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HEALTH SERVICES AND POLICY RESEARCH

The Blockbuster Sunset

What changes in the primary care pharmaceutical market mean for research and policy



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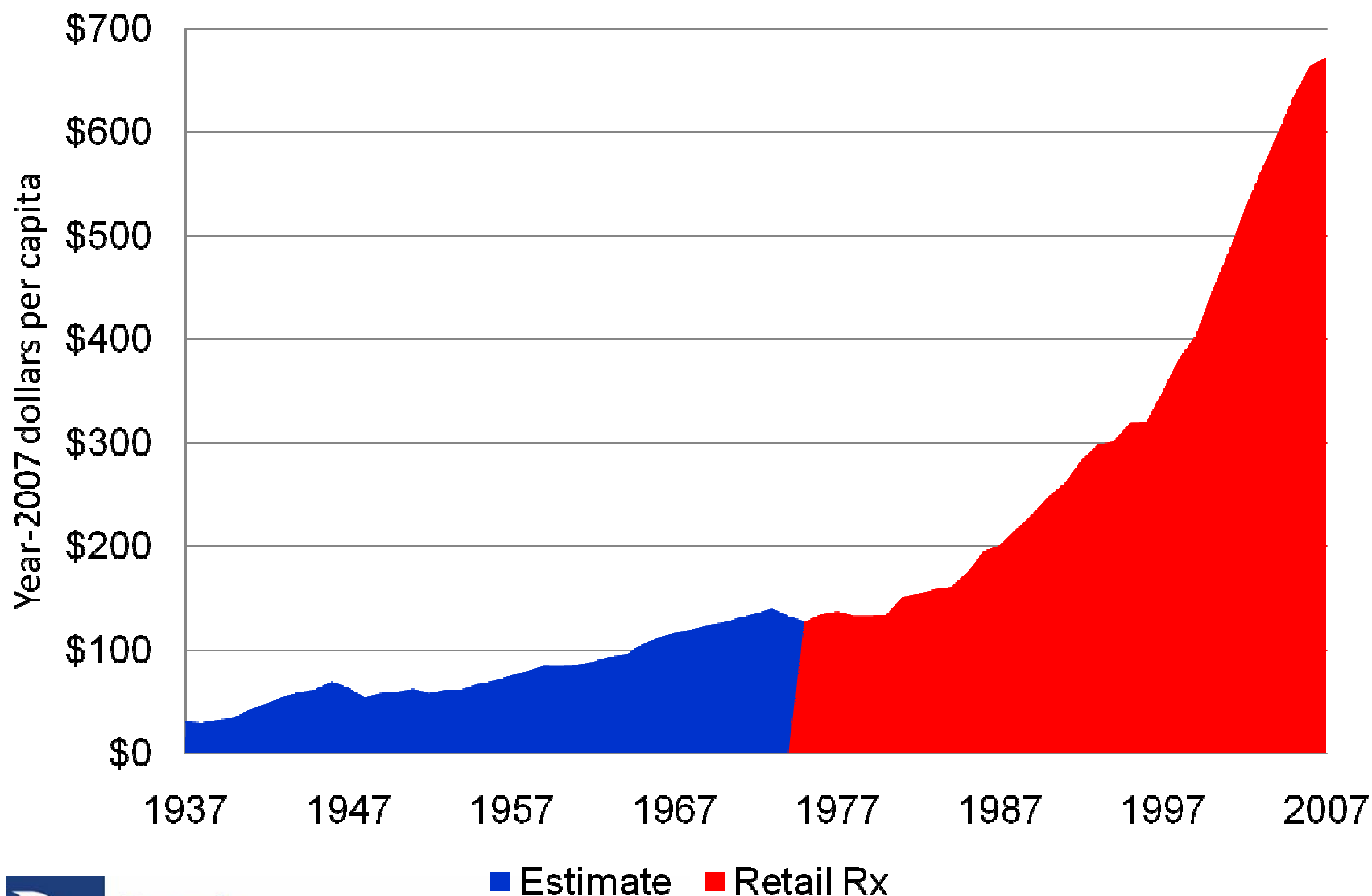
CAPT 2009, Montreal, QC



THE UNIVERSITY OF BRITISH COLUMBIA
School of Population and Public Health



Retail prescription drugs spending per capita, Canada, 1937-2007 (inflation-adjusted)



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Early scientific ‘lamplight’



Pasteur’s “germ” theory (and vaccines)



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Early searching ('dyeing' to find a drug)

