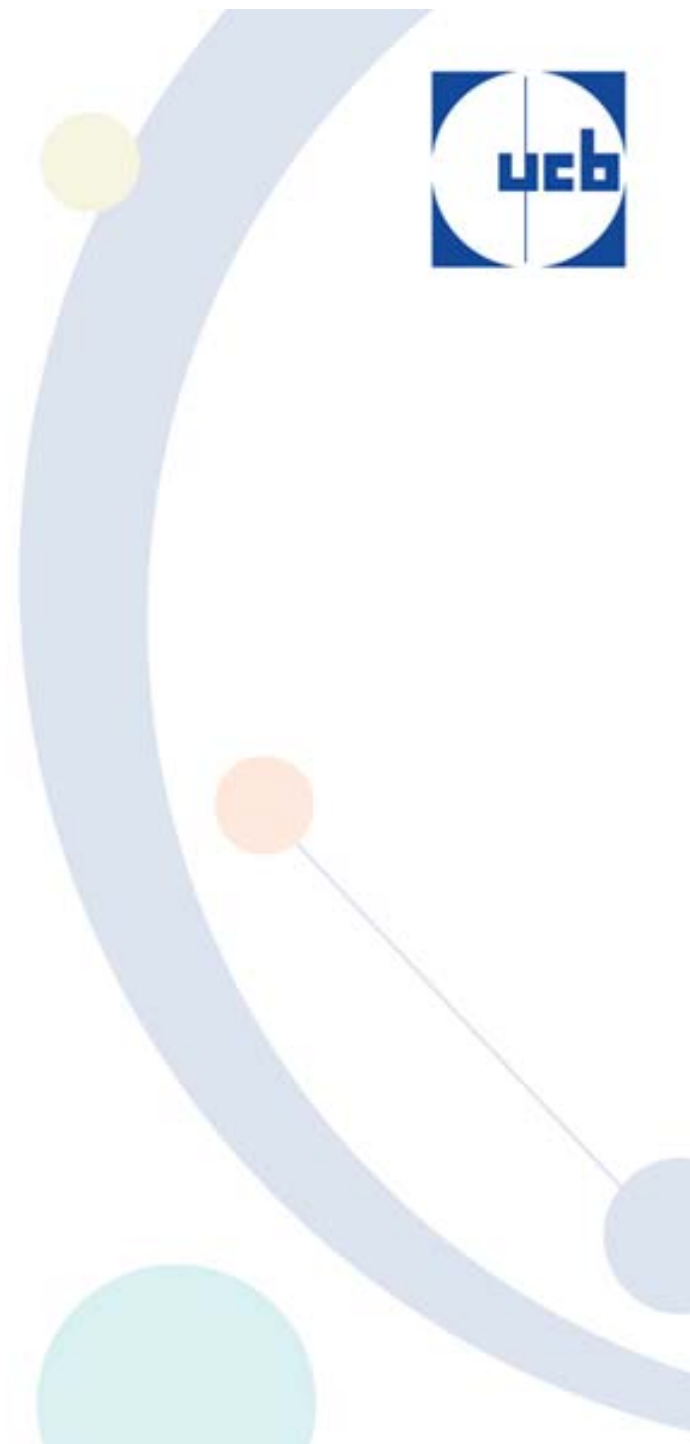


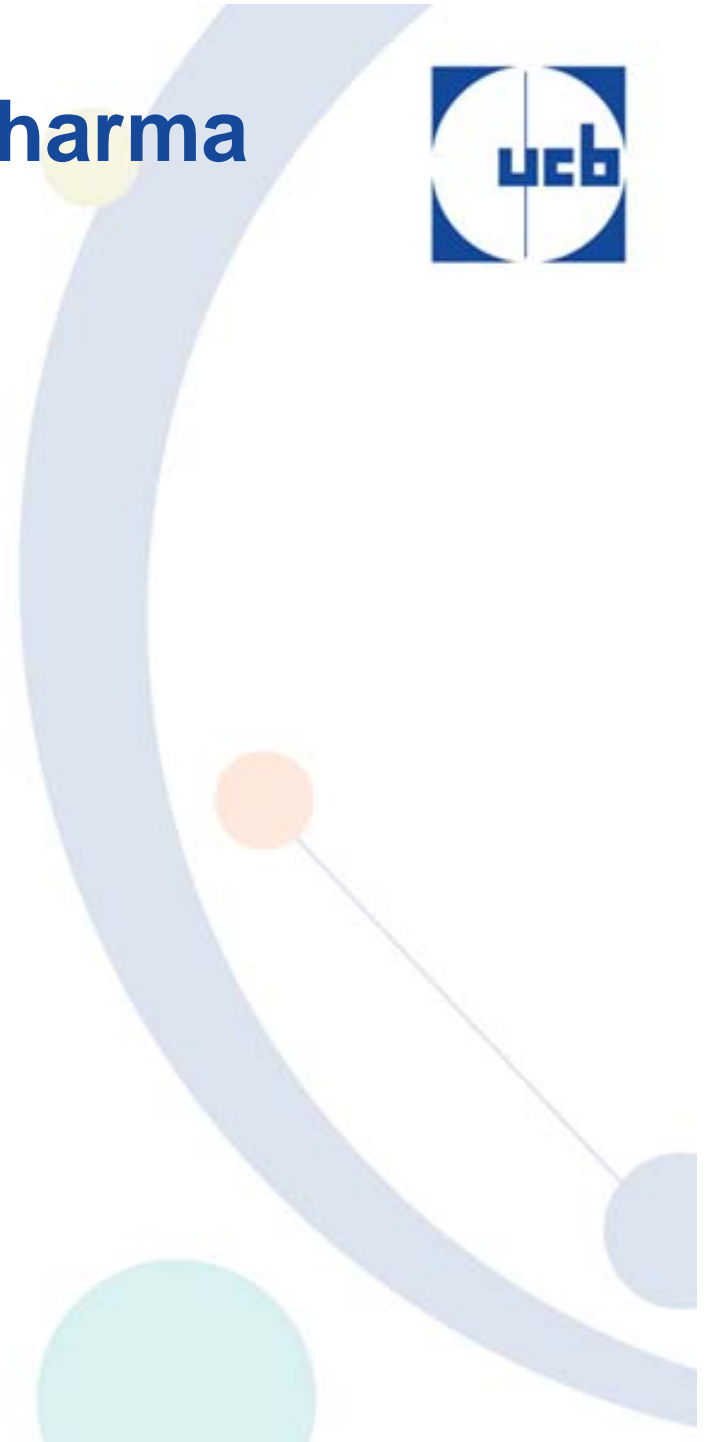
This is UCB...



UCB, Next Generation Biopharma



- **Unique Technologies**
- **Unique Platforms**
- **Unique Products**
- **Unique Team of Experts**



Scientific Advisory Board in London



- **Professor Sir Tom Blundell**
- Professor Robert Darnell
- Dr Frank Fildes
- **Professor George Griffin, Chairman**
- Dr John McCall
- **Peter Fellner, UCB Board Member**

UCB R&D Day Agenda



- **Discovery Research**

- Research overview and differentiating technologies
- Sclerostin antibody
- CDP323

- **Oncology**

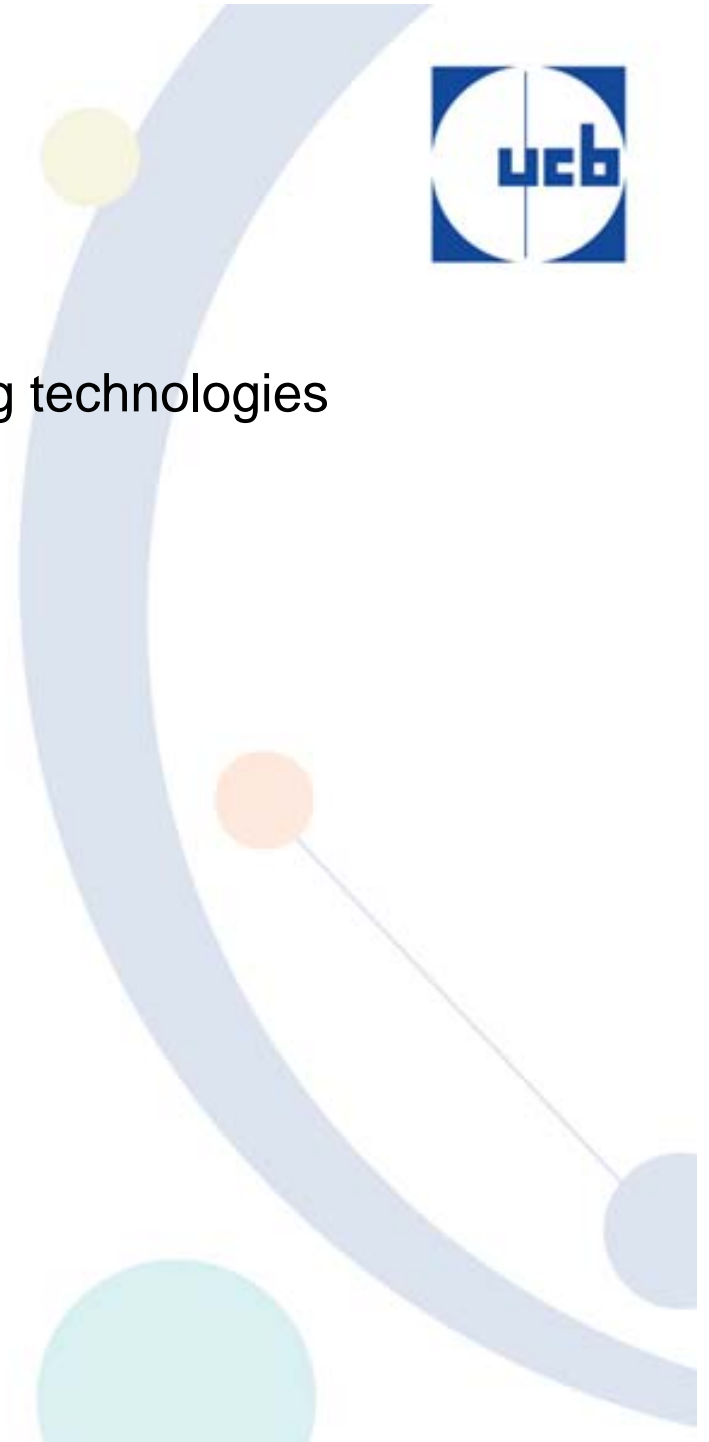
- CDP791
- CMC544

- **Inflammation**

- Epratuzumab
- Cimzia™

- **CNS**

- UCB 106607
- Brivaracetam / Seletacetam
- Epilepsy commercial strategy



UCB Vision



To build a **global** biopharmaceutical **leader**,
based on unique blending of **innovation**,
entrepreneurship and **proven experience**,
bringing to **specialists** first, new medicines to
treat patients suffering from **severe diseases**

Biopharma - Key Success Factors



- **Differentiated new medicine**
- **Resources**
- **Flexible and opportunistic**
- **Core processes**
 - quality, compliance, development, supply chain, finance
- **People with Passion and Performance**

Transformational Merger of UCB with Cellect



Quantum Strategic Leap

Creating a **Global Leader**
able to **Compete**
in the **Biopharmaceutical World**

UCB, Pharma or Biotech?



... is a Mid-size Pharma Company?

- Partnering with other mid-sized Pharma companies
- Dependent on licensing for its LT growth

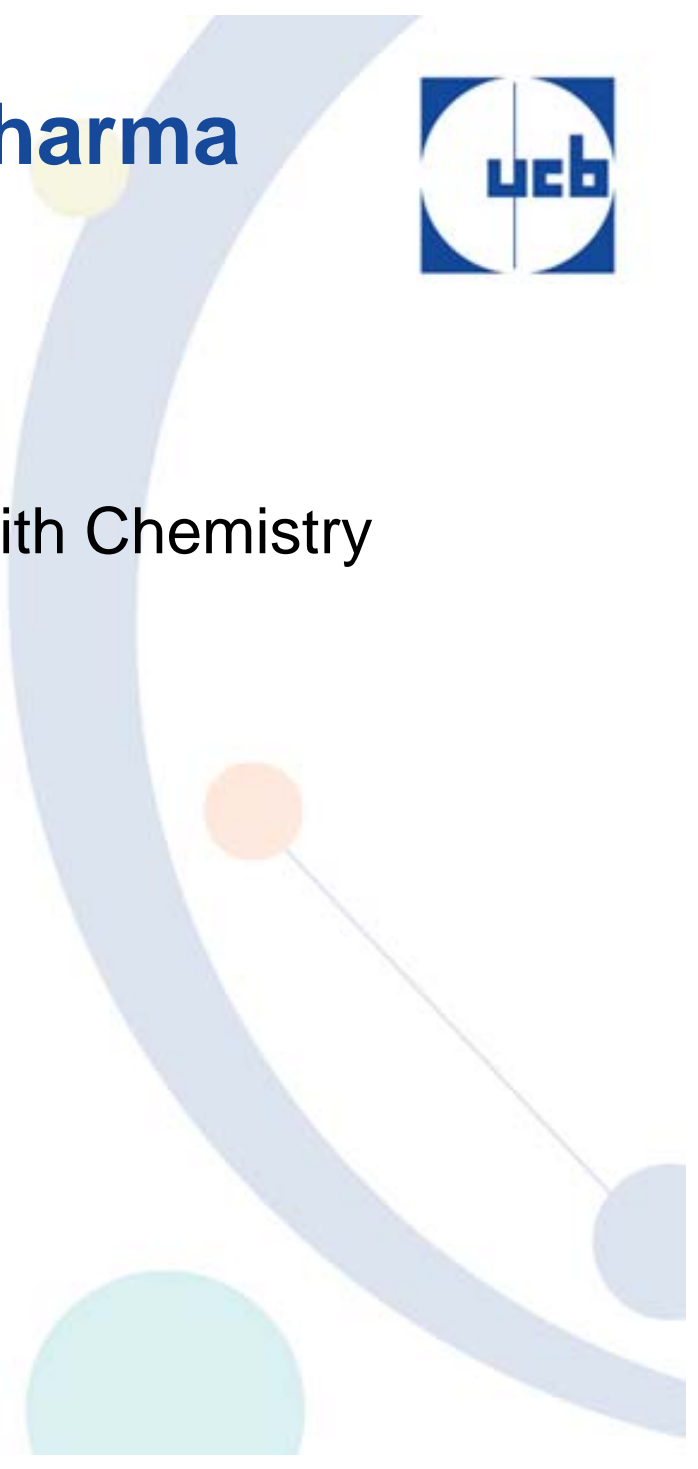
... is a Biotech Company?

- Willing to make bold moves
- Partner with the Best
- Unique Research capabilities
- Productive portfolio of new targets, compounds, new medicines
- Big Pharmas and Biotechs looking to partner with us

UCB, Next Generation Biopharma



- **Science-led Research**
 - Unique Combination of Biology with Chemistry
- **Innovative Clinical Development**
- **Partners and Networks**
- **Focused Global Business Units**
- **Unique Diverse People Base**
- **Patient Centric**



UCB Strategy



- **Innovation-driven**
 - Science, Patient & People
- **Specialist Marketing**
 - USA, Europe, Asia
- **Focus to reach leadership**
 - Neurology, Inflammation, Oncology
- **Partnering up- and downstream**
 - Access technology and maximise assets
- **Broadening base**
 - Invest more in R&D
 - Enhance LT growth



UCB, Next Generation Biopharma



UCB is shaping a Next Generation Biopharma

One With a Clear Strategy

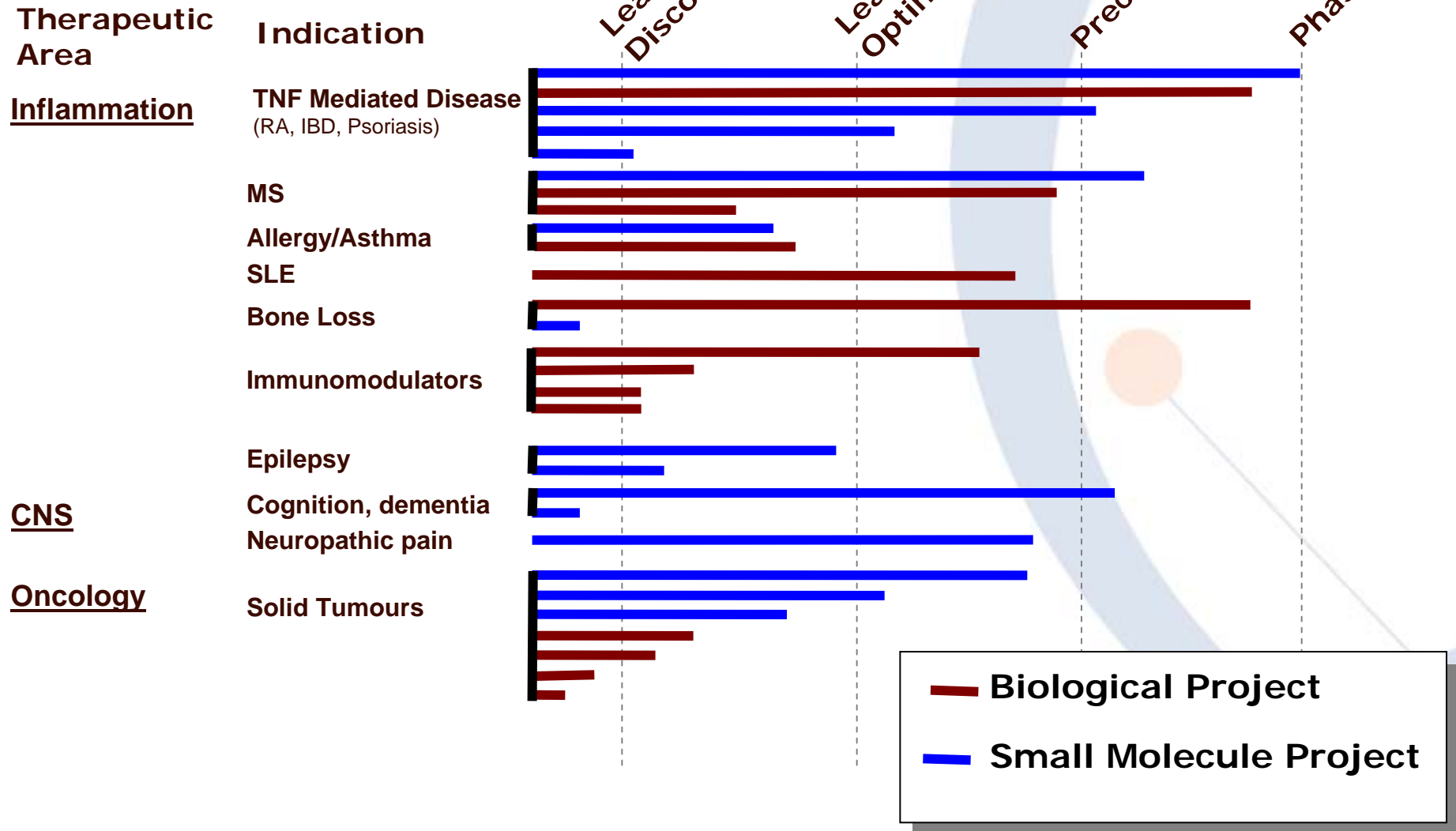
One With Passionate Networked Individuals

