Currículo Resumido em Português

Prof. Dr. Peter Bernstein

Peter Bernstein é graduado em Química (1973) pela Universidade de Rochester, Nova York. Possui doutorado em Química Orgânica (1977) pela Universidade Columbia, Nova York. Após terminar o doutorado, fez pós-doutorado com Professor Barry Trost, no Departamento de Química da Universidade de Wisconsin. Em 1979, Bernstein se juntou ao Departamento de Química Medicinal da ICI Pharmaceuticals. Ele possui um histórico com mais de 30 anos de experiência em pesquisa industrial (ICI Pharmaceuticals, Zeneca Pharmaceuticals e AstraZeneca Pharmaceuticals). Ele liderou grupos de pesquisa que avançaram mais de 10 candidatos em desenvolvimento pré-clínico e 5 para os estudos clínicos. Um dos projetos no qual ele trabalhou levou ao Accolate® (antagonista CysLT1R para asma). Ele é o co-inventor de 90 patentes emitidas e co-autor de 130 publicações e apresentações. Ele tem experiência em diversas áreas, tais como: neurociência, psiquiatria, dor, doenças respiratórias, inflamação e oncologia. Atualmente, ele presta serviço de consultoria em desenvolvimento de fármacos pela PhaRmaB LLC.

Curriculum

Dr. Peter R Bernstein

BS, University of Rochester 1973, in Chemistry with High Distinction

PhD, Columbia University, 197, in Organic Chemistry

Felow, Department Of Chemistry, University of Wisconsin, Madison, 1979

In 1979, after doctoral studies with Profesor Gilbert Stork, Columbia University, and a postdoctoral felowship with Profesor Bary Trost, University of Wisconsin, Madison, Peter joined the Medicinal Chemistry Department of ICI Pharmaceuticals in Wilmington, DE. He worked there 31 years, continuing through its spin-of as Zeneca Pharmaceuticals and its merger with Astra Pharmaceuticals to form AstraZeneca Pharmaceuticals. Folowing his retirement in 2010 he established PhaRmaB LLC as a platform for providing consulting and mentoring in drug discovery and development.

Peter has worked at developing treatments to many different diseases, through multiple mechanisms of action, and has had more than 10 compounds advance into development. Early in his career he initiated, and worked on, ICI's leukotriene antagonist project. During this effort he co-invented and helped develop Accolate™, the first leukotriene antagonist to be approved in the US. After developing and outlicensing a back-up, ZD3523, he moved onto inhibitors of human neutrophil elastase. Two compounds from those efforts, ZD8321 and ZD0892, entered clinical development. Since then he has worked on, or led, chemistry teams targeting: neurokinin antagonists, β-estrogen agonists, γ-secretase inhibitors, H3 antagonists, 5-HT1B antagonists and dual NET/DAT reuptake inhibitors. In the area of neurokinin antagonists he led the chemistry teams working on dual NK1/NK2 antagonists for pulmonary disease [ZD6021 and ZD2249] and selective NK1 antagonists for CNS indications [ZD4974]. Towards the end of his time at AstraZeneca, he led the preclinical 5-HT1B-antagonist [AZD3783] and the H3-antagonist [AZD5213] programs. The latter is [as of 6/2014] in clinical development for Tourette syndrome.

Peter is an author on greater than 200 scientific papers, presentations, and patents. He is active as a consultant, editor, and board member. He currently holds appointments as: Digests Editor, *Bioorganic & Medicinal Chemistry Letters*; Section Editor, Topics in Drug Design and Discovery, *Annual Reports in Medicinal Chemistry*; and Adjunct Full Professor in the Department of Chemistry and Biochemistry, University of Delaware. He was the Chair of the 2004 Gordon Research Conference on Med Chem, served 6 years on the ACS MEDI executive committee, 8 years as Member and Chair of the Carothers Award Committee of the Delaware Section ACS and 9 years on the Scientific Advisory Board of the Keystone Symposia. At AstraZeneca, in addition to managerial duties, he progressed up the Scientific Ladder to the position of Senior Principal Scientist.

