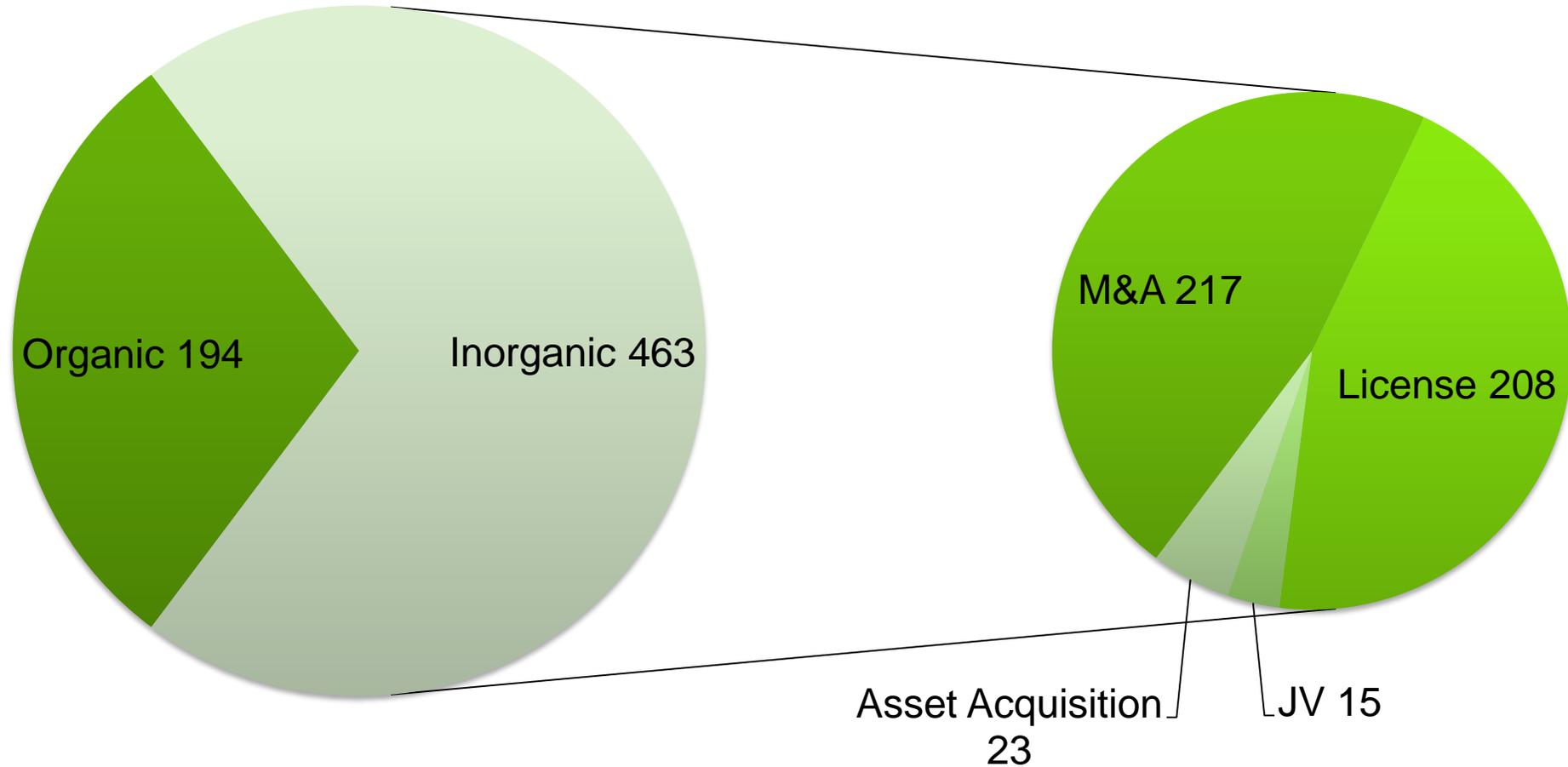
Big Pharma

SME

Big Pharma



70% of future NME sales¹ are from non-organic² sources



SOURCE: EvaluatePharma (March 2017)
¹All TAs, only new molecular entities
²Defined as products with originator different than current owner