Who focus

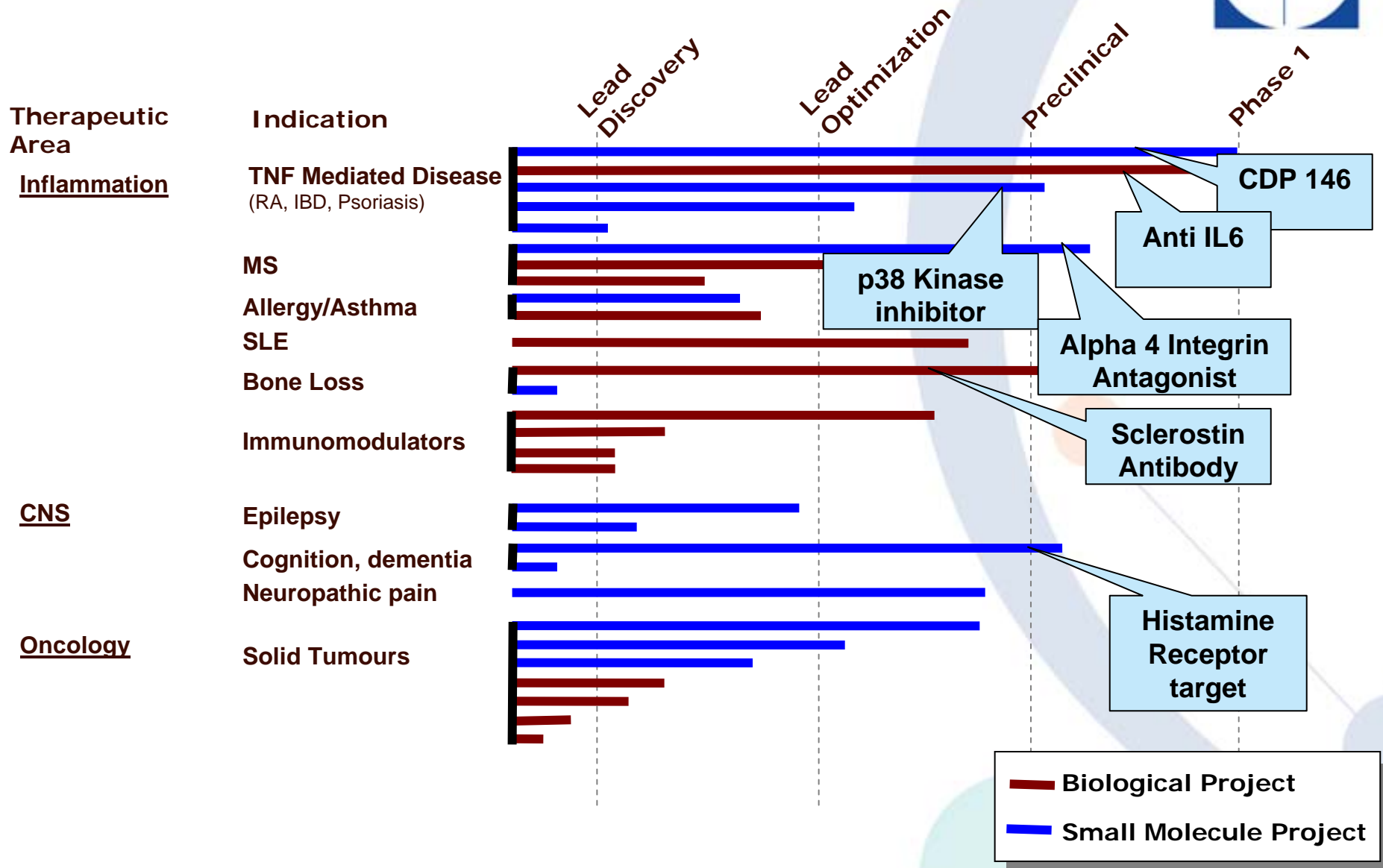
Who aim high

Who perform

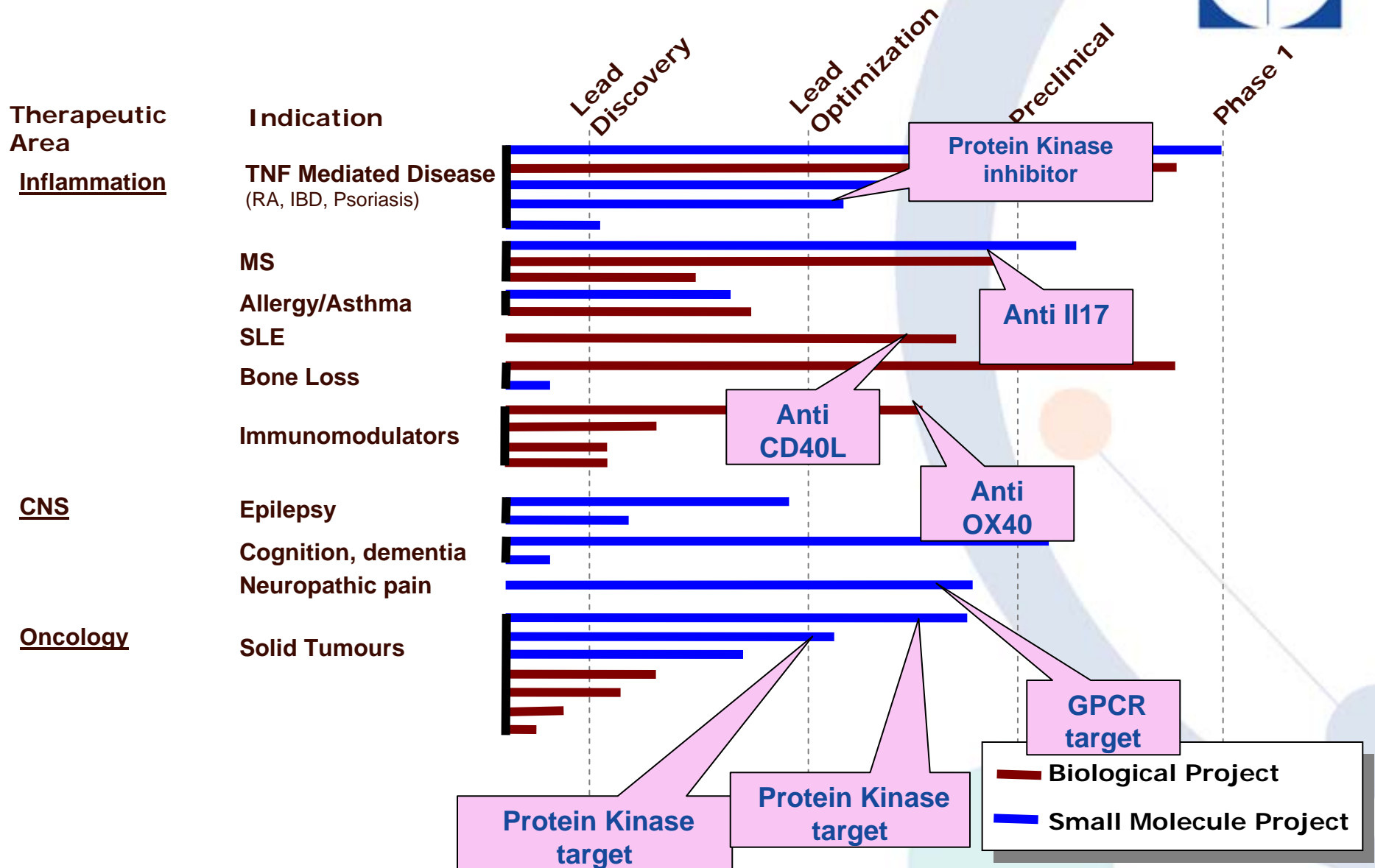
UCB has a Rich Research Pipeline



UCB has a rich Research Pipeline



UCB has a rich Research Pipeline



Innovation

Novel drug design and Novel target biology



Therapeutic Area

Indication

Inflammation

TNF Mediated Disease
(RA, IBD, Psoriasis)

MS

Allergy/Asthma

SLE

Bone Loss

Immunomodulators

CNS

Epilepsy

Cognition, dementia

Neuropathic pain

Oncology


Solid Tumours


Lead
Discovery

Lead
Optimization

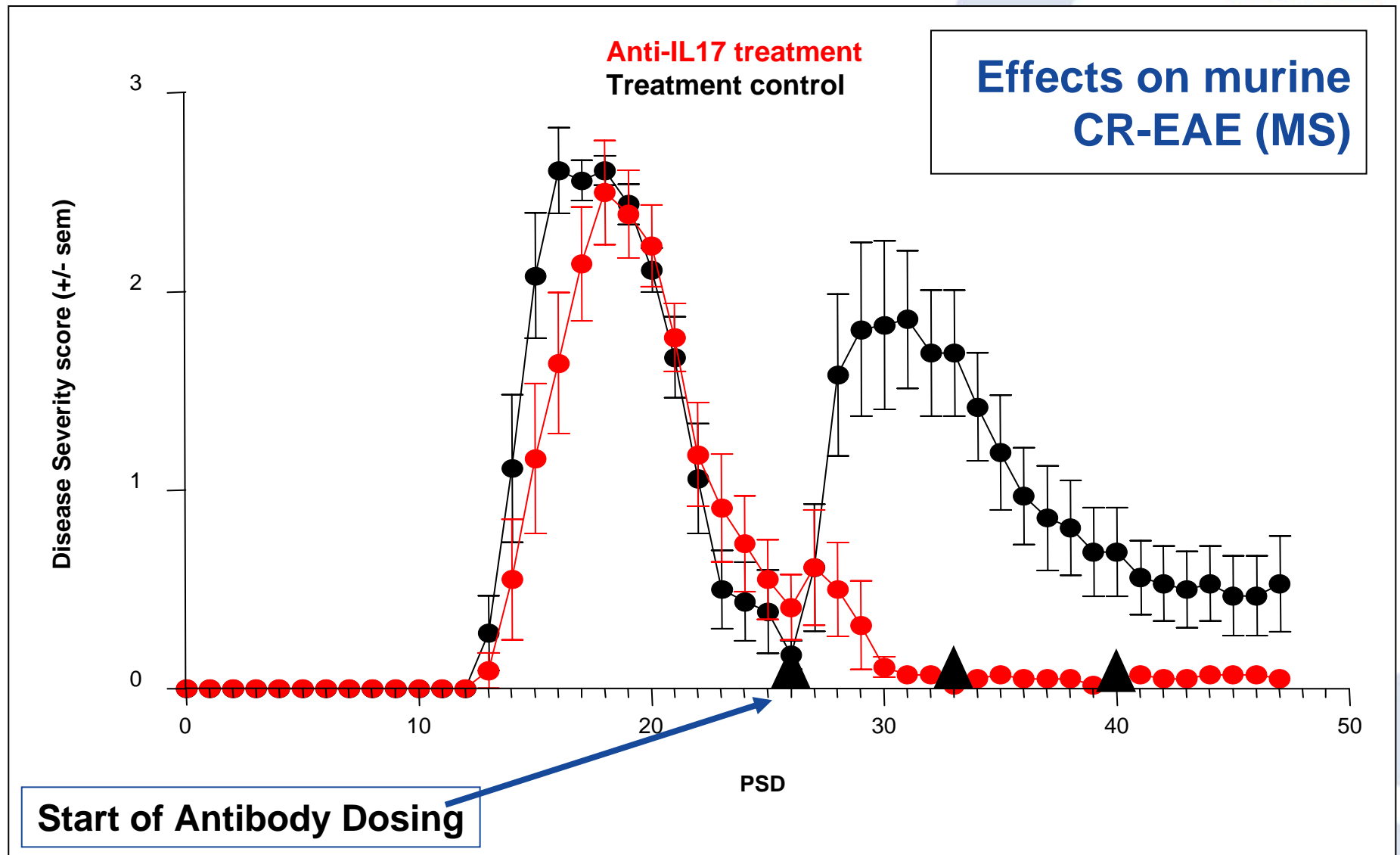
Preclinical

Phase 1

 Innovative drug design

 Innovative disease target biology

UCB Target Innovation: Linkage of IL17 to CNS Inflammatory processes



UCB Addressing innovative drug targets and discovering disease biology links

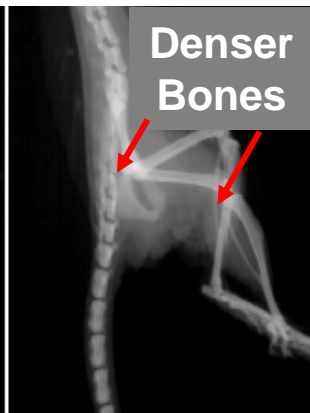


Increased Bone Formation in KO mice

Wild type

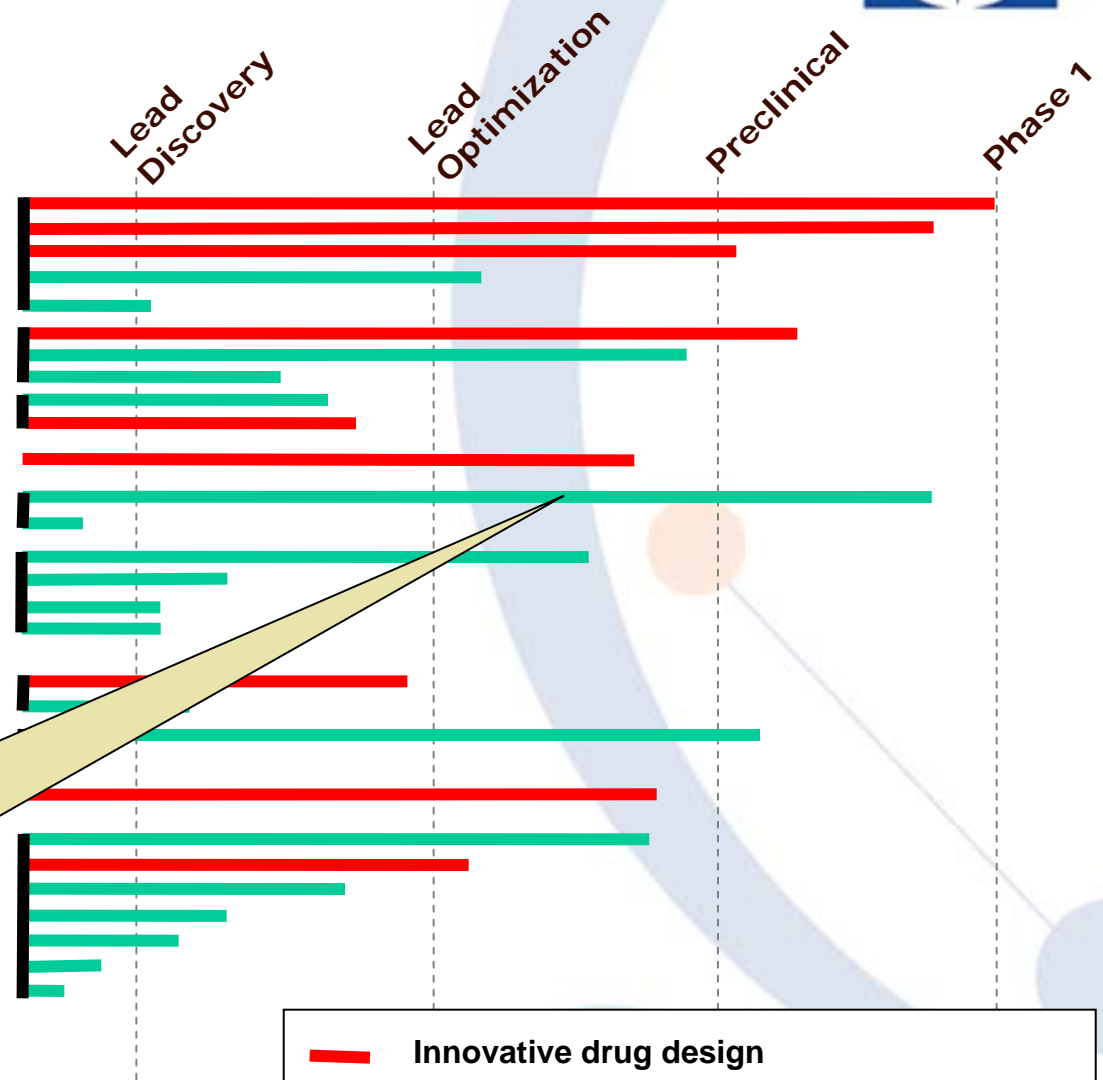


Knockout mice



Courtesy of Amgen

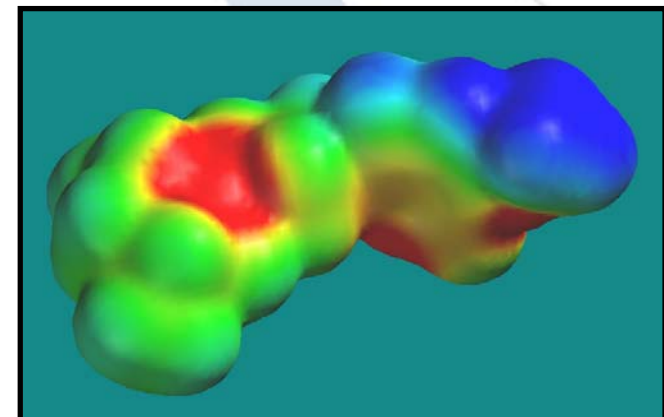
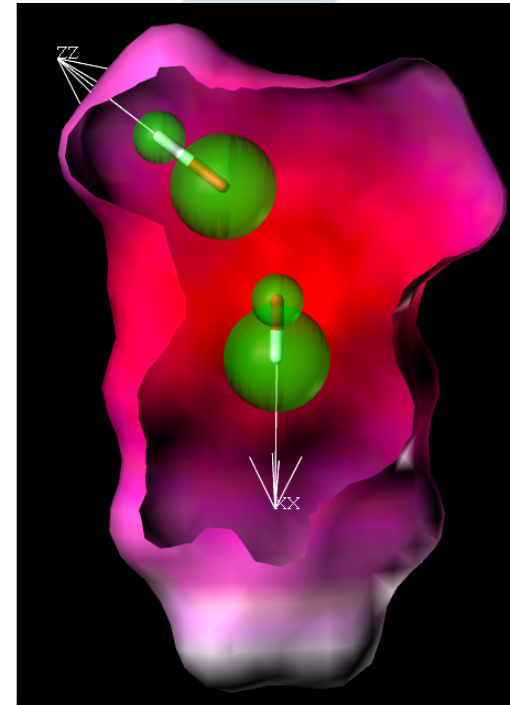
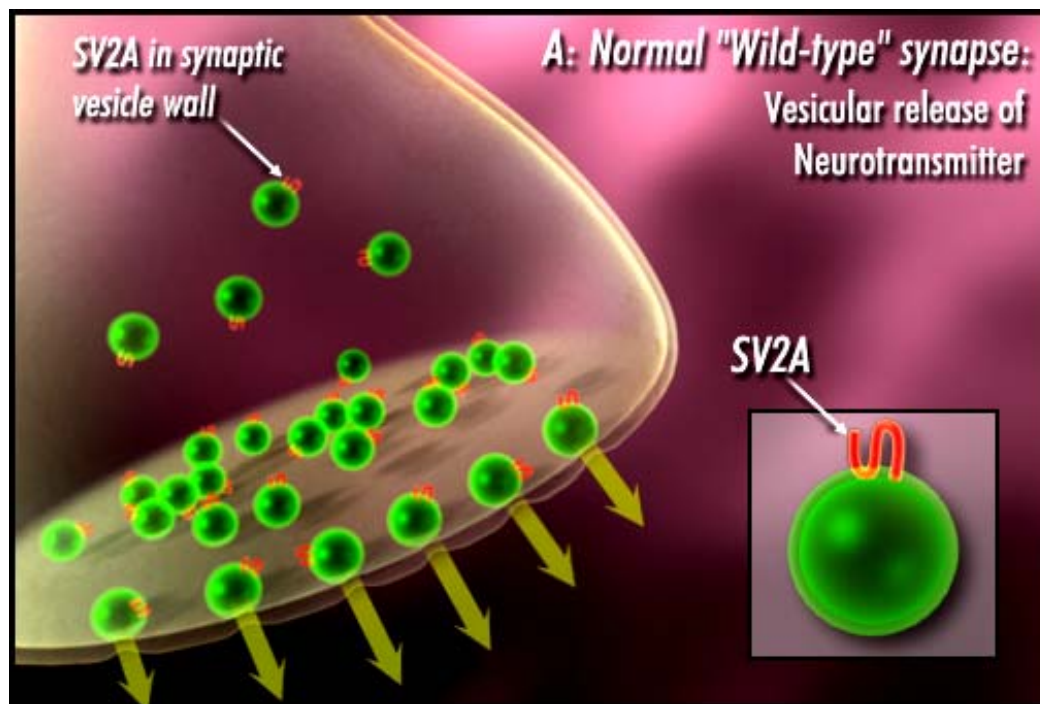
Sclerostin
Target and biology discovery,
novel approach to bone
disease
Extensive patenting



Innovative drug design
Innovative disease target biology

NCE Target Innovation

Building on strengths in SV2 biology
and histamine receptors





Innovation:

Novel drug design based upon competitive technological strengths

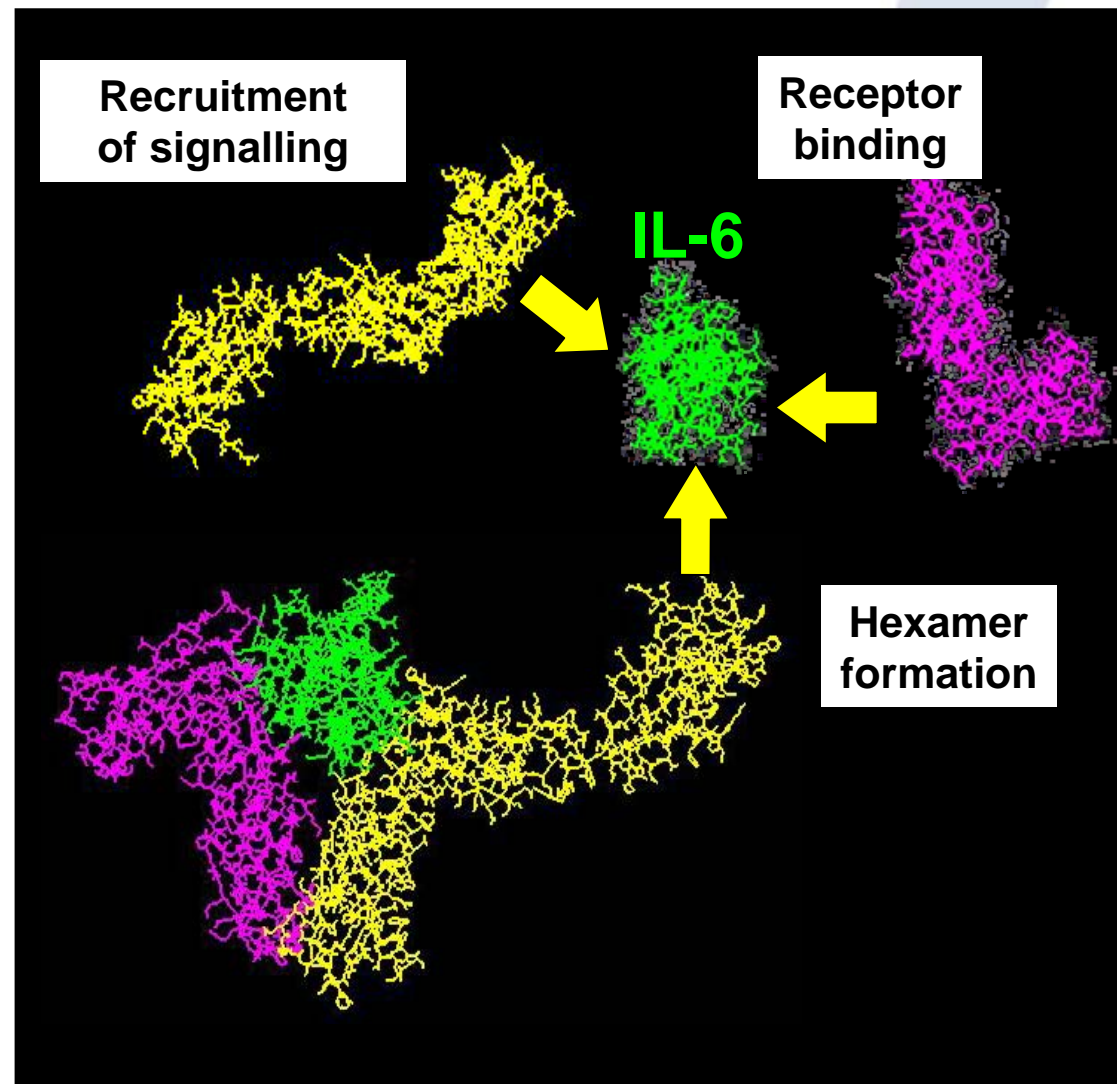
- Small Molecules
 - Protein kinases as targets for drug discovery
 - Histamine receptor biology and chemistry
- Biologicals
 - Optimal antibody selection
 - Structure aligned to preferred drug function

Antibody target epitope optimisation

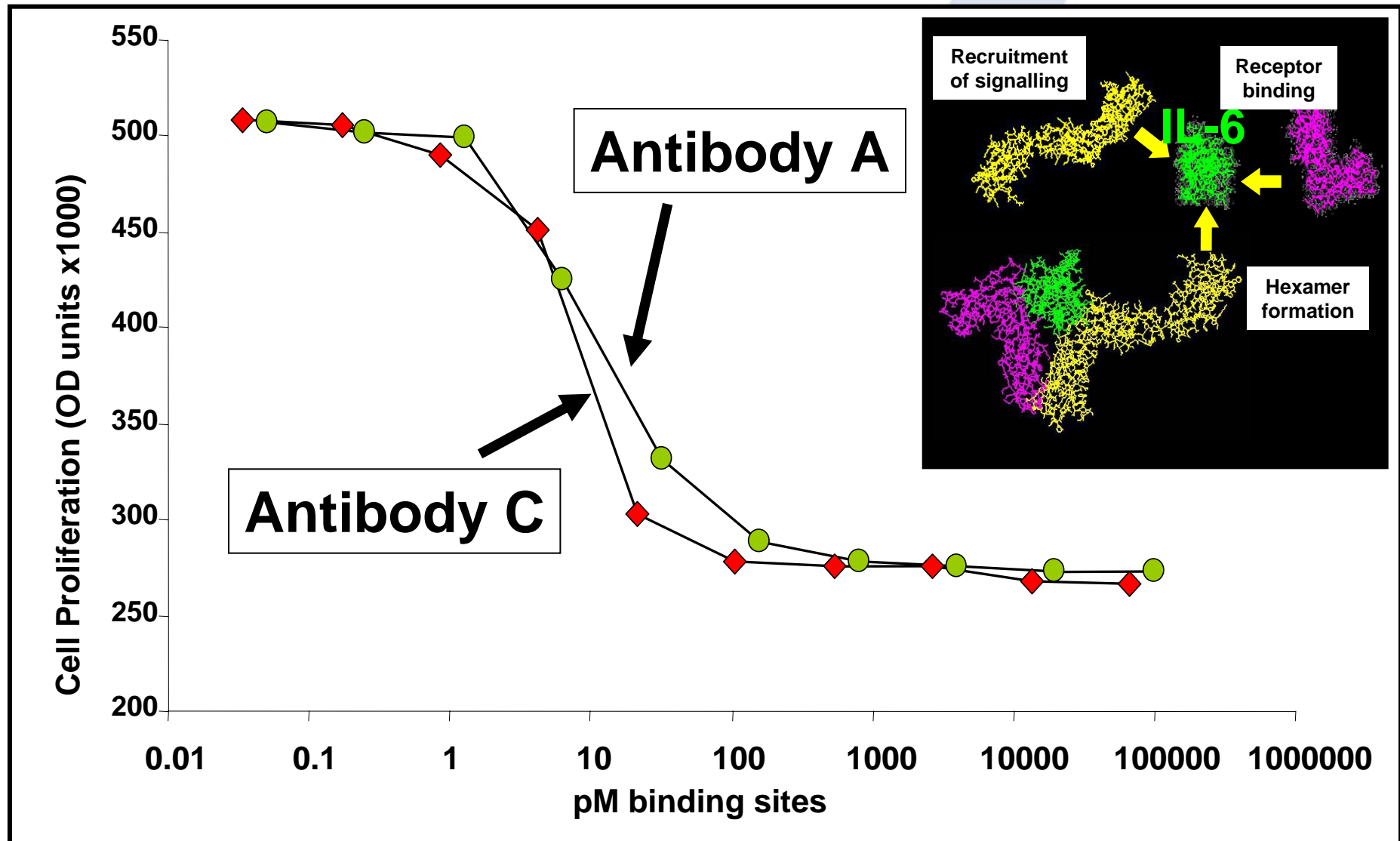


- Functional mechanism complexity exemplified by Cimzia™
- UCB approach to proactively map underlying functional complexity
- UCB very well equipped to address this opportunity

Selection of optimal therapeutic epitope exemplified by antagonists of IL-6 signalling



Selection of optimal therapeutic epitope exemplified by antagonists of IL-6 signalling

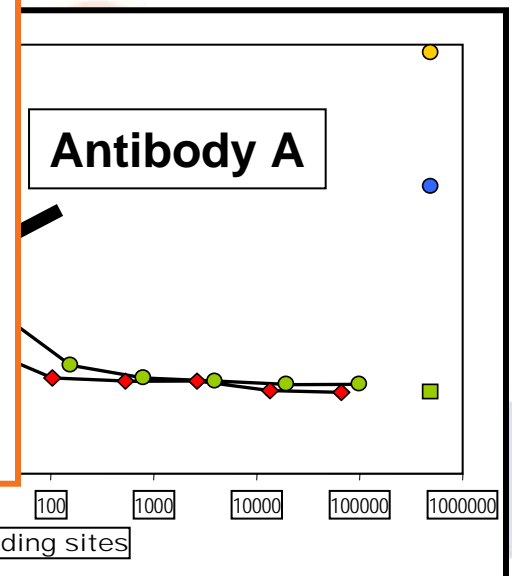
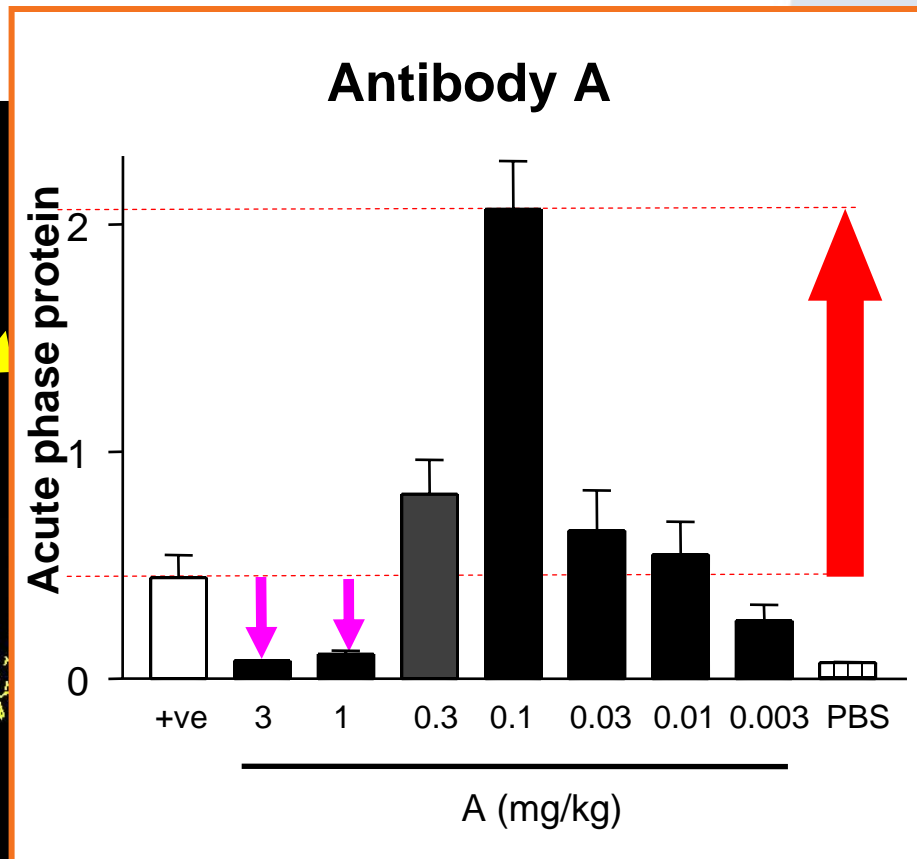
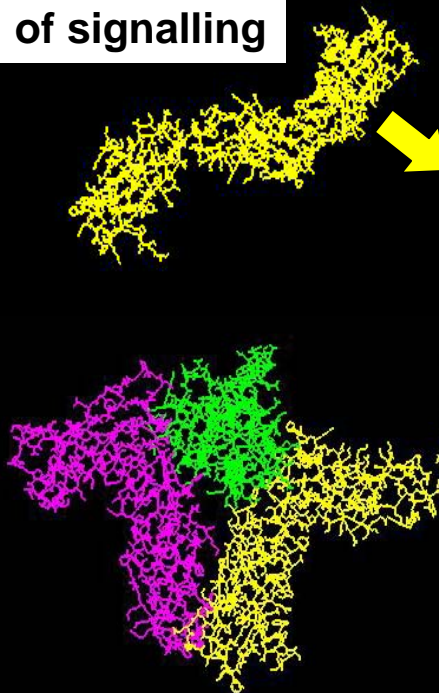


Selection of optimal therapeutic epitope exemplified by antagonists of IL-6 signalling

similar *in vitro* potency can result in very different *in vivo* activity

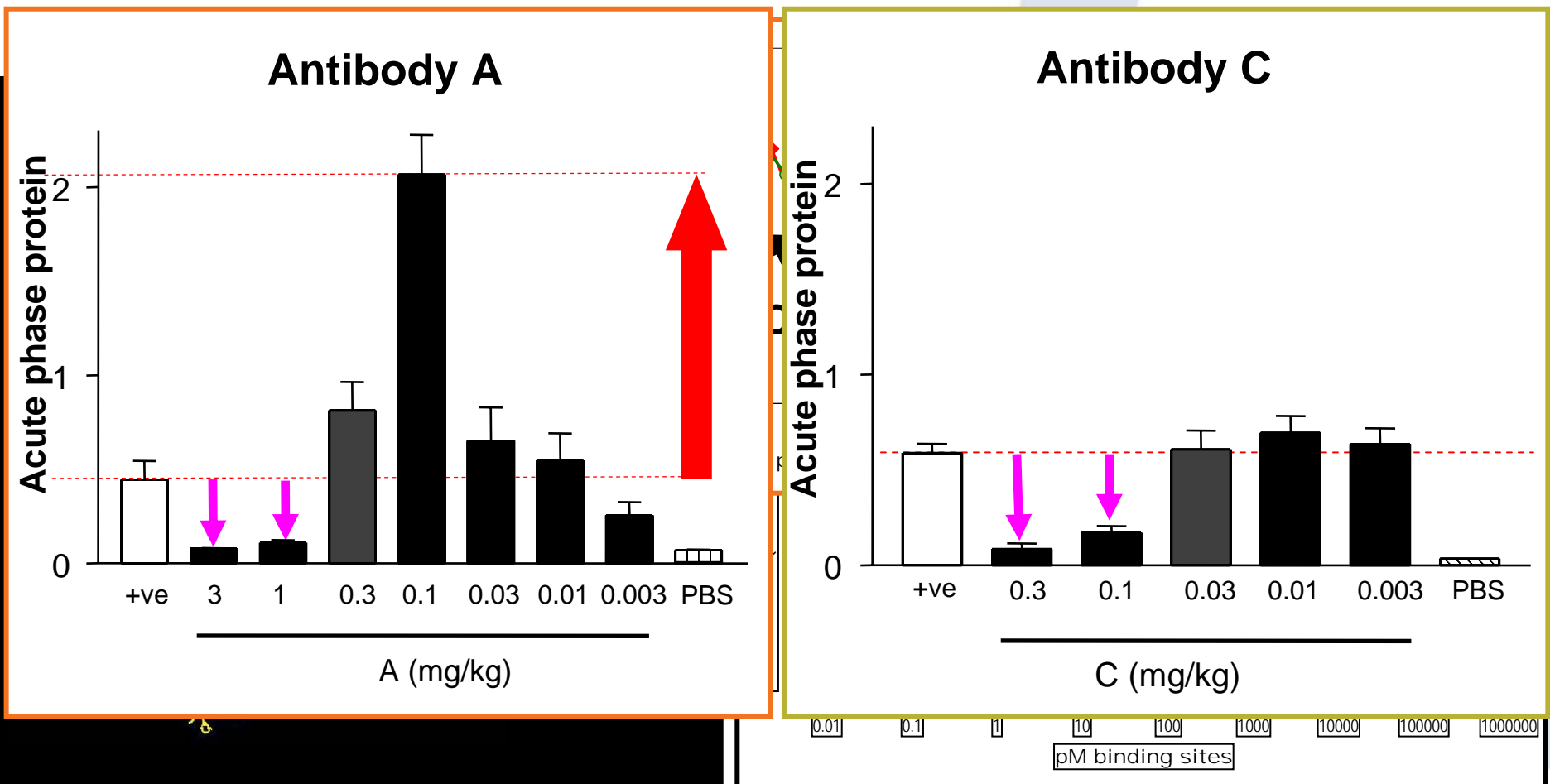


Recruitment
of signalling

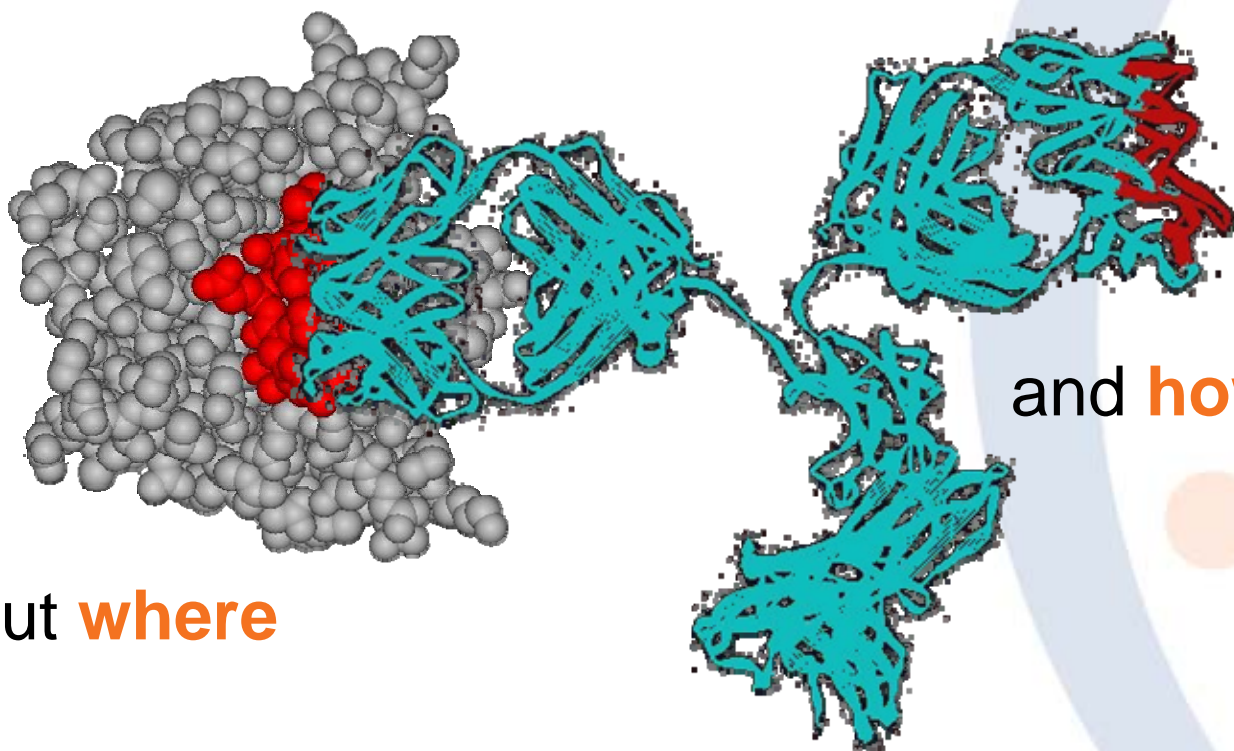


Selection of optimal therapeutic epitope exemplified by antagonists of IL-6 signalling

similar *in vitro* potency can result in very different *in vivo* activity



Applying Knowledge from Antibody Function to inform Small molecule discovery



about **where**

and **how**

antibodies bind
to design new small molecule drugs

Differentiating UCB

UCB Research Pipeline Summary



**An extensive and innovative Research pipeline
Novel target biology and drug design**

**Focussed Research groups working in areas of
competitive strength**

**Synergistic Combination of Biological and
Small Molecule Medicines Discovery**



Patient-Driven Research



**Innovative Products
From Leading Edge Technology**

Seeing The Potential

In-house

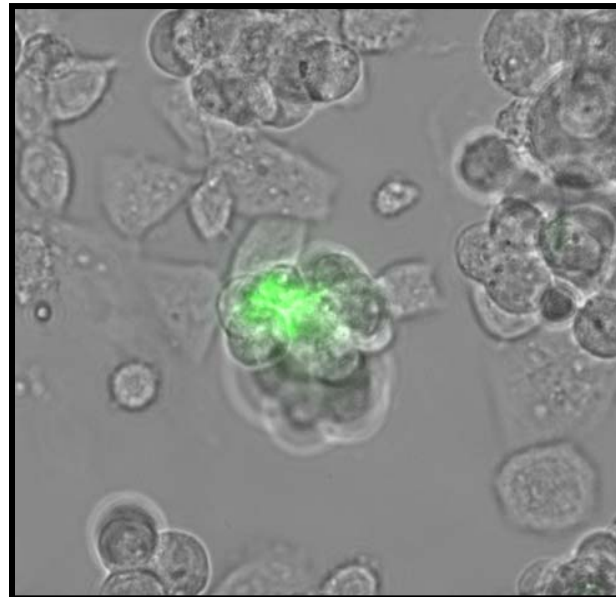
e.g. Antibody Fragment Technology Platform



In-licensed

e.g. **SLAM** (Selected Lymphocyte Antibody Method)

UCB SLAM



UCB Patent Applications

WO2004/051268

WO2004/106377

WO2005/019823

WO2005/019824

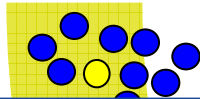


UCB SLAM

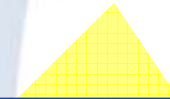
Applying High Throughput Screening Technology To Antibody Discovery



