Potomac Research Group

Follow-On Biologic Market: Initial Lessons and Challenges Ahead

Paul Heldman
Friday, November 21, 2008

INSTINET. Research Partners

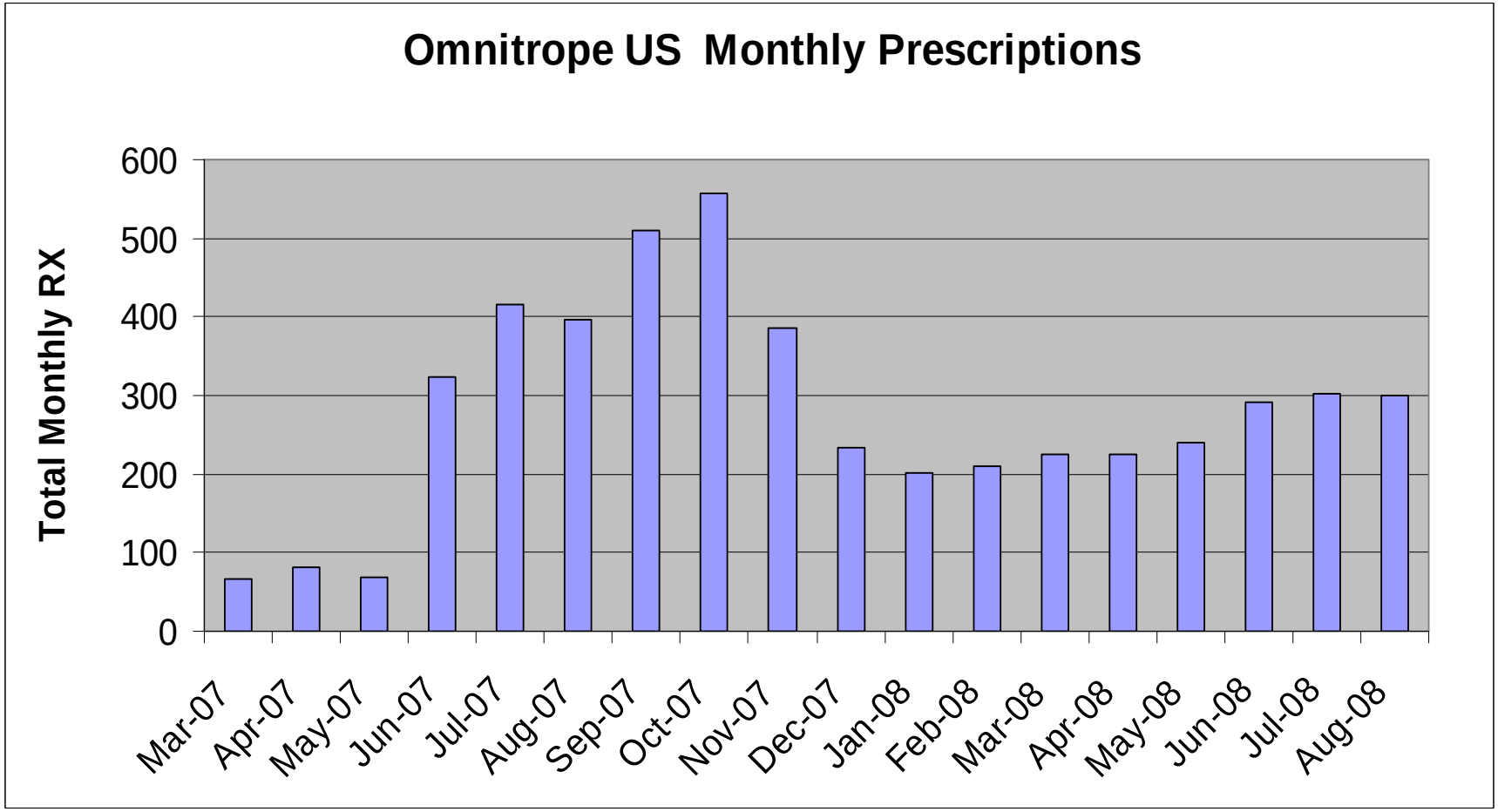
© 2008 Potomac Research Group. This information is solely for recipient's internal use, and may not be copied, disseminated or forwarded to anyone outside the recipient's organization without the prior written consent of Potomac Research Group.