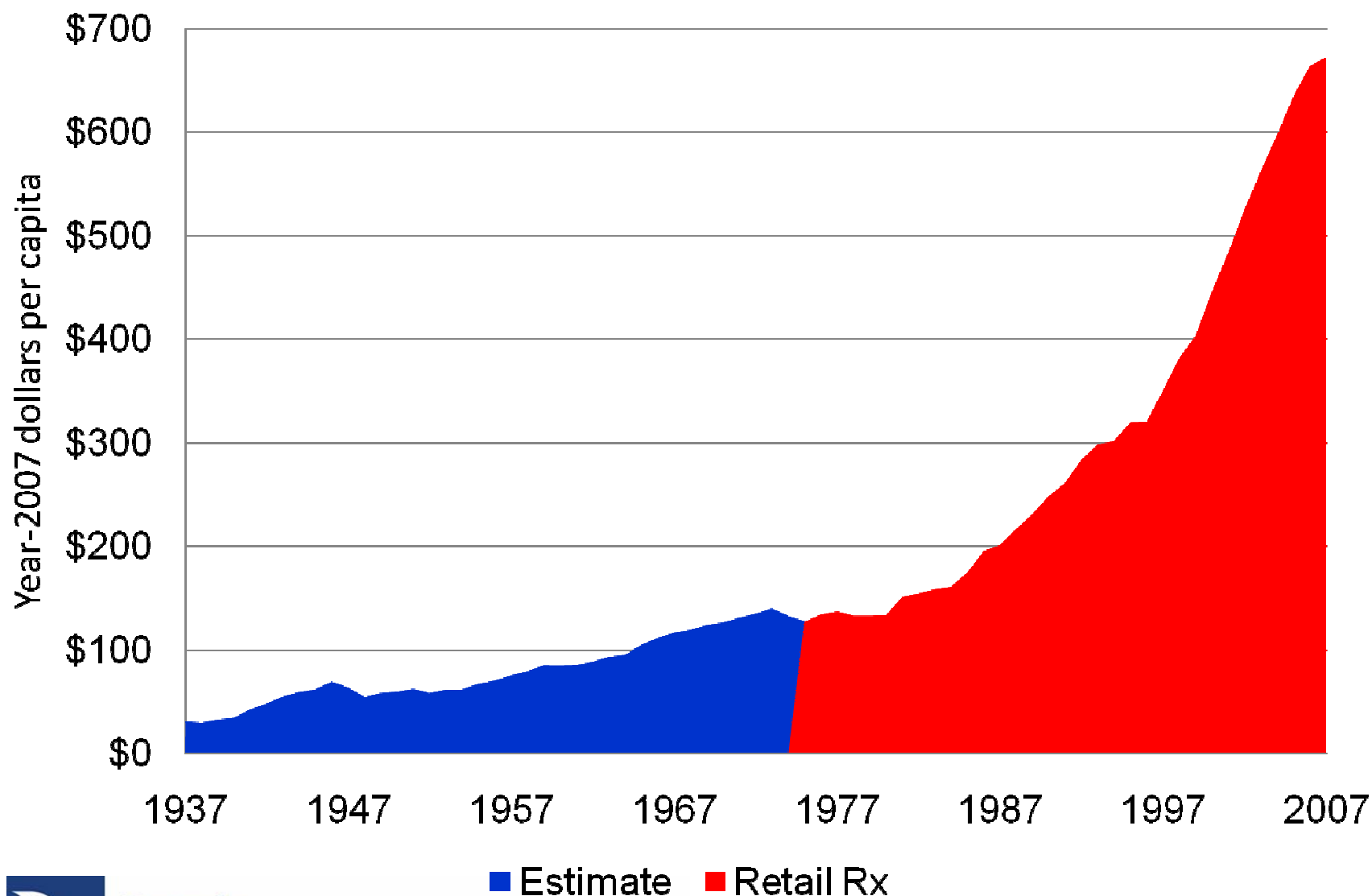


Paul Ehrlich



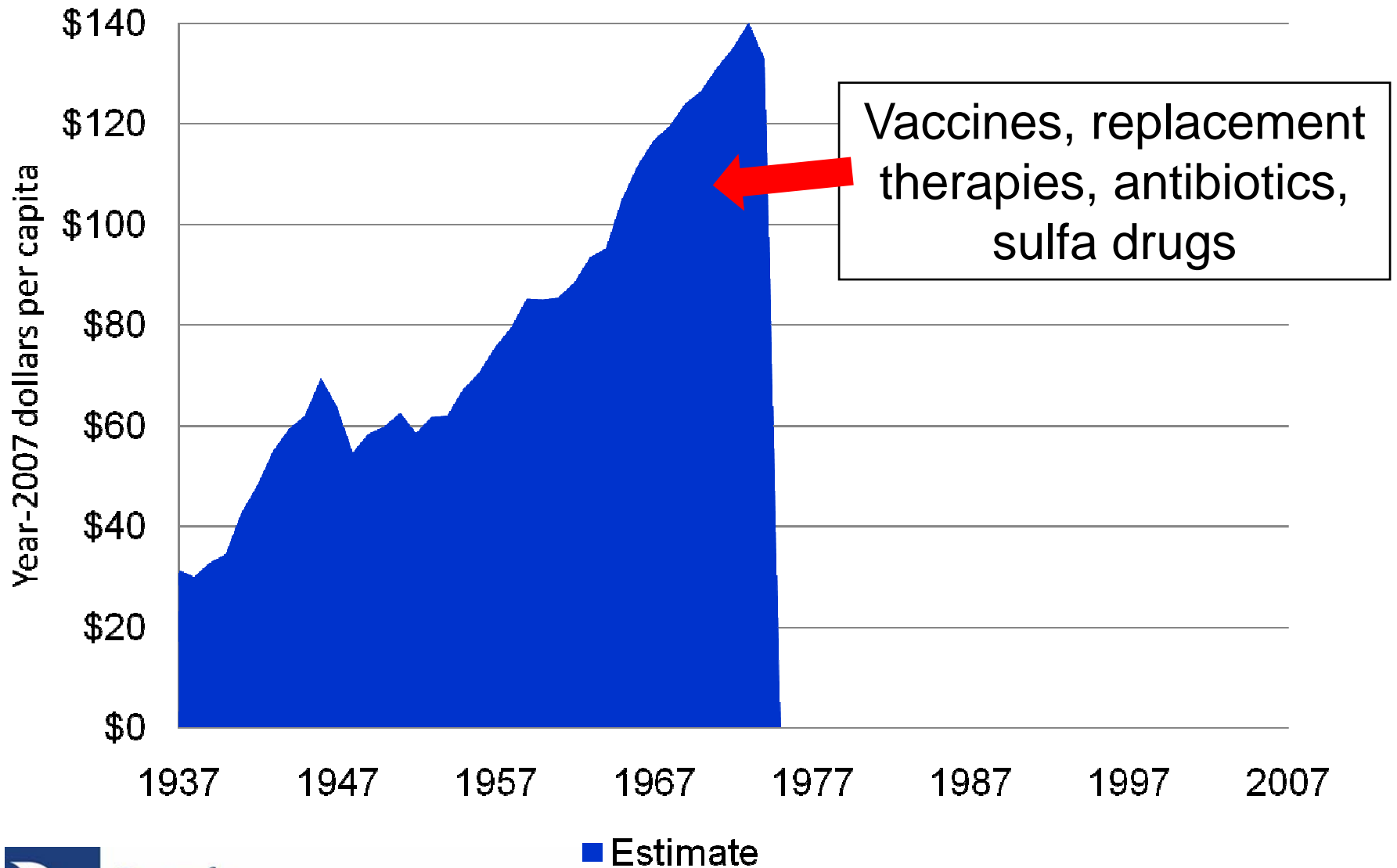
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Retail prescription drugs spending per capita, Canada, 1937-2007 (inflation-adjusted)

