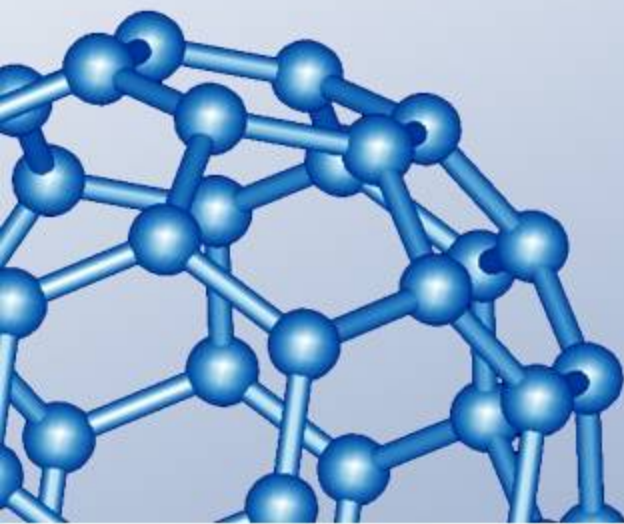


The Imperative for Collaboration: Informatics for Nanomedicine



Dr. Martin Fritts

BIOINFOSALUD 2009
Madrid

March 16, 2009



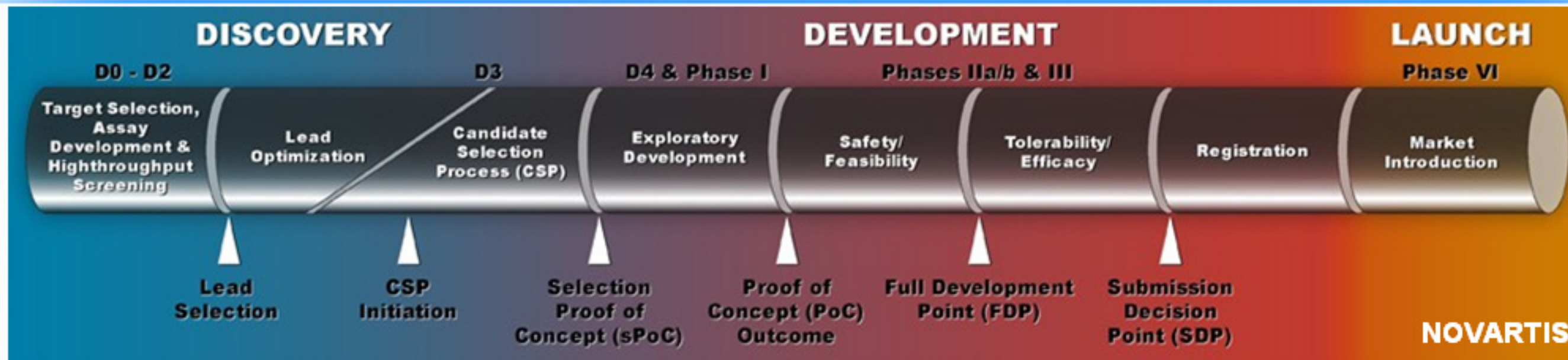
Advanced Technology Program

SAIC **SAIC-Frederick, Inc.**
From Science to Solutions A subsidiary of Science Applications
International Corporation