POTOMAC RESEARCH GROUP

- The emerging follow-on biologic markets suggest lower discounts and less market penetration than for small molecule-based medicines.
- Key differences between the small-molecule and the biologics market.
- 3 backstops against rapid reference product market share erosion: insurance reimbursement incentives, evergreening, and safety concerns about substitution.

POTOMAC RESEARCH GROUP

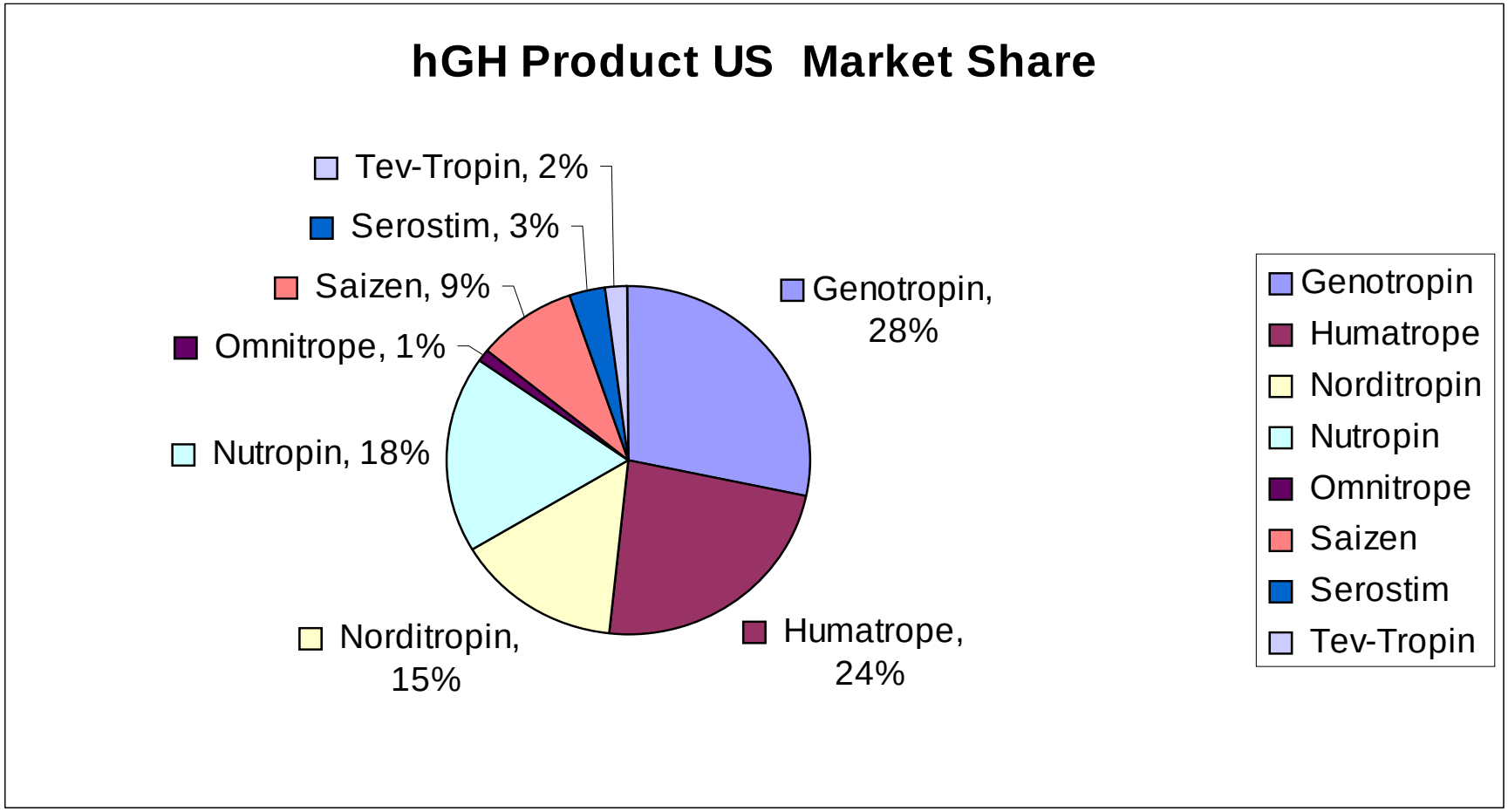
THERE IS A MARKET FOR BIOSIMILARS….