After his retirement he was chosen as the “Distinguished Lecturer” for the 2010 AstraZeneca Excellence in Chemistry Award and in 2011 he was named to the ACS Division of Medicinal Chemistry Hall of Fame.

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SUMMARY

Innovative drug discovery scientist with 30+ years of industrial experience and a proven track record of project delivery in several therapeutic areas, targeting diverse mechanisms of action. Someone with the ability to mentor across disciplines and provide clarity to drug discovery teams, who with >200 papers, presentations, and patents is recognized as an expert Medicinal Chemist with the skills to transform basic science into successful research and development efforts, from early stage to post launch.

A leader with the ability to manage multiple projects and people, deliver to timelines and develop staff. As an appointee to the senior levels of the AstraZeneca Scientific Ladder, was a member or leader of multi-disciplinary and chemistry focused teams including the: Chemistry Management Team; Cardiac Safety working group; Respiratory, Inflammatory and Neurological Disease Management Team; Psychiatry Disease Management Team and AstraZeneca global Portfolio Evaluation Group.

PROFESSIONAL EXPERIENCE

DART NEUROSCIENCE LLC **March 2013 -**
Scientific Advisory Board Member

UNIVERSITY OF DELAWARE **Feb. 2013 -**
Adjunct Professor, Department of Chemistry and Biochemistry

BIOORGANIC MEDICINAL CHEMISTRY LETTERS **2012-**
Digests Editor and member of the Executive Board of Editors, Tetrahedron Publications

PhaRmaB LLC, Rose Valley, PA **2010-**
Principal - Owner

- Consulting in small molecule drug discovery and development

ASTRAZENECA PHARMACEUTICALS, Wilmington, DE **1979-2010**
Formerly: Zeneca, ICI and Stuart Pharmaceuticals

CNS Chemistry Department
Sr. Principal Scientist (2001-2010)

- Candidate Drug Delivery Team Leader for 5-HT_{1B} and Project Leader for H3 antagonist and dual Norepinephrine/Dopamine reuptake inhibitor projects. Project Chemistry Leader for 5-HT_{1B}, Neurokinin-1 antagonist and dual Neurokinin-1 antagonist/ Serotonin reuptake inhibitor projects. Chemistry Team leader for beta-Estrogen antagonist and NMDA antagonist projects.
  - Delivered clinical candidates **AZD3783** & **AZD5213**, both made it to man and one is continuing to advance. Breakthrough discovery of the first non-basic ligand for the 5-HT_{1B} receptor.
  - Line management for 6-12 scientists
- Chair of AZ Global Scientific and Technical Achievement Award Committee and Wilmington Cardiac Safety Working Group, Lead Chemist Global Candidate Drug Reprofiling Team, Member of AstraZeneca Portfolio Evaluation Group [PEG], Wilmington Psychiatry Discovery Management Committee and Wilmington Chemistry Leadership Teams.

- Initiated the AZ Global science award, which had a positive impact on morale throughout R&D and increased recognition of AZ science. Pioneered a strategy that reduced the risk of cardiac safety issues derailing CNs-targeted compounds as they progressed. Delivered chemical support that enabled the repositioning of AZ-clinical candidates to new indications. Contributions to PEG review of the Oncology, New Technology and Safety areas led to improvements in project processes that reduced timelines and required resources and improved project functioning across the disease area safety interface. Co-led a forum for sharing best practices among the Medicinal Chemists and the Management Team.

AstraZeneca Research Associate (1999-2001)

- Project Chemistry Leader Neurokinin-1 antagonist project.
  - Invention and delivery of development candidate **ZD4974** and line management of 9 scientists.
- Member of Neurology Target Evaluation, Neurology Strategy Advisory Group and Scientific Ladder working group.
  - Contributed to decisions on which new targets to pursue in Wilmington and to the case for the establishment of parallel Scientific/Project/Line career progression ladders within AstraZeneca.

