




*m<sup>4</sup>*

Personalized Medicine and Targeted Therapies  
—  
A New Dimension in Drug Development


GEFÖRDERT VOM



Bundesministerium  
für Bildung  
und Forschung




CLUSTER  
**BIOTECHNOLOGIE**  
BAYERN




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**Bio<sup>M</sup>**  
Biotech Cluster  
Development



Bayerisches Staatsministerium für  
Wirtschaft, Infrastruktur, Verkehr und Technologie

*m<sup>4</sup> - Personalized Medicine and targeted therapies* 

- m<sup>4</sup> is a Munich initiative for personalized medicine with partners from industry and science
- m<sup>4</sup> has won the national „Spitzencluster-Wettbewerb – Cutting Edge Cluster Competition“ in 2010
- € 40 Mio. grant from federal government  
+ € 40 Mio. from industry  
+ about € 15 Mio. from Free State of Bavaria
- Almost € 100 Mio. for Personalized medicine in the next 5 years
- 32 Research and Development projects
- 5 structural projects

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## Life Science Cluster Munich – Germany's leading location in Biotech and Pharma



- > 350 LifeScience-Companies, 118 SMEs
- > 50%: of these in Therapeutics/Diagnostics (SME)
- Strong Pipeline  
4 Drugs approved, 40 in clinical trials, 89 in preclinic
- Revenues SME (2008): about € 400 Mio.
- innovative technologies:  
Imaging, Genomics, Proteomics, Kinomics, and more
- 8 excellent scientific institutions
- > 40 Pharma-Companies
- 30.000 Employees in Science and Industry (SME: >2.600)
- Innovation- and start-up-incubators (26.000 m<sup>2</sup>)
- > € 2,4 Mrd. private Investments since 1996
- Clustermanagement by Bio<sup>M</sup>  
[www.bio-m.org](http://www.bio-m.org)



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## A New Dimension in Drug Development

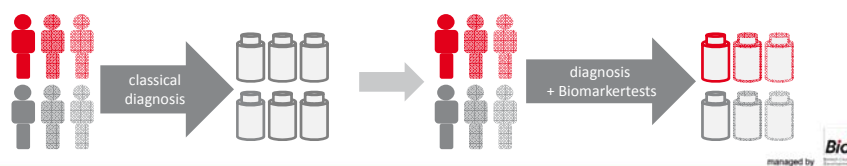


### Symptom-based medicine

- „one fits all“ / Blockbuster
- limited effectiveness (only 40-60%)
- side-effects
- high attrition rates
- long development
- cost intensive development and clinical trials

### Personalized medicine

- individualized patient
- more effective drugs
- safer drugs
- less attrition rate
- smaller and hence cheaper clinical trials



m<sup>4</sup> - 4 Strong Partners for Munich

Science in *m*unich

Biotech and Pharma in *m*unich

Hospitals in *m*unich

Cluster management for *m*unich

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m<sup>4</sup> includes about 100 collaborators from diverse institutions and is open to new partners