Source: IMS Health

POTOMAC RESEARCH GROUP

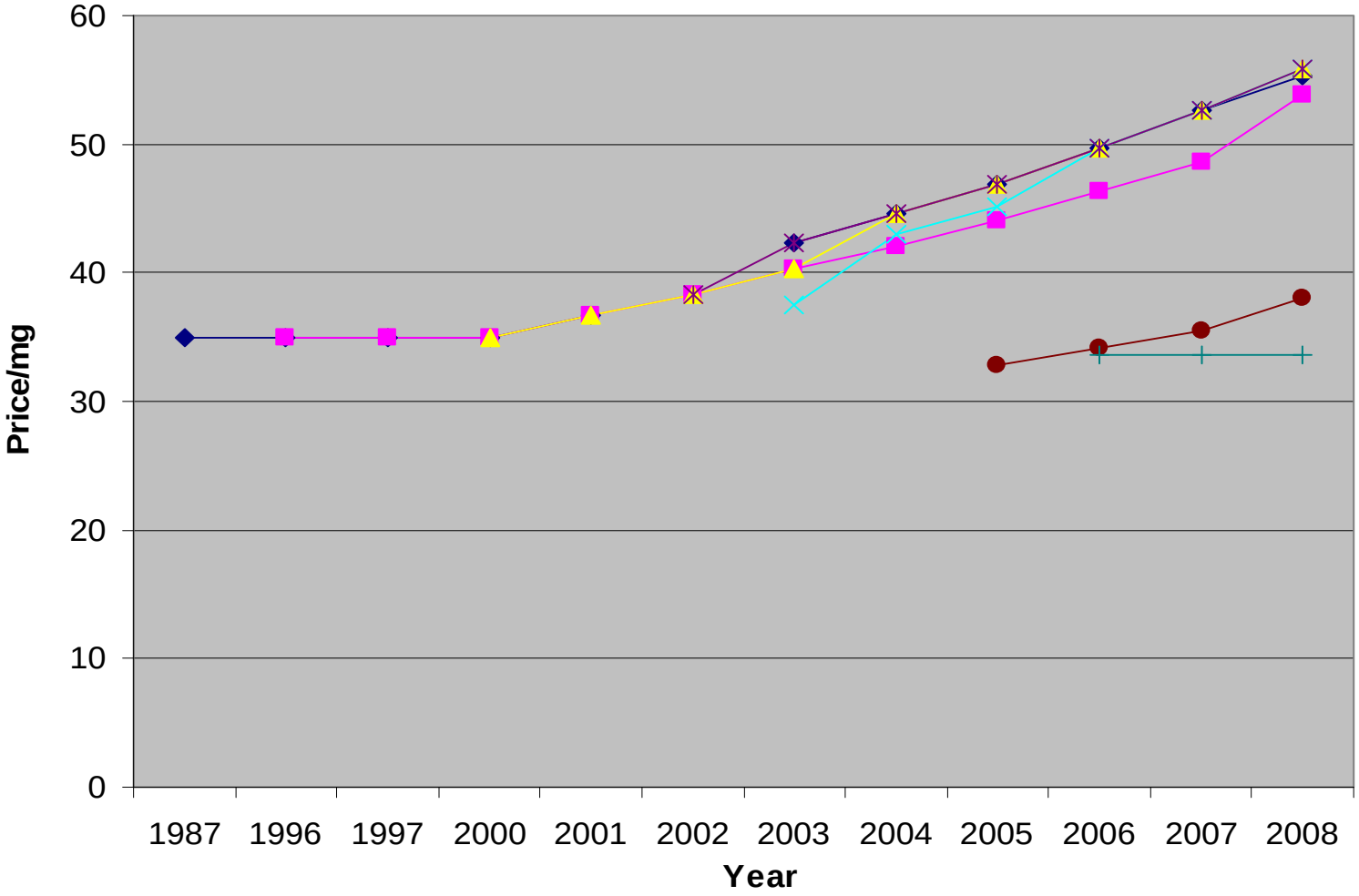
…BUT LIMITED IF BIOSIMILAR USES A DIFFICULT ROUTE OF ADMINISTRATION



Source: IMS Health

POTOMAC RESEARCH GROUP

Somatropin WAC prices in the US: Prices of all the somatropins have increased even after the addition of new products



