SUPPORTING YOUR STUDENTS IN THE SCIENCES

Providing resources and engagement

Dr Rosie Gibson

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Information Challenges

Learning and Research

- Information feels abstract/disconnected from real world
- Reading and writing in scientific language
- Temptation of using AI/identifying AI produced lit.
- Transition from teaching to research: finding info
- Accessing reliable and informative resources
- Extracting important information
- Presenting scientific information in context of own work
- Making confident research decisions
- Efficient use of limited time
- Is research publishable/patentable
- Quick responses (getting “scooped”)
- Interdisciplinary collaborations

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Solutions – using information-based resources

- Examples of theory applied in today's research/real-world examples
- Become accustomed to scientific writing – even just sentence structure
- Teaching when and how to use AI including limitations
- Discovering information – where and how to search
- Access to wide range of up-to-date peer-reviewed literature
- Awareness of patent literature and scope
- Access to conference papers and abstracts, pre-prints
- Normalised information/data across different fields

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Student Engagement

How do you get students to engage with these resources?

- Building resources directly into VLN
- Holding events *in departments*
- Publisher/vendor training sessions or on-site days
- Connect with teaching-focused academics
- Grants for developing teaching resources
- Pizza (and beer)

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What scientific information-based resources are available?

- Generative AI in HE: The Quality Assurance Agency for Higher Education
- Open-access archives e.g. arXiv (physics, mathematics, computer science…)
- Google Scholar
- Non-human curated databases e.g. PubMed
- Human-curated databases with indexing e.g. **CAS**

Cureus. 2023 Sep; 15(9): e44769. PMCID: PMC10557088
Published online 2023 Sep 6. doi: 10.7759/cureus.44769 PMID: 37809155

ChatGPT Surpasses 1000 Publications on PubMed: Envisioning the Road Ahead

Monitoring Editor: Alexander Muacevic and John R Adler

Mohamad-Hani Temsah,[✉1] Ibraheem Altamimi,[2] Amr Jamal,[3] Khalid Alhasan,[4] and Ayman Al-Eyadhy[5,6]

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CAS is an expert in scientific information content and management

Our vision

Improving lives through the transforming power of science

At CAS, our passion is advancing scientific progress. As a leader in scientific information solutions, we **curate, connect, and analyse** the world's published science to accelerate discovery.

We are proud to partner with innovators across industries and academia, providing the hindsight, insight, and foresight they need to build upon the past and discover a better future.