Immune B Cells



Variable Region Sequences

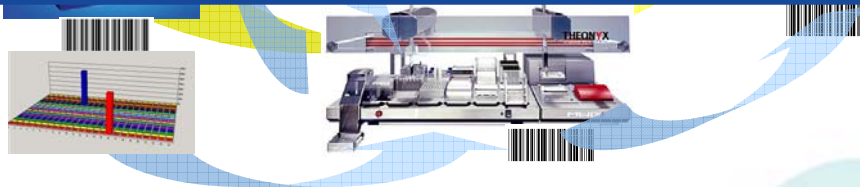


One Thousand Million B Cells

CAAGCT



One Antibody

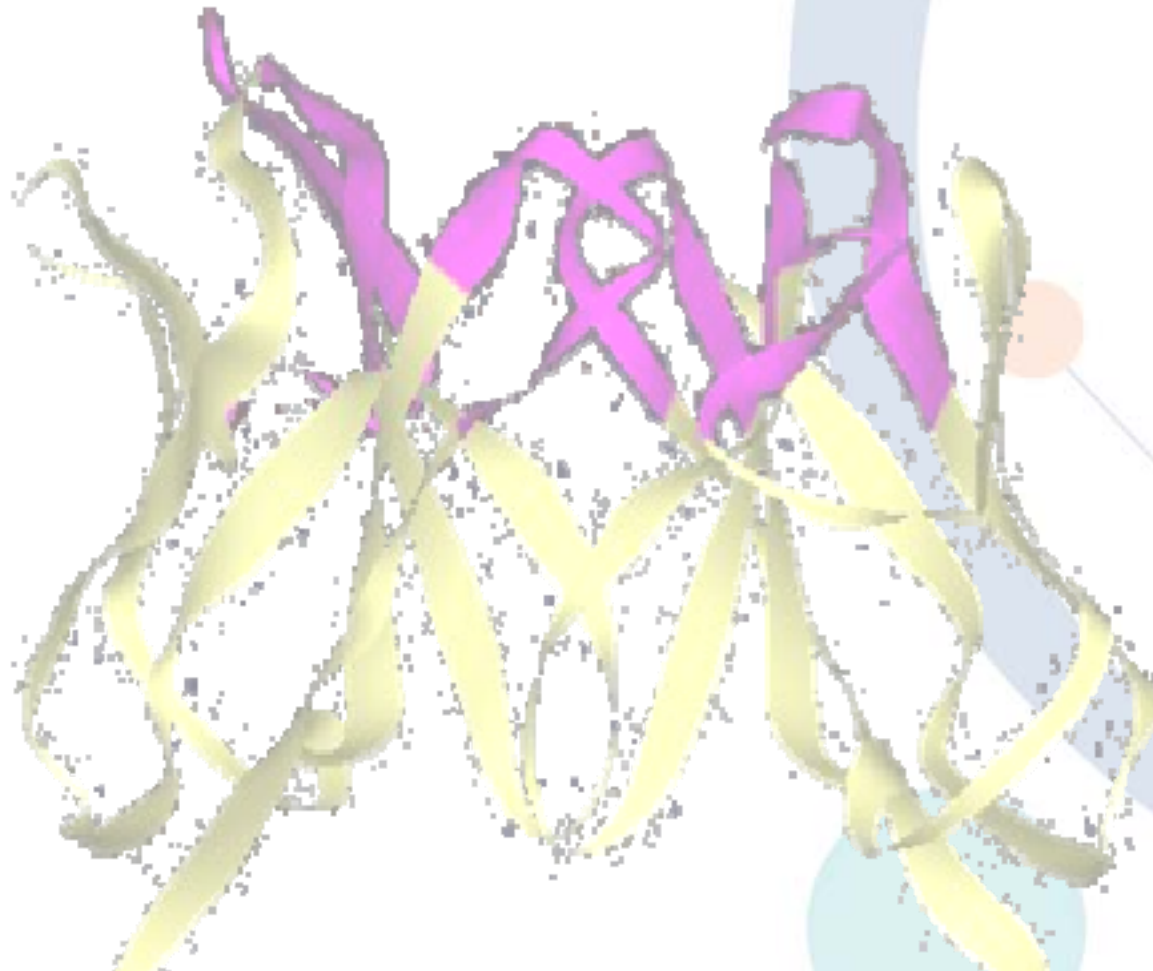


UCB SLAM

Delivering High Quality Therapeutics



Antibody variable regions for therapeutics



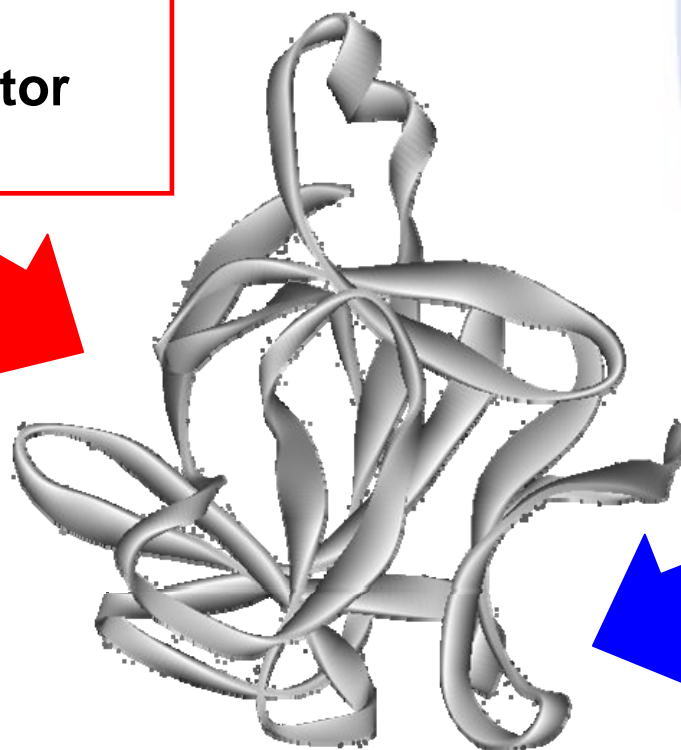
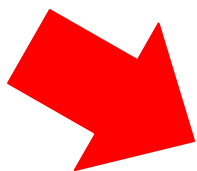
UCB SLAM

Delivering High Quality Research Reagents

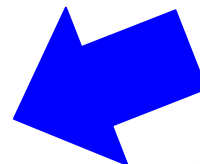


Antibody variable regions for research reagents

**Mechanism 1
Blocking Receptor
Binding**



**Mechanism 2
Blocking Signalling**

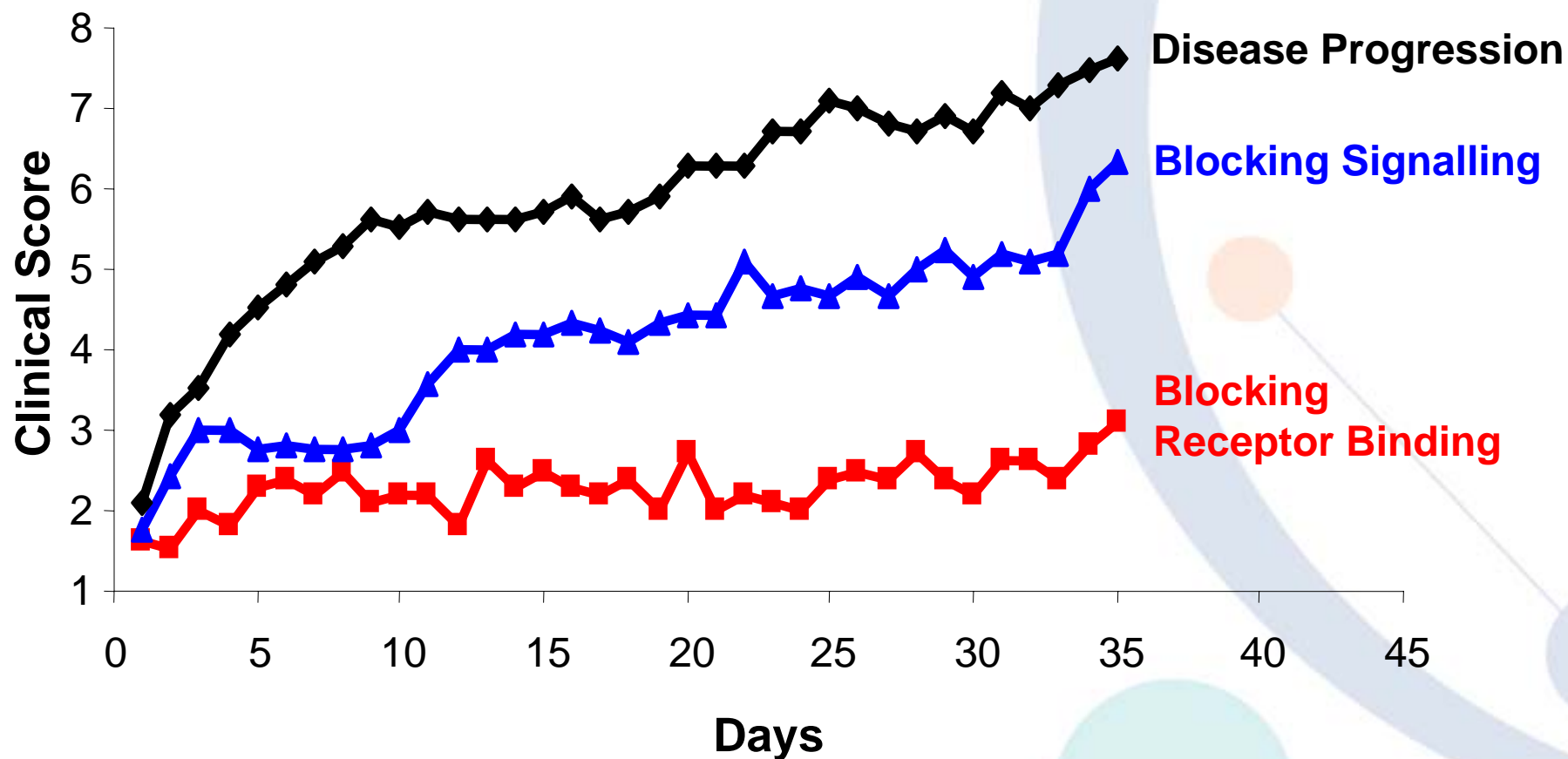


Determining The Preferred Therapeutic Axis

In Vivo



Arthritis Model



**Building on Strengths
Exploring New Opportunities**



**Antibody
Technology**

**Structural
Biology**

SYNERGY

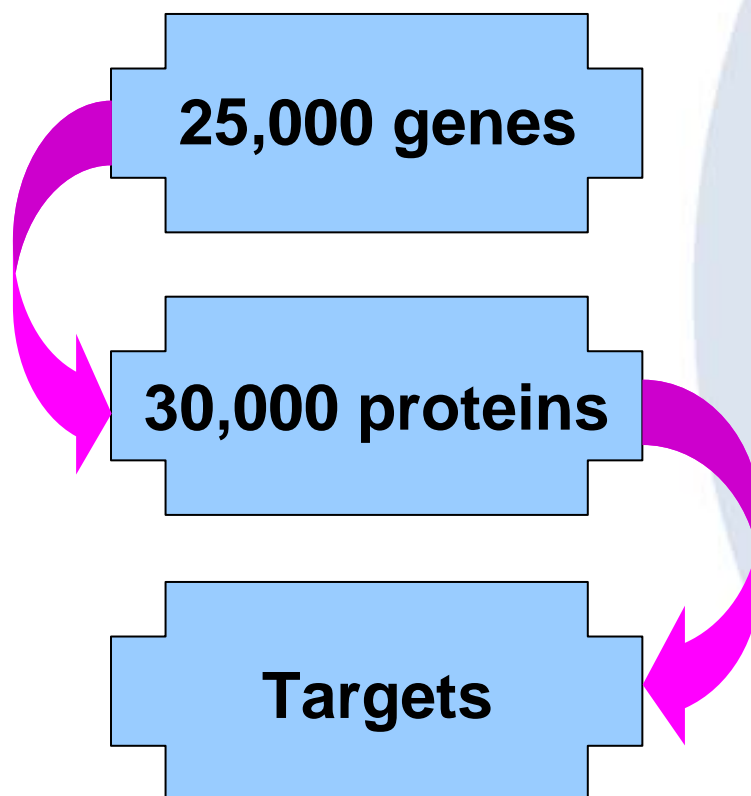
HTS

**Medicinal
Chemistry**

Pharmacology

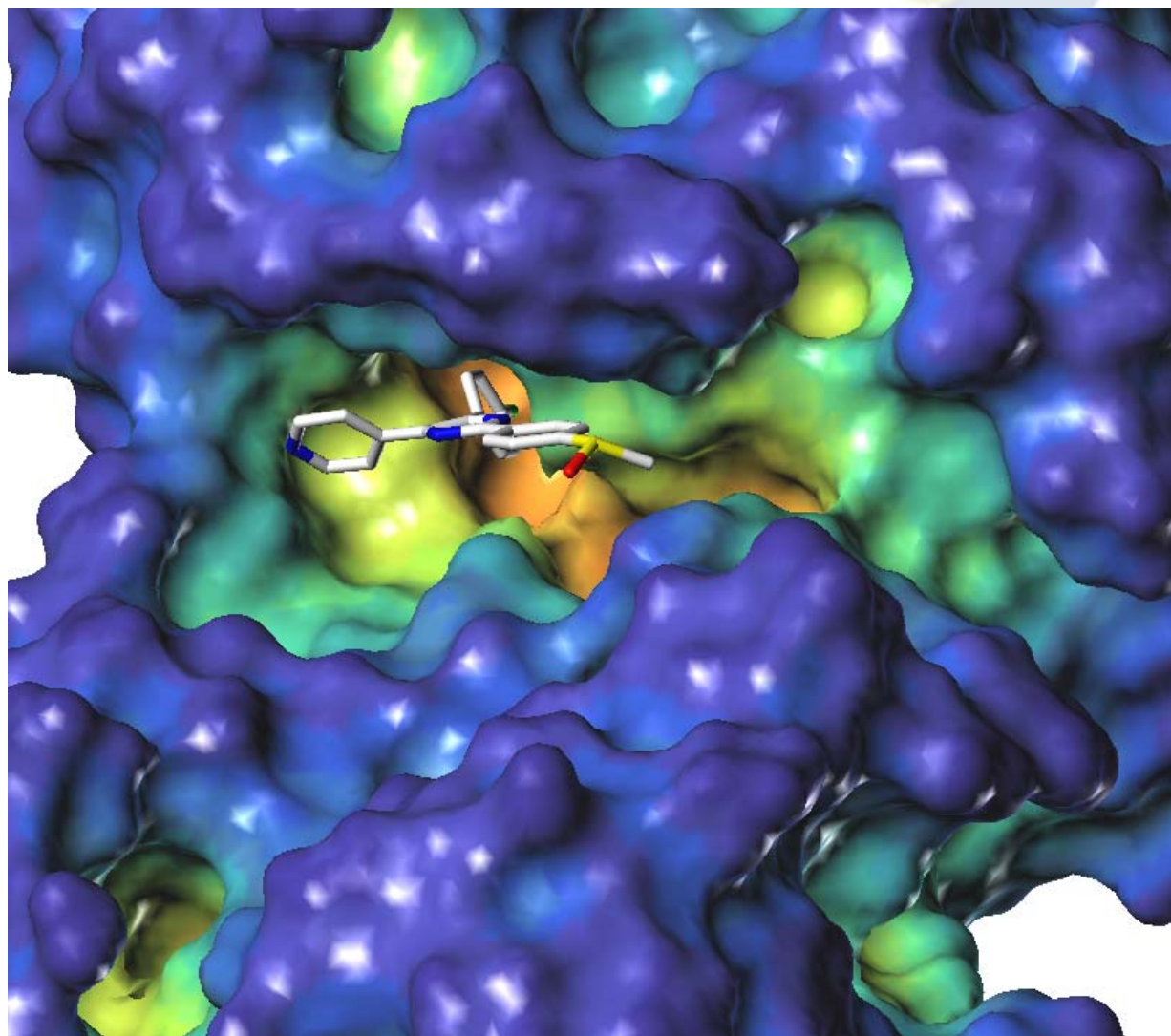
Differentiating UCB

Pharma's Basic Research Toolkit



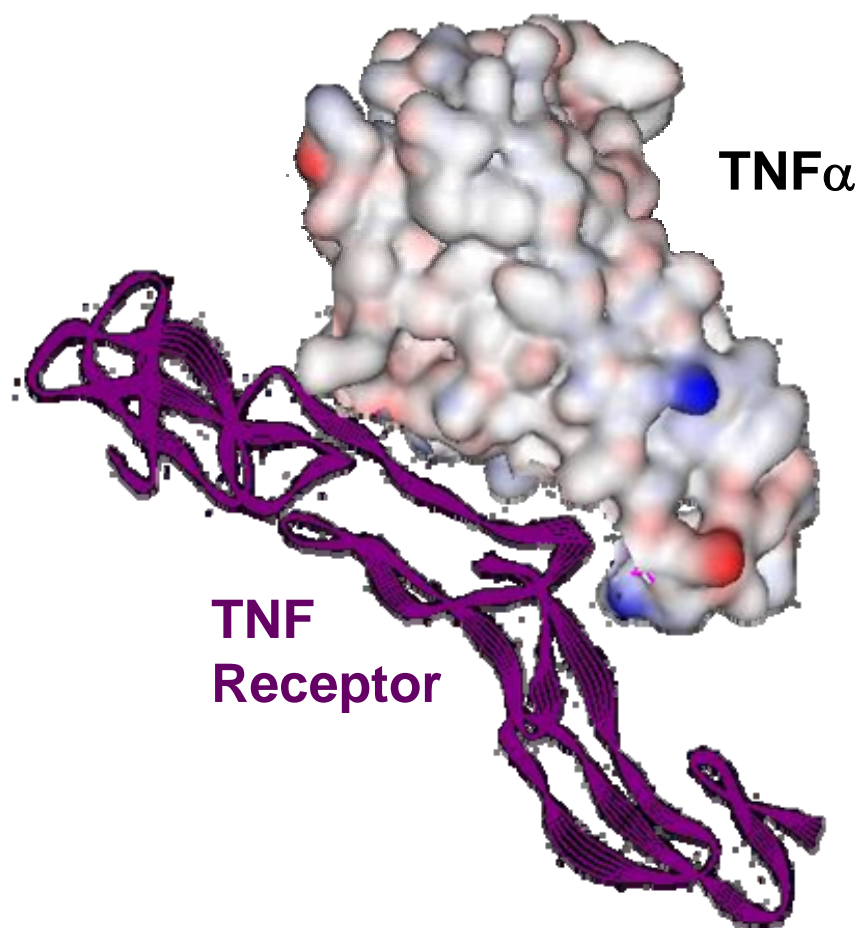
Less than 10% amenable to targeting with traditional small molecule drugs

“Traditional” Small Molecules



pockets, grooves and clefts

90% of the proteins are currently
“undruggable” with small molecules

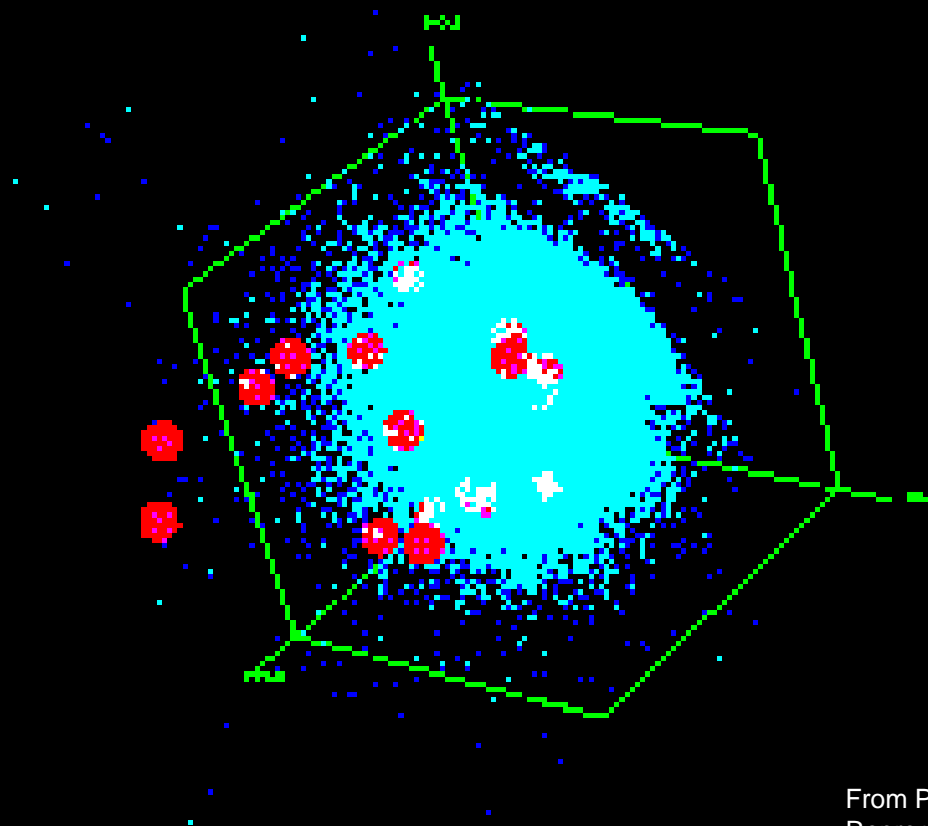


cimzia™
(certolizumab pegol)

The Cimzia logo, featuring a stylized orange and green infinity symbol above the text 'cimzia™' in green and '(certolizumab pegol)' in orange.

