Human Intestinal Absorption

Intestinal Uptake and Oral Exposure

NEZU
Biotech GmbH

Dear Client,

first and foremost, thanks for downloading this free resource. All graphics in this report are predictions made by our AI systems. They show the profile of this ADMET endpoint for thousands of marketed drugs. We divided it by indication, and as you can see, it changes a lot from one category to another. Therefore, try to find the closest indication to the compounds you are currently developing.

Human intestinal absorption (HIA) asks what fraction of an orally administered dose crosses the intestinal epithelium and enters the portal circulation. It describes intestinal uptake, not the amount that finally reaches systemic blood. A compound can be well absorbed but have low oral bioavailability because intestinal or hepatic first-pass metabolism removes much of the absorbed dose.

Experimental HIA is usually reported as the **fraction absorbed**, expressed as a percentage from 0% to 100%. It is derived from human pharmacokinetic studies rather than one standardized laboratory assay. Researchers administer an oral dose and collect blood, urine, and sometimes feces over time. They measure the parent compound and relevant metabolites using validated analytical methods such as liquid chromatography–mass spectrometry. Fraction absorbed is then estimated from mass-balance data, urinary recovery, comparisons of oral and intravenous exposure, or pharmacokinetic modeling. These methods represent absorption in the intact human gastrointestinal tract. Their estimates can be affected by incomplete sample recovery, degradation in the gastrointestinal lumen, first-pass metabolism, biliary excretion, and uncertainty about metabolite origin.

Absorption depends on dissolution in gastrointestinal fluid, membrane permeability, ionization, molecular size, lipophilicity, intestinal transit, and chemical stability. Compounds cross the epithelium through passive transcellular diffusion, paracellular transport, or uptake transporters. Efflux transporters can return absorbed compound to the intestinal lumen.

Higher HIA indicates that more of the oral dose enters the body and often supports greater systemic exposure. **Lower HIA** reduces systemic delivery but can be appropriate for drugs intended to act locally within the gastrointestinal tract.

We generated these insights using advanced AI systems designed to analyze complex biotech data and highlight potential trends. While we strive for accuracy, AI models can occasionally make mistakes or miss context, so please treat these predictions as informative guidelines rather than absolute facts.

This report is provided for general informational and educational purposes only, not for medical diagnosis, treatment decisions, or financial advice. Because individual circumstances and data can vary, we cannot be held responsible for any decisions made or losses incurred based on these predictions.

Now that we got this out of the way, we genuinely hope these results are useful for your research.