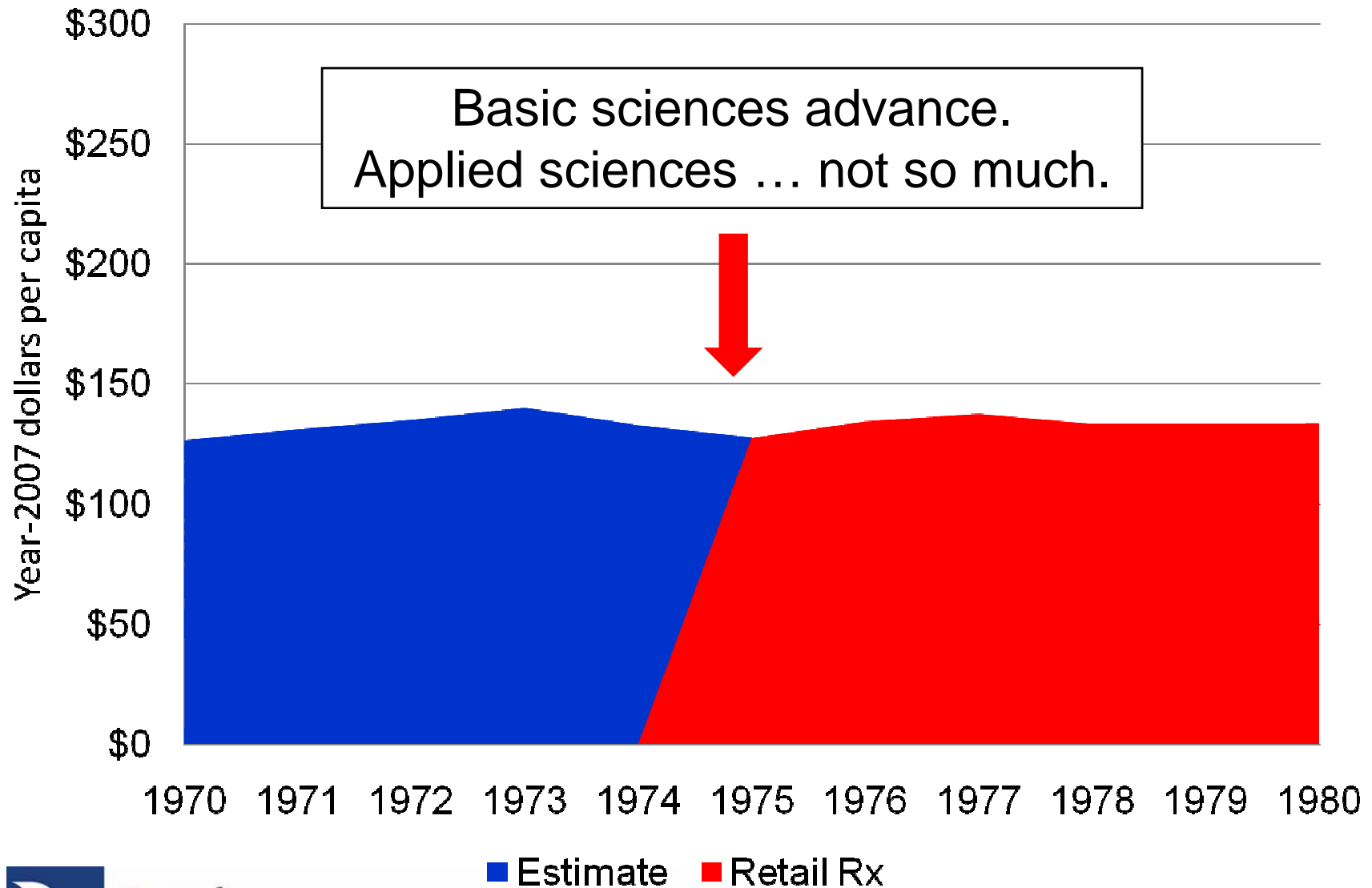


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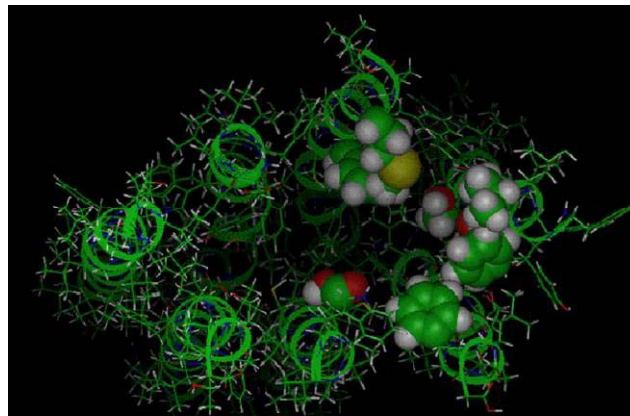
Pre- and post-war therapeutic revolutions



