Mark Johnson

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Research interests

Development and promotion of chemotypic methodologies and related software especially in the context drug discovery.

Education

Colorado State University. B.S. Zoology, 1964.
U. of North Carolina at Raleigh, Ph.D. Experimental Statistics, 1969.

Employment related activities

President of Pannanugget Consulting 2001 – present.
Pharmacia & Upjohn: 1969 – retirement in 2001. Senior Biostatistician V in Computer-Aided Drug Discovery.
Chairperson and organizer of the Research Informatics Team in Pharmacia (1999-2001).
Awarded postdoctoral position on structural browsing indices (1998).
Visiting Mathematician, Universidad Catolica de Valparaiso Nov., 1994.
Awarded postdoctoral position on molecular similarty (1992).

Selected publications

M.A. Johnson and G.M. Maggiora, G.M., Eds. "Concepts and Applications of Molecular Similarity", John Wiley & Sons, Inc., New York, 1990.

M. Johnson, V. Shanmugasundaram, G. Bundy, D. Chapman and R. Kilkuskie, "Chemotypic Coverage: A New Basis for Constructing Screening Sublibraries," *J. Chem. Inf. Comput. Sci. 49(2009)531-542.*

Y.-j. Xu, and M. Johnson, "Using Molecular Equivalence Numbers to Visually Explore Structural Features that Distinguish Chemical Libraries," *J. Chem. Inf. Comput. Sci. 42(2002)912-926.*

Y.-j. Xu, and M. Johnson, "Algorithm for Naming Molecular Equivalence Classes Represented by Labeled Pseudographs," *J. Chem. Inf. Comput. Sci.*, 41(2001)181-185.

M. Johnson, "Browsable Structure-Activity Datasets" in *Advances in Molecular Similarity*, ed by R. Carbó and P.G.Mezey, JAI Press, V. 2,(1998),151-168.

C. Cheng and M.A. Johnson, "Four Association Coefficients Relating Molecular Similarity Measures," J. Chem. Inf. Comput. Sci., 36, 909-915 (1996).

E.M. Gifford, M.A. Johnson, D.G. Kaiser, and C.-c. Tsai, "Modeling the Relative Metabolic Occurrence of Alkyl-Nitrogen Bond Cleavage Using Structure-Activity Maps," Xenobiotica, 25,825-846(1995).

M.A. Johnson, "Structure-Activity Maps for Graphically Analyzing Data in Nondimensional Metric Spaces Arising in Drug Design," J. Biopharm. Sci., 3, 203-236 (1993).

G. Chartrand, H. Hevia, and M.A. Johnson, "A Representation of Chemical Transformations by Labeled Graphs," J. Math. Chem., 12, 59-80 (1992).

M.A. Johnson, V. Nicholson, and C.-c. Tsai, C-c., "Stereographs: An Extension of Chemical Graphs for Representing Stereochemical and Conformational Structures," J. Math. Chem., 7, 3-38 (1991).

M.A. Johnson, "Graph Transforms: A Formalism for Modeling Chemical Reaction Pathways," in Graph Theory, Combinatorics, and Applications, Y. Alavi, G. Chartrand, O. Oellermann and AJ Schwenk, Ed. John Wiley & Sons, New York, 725-738 (1991).

M.A. Johnson, "A Review and Characterization of the Mathematical Spaces Underlying Molecular Similarity Analysis," J. Math. Chem., 3, 117-145 (1989).
M.A. Johnson, "A Relating of Metrics, Lines, and Variables Defined on Graphs to Problems in Medicinal Chemistry," in Graph Theory and Its Applications to Algorithms and Computer Science, Y. Alavi, G. Chartrand, L. Lesniak, D.R. Lick and C.E. Wall, Eds., John Wiley & Sons, Inc., New York, 457-470 (1985).

Patents

M.A. Johnson and Y.-j. Xu, "Chemical Structure Identification", U.S. Patent No. 6,757,618.
G.F. Banner, J.M. Fostel, E.L. Benson, M.A. Johnson, “Gene Expression Profiles,” Case No. 6285, 9/24/99.