LMU KLINIKUM morphosys priaxon corimmun... MRI itm

paktis AMSilk ascenion GENEART GOUTHE UNIVERSITÄT NOVARTIS KINAXO

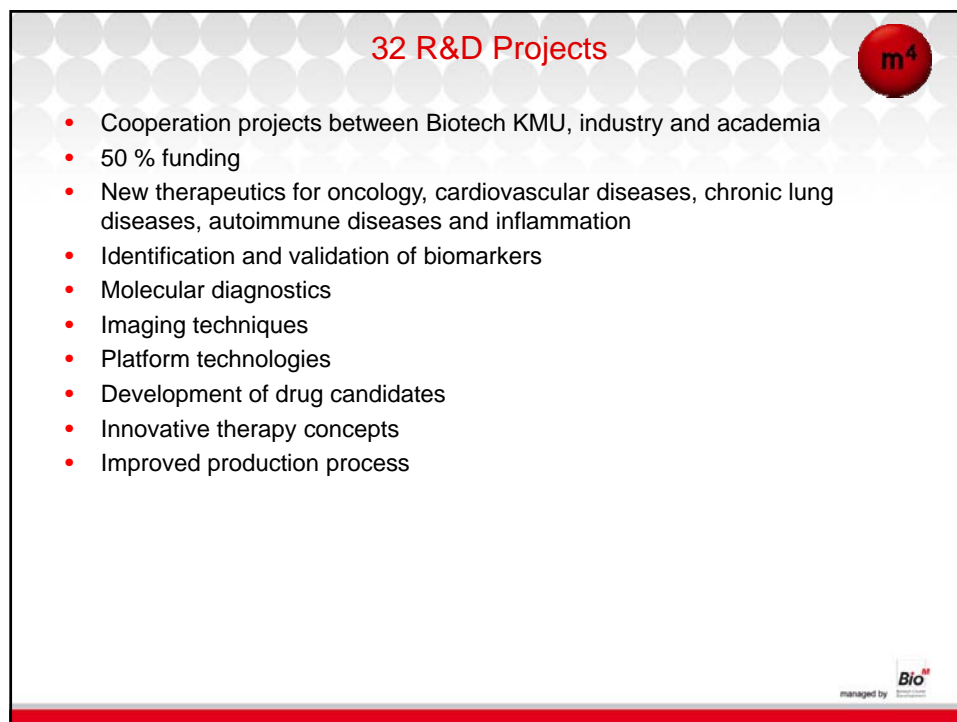
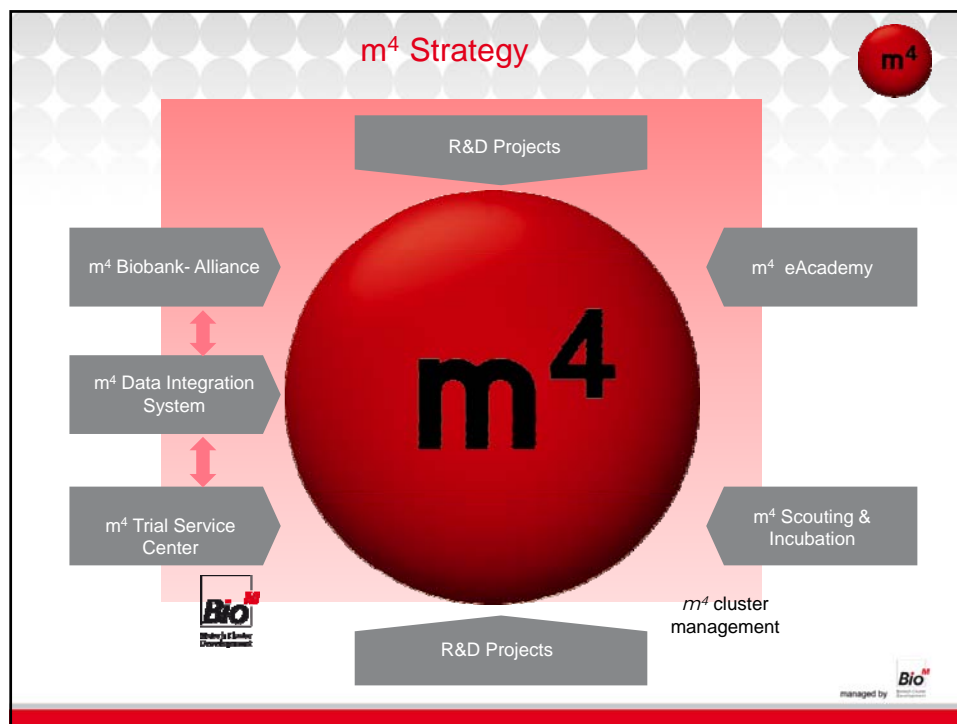
GE TUM STAGE cell Therapeutics SIEMENS conoGenetics PHILIPS Intana

apceth biomax Friedrich-Alexander-Universität Erlangen-Nürnberg Roche Blutspendedienst des Bayerischen Roten Kreuzes

ACTIVAERO WILEX aurigon XL-protein proteros biostructures mi

VIPig genomatix Pfizer STY SuppreMol HelmholtzZentrum münchen Deutsches Forschungszentrum für Gesundheit und Umwelt TRION

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## m<sup>4</sup> - 5 Structural Projects



- m<sup>4</sup> Biobank Alliance  
Central access to biological samples for pharmaceutical industry and academic research
- m<sup>4</sup> Data Integration System  
Central communication platform and data management
- m<sup>4</sup> Trial Service Center  
Service and consulting concerning patient recruitment and stratification, progression from preclinic to clinic
- m<sup>4</sup> eAcademy  
eLearning platform for custom-fit Life Science and business modules
- m<sup>4</sup> Scouting & Incubation  
Targeted identification and active advancement of innovative academic research projects

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## Cluster Management for Munich Biotech Cluster



[www.bio-m.org](http://www.bio-m.org)

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