Sincerely,

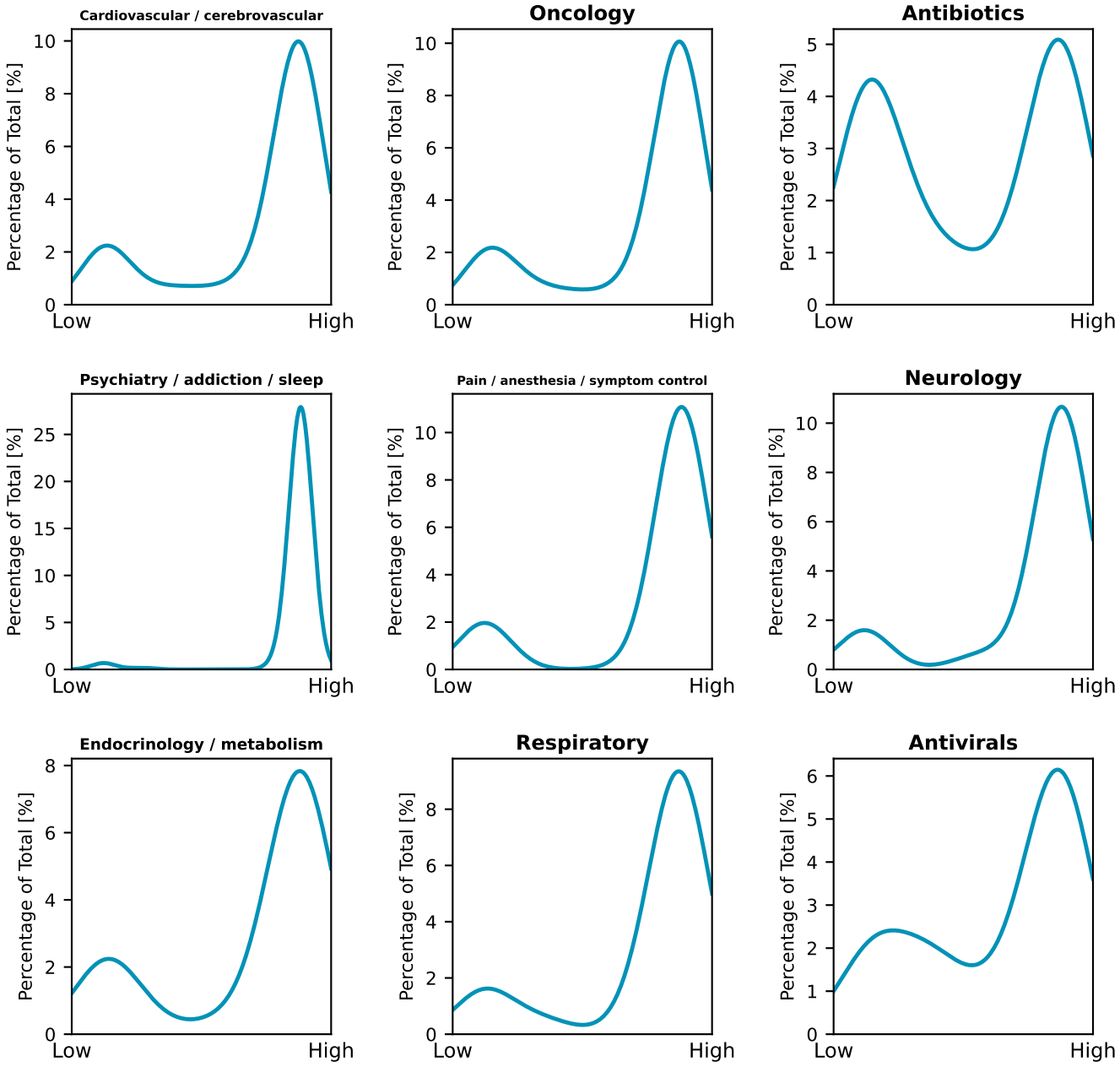
Your friends at Nezu Biotech GmbH.

You have the vision. We can help make it reality.

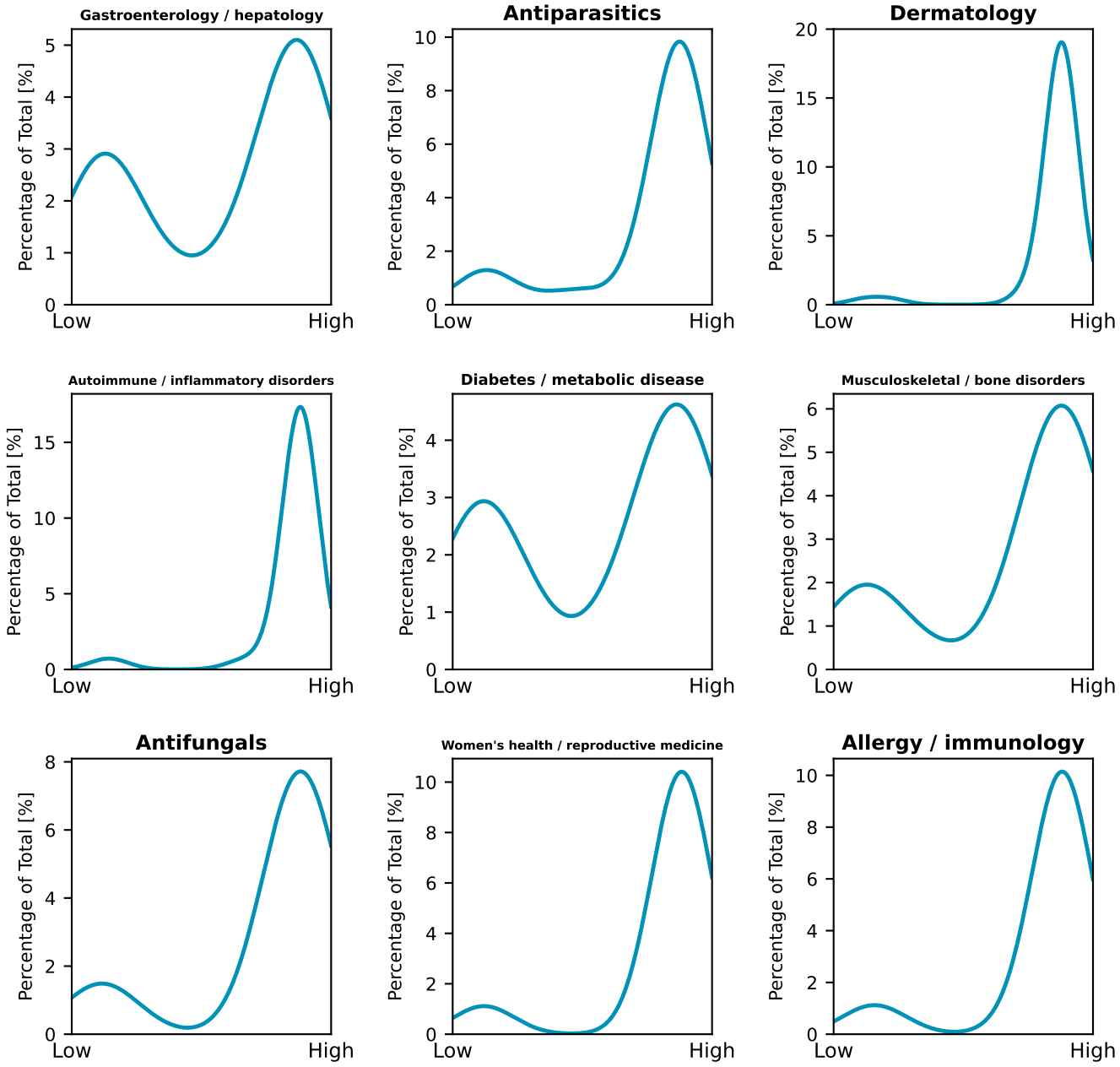
Click here to book a demo. Tell us about your molecules.