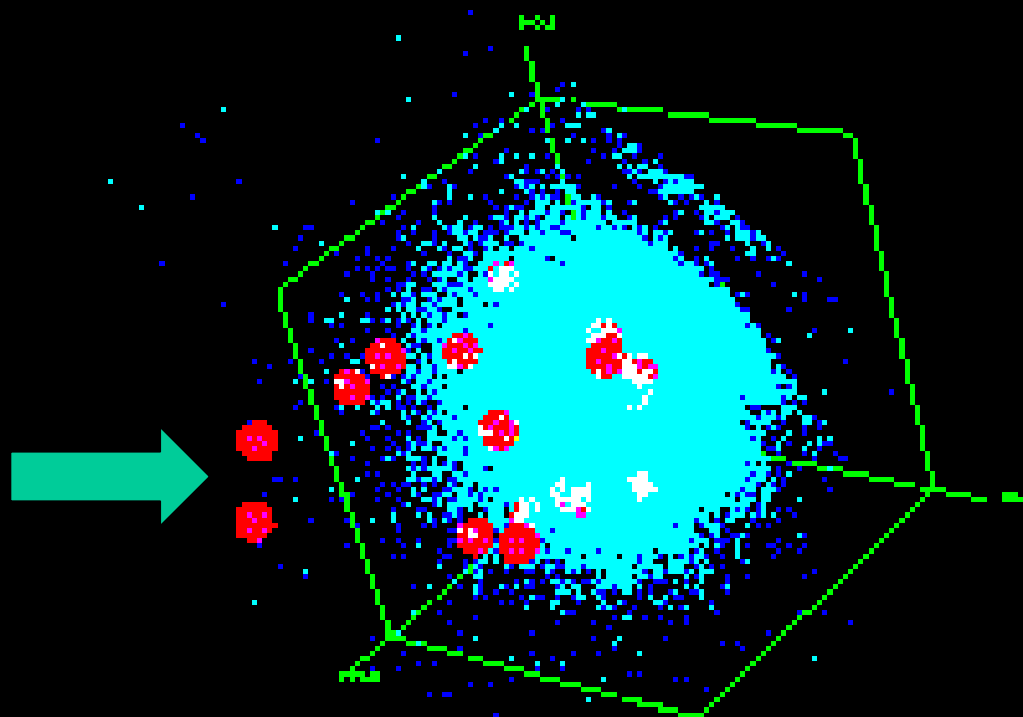
large, flat, *apparently* featureless surfaces

The Chemical Universe



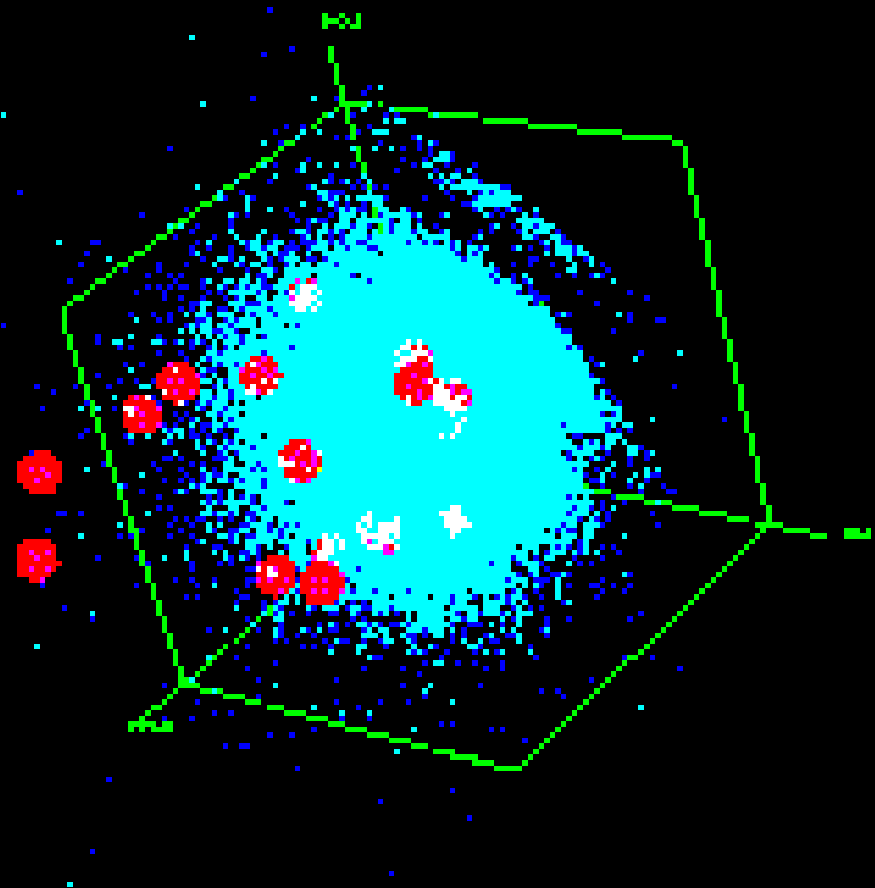
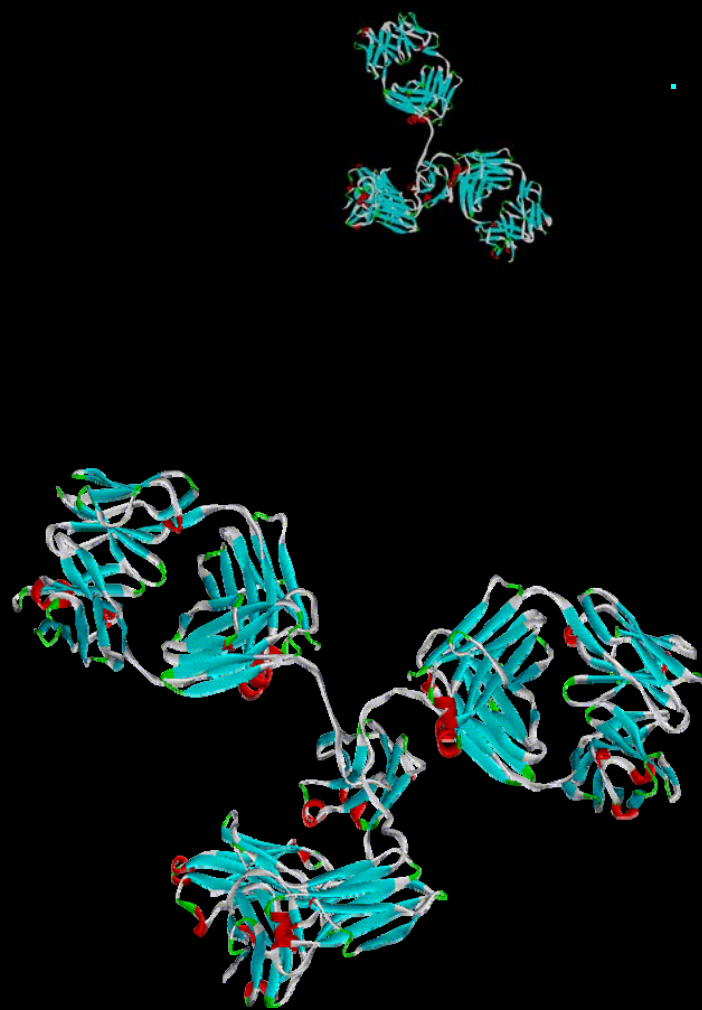
From Pagliaro et al., 2004
Reproduced with permission of Elsevier Ltd

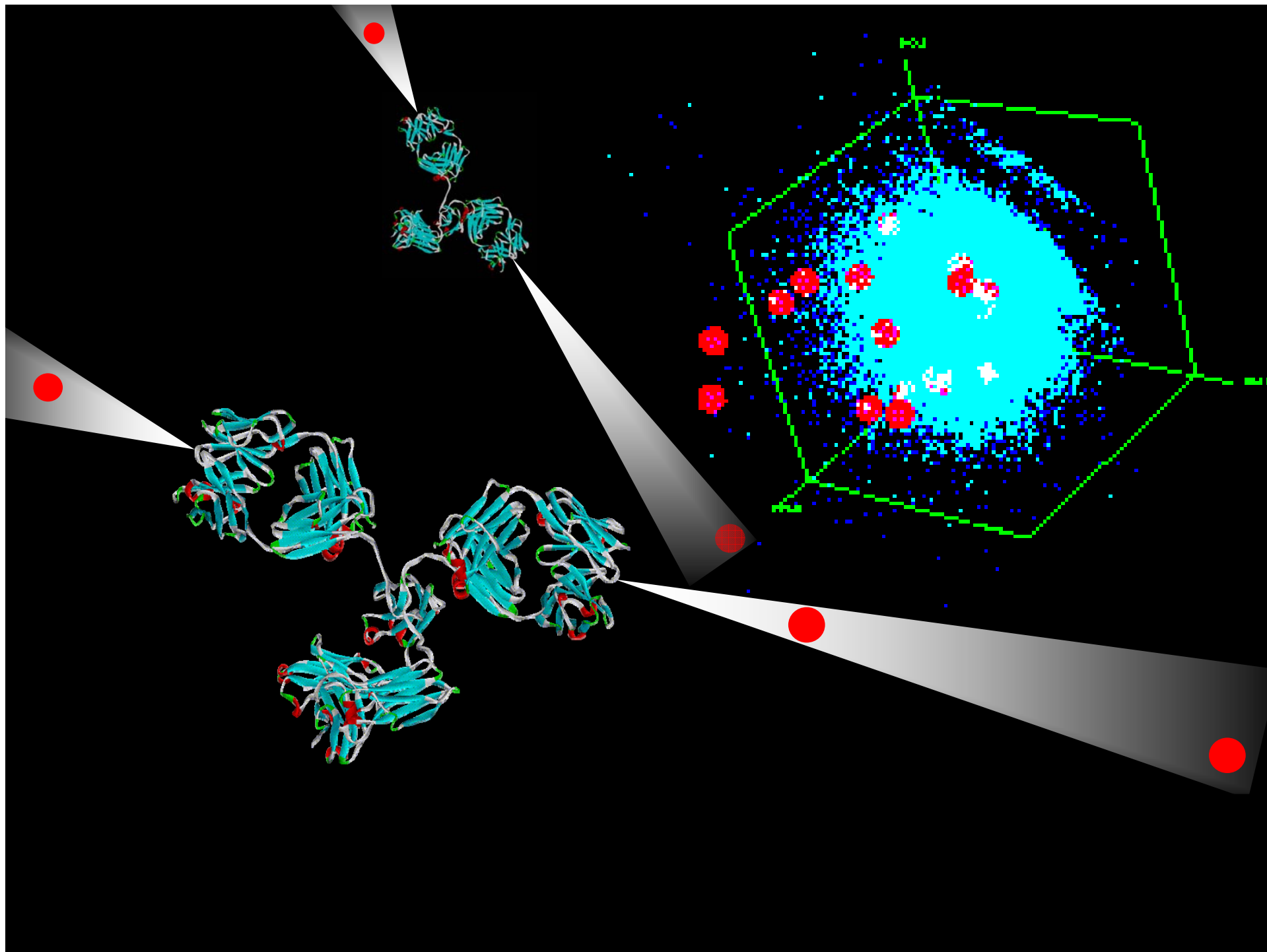
The Chemical Universe

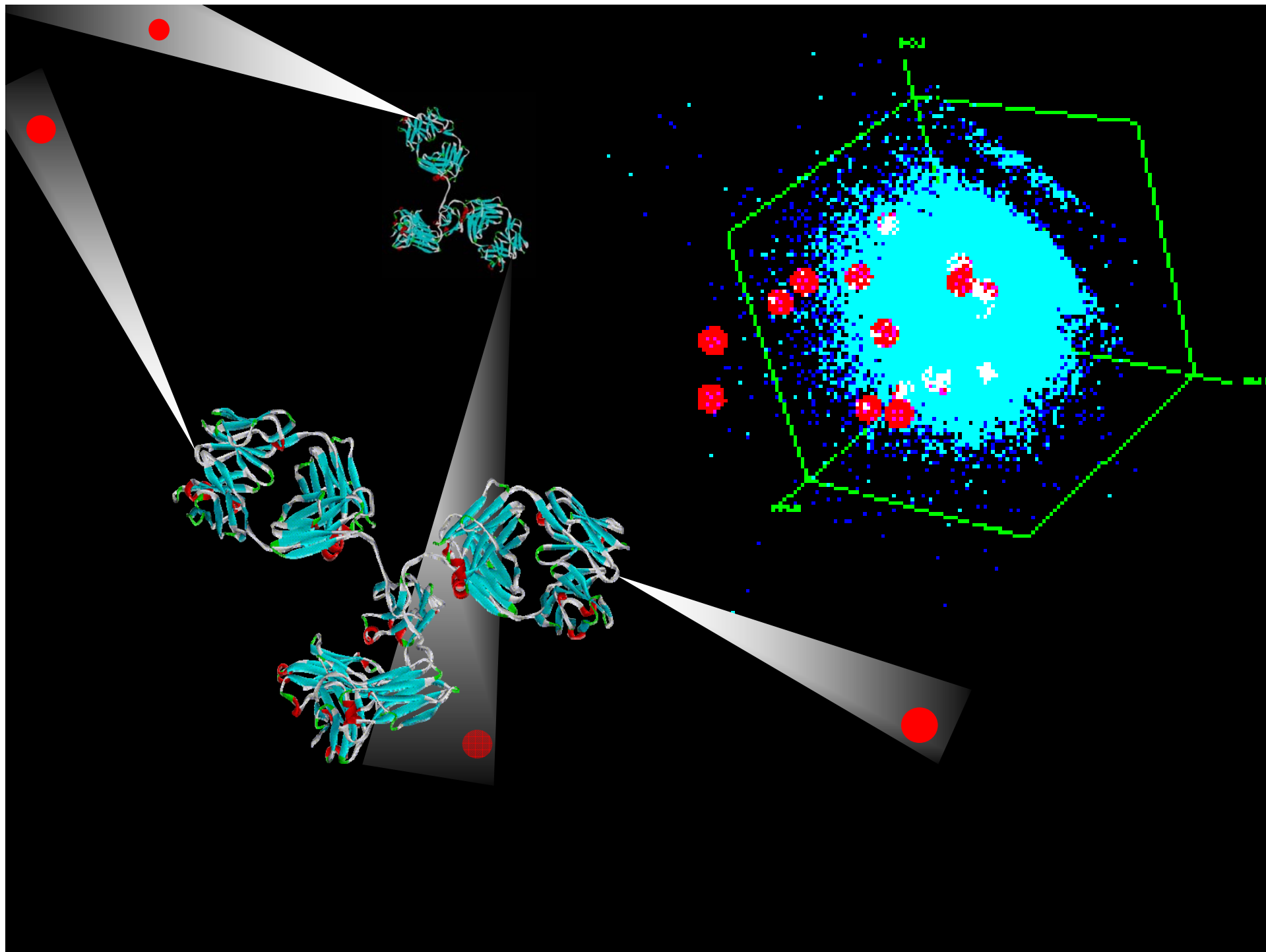


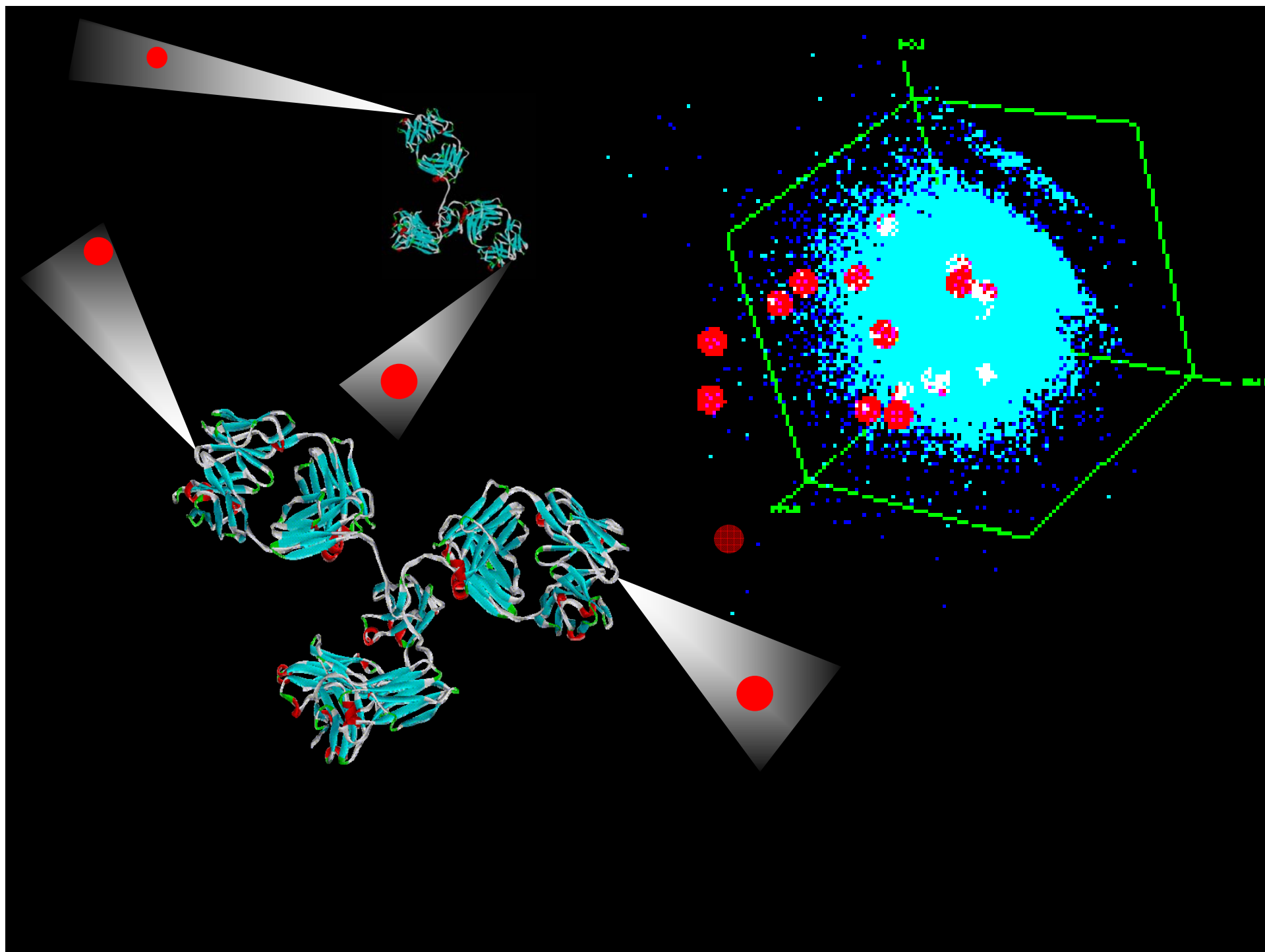
From Pagliaro et al., 2004
Reproduced with permission of Elsevier Ltd