Inter-era doldrums



Scientific ‘lamplight’ of 1970s

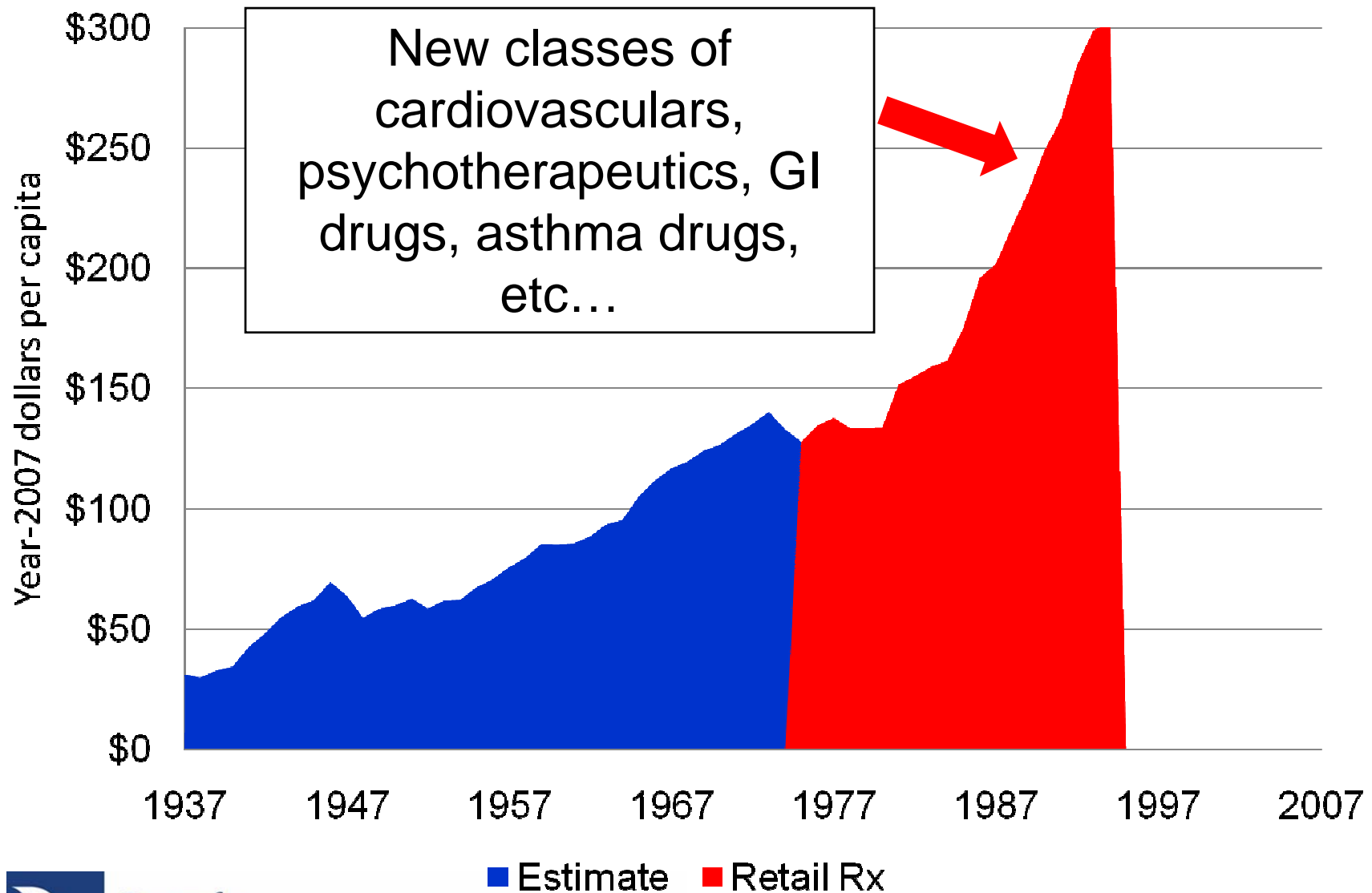


‘Receptor theory’ begets ‘rational drug design’