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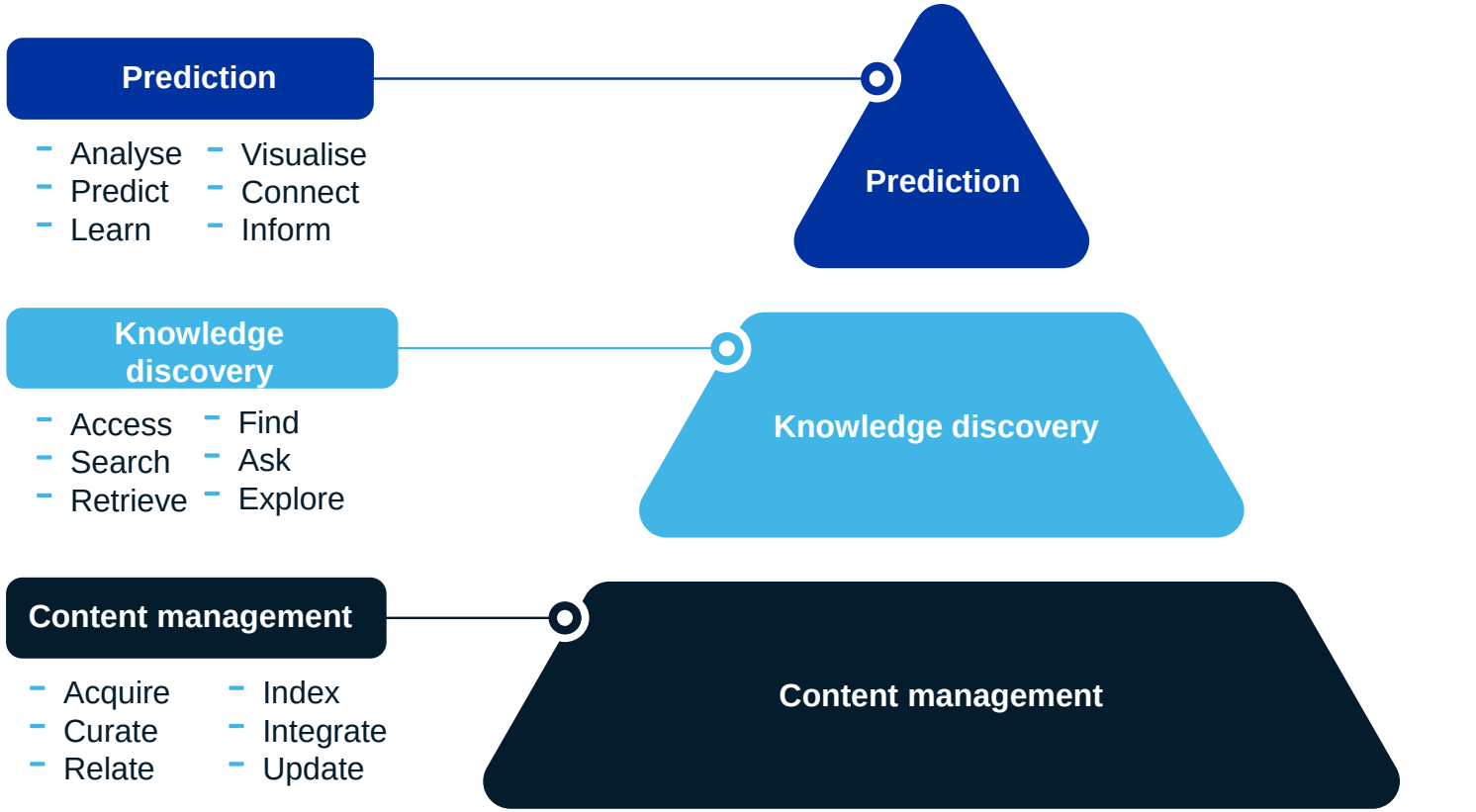
Our unique core competencies and assets



Over **50K** scientific journals and documents

Over **50** languages

Over **250** million substances

109 patent offices

Unparalleled content

Specialised technology

Unmatched human expertise

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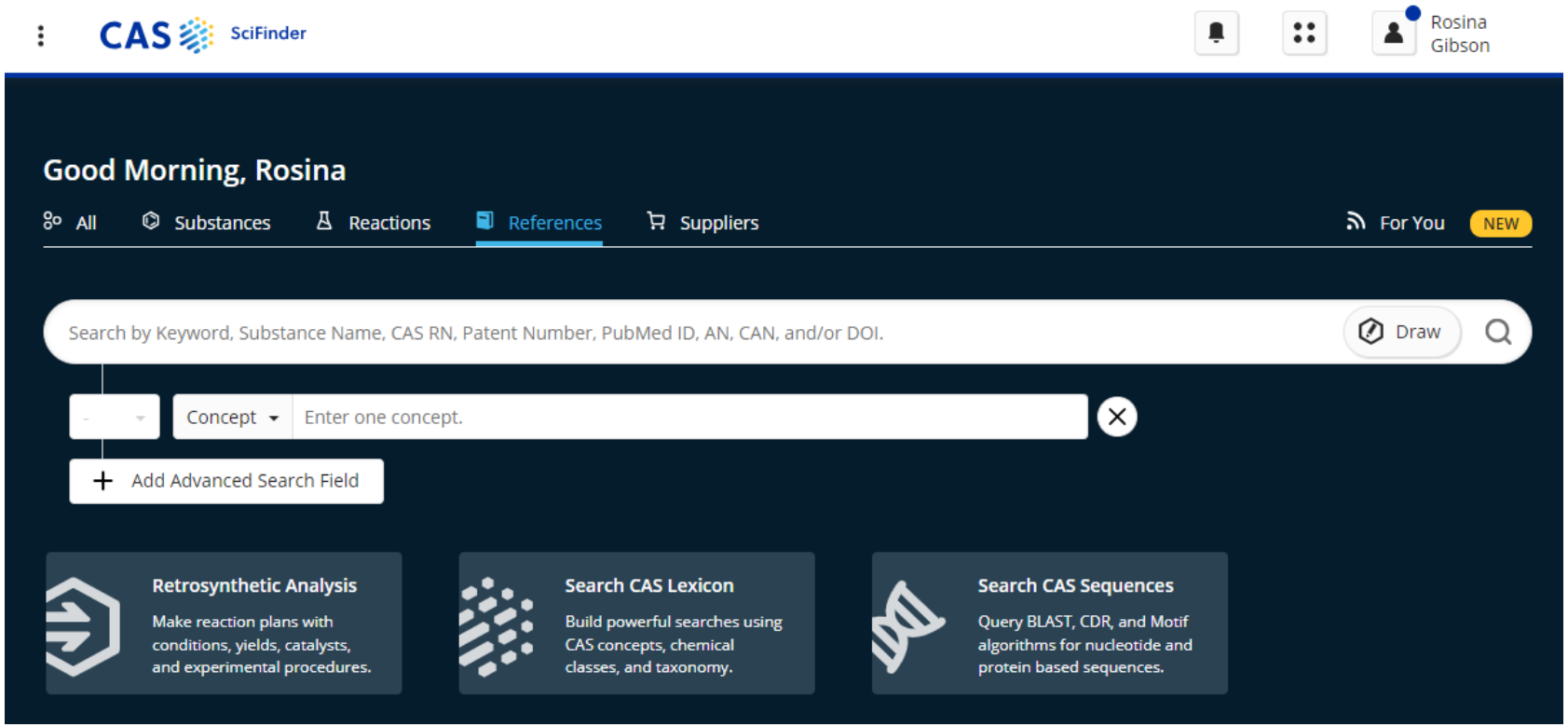
CAS SciFinder Discovery Platform for academics