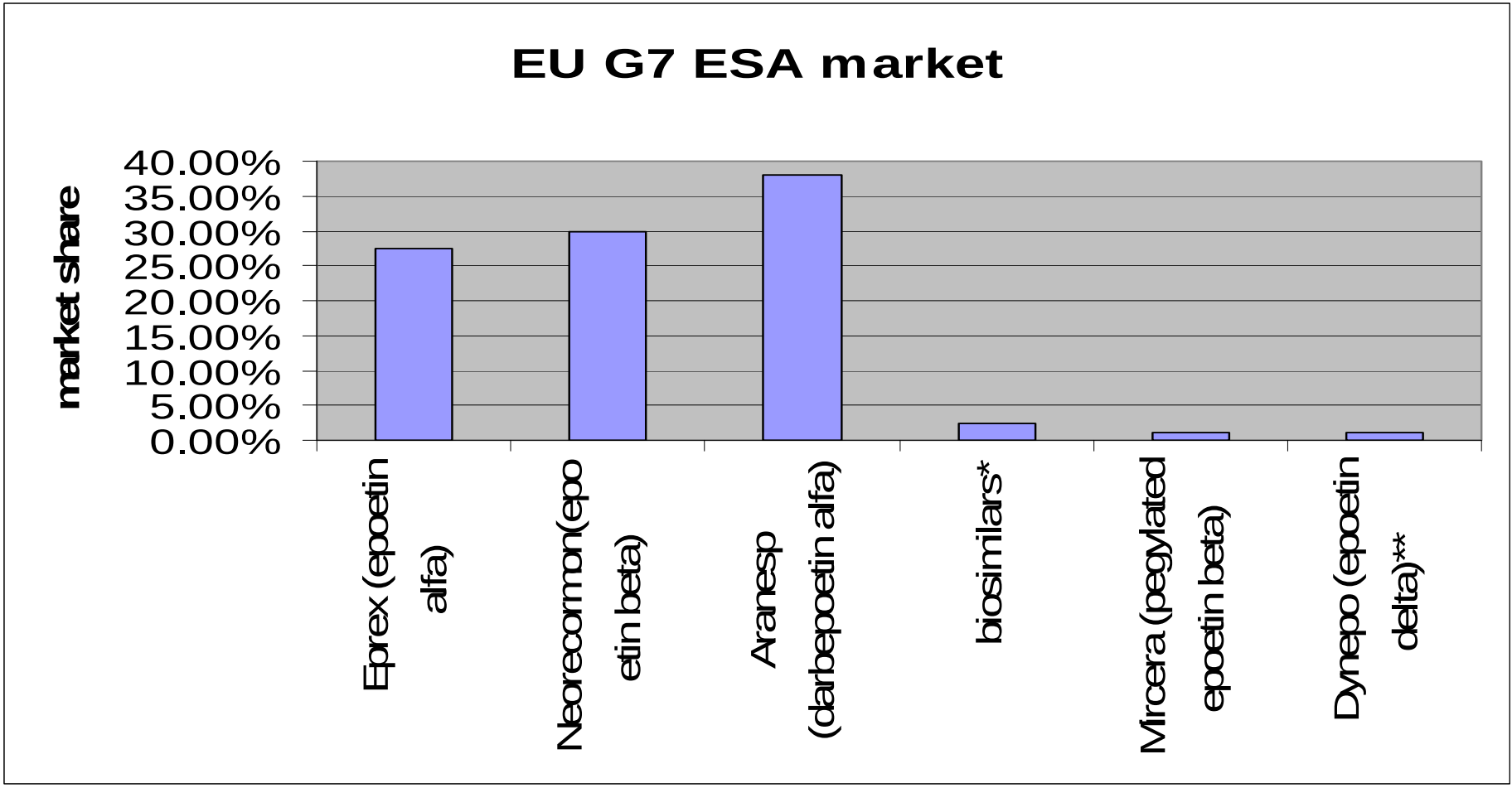
Data source: IMS, as compiled by Sandoz, a Novartis company

Pricing of Somatropin

- Initial discount of about 30% for Omnitrope in comparison to Pfizer's Genotropin in 2006, based on wholesale acquisition cost (WAC).
- Discount widens to about 40% in 2008 as Omnitrope competitors raise prices, compared to 80% discounts in the market for traditional medicines.
  - Aggressive discounting not calculated in WAC may help innovators maintain market share