Zeneca Pharmaceuticals, Chemistry Department **1993-1999**

Zeneca Research Associate (1998-1999)

- Lead Chemist on the Tachykinin Team
  - Invention and delivery of development candidate **ZD2249**, a NK1/NK2 antagonist.
- Member Accolate™ Global Product Team, Member RIN [Respiratory, Inflammatory & Neurological Disease Department] Portfolio Management Team.
  - Provided discovery scientific support to the commercialization of Accolate® that led to overcoming issues and improved acceptance by Clinicians. Key member of the team that out-licensed **ZD3523**, delivering millions of dollars to Zeneca. Analysis of Wilmington project portfolio contributing to decisions on: initiation, prioritization, progression and closure. Responsible for review of candidates for appointment to the Zeneca Science ladder.

Zeneca Senior Chemist (1997-1998)

- Lead Chemist on the Tachykinin Team
  - Invention, delivery and development support of clinical candidate **ZD6021**, a dual antagonist.
- Member RIN Portfolio Management Team and Asthma Science Group, Chair of the Principal Chemists Group.
  - Responsible for analysis and ranking of Wilmington Project Portfolio and for providing new directions for anti-asthma research. Delivered a new training paradigm that reduced the time needed to develop newly hired synthetic chemists into medicinal chemists by more than 1 year.

Principal Chemist (1993-1997)

- Lead Chemist on the Neurokinin-1/Neurokinin-2 [NK1/NK2] antagonist for Asthma project.
  - Led lead identification effort that supported the transition of the project to lead optimization.

ICI Pharmaceuticals, Medicinal Chemistry Department **1983-1993**

Principal Chemist (1991-1993)

- Member Elastase Inhibition Team
  - Invention of non-peptidic inhibitors of human leukocyte elastase, including development candidates **ZD0892** and **ZD8321**, one of which progressed into man.

Sr. Research Chemist (1983-1991)

- Member of Leukotriene Antagonist and Elastase Inhibition Teams

- Contributed to the discovery and development of the leukotriene antagonist clinical candidates: **ICI-198707, ICI-204219 (Accolate™) and ZD3523**.

Stuart Pharmaceuticals, Medicinal Chemistry Department **1979-1983**
Research Chemist

- Member of Leukotriene Antagonist Team
  - Proposed and initiated the leukotriene antagonist project, designed and delivered an in-house synthesis of the leukotrienes and achieved approval for their clinical use.

Department of Chemistry, University of Wisconsin, Madison, WI **1977-1979**
Postdoctoral Fellow, with Prof. B.M. Trost

- Design and delivery of a formal total Synthesis of Vitamin D.

EDUCATION

Ph.D., Organic Chemistry, Columbia University – Research Advisor G. Stork
B.S., Chemistry, *Magna Cum Laude,* University of Rochester