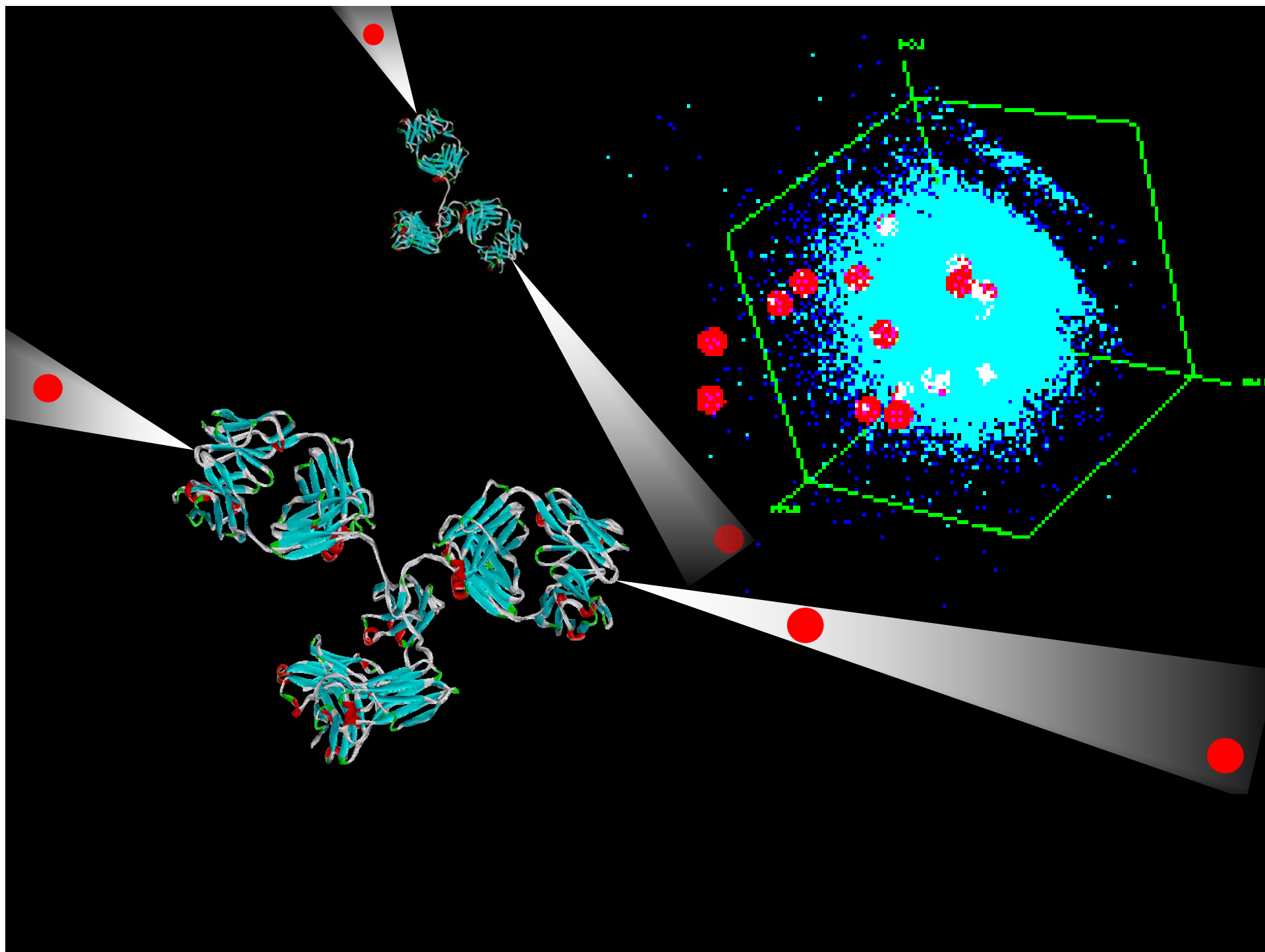
- The few small molecules which do inhibit protein-protein interactions push the boundaries of conventional chemical space

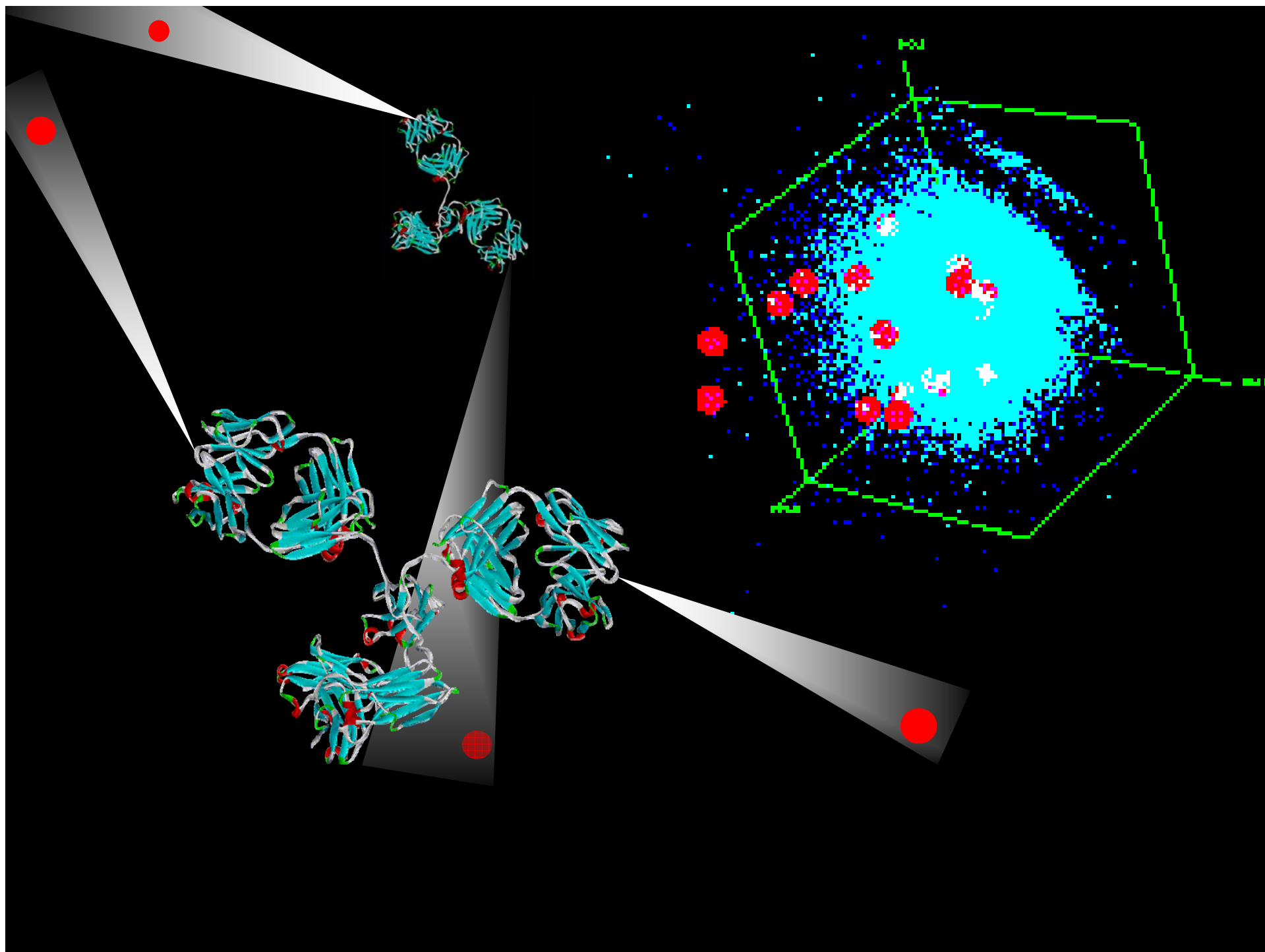


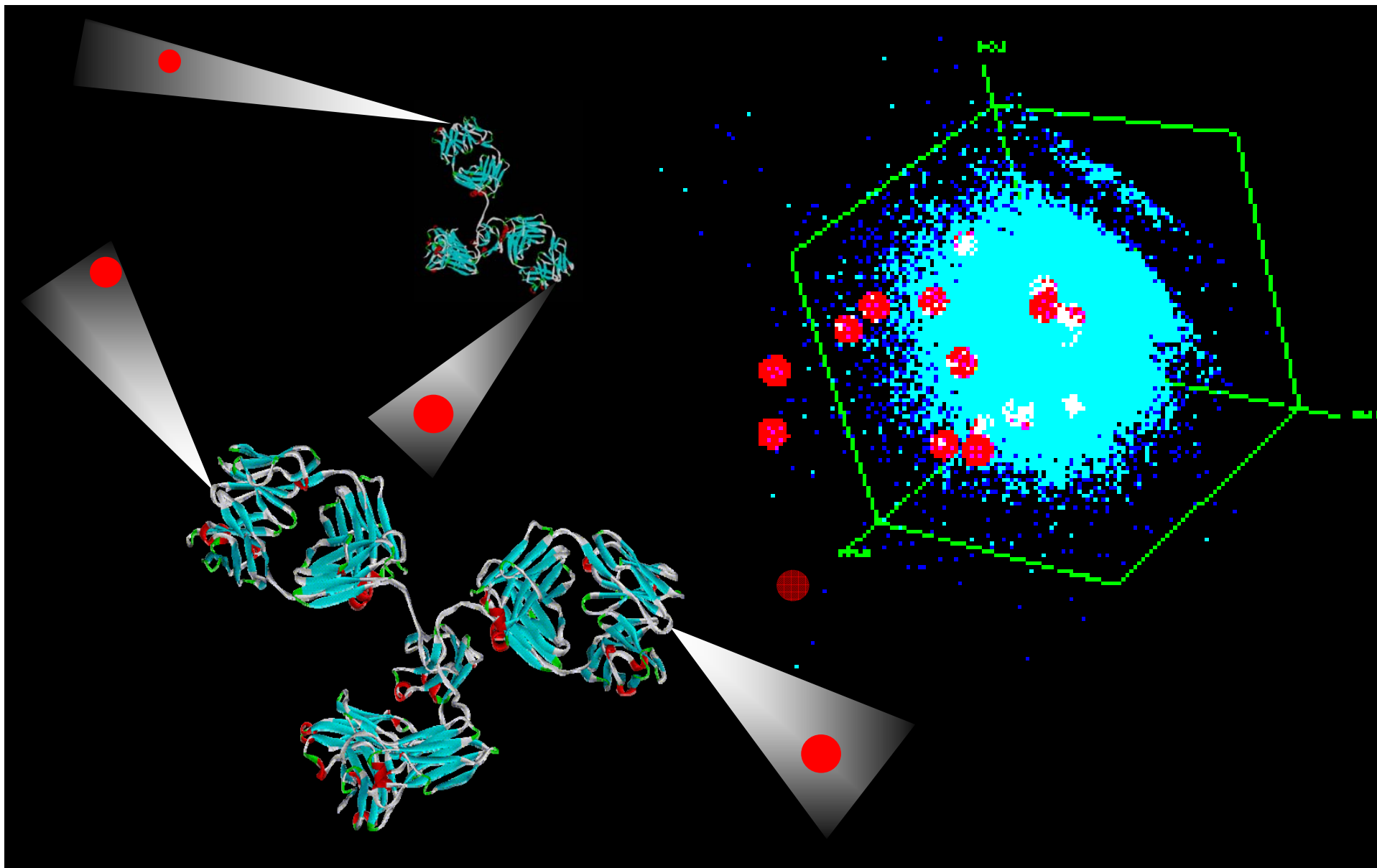












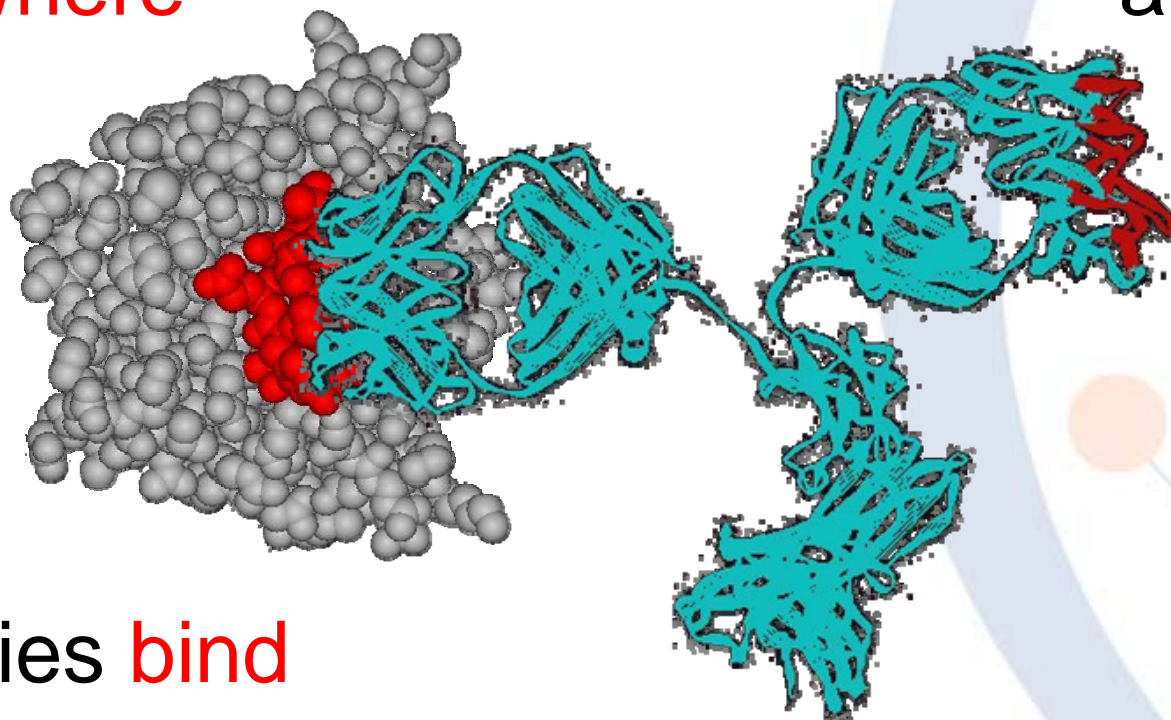
**Antibodies inhibit protein-protein interactions
and can guide us in exploring uncharted chemical space
for a new generation of small molecule drugs**

Applying Knowledge



about **where**

and **how**



antibodies **bind**

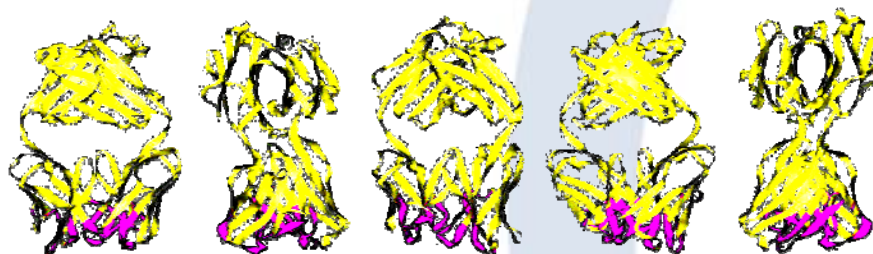
Unique information to help us design novel
small molecule drugs

Making the Dream a Reality

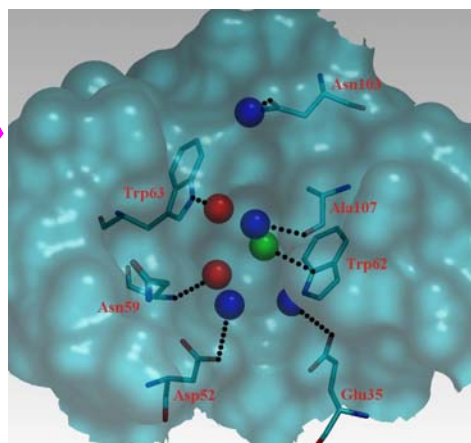


Output from SLAM

High affinity, function-modifying antibodies



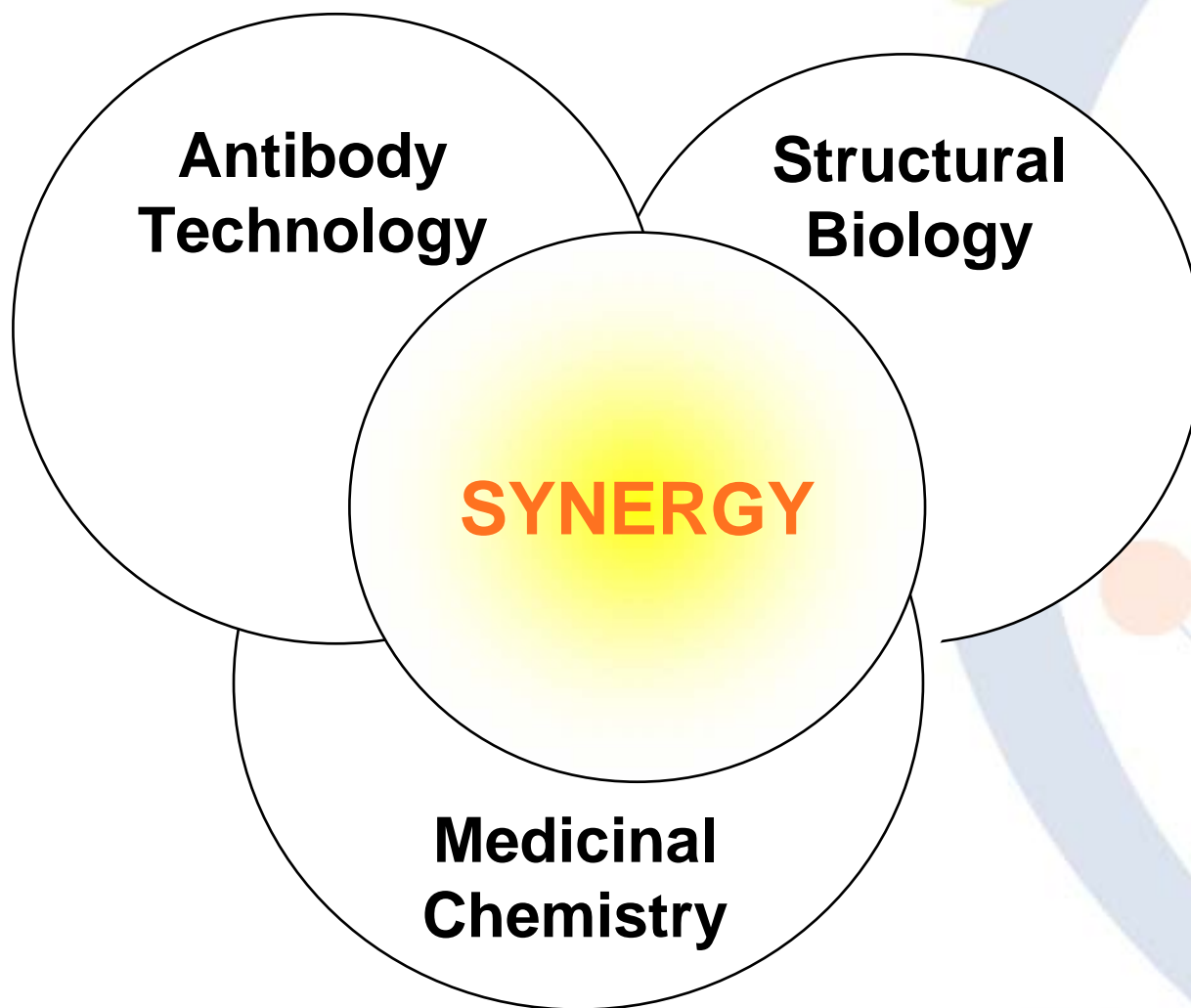
Contact
information to
design
pharmacophores



Virtual and
directed screening

Unique hits
for small molecule drug design

Playing to Our Core Strengths



Differentiating UCB



Antibody-Guided Drug Discovery Where Biology and Chemistry Meet

Differentiating UCB

Osteoporosis is a serious and growing problem



Bone fractures in the elderly

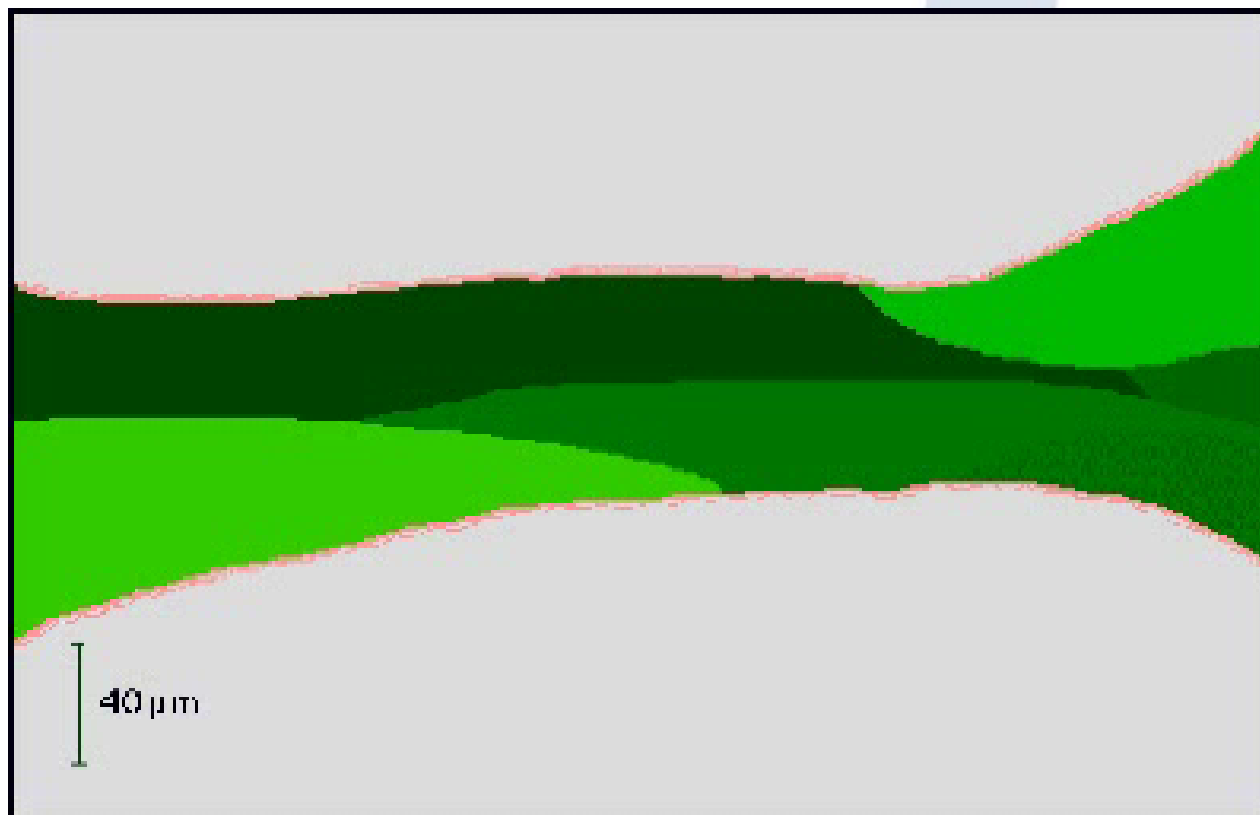
One year after hip fracture, 40% of patients are still unable to walk independently, 60% have difficulty with at least one essential activity of daily living, and 80% are restricted in other activities, such as driving and grocery shopping

C. Cooper

The crippling consequences of fractures and their impact on quality of life
Am J Med. 1997

Bone turnover

- 5-10% of our bone structure is replaced each year
- This is a normal process that allows repair of tiny cracks and weaknesses.