Contract N01-CO-12400 - Funded by the National Cancer Institute

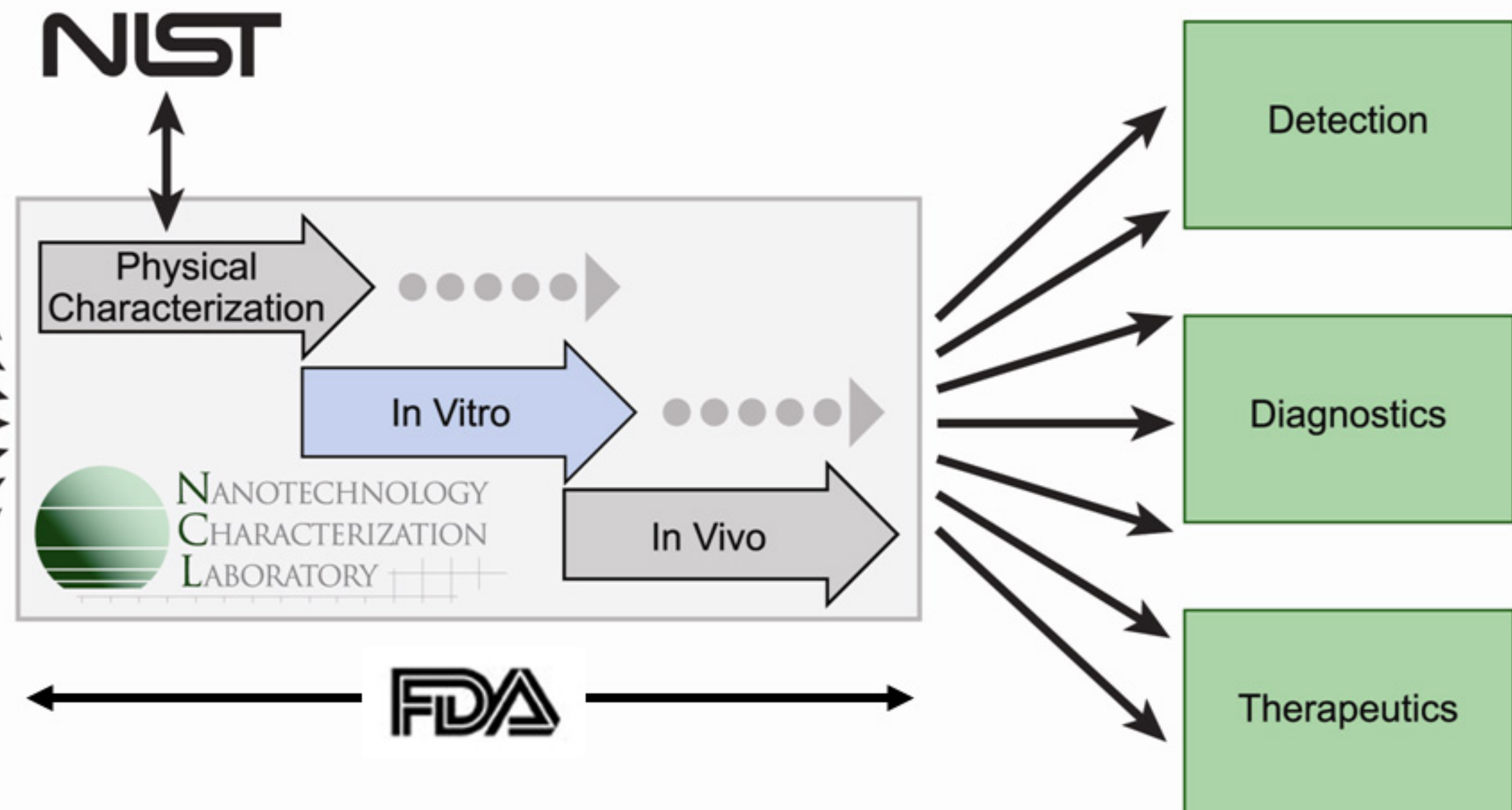


Drug/Device Lifecycle

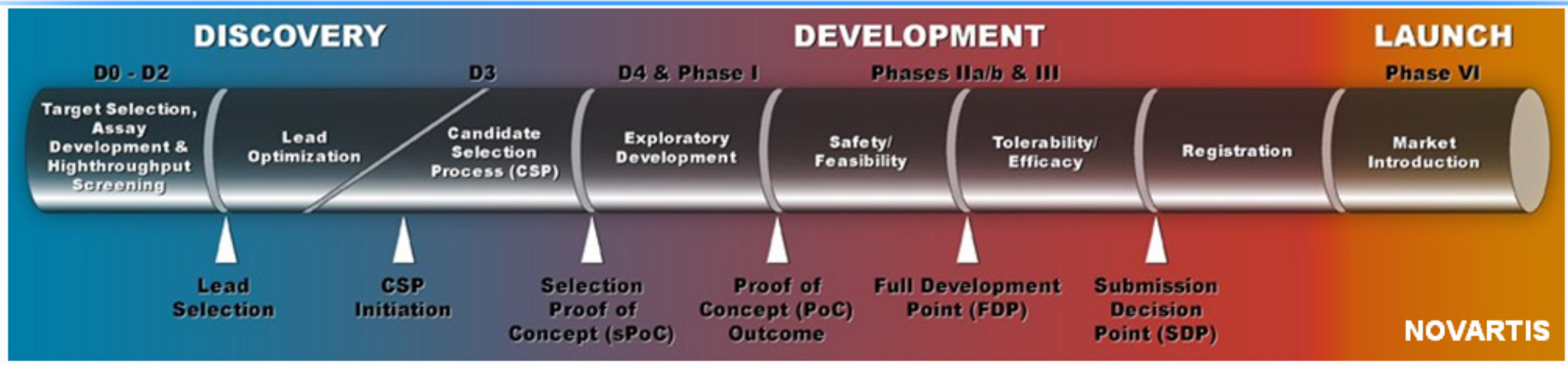


Sources of Nanomaterials

- Centers of Cancer Nanotech Excellence (CCNEs)
- Academia
- Big Pharm
- Small Biotech
- NCI, NIH, NSF Grants
- DoD, DoE
- Unconventional Innovative Program (UIP)