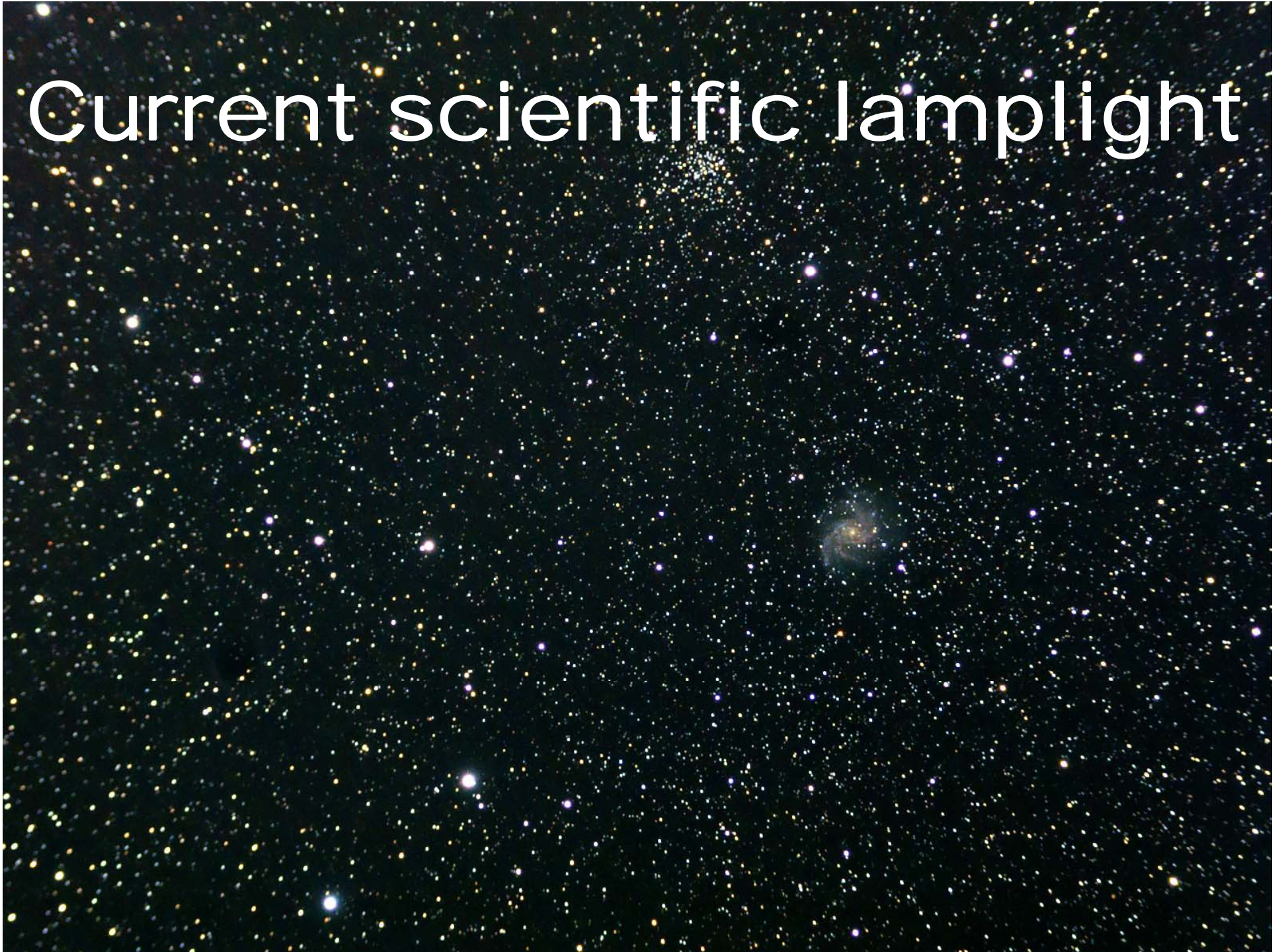


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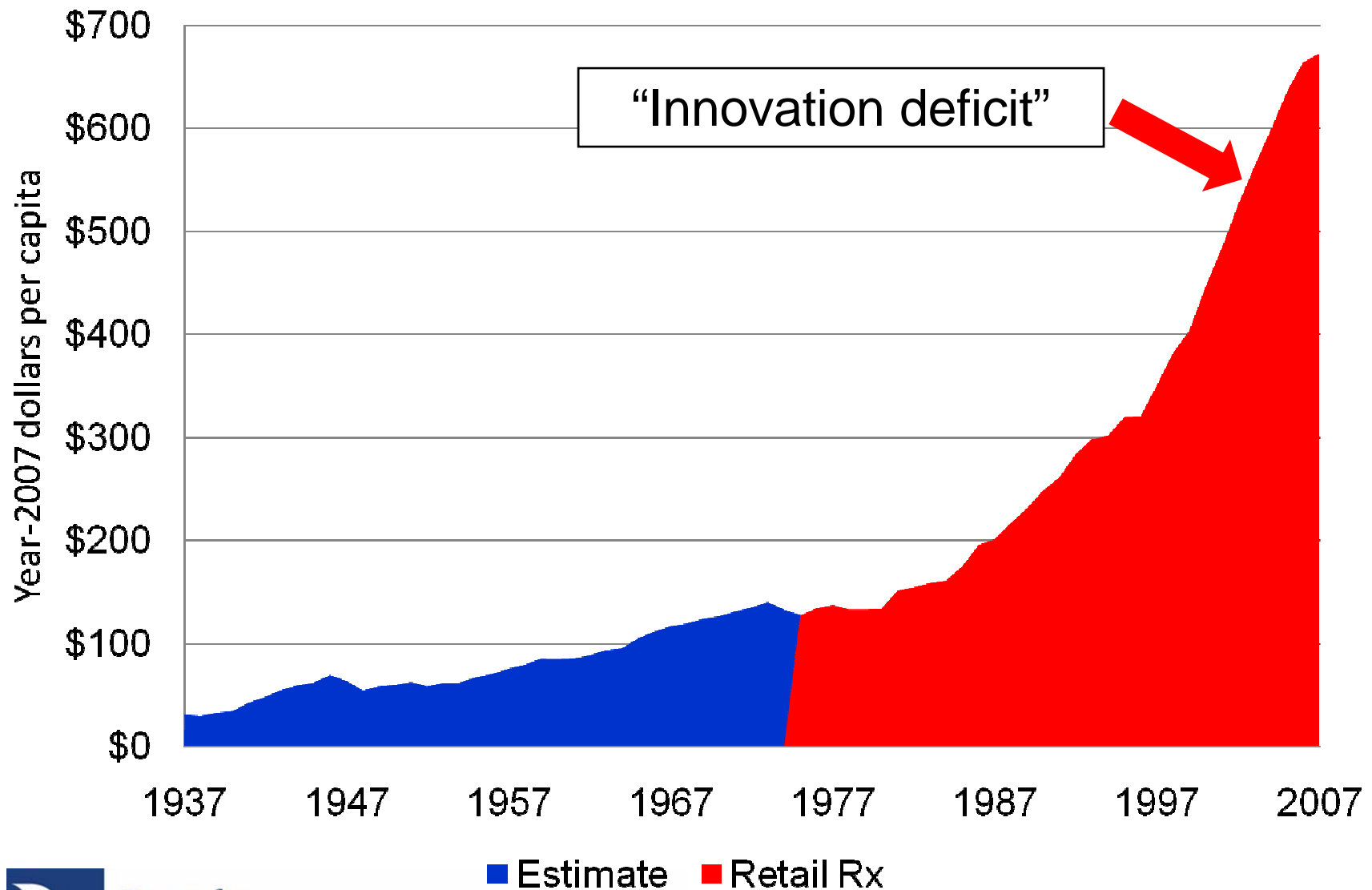
Drugs-by-design revolution: 1980 – 1995



Current scientific lamplight



Inter-era transitions: 1995 – 2005



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Sunset on blockbuster primary care pharma



What goes up, ...

Brand name (Firm)	Patent expiry	Sales at expiry (USD\$-billion)
Lipitor (Pfizer)	2011	\$12.1
US Plavix (BMS / Sanofi-Aventis)	2011	\$8.6
Diovan (Novartis)	2012	\$6.0
Zyprexa (Eli Lilly)	2011	\$4.8
Seroquel (AstraZeneca)	2011	\$4.7
Singulair (Merck)	2012	\$4.5
Advair (GlaxoSmithKline)	2010	\$3.8
Symbicort (AstraZeneca)	2012	\$3.7
Other major brands (various firms)	2010-12	\$25.7
<u>Total value of patent expiries</u>	<u>2010-12</u>	<u>\$74 billion</u>



3 biggest changes in primary care markets

- **Generics**
- **Generics**
- **Generics**



Other changes in the larger sector...