POTOMAC RESEARCH GROUP

ESA BIOSIMILAR MARKET STARTS SLOWLY AS WELL

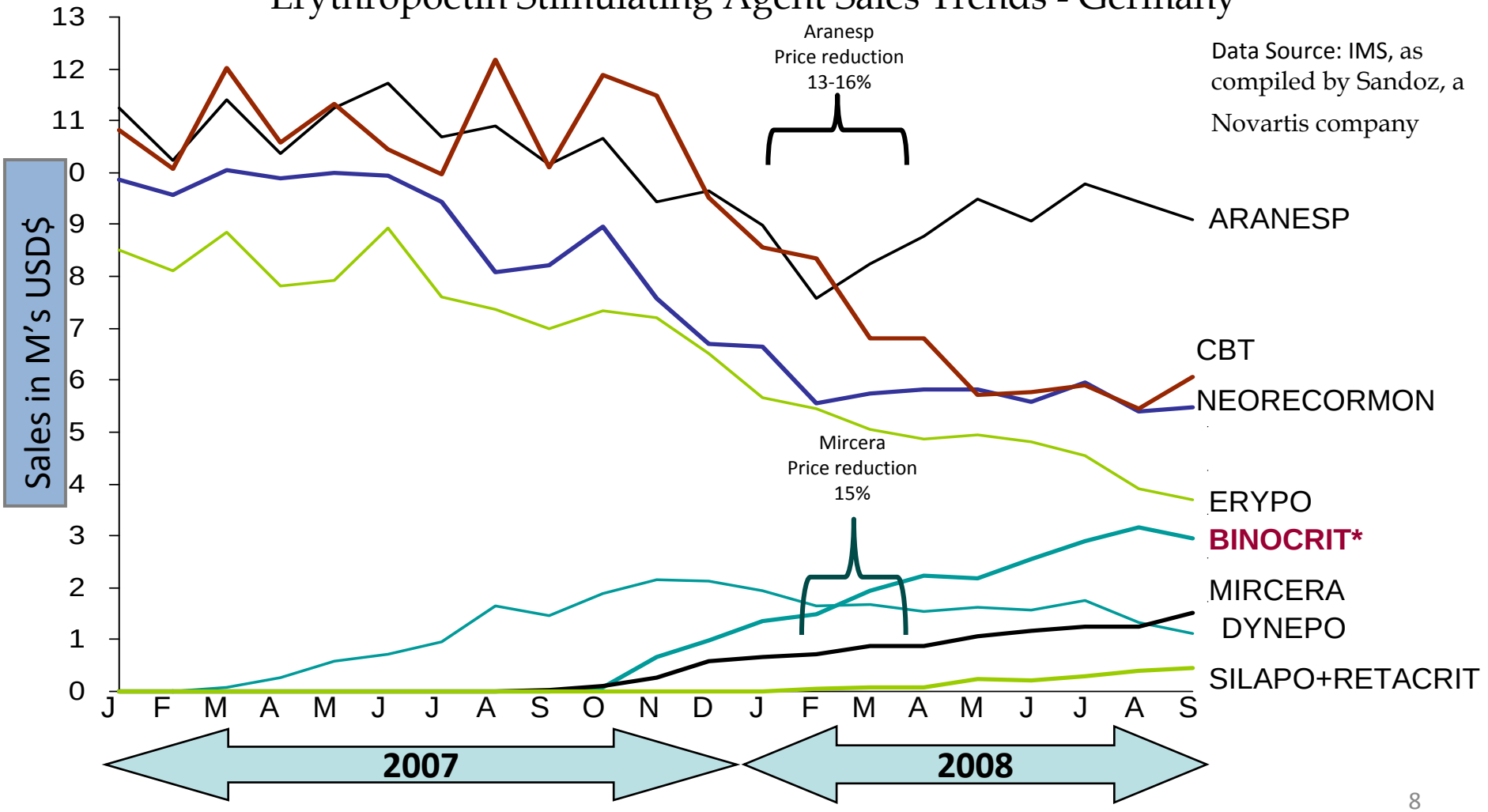


Source: IMS Health and companies

*Biosimilar market share just in Germany and UK.
**Dynepo being phased out by year end.