Animation courtesy of Dr Susan Ott, University of Washington



There is a paucity of anabolic therapies for the treatment of osteoporosis

- A range of drugs inhibit bone resorption but few effectively stimulate bone formation in patients with low bone mass.
- New therapies that stimulate the formation of strong new bone have been long sought.
- UCB identified a proprietary new target for bone anabolic therapy using molecular analysis of a human inherited disease.



UCB / Amgen collaboration

- The UCB Collaboration with Amgen was established in 2002 and covers antibodies to sclerostin
- Terms:
 - Cost sharing during development
 - Profit sharing during commercialisation

Sclerosteosis –

An inherited high bone mass disorder with massive bone overgrowth throughout life



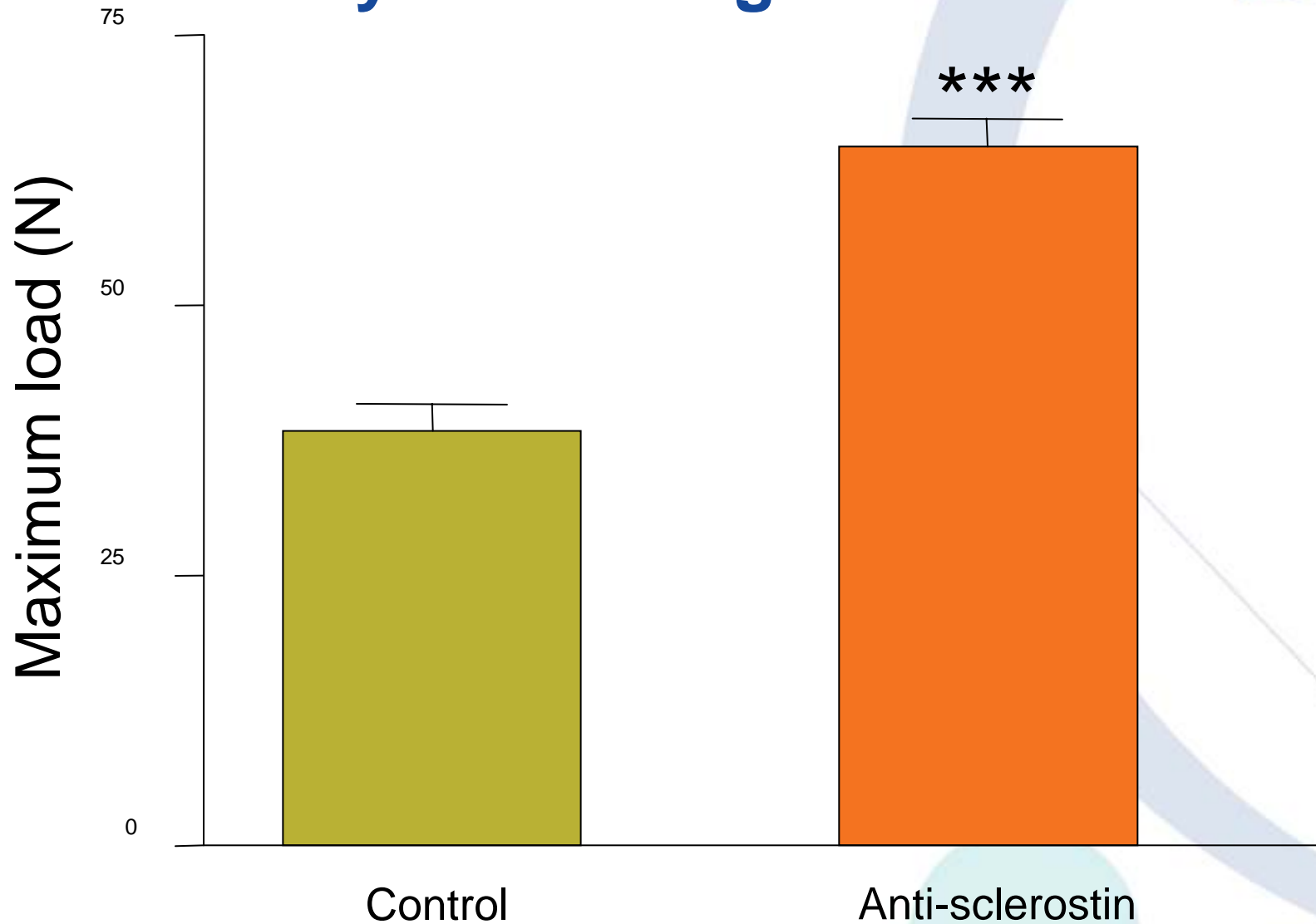
Normal



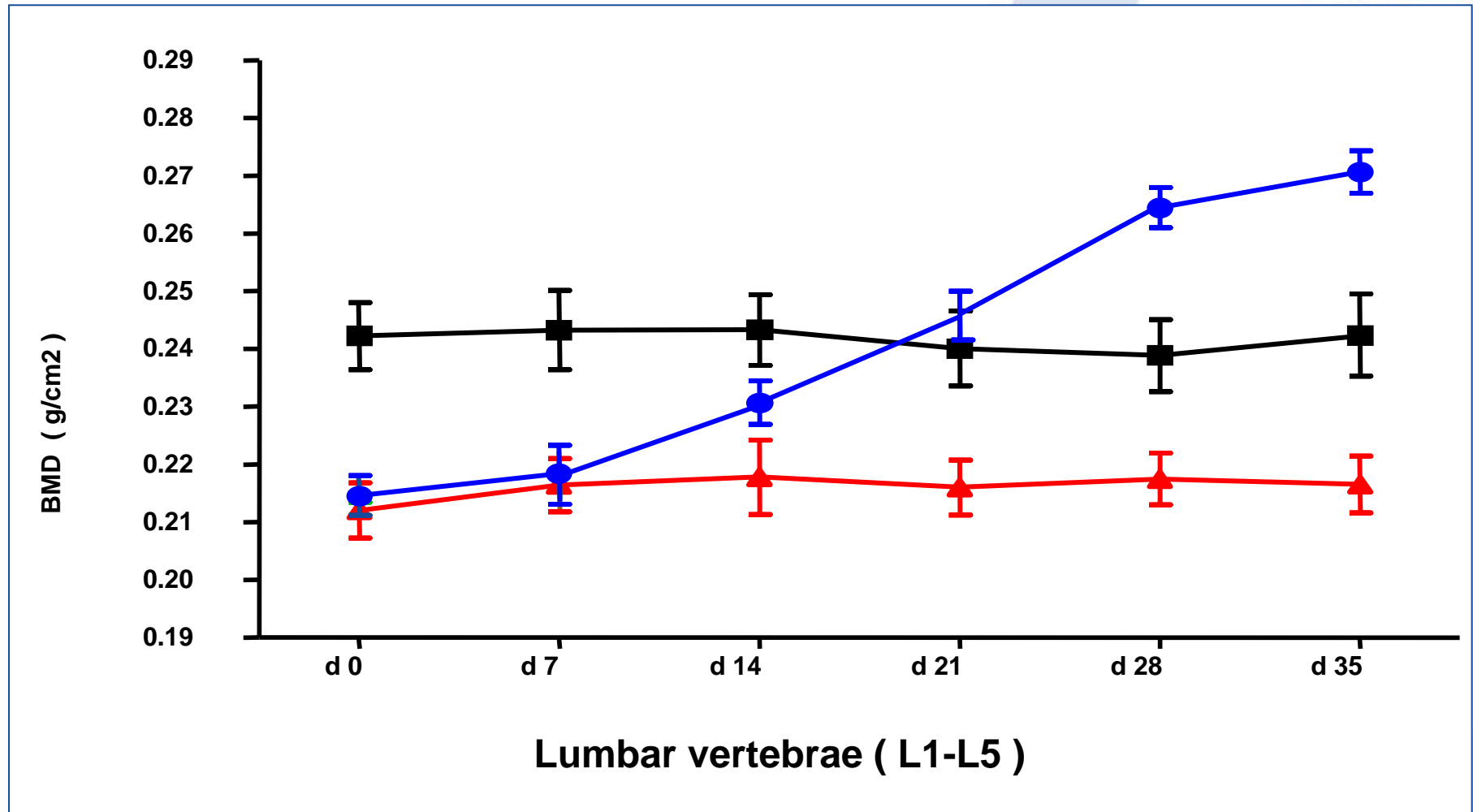
Sclerosteosis

- **Sclerostin has been the subject of extensive patent application filings by UCB and Amgen (US6395511, US6489445, US6495736, US6803453, US20030166247, US20040009535, WO 2004082608, WO2005014650, WO2003087763, WO2003073991, WO2005003158)**

Sclerostin antibodies increase bone density and strength in mice



Sclerostin antibody treatment increases bone density in an aged ovariectomised (OVX) rat model of bone loss

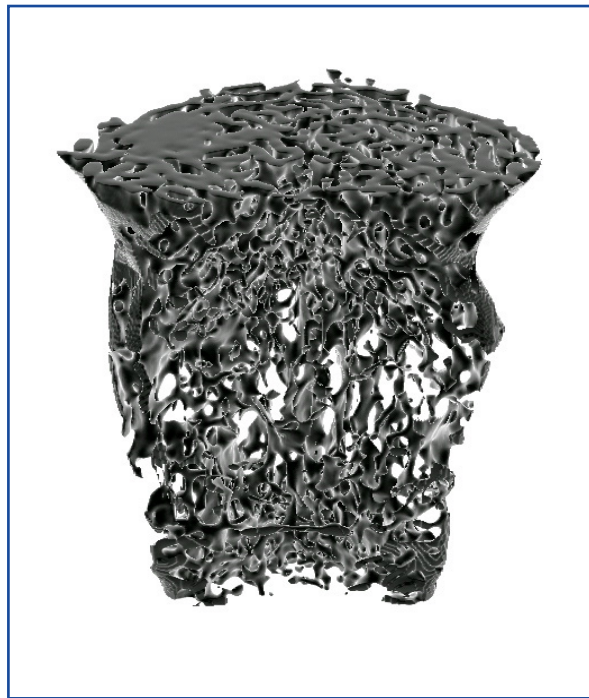


Control

OVX. Vehicle.

OVX. Anti-sclerostin

Sclerostin antibody treatment reverses ovariectomy-induced bone loss



Control



OVX



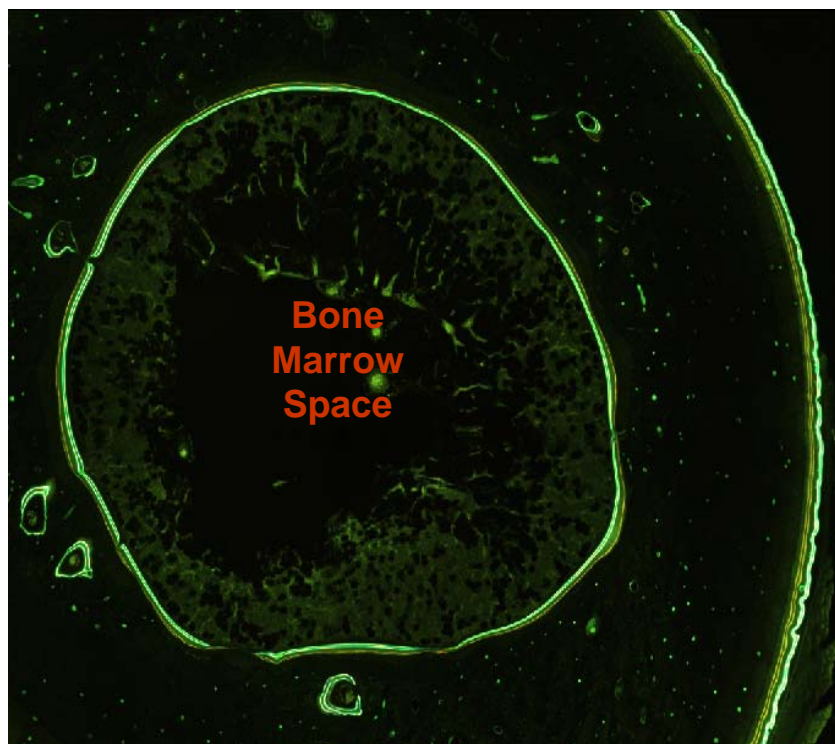
**OVX +
sclerostin
antibody**



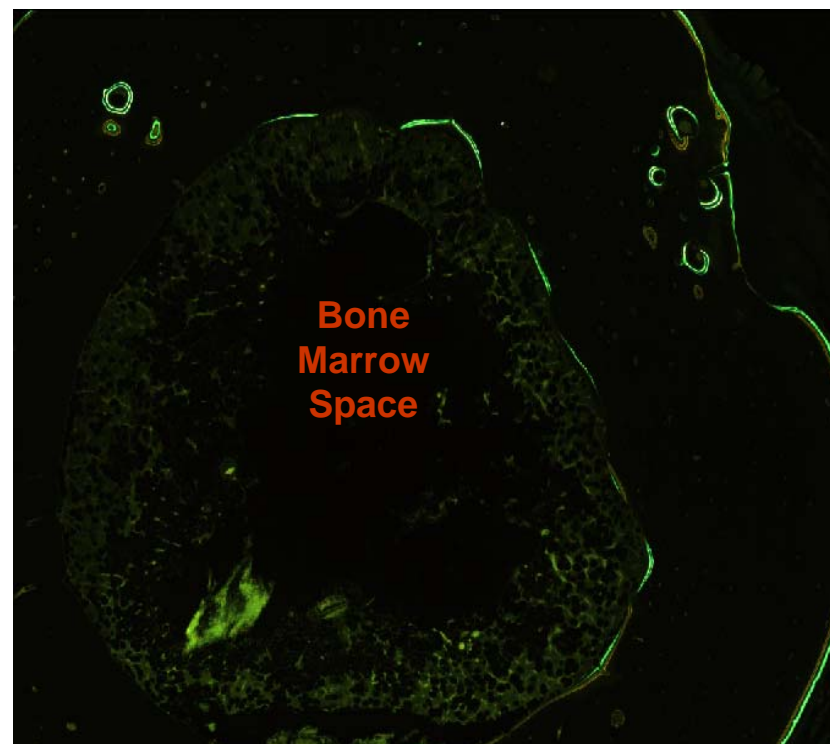
Current status

- High affinity Sclerostin antibodies have been selected for further development
- When dosed sub-cutaneously these antibodies lead to an increase in bone formation and bone strength

Sclerostin antibody increases bone formation



Treated

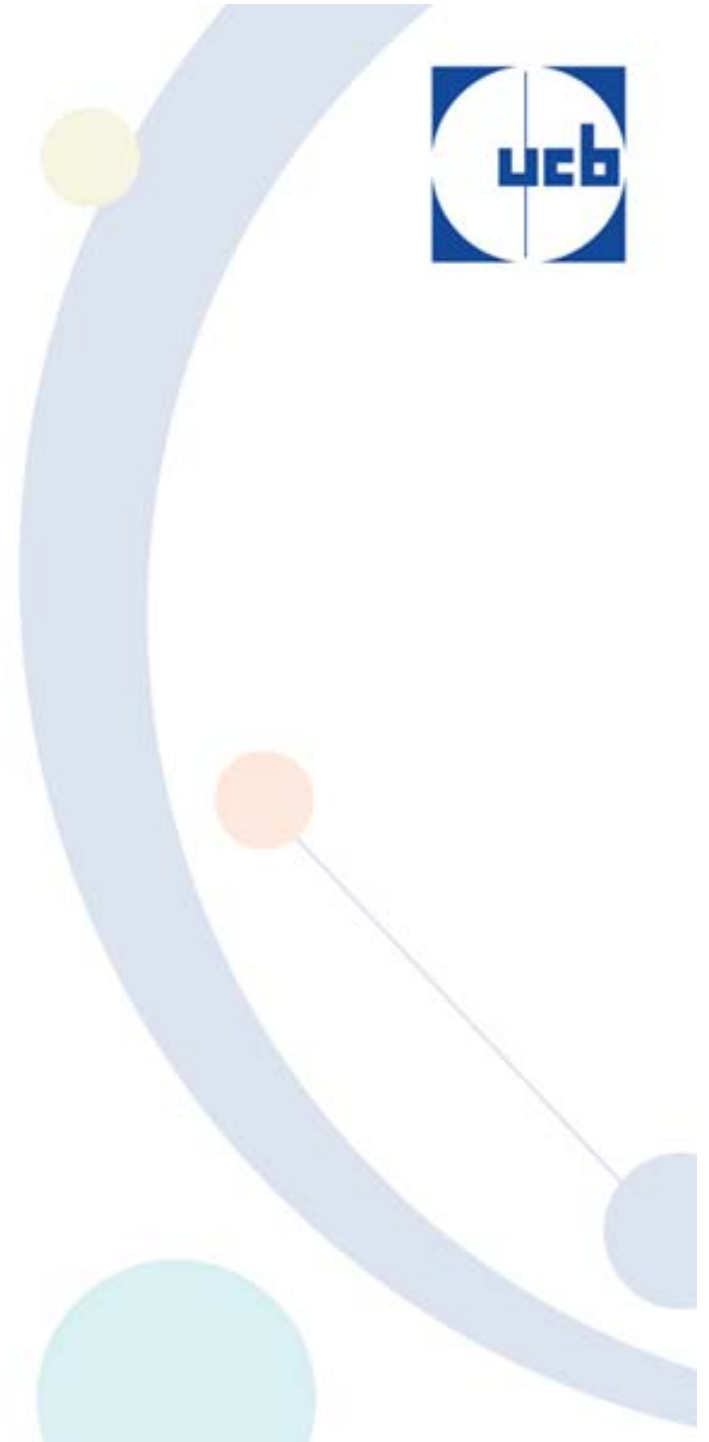


Untreated

Green = new bone

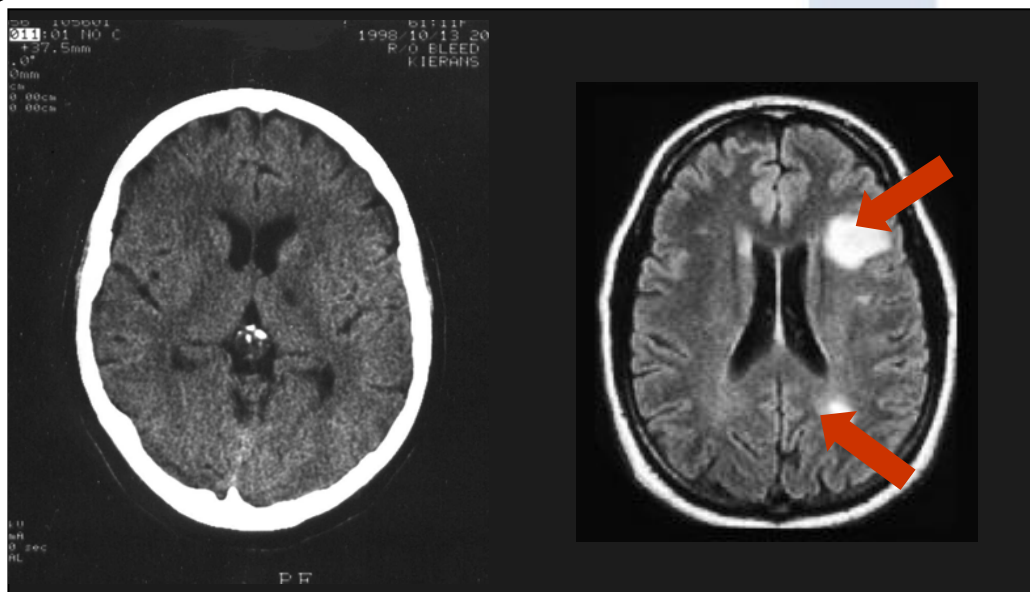
Summary

- **Gene to Drug**
- **Good in vivo efficacy**
- **Lead antibody selected**



UCB understands patient needs

- UCB is developing treatments for severe inflammatory/autoimmune and CNS disorders
- MS is a severe autoimmune disease with poor prognosis