- CAS SciFinder®
- CAS Formulus®
- CAS Analytical Methods™
- CAS Bioactivity
- ChemZent®

Covered areas include:

- Pharmacology
- Food and feed chemistry
- Fertilisers/plant nutrition
- Organic synthesis
- Proteins
- Polymers
- Textiles
- Fuels
- Building materials
- Pollution/environmental
- Cosmetics
- Nuclear technology
- Particle physics



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Life sciences content in SciFinder Discovery Platform

- Assists advancement of biologically active discoveries
- Increase knowledge and insights into product development lifecycle
- Offers better design and facilitation of research programs
- Potential to increase collaborations and/or career opportunities

- Structure-Activity Relationships (SAR)
  - Medicinal Chemistry, Biology, Biochemistry
- Adsorption, Distribution, Metabolism, Excretion (ADME)
  - Pharmacy, Veterinary Sciences, Forensic Science, Agriculture
- Toxicity (TOX)
  - Pharmacy, Environmental Science, Veterinary Science, Forensic Science, Food Science

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Summary

- CAS offers best scientific information resources
- Can support you with training sessions, offer SSO, bonus content e.g. CAS insights
- Academia has unique access to CAS life sciences content
- Opens up CAS SciFinder^{n} to a broader student audience
- Offers another route of planning research programs
- Identify other universities and organisations with same research interests
- Work with resources providers and department academics to promote and embed resources

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Thank you

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Which references have reported SAR data?

Reference filters

Filter Behavior

Filter by | Exclude

Organization

- Zenith Epigenetics Corp. (6)
- GlaxoSmithKline LLC (5)
- GlaxoSmithKline Intellectual Property (No.2) Limited (3)
- Constellation Pharmaceuticals, Inc. (2)
- Genentech, Inc. (2)

View All

Publication Name

Concept

CA Section

CAS Solutions

Bioactivity Data

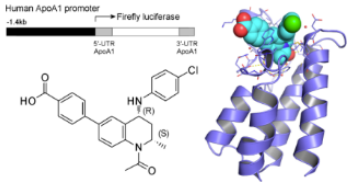
- [x] Structure Activity Relationships (37)
- [ ] Absorption, Distribution, Metabolism, Excretion (4)

1

The Discovery of I-BET726 (GSK1324726A), a Potent Tetrahydroquinoline ApoA1 Up-Regulator and Selective BET Bromodomain Inhibitor