POTOMAC RESEARCH GROUP

Erythropoetin Stimulating Agent Sales Trends - Germany



* Represents Binocrit, Epoetin alfa Hexal and Abseamed

Biosimilar Discounts Significant

- ESA brand-name competitors reduce prices before and after introduction of biosimilars in Germany and UK.
- Amgen reduces price 13% to 16% in early ’08 in Germany. However, Amgen says it maintains a 15% to 30% price premium to first generation ESAs in Europe. Other data suggest price premium is narrower in Germany.
- ESA biosimilars priced at about 25% discount to innovator product.

Sources: IMS and companies

POTOMAC RESEARCH GROUP

Causes of More Limited Biosimilar Market

- Clinical development and marketing costs.
- Biosimilar NOT substitutable for reference product at retail pharmacy level
  - State generic substitution laws may not provide for biosimilar or biogeneric substitutability.

One Man'sTech Gain is Another's Evergreening

- Introduction of 2nd generation product threatens to limit potential of biosimilars to save money by retaining reference product market share and price premium.

  Aranesp:

  - Still commands a premium price to first-generation ESAs, according to Amgen, although that premium is narrower in Germany.
  - Remains market leader in sales, with less market-share erosion in Germany than first-generation ESAs.

- Caveat: Biosimilar may improve on the reference product.

POTOMAC RESEARCH GROUP

Biosimilar Impediment: Reimbursement Incentives

- 64% of biotech drugs are used in a physician's office which limits effectiveness of retail pharmacy substitution (if its even possible).
- Medicare Part B payment system provides incentive for doctors to use the more expensive drug.
- Limits on Medicare's authority to group similar drugs in same payment category.
- Can Medicare use coverage decisions to steer patients toward biosimilars?

POTOMAC RESEARCH GROUP

Some Insurance Incentives in Place

- Dialysis bundling (although payments not yet set)
- Insurance plan formularies
- Medicaid preferred drug lists

POTOMAC RESEARCH GROUP

Conclusions

- First biosimilars in Europe and US show potential for price discounts, but more modest than with small-molecule generics.
- Federal and state legislative issues of substitutability, public and private reimbursement incentives and coverage, and coding authority are key to future of biosimilars.

DISCLAIMERS

About Potomac Research Group

Potomac Research Group is the premier provider of independent research regarding the impact of legislative and regulatory developments on highly-regulated industries. Our research draws upon the most extensive network of Washington policy influencers, enabling uncommon insight into the timing, direction and impact of policy changes upon Wall Street.

For more information contact Paul Heldman at 202-266-7289.

About Instinet

Instinet, through affiliates, is the largest global electronic agency securities broker and has been providing investors with electronic trading solutions for more than 30 years. Instinet Research Partners, a product group of Instinet, LLC, gives institutional investors a single point of entry to a network of high-quality independent research providers, backed by sales and trading coverage from the largest global electronic agency securities broker. For more information please call Instinet's Research Sales desk at 1-888-819-5236.

© 2008 Instinet, LLC and its affiliated companies. All rights reserved. INSTINET is a registered mark in the United States and other countries throughout the world. Instinet, LLC is a subsidiary of Instinet Incorporated, which is itself a wholly-owned subsidiary of Nomura Holdings, Inc., and is a member FINRA/SIPC. This report is provided for informational purposes only. It does not take into account the particular investment objectives, financial situation, or needs of any individual or entity. Under no circumstances is it to be used or considered as an offer to purchase or sell any security, or as a solicitation or recommendation of the purchase, sale or offer to purchase or sell any security. While the information contained herein has been obtained from sources deemed reliable, neither Instinet nor its licensors, nor any other party through whom the user obtains this information: (i) makes any guarantees that it is accurate, complete, timely or contains correct sequencing of information; (ii) makes any warranties with regard to the results obtained from its use; (iii) shall have any liabilities for claims, losses or damages arising from or occasioned by any inaccuracy, error, delay or omission, or the use of the report or actions taken in reliance on the information. Reproduction or redistribution of this information in any form is prohibited except with written permission. Instinet (including its affiliated companies) does not operate, control or maintain any ownership interest in Potomac Research Group, and the opinions expressed by Potomac Research Group in its research reports may differ from the opinions expressed by other research providers or Instinet. The research providers supplying this information and their affiliated companies do not have a position in any securities discussed herein. Unless otherwise disclosed, Instinet (including its affiliated companies) does not operate, control or maintain any equity ownership interest of 1% or more in the company (ies) discussed in this report.