PROFESSIONAL ACTIVITIES

- Presiding – Tetrahedron Prize Symposium, *248th ACS National Meeting & Exposition*, San Francisco CA, August 11, 2014.
- Co-Chair - *The Academic-Industrial Interface in 21st Century Drug Discovery,* London, UK, June 24, 2014.
- Member – Organizing Committee, *15th Tetrahedron Symposium,* London, UK, June 2014.
- Professor of Medicinal Chemistry – Pennsylvania Drug Discovery Institute (2013 – **present**)
- Session Chair – Protein Misfolding, *Frontiers In Medicinal Chemistry 2013,* San Francisco, CA, June 26, 2013
- Member – Organizing Committee, *Frontiers In Medicinal Chemistry 2013* (2012-2013)
- Session Chair – Allosteric Drugs, *Gordon Research Conference on Medicinal Chemistry* (2012)
- Session Chair – Challenges in Chemical Biology, *13th Tetrahedron Symposium,* Amsterdam, Holland, June 2012
- Member – Graduate Fellowship Award Committee, MEDI Division of the A.C.S (2012)
- Member – Drug Discovery and Design Faculty, *Faculty of 1000,* (Jan. 2012 – **present**)
- Section Editor – Topics in Drug Design and Discovery *Annual Reports in Medicinal Chemistry* (2011 – **present**)
- Member – Editorial Advisory Board, *Pharmaceutical Patent Analyst* (2011 – **present**)
- Member – Editorial Advisory Board*, J. Medicinal Chemistry* (2009-2013)
- Alternate Industrial Councilor – MEDI Division, American Chemical Society (2009-2011)
- Session Chair – Imaging and Chemistry, *236th ACS National Meeting, Philadelphia, PA*, 2008.
- Industrial Councilor – MEDI Division, American Chemical Society (2006-2008)
- Member – Gordon Research Conferences Council (2005-2007)
- Member – Editorial Board *Topics in Med. Chem.,* Springer-Verlag (2005-**present**)
- Member – Graduate Fellowship Award Committee, MEDI Division of the A.C.S (2004-2005)
- Officer [Vice Chair-elect, Vice Chair, Chair] – *Gordon Research Conference on Medicinal Chemistry* (2002-2004)
- Member – Editorial Advisory Board *Current Topics in Med. Chem.*, Bentham (2002-2009)

- Chair – Division Awards Committee, Medicinal Chemistry Division of the A.C.S. (2002)
- Member – Scientific Advisory Board, *Keystone Symposium* (2001-2010)
- Chair – Carothers Award Committee of the Delaware Section A.C.S. (2000-2002)
- Chair – Poster Session, Med. Chem. Gordon Research Conference, Aug. 2000
- Program Chair – Keynote Symposium – *Accelerating Drug Discovery and Development,* Middle Atlantic Regional Meeting of the A.C.S., May 2000
- Member – Editorial Advisory Board *Current Opinion in Anti-inflammatory and Immunomodulatory Drugs* (1998-2000)
- Member – Carothers Award Committee of the Delaware Section A.C.S. (1995-2003)
- Alternate Councilor – Delaware Section Am. Chem. Soc. (1986-1988)
- Chair – Nominations Committee, Delaware Section Am. Chem. Soc. (1985)
- Member – Organizing Committee, Delaware Section Am. Chem. Soc. (1982-1983)
- Program Chair – Org. Div.,16th Middle Atlantic Regional Meeting, Am. Chem. Soc. (1982)

SELECTED HONORS

- Distinguished Lecturer: *2010 AstraZeneca Excellence in Chemistry Awards,* Waltham, MA.
- Inducted to ACS Division of Medicinal Chemistry Hall of Fame: *242nd National Meeting ACS National Meeting*, August 30, 2011, Denver, CO.
- Plenary Lecturer: *Frontiers in Medicinal Chemistry 2014,* Tübingen, Germany, March, 2014

OTHER INTERESTS

- Active Class IV whitewater kayaker, American Canoe Association certified Instructor for *Level 3: River Kayaking* through 12/31/13.

Publications:

1. Brown, D.G., Bernstein, P.R., Griffin, A., Wesolowski, S., Labrecque, D., Tremblay, M.C., Sylvester, M., Mauger, R., Edwards, P.D., Throner, S.R. Folmer, J.J., Cacciola, J., Scott, C., Lazor, L.A., Pourashraf, M., Santhakumar, V., Potts, W.M., Sydserff, S., Giguère, P., Lévesque, C., Dasser, M. and Groblewski, T. "Discovery of Spirofused Piperazine and Diazepane Amides as Selective Histamine-3 Antagonists with In Vivo Efficacy in a Mouse Model of Cognition" *J. Med. Chem.,* **57,** 733-758 (2014), doi.org/10.1021/jm4014828
2. Brown, D.G. Bernstein, P.R., Wu, Y., Urbanek, R.A. Becker, C.W., Throner, S.R., Dembofsky, B.T., Steelman, G.B., Lazor, L.A., Scott, C.W., Wood, M.W., Wesolowski, S.S., Nugiel, D.A., Koch, S., Yu, J., Pivonka, D.E., Jiang, Q., Shuang Li, S., Thompson, C., Zacco, A., Elmore, C., Schroeder, P., Liu, J-W., Hastings, R., Hurley, C.A., Ward, S. Hunt, H.J., Williams, K., McLaughlin, J., Hoesch, V., Sydserff, S., Maier, D., and Aharony, D. "Azepines and Piperidines with Dual Norepinephrine Dopamine Uptake Inhibition with Antidepressant Activity." *ACS Med. Chem. Lett., **4**,* 46–51 (2013*).*
3. Bernstein, P.R. "My Path in Seeking New Medicines." *Ann. Rep. Med. Chem.,* **47,** 13-24, (2012).
4. Bernstein, P.R. "The Development of Cysteinyl Leukotriene Antagonists." in Fischer, J., Ganellin, C.R., and Rotella, D., Eds., *Analogue-based Drug Discovery III,* Wiley, Weinheim, pp. 211-240, 2012.
5. Zhang, M., Zhou, D., Wang, Y., Maier, D.L., Widzowski, D.V., Sobotka-Briner, C.D., Brockel, B.J. Potts, W.M., Shenvi, A.B., Bernstein P.R., and Pierson, M.E. "Preclinical Pharmacology and Pharmacokinetics of AZD3783, a Selective 5-HT_{1B} Receptor Antagonist." *J. Pharm. Exp. Ther.,* **339**, 1-12 (2011).
6. Bernstein, P, Ciaccio, P., Morelli, J. "Drug Induced Phospholipidosis." *Ann. Rep. Med. Chem.,* **46,** 419-430, (2011).
7. Luo, X. Krumrine, J.R., Shenvi, A.B. Nugiel, D., Pierson, M.E., Bernstein, P.R. "Calculation and Application of Activity Discriminants in Lead Optimization." *J. Mol. Graphics and Modeling,* **29,** 372-381 (2010)
8. Nugiel, D.A., Krumrine, J.R.; Hill, D., Damewood, J.R., Bernstein, P.R., Sobotka-Briner, C.D., Liu, J., Zacco, A., and Pierson, M.E. "De novo Design of a Picomolar Non-Basic 5-HT_{1B} Receptor Antagonist." *J. Med. Chem.,* **53**, 1876–1880 (2010).
9. Zhang, M., Potts, W., Pierson, E., Shenvi, A., Chapdelaine, M., Nugiel, D., Bernstein, P., Sobotka-Briner, C., Alelyunas, Y., Ledonne, N., Otmani, S., Lanoue, B., and Ellis, A. "Improving Drug Properties in the Discovery of 5-HT_{1B} Antagonists for Depression" in Kaminsky, L.S., Ed. *Proceedings of 17th International Metabolism and Drug Oxidation symposium,* MEDIMOND S.r.l., Bologna, 2008, pp 49-62.
10. Ohnmacht, C.J., Albert, J.S., Bernstein, P.R., Rumsey, W.L., Masek, B.B., Dembofsky, B.T., Koether, G.M., Andisik, D., and Aharony, D.D. "Naphtho[2,1-b][1,5] and [1,2-f][1,4]oxazocines as Selective NK1 Antagonists." *Bioorg. Med. Chem. Lett.,* **12,** 2653-2669 (2004).
11. Albert, J.S., Ohnmacht, C., Bernstein, P.R., Rumsey, W., Masek, B.B., Dembofsky, B.T., Koether, G.M. Potts, W. and Evenden, J.L. "Design and Optimization of Cyclized NK1 Antagonists With Controlled Atropisomeric Properties." *Tetrahedron,* **60**, 4337-4347 (2004).
12. Albert, J.S., Ohnmacht, C., Bernstein, P.R., Rumsey, W.L., Aharony, D., Alelyunas, Y. Russell, D.J., Potts, W., Sherwood, S.A., Shen, L., Dedinas, R.F., Palmer, W.E., Russell, K. "Structural Analysis and Optimization of NK1 Receptor Antagonists Through Modulation of Atropisomer Interconversion Properties." *J. Med. Chem.,* **47**, 519-529 (2004).
13. Albert, J.S., Aharony, D., Andisik, D., Barthlow, H., Bernstein, P.R., Bialecki, R.A., Dedinas, R., Dembofsky, B.T., Hill, D., Kirkland, K., Koether, G.M., Kosmider, B.J., Ohnmacht, C., Palmer, W.,