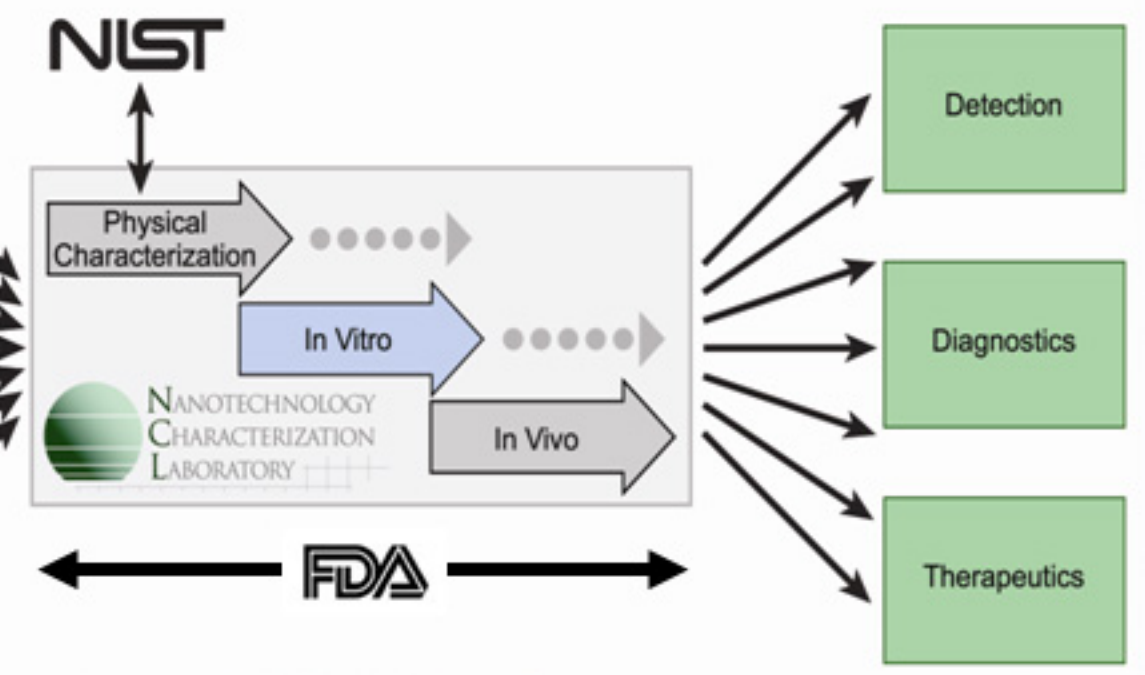
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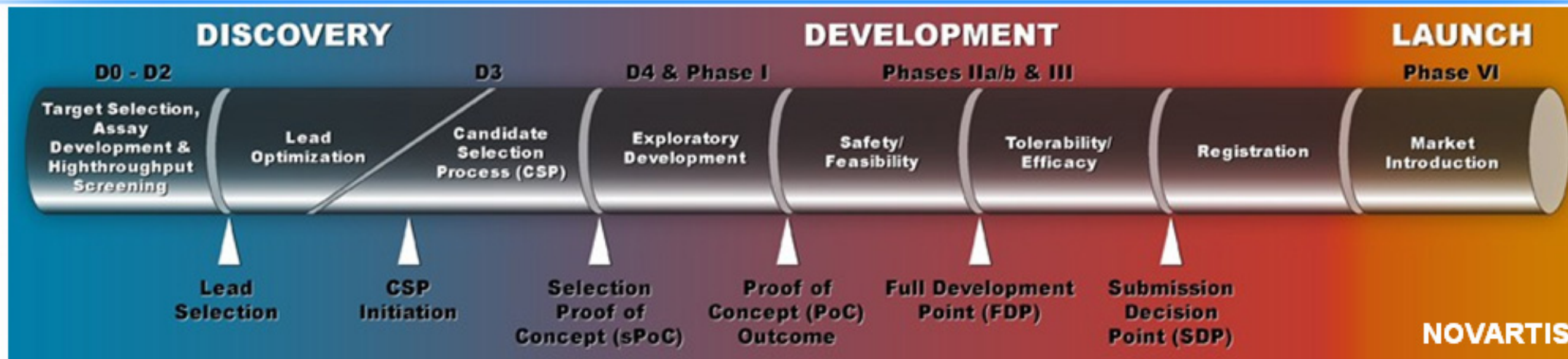
NOVARTIS

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Drug/Device Lifecycle



NCI Nanotechnology Characterization

Materials Research, Standard Assays, Modeling

Cancer Biomedical Informatics Grid (caBIG®)

Research, Genomics, Proteomics, Clinical Trials Management

Personalized Medicine

Collaboratory for Structural Nanobiology

NanoHealth and Safety Enterprise

ACTION Grid



NanoBioMedInformatics

ACTION-Grid presents an enormous challenge

- Leverage existing databases and tools
- Honor requirements from multiple disciplines
- Administer massively large public/private datasets

Semantic Interoperability is Crucial

- Connect to data/tools using unfamiliar terminology/logic
- Metadata and annotations are nuanced by namespace
- Federated ontologies promise translation capability

This session highlights the challenge