www.nezubiotech.com/contact

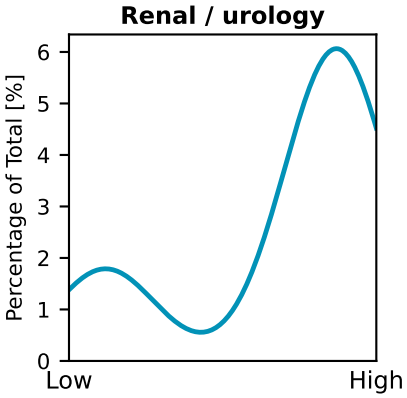
Human Intestinal Absorption (HIA)

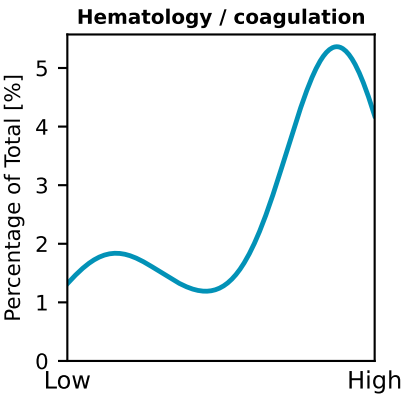


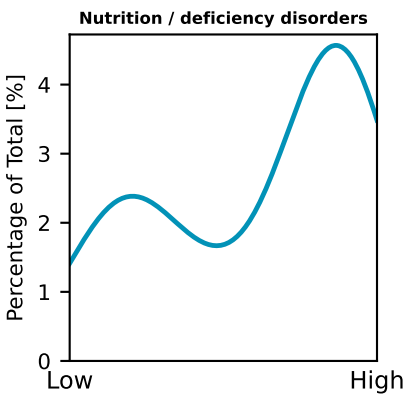
Human Intestinal Absorption (HIA)

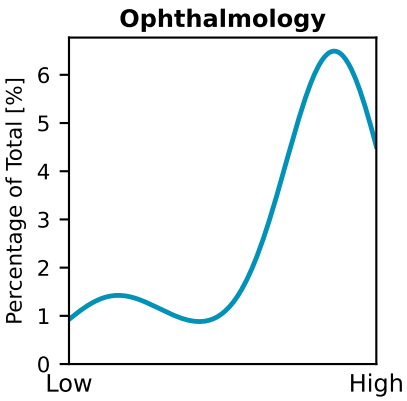


Human Intestinal Absorption (HIA)









Derived from thousands of marketed drugs