Potts, W., Rumsey, W., Russell, K., Shen, L., Shenvi, A., Sherwood, S. and Warwick, P.J. "Design, Synthesis, and SAR of Tachykinin Antagonists. Modulation of Balance in NK1/NK2 Receptor Antagonist Activity." *J. Med. Chem.,* **45**, 3972-3983 (2002).

14. Bernstein, P.R., Aharony, D., Albert, J.S., Andisik, D., Barthlow, H.G., Bialecki, R., Davenport, T., Dedinas, R.F., Dembofsky, B.T. Koether, G., Kosmider, B.J., Kirkland, K., Ohnmacht, C.J., Potts, W., Rumsey, W.L., Shen, L., Shenvi, A., Sherwood, S., Stollman D. and Russell K. "Discovery of Novel, Orally Active Dual NK1/NK2 Antagonists." *Bioorg. Med. Chem. Lett.,* **11,** 2769-2773 (2001).
15. Rumsey, W.L., Aharony, D., Bialecki, R.A., Abbott, B.M., Barthlow, H.G., Caccese, R., Ghanekar, S., Lengel, D., McCarthy, M., Wenrich, B., Undem, B., Ohnmacht, C., Shenvi, A., Albert, J.S., Brown, F., Bernstein, P.R., and Russell K. "Pharmacological Characterization of ZD6021: A Novel, Orally Active Antagonist of the Tachykinin Receptors." *J. Pharm. Exp. Ther.,* **298**, 307-315 (2001).
16. Bernstein, P.R. "The Development of Zafirlukast (Accolate®) and the Zeneca Series of Peptidyl-leukotriene Receptor Antagonists" in Folco, G., Samuelsson, B., and Murphy, R.C. Eds. *Novel Inhibitors of Leukotrienes*, Birkhäuser, Basel, 1999, pp 215-234.
17. Bernstein, P.R. "Antiasthmatic Agents" *Kirk-Othmer Concise Encyclopedia of Chemical Technology, 4th Ed.,* Wiley, New York, 1999, pp. 127-130.
18. Bernstein, P.R. "The Challenge of Drug Discovery: The Development of Leukotriene Antagonists." *Actualités de Chimie Thérapeutique 1998 - 24 série*: *33es Recontres Internationales de Chimie Thérapeutique:* Elsevier, Paris pp. 101-120, 1998
19. Huang, Y.-L., Surichamorn, W., Cao, G.-L., Meng, M., Sovitj, P., Rosen, G.M., Salcedo, T.W., Strimpler, A., Veale, C., Bernstein, P.R., Bonucelli, C.M. "Effect of trifluoromethyl ketone-based elastase inhibitors on neutrophil function in vitro." *J. Leukocyte Biol.,* **64**, 1-9 (1998).
20. Bernstein, P.R. "Chemistry and Structure-Activity Relationships of Leukotriene Receptor Antagonists." *Am. J. Resp. Crit. Care Med.,* **157***:*S220-226 (1998).
21. Veale, C.A., Bernstein, P.R., Bohnert, C.M., Brown, F., Bryant, C., Damewood, J., Earley, R., Edwards, P., Feeney, S., Gomes, B., Hulsizer, J., Kosmider, B.J., Krell, R.D., Moore, G., Salcedo, T., Shaw, A., Silberstein, D.S., Steelman, G.B., Stein, M., Strimpler, A., Thomas, R.M., Vacek, E., Williams, J.C., Wolanin, D.J., Woolson, S. "Orally Active Inhibitors of Human Leukocyte Elastase" *J. Med. Chem.,* **40**, 3173-3181 (1997).
22. Bernstein, P.R. "The Challenge of Drug Discovery: Developing Leukotriene Antagonists" in Holgate, S. and Dahlén S.-E. Eds. *SRS-A to Leukotrienes: The Dawning of a New Treatment,* Blackwell Science, Oxford, 1997, pp. 171-186.
23. Bernstein, P.R., Bird, T.G., Brewster, A.G. "Agents Affecting the Actions of Leukotrienes and Thromboxanes" in Wolff, M.E. Ed., *Burger's Medicinal Chemistry and Drug Discovery, Fifth Edition, Volume 5: Therapeutic Agents,* Wiley, New York 1997, pp. 405-493.
24. Andisik, D., Bernstein, P., Brown, F., Bryant, C., Ceccarelli, C., Damewood, J., Edwards, P., Feeney, S., Gomes, B., Green, R., Kosmider, B., Shaw, A., Steelman, G., Thomas, R., Tuthill, P., Vacek, E., Veale, C., Warner, P., Williams, J., Wolanin, D., Woolson, S. "Computer-Aided Design of Novel Inhibitors of Human Leukocyte Elastase." *Proceedings of XIVth International Symposium on Medicinal Chemistry, Maastricht,* The Netherlands, 8-12 September, 1996. Ed. F. Awouters, pp 499-509. Pharmacochemistry Library, **28** (1997).
25. Henderson, K.W., Dorigo, A.E. Williard, P.G., Bernstein, P.R. "A Triple Anion Complex Containing Enolate, Amide and Halide - A New Structural Type in Lithium Chemistry." *Angewandte Chemie Int. Ed.,* **35**, 1322-1324 (1996).
26. Henderson, K.W., Dorigo, A., Liu, Q.-Y., Williard, P.G., Schleyer, P.v.R., Bernstein, P.R. "Structural Consequences of the Addition of Lithium Halides in Enolization and Aldol Reactions." *J. Am. Chem. Soc.,* **118**, 1339-1347 (1996).