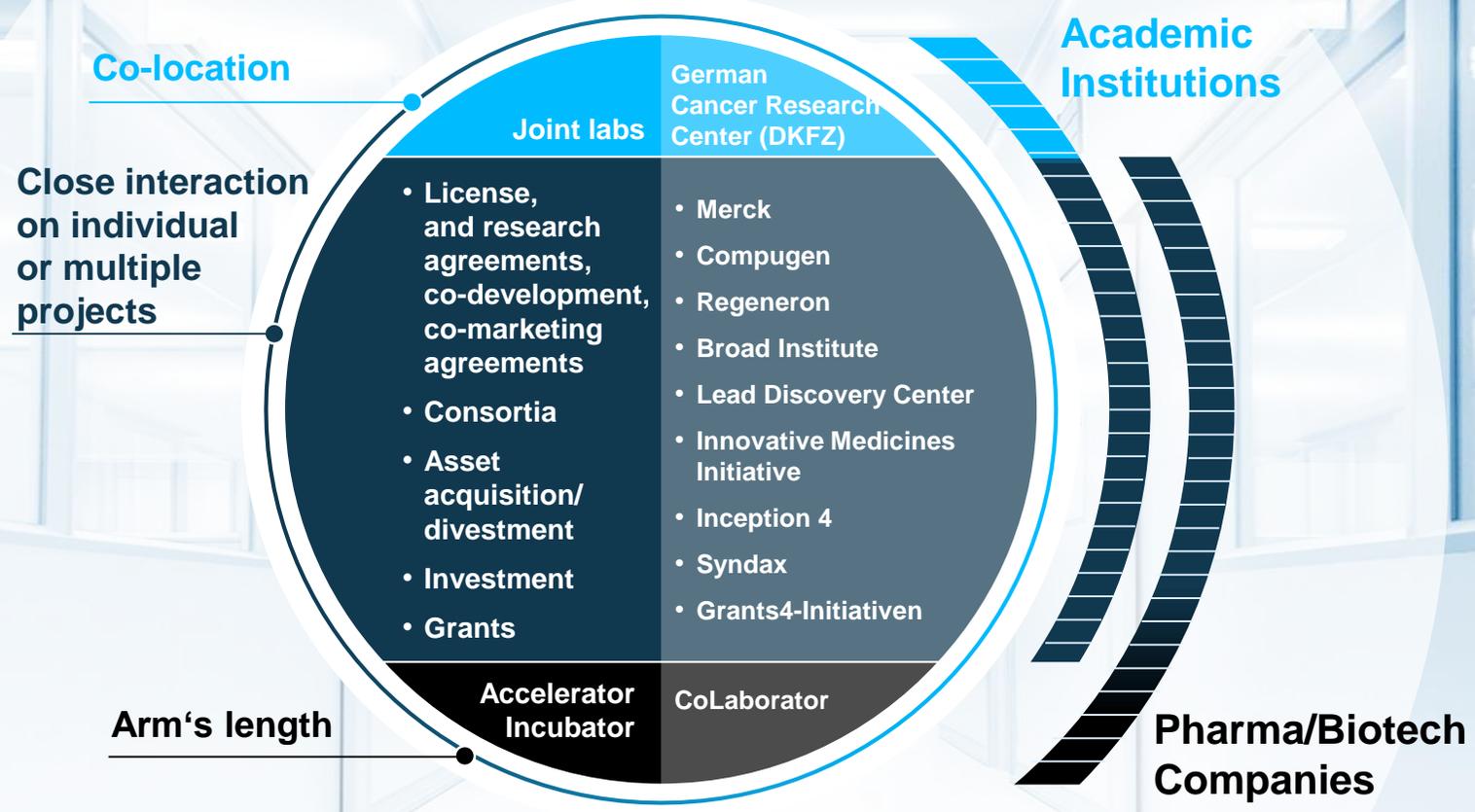


Without the ability to open up silos, the innovation speed seen in healthcare could not have happened and could not be maintained!





Partnering comes in different forms and colors



From traditional licensing agreements or strategic research alliances to public-private partnerships or open innovation models – Bayer welcomes many different forms of cooperation along the value chain



Focused licensing also enables CSR programs for NTDs

Bayer, DNDi to Develop Astellas' Emodepside for River Blindness

Bayer HealthCare will furnish the active ingredient emodepside to support the Drugs for Neglected Diseases initiative (DNDi) in developing a new oral drug to treat the world's second leading infectious cause of blindness, known as river blindness or onchocerciasis.

Bayer has been granted rights to develop emodepside for the neglected tropical disease by Astellas— which has previously licensed the compound to Bayer Animal Health for animal health uses. Bayer has commercialized emodepside as an anthelmintic veterinary drug for cats and dogs in combination with praziquantel (Profender™) and with toltrazuril (Procox™).



Long-term partnerships are an opportunity to build own capabilities through technology diffusion

The Bayer-SIOC partnership has evolved significantly over time

// 1996-2003

- // Scaffold synthesis to support a library build-up program
 - // Focus on large number of analogs per series, relatively simple syntheses
 - // Emphasis on high overall output, not on timelines, flexibility or complexity

// 2004-2009

- // Increasing number and variety of program goals
 - // LO and ER project support, library enhancement support, building blocks
 - // Growing emphasis on timelines (Fast Track concept), flexibility, complexity

// 2010-2016

- // Development towards more value-added support
 - // Troubleshooting, route finding in addition to analog synthesis, optimization
 - // Establishment of additional synthetic expertise (collaboration expert role)

// Since 2016

- // New Strategic Alliance and Research Collaboration
 - // Individual research projects





„What we do is to manufacture small white pills with IP“

Some take-aways from the real world

- // Licensing is an indispensable tool to optimize research efficiency and achieve technology diffusion
- // In negotiations, discussions often focus on different aspects of IP
 - // Ownership of Background IP ✓
 - // Ownership of Foreground IP
 - // Distribution of rights under Foreground IP
 - // Surviving licenses in case of termination
- // The ability to trade IP, „slice“ IP and enforce IP reliably is the very foundation of the ability to cooperate and thus increases access to drugs which otherwise would never exist!



Thank you!



Bye-Bye





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