By: Gosmini, Romain; Nguyen, Van Loc; Toum, Jerome; Simon, Christophe; Brusq, Jean-Marie G.; Krysa, Gael; Mirguet, Olivier; Riou-Eymard, Alizon M.; Boursier, Eric V.; Trottet, Lionel; et al

Journal of Medicinal Chemistry (2014), 57(19), 8111-8131 | Language: English, Database: CAplus and MEDLINE



Through their function as epigenetic readers of the histone code, the BET family of bromodomain-containing proteins regulate expression of multiple genes of therapeutic relevance, including those involved in tumor cell growth and inflammation. BET bromodomain inhibitors have profound antiproliferative and anti-inflammatory effects which translate into efficacy in oncol. and inflammation models, and the first compounds have now progressed into clin. trials. The exciting biol. of the BETs has led to great interest in the discovery of novel inhibitor classes. Here we describe the identification of a novel tetrahydroquinoline series through up-regulation of apolipoprotein A1 and the optimization into potent compounds active in murine models of septic shock and neuroblastoma. At the mol. level, these effects are produced by inhibition of BET bromodomains. X-ray crystallog. reveals the interactions explaining the structure-activity relationships of binding. The resulting lead mol., I-BET726, represents a new, potent, and selective class of tetrahydroquinoline-based BET inhibitors.

Full Text | Substances (127) | Reactions (342) | Citing (135) | Citation Map

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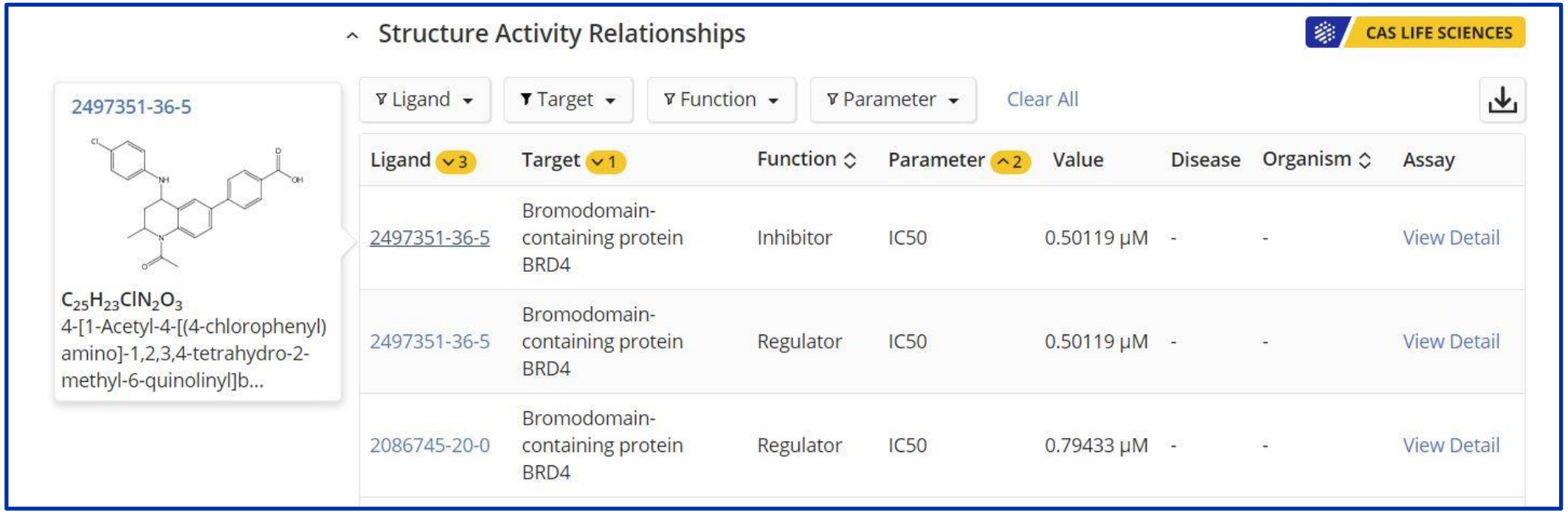
SAR data in reference detail

Identifies other substances (ligands) with same core structure



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