27. Bernstein, Peter R. Book Review "Eicosanoids From Biotechnology to Therapeutic Applications." NATO ASI Series A: Life Sciences Vol. 283. Edited by G. C. Folco, B. Samuelsson, J. Maclouf, and G. P. Velo. *J. Med. Chem.,* **39**, 5292 (1996).
28. Jacobs, R.T., Bernstein, P.R. "ZD3523." *Drugs Fut.,* **20**, 1233-1236 (1995).
29. Henderson, K.W., Williard, P.G., Bernstein, P.R. "Synthesis and Characterization of the First Mixed Alkali Metal Enolate Containing Amine Ligands: A Novel 'Open-Stack' Structure and Its Implications for the Aldol Addition Model." *Angewandte Chemie Int. Ed.,* **34**, 1117-1119 (1995).
30. Bernstein, P.R., Gomes, B.C., Kosmider, B.J., Vacek, E.P., Williams, J.C. "Nonpeptidic Inhibitors of Human Leukocyte Elastase. 6. Design of a Potent, Intratracheally Active 3-Amino-6-Phenylpyridin-2-one." *J. Med. Chem.,* **38**, 212-215 (1995).
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33. Bernstein, P.R., Andisik, D.A., Bradley, P.K., Bryant, C., Ceccarelli, C., Damewood, J.R., Earley, R., Feeney, S., Gomes, B.C., Kosmider, B.J., Steelman, G.B., Thomas, R.M., Vacek, E.P., Veale, C.A., Williams, J.C., Wolanin, D.J., Woolson, S.A. "Nonpeptidic Inhibitors of Human Leukocyte Elastase 3. Design, Synthesis and Structure-Activity Relationships of a Series of 3-amino-6-phenylpyridin-2-one-trifluoromethylketones." *J. Med. Chem.,* **37**, 3313-3326 (1994).
34. Jacobs, R.T., Bernstein, P.R., Cronk, L.A., Vacek, E.P., Newcomb, L.F., Aharony, D.A., Buckner, C.K., and Kusner, E.J., "Synthesis, Structure-Activity Relationships, and Pharmacological Evaluation of a Series of Fluorinated 3-Benzyl-5-indolecarboxamides: Identification of 4-[[5-[((2R)-2-Methyl-4,4,4-trifluorobutyl)carbamoyl]-1-methylindol-3-yl]methyl]-3-methoxy-N-[(2-methyl-phenyl)sulfonyl]benzamide, a Potent, Orally-Active Antagonist of Leukotrienes D4 and E4.″ *J. Med. Chem.,* **37**, 1282-1297 (1994).
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36. Bernstein, P.R., Edwards, P.D., and Williams, J.C., "Inhibitors of Human Leukocyte Elastase." in *Prog. Med. Chem.;* Ellis, G.W. and Luscombe, D.K., Eds., Elsevier, Amsterdam, 1994, Volume 31, pp. 59-120.
37. Bernstein, P.R. "Accolate." *Drugs Fut.,* **19(3)**, 217-220 (1994).
38. Edwards, P.D. and Bernstein, P.R., "Synthetic Inhibitors of Elastase." *Med. Res. Rev.,* **14**, 127-194 (1994).
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Presentations:

1. Bernstein, P. "Recent Advances in Targeting Inflammation" Plenary Lecture: *Frontiers in Medicinal Chemistry Meeting 2014*" (FiMC), Tuebingen, Germany, March 16-19, 2014.
2. Bernstein, P. "5-HT1B modulators: An elusive target for CNS Discovery and Development" Pennsylvania Biotechnology Center, Drexel Institute for Biotechnology and Virology Research, Doylestown, PA, September 12, 2013
3. Bernstein, P. "The Challenge of CNS Therapeutics" Biogen Idec Lecture Series, Biogen Idec Pharmaceuticals, Cambridge, MA, September 19, 2012
4. Bernstein, P.R. "The Evolving Role of Chemistry in Small Molecule Drug Discovery" *Abstracts of Papers 243rd ACS National Meeting,* #CHED 368, Graduate Student Symposium, Philadelphia, PA, August 2012
5. Bernstein, P. "The Challenge of CNS Therapeutics" *JNJ Lecture Series*, JNJ Pharmaceuticals, San Diego, CA, March 29, 2012.
6. Bernstein, P. "The Discovery and Development of Leukotriene Antagonists: The Issues Found When Targeting Fatty Acid Metabolites", Eisai Pharmaceuticals, WEBEX presentation to Andover, MA and Tsukuba, Japan, February 20, 2012.
7. Bernstein, P. "The Importance of Non-target Data in Progressing from Hit to Drug", EnVivo Pharmaceuticals, Watertown, MA, October 05, 2011
8. Bernstein, P. "Problems and Progress in the Development of CNS Therapeutics: *De novo* design of a picomolar non-basic 5-HT_{1B} receptor antagonist." *Gedeon-Richter Lecture Series*, Gedeon Richter Pharmaceuticals, Budapest, Hungary, July15, 2011
9. Bernstein, P. "Discovery and development of novel non-peptide neurokinin antagonists." *Eisai Lecture Series,* Eisai Pharmaceuticals, Andover, MA, June 20, 2011
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15. Bernstein, P. "The Evolving Role of Chemical Technology in Drug Discovery." Distinguished Lecturer, *2010 Excellence in Chemistry Award Symposia*, AstraZeneca Pharmaceuticals, Waltham, MA, October 4, 2010.
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