- **Custom therapy**
 - Smaller markets / greater gravity of disease
 - Test/treat dyad
- **Performance contracts**
 - Tricky: data, science, ethics, law



Canada: A diverse, “real-world” laboratory



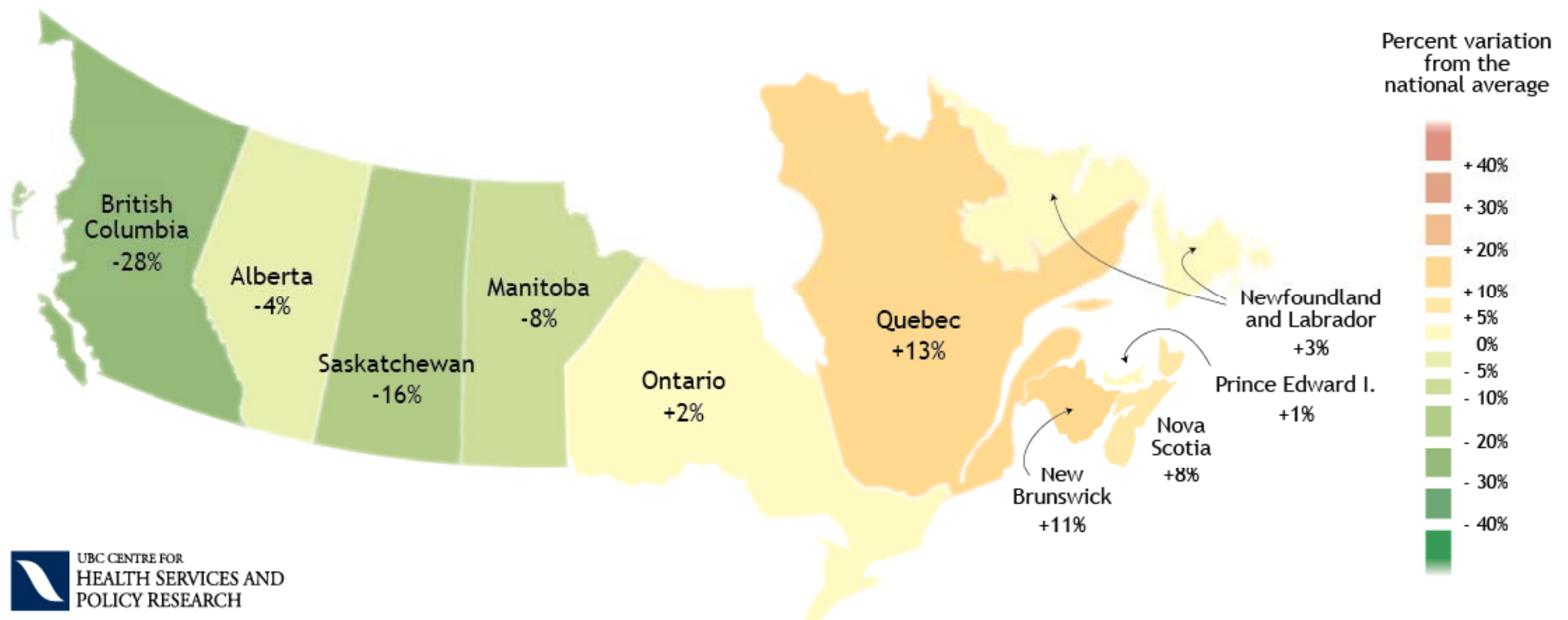
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Canada: A diverse, “real-world” laboratory

Overall spending

Age-standardized variation from the national average per capita spending by province, 2007

Source: Canadian Rx Atlas, 2nd Ed.



Canada: A diverse, “real-world” laboratory

Cardiovascular: Antihypertensives

Age-standardized variation from the national average per capita spending by province, 2007

Source: Canadian Rx Atlas, 2nd Ed.