- We are developing a portfolio of approaches to alleviate patient suffering in MS

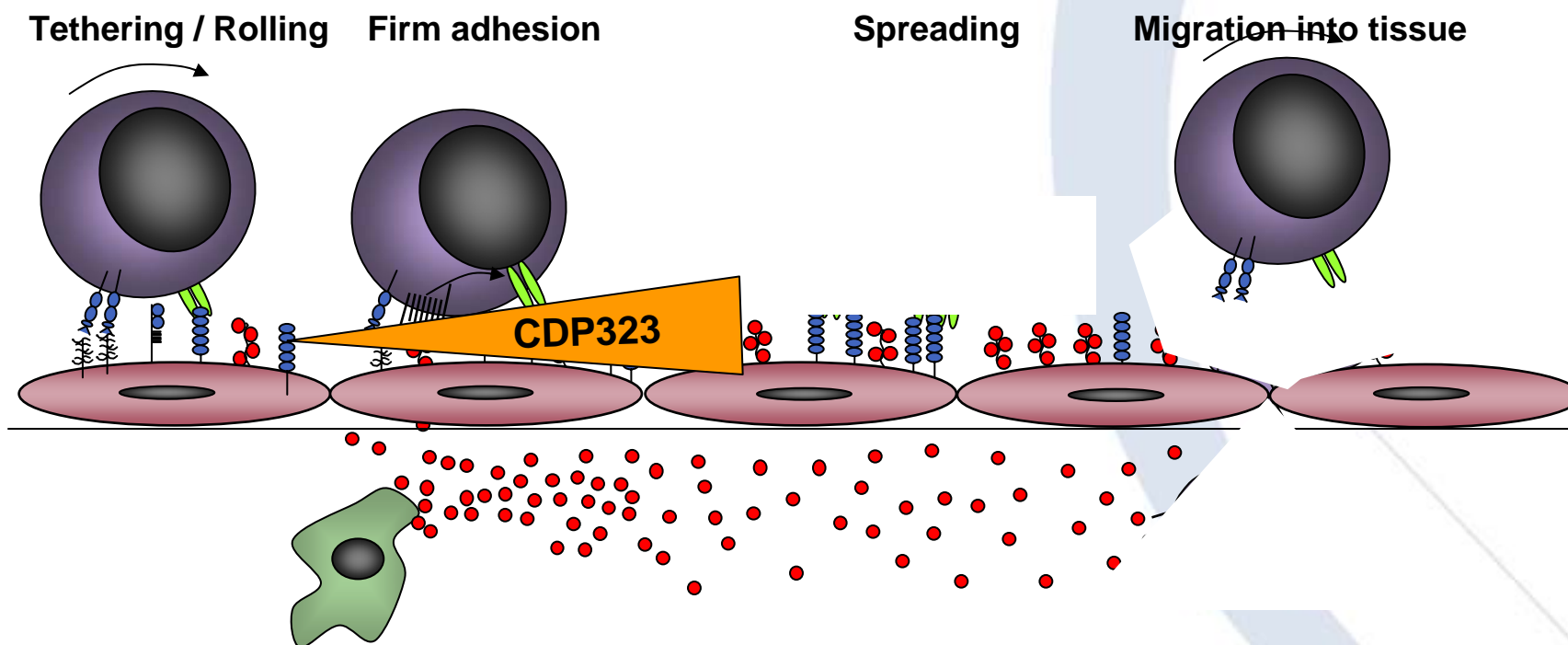
UCB has expertise to deliver effective drugs



- UCB scientists understand the mechanisms underlying the pathology of some forms of MS
 - Experience in our Inflammation and CNS Therapeutic Areas
- UCB antibody and NCE expertise and experience are leading to novel treatments
 - mAbs
 - Antibody-based therapeutics
 - Pharmacological tools
 - a small molecule approach that can match antibody efficacy characteristics

Our target is $\alpha 4$ integrin

- $\alpha 4$ integrin is a key molecule in controlling access of leukocytes to sites of inflammation



- Pathogenic T-cells in MS express $\alpha 4$ integrin

α 4 integrin is a clinically proven target in MS



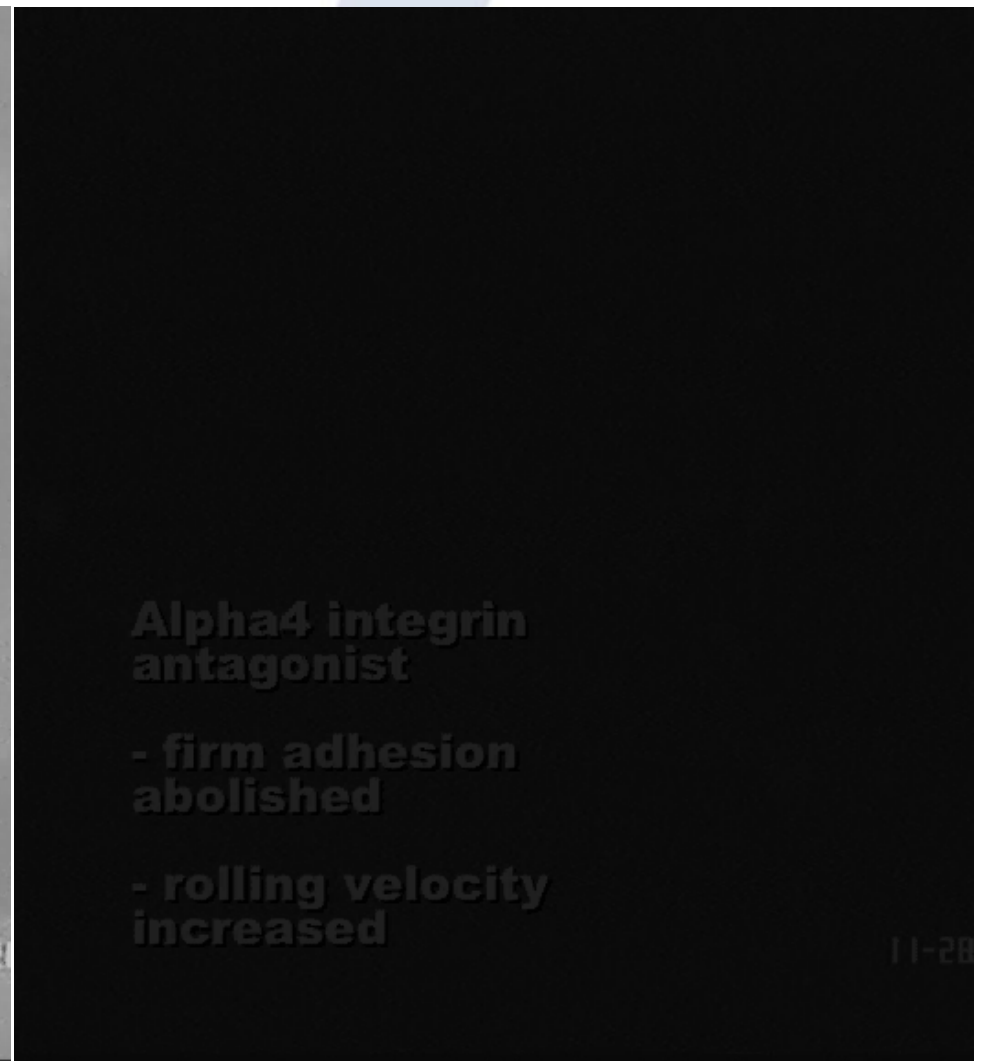
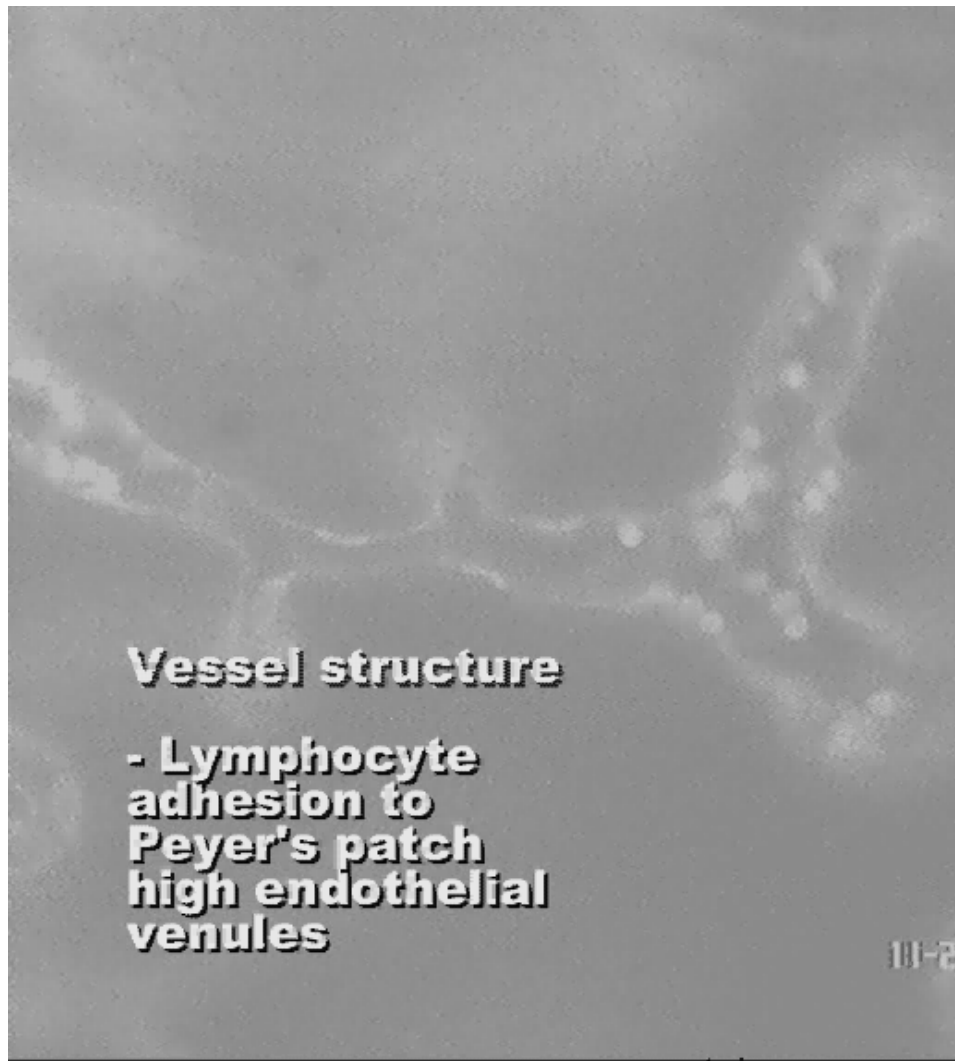
- Tysabri® is a monoclonal antibody that binds α 4 integrin
 - It is the most effective approved therapy so far in Relapsing Remitting MS
- **BUT clinical complications including**
 - A few cases of life threatening viral reactivation (PML)
 - Long half-life (weeks)
 - Problematic for treatment withdrawal if PML detected
- Patient focus means understanding and effectively addressing these issues

CDP323 well placed to be best in class α 4 antagonist

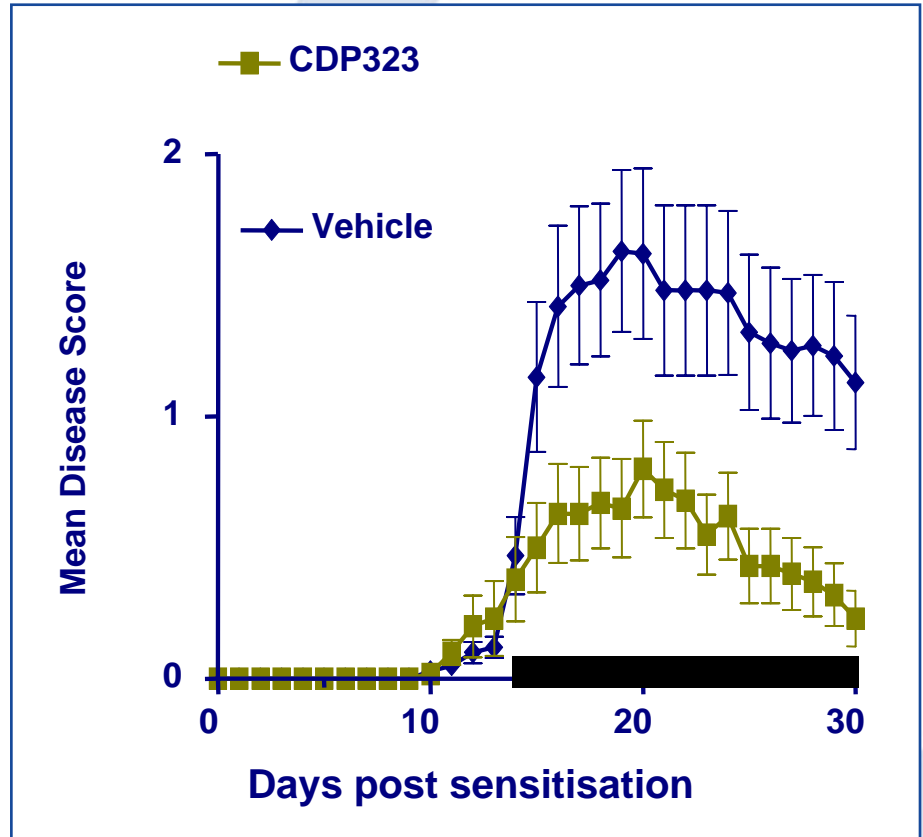
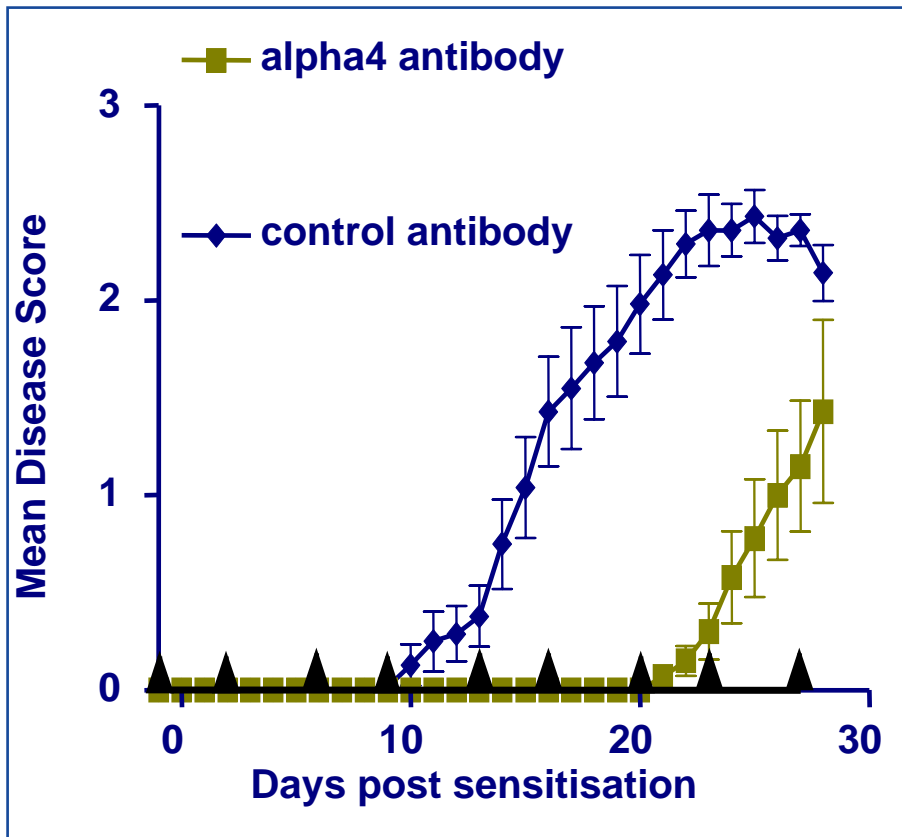


- UCB scientists have developed CDP323, a potent and orally active small molecule antagonist of α 4-integrins
 - **will replicate the level of benefit seen with Tysabri® but with a more controlled patient exposure and dosing convenience**

Reducing lymphocyte adhesion is a fundamental property of CDP323



CDP323 delivers 'Tysabri®-like' efficacy in a mouse model of MS

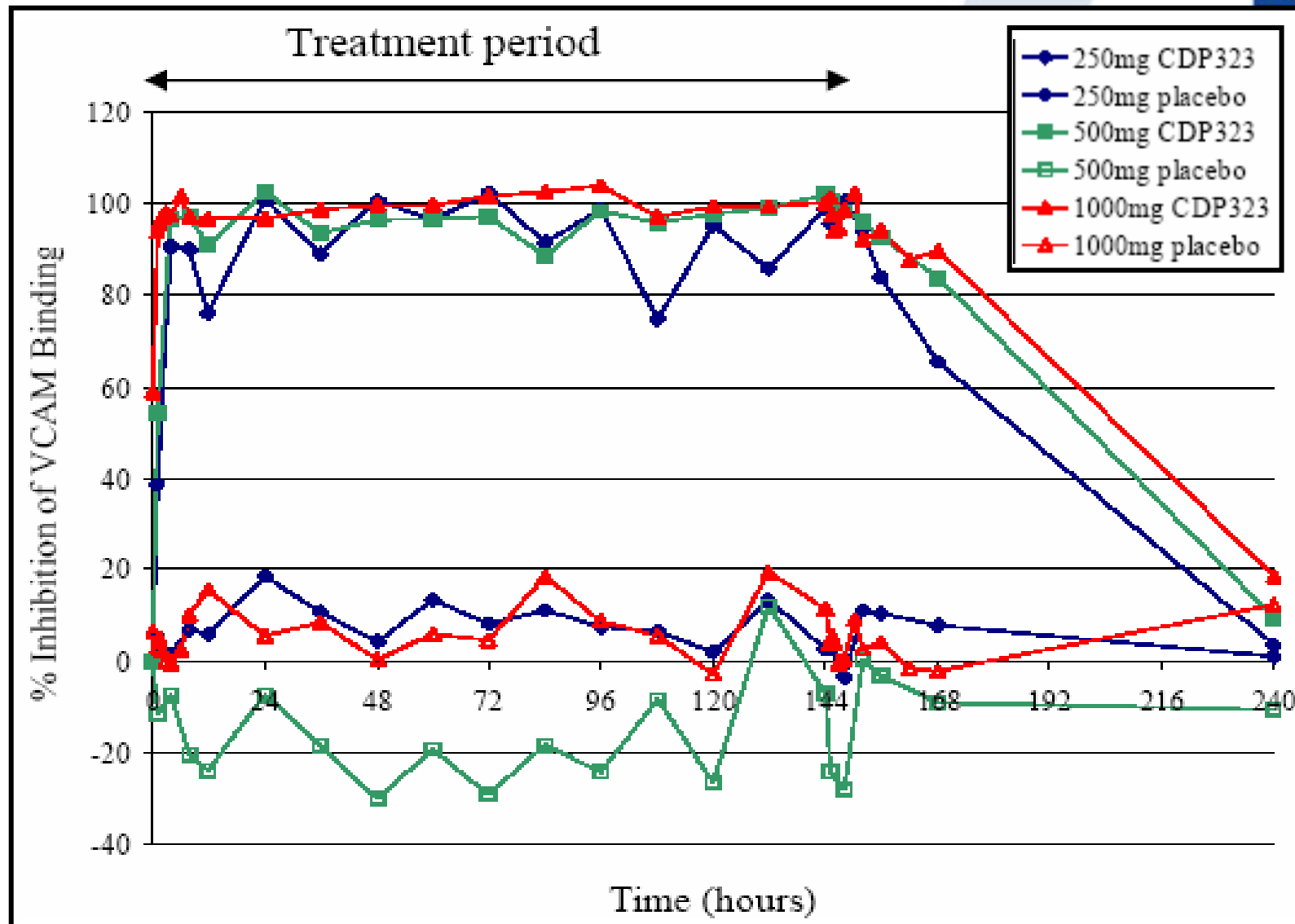


CDP323 is well tolerated in human volunteers



- Clear demonstrated pharmacological rationale
- Safe and well tolerated
 - Single dose
 - Repeat dose up to 7 days
- UCB scientists developed a novel and robust PD assay
 - Clear pharmacodynamic effect
- Data Presented at ECTRIMS meeting 27th September 2006. Madrid

CDP323 inhibits α 4-binding in volunteers





CDP323 development plan

- Phase I human volunteer studies successfully completed
- Patient studies in Relapsing MS scheduled to start in Q1 2007
- Phase III studies anticipated to begin 2008
- Approach agencies for approval to study CDP323 in other indications
 - **Crohn's disease**
 - **Rheumatoid arthritis**
 - **Other autoimmune diseases**
 - **Oncology**

Conclusion



- α 4 antagonists offer the best treatment for Relapsing Remitting MS
- CDP323 will deliver an effective treatment for Relapsing Remitting MS
- Will bring a therapeutic solution to the treatment and suffering in this severe disease



Questions & answers

This is UCB...