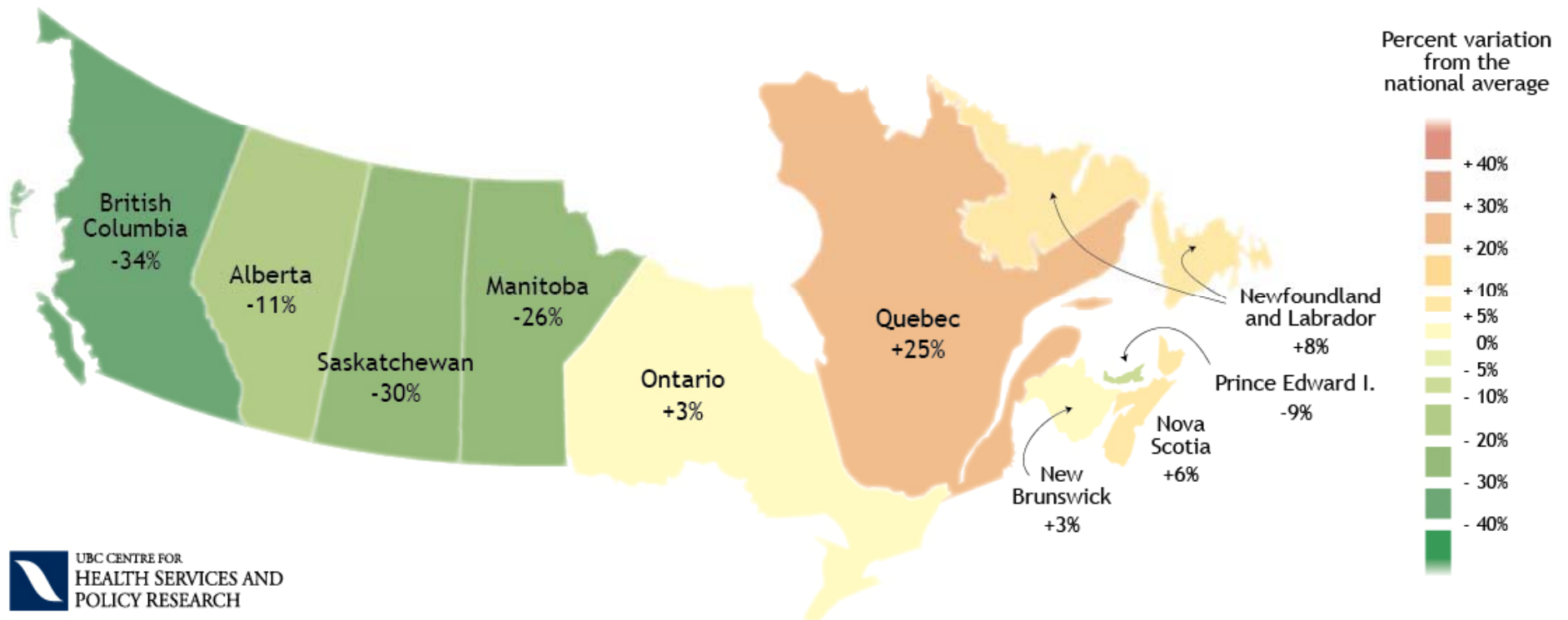


Canada: A diverse, “real-world” laboratory

Cardiovascular: Statins

Age-standardized variation from the national average per capita spending by province, 2007

Source: Canadian Rx Atlas, 2nd Ed.

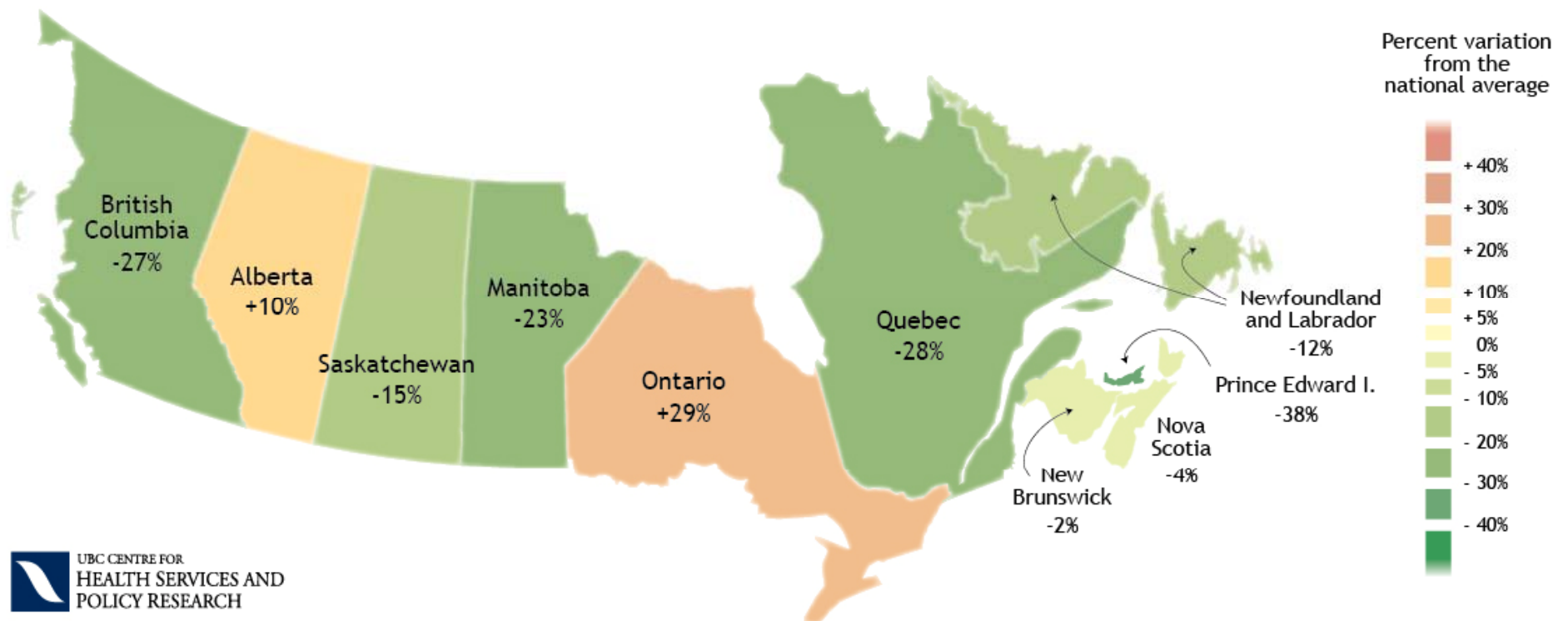


Canada: A diverse, “real-world” laboratory

Analgesics: Opioid drugs

Age-standardized variation from the national average per capita spending by province, 2007

Source: Canadian Rx Atlas, 2nd Ed.



Canada: A diverse, “real-world” laboratory

Neurological: Cholinesterase inhibitors

Age-standardized variation from the national average per capita spending by province, 2007

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Thank you!



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