CURRICULUM VITAE

GERALD WARREN HART



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Business Address/Phone.

Georgia Research Alliance,

William Henry Terry, Sr. Eminent Scholar in Drug Discovery,

and Professor of Biochemistry and Molecular Biology,

Complex Carbohydrate Research Center,

 University of Georgia, Athens, GA  30602,

Ph: 706-583-5550; Mobile: 443-921-6484; \*EM: [GERALD.HART@uga.edu](mailto:GERALD.HART@uga.edu)

\*Preferred Contact Methods

Formal Education:

1. Post-doctoral - Johns Hopkins University School of Medicine, June 1977 to July 1, 1979 - Glycoprotein Biochemistry
2. Ph.D. - Kansas State University, Spring 1977 - Developmental Biology
3. Bachelor of Sciences - Washburn University, Spring 1971 - Biology and Chemistry

**Research & Career Highlights - Synopsis**

Dr. Hart joined the faculty at UGA on October 1, 2018. Prior to that he was the Director of Biological Chemistry at Johns Hopkins Medical School for 21 years, and on the faculty at JHUSOM for over 40 years. He began his research on glycoconjugates in 1971 as a graduate student, and he has been active in the field ever since. He did some of the very earliest studies on cell surface heparan sulfate proteoglycans (eg. *Developmental Biol. (1975) 44,* 253). He characterized the roles of sulfated glycosaminoglycans and hyaluronic acids in the development of corneal transparency, and he performed early studies on the importance of proteoglycan sulfotransferases (eg. *J. Biol. Chem*. (1976) 251, 6513; *J. Biol. Chem.* (1978) 253, 347). He showed that keratan sulfate I proteoglycan is synthesized by the N-linked biosynthetic pathway, and he established that the sequon, Asn-X-Ser(Thr) is the minimal structural requirement for recognition by the N-glycan oligosaccharyltransferase. Hart’s laboratory performed some of the earliest studies mapping N-glycan attachment sites and they were among the first to show that N-linked protein glycosylation heterogeneity is site specific and highly regulated by cellular physiology (eg. *J. Biol. Chem*. (1985) 260, 4046). His group further showed that site-specific N-linked glycosylation is tightly controlled also by protein structure at all levels, even up to the level quaternary structure (eg. *J. Biol. Chem****.*** (1986) 261:13186-13196). Hart’s laboratory purified several of the most important glycosyltransferases and developed methods to use them to probe glycan structures on living cells (eg. *Meth. Enzymol*. (1989) 179, 82). In collaboration with Paul Englund’s group, at Johns Hopkins, they elucidated the biosynthetic pathway for GPI-Anchors (eg. Cell (1989) 56, 793). In the early 1980’s, while probing cells with glycosyltransferases, *Hart’s laboratory discovered cytoplasmic and nuclear protein glycosylation by O-linked N-acetylglucosamine (O-GlcNAc) (eg. J. Biol. Chem. 259:3308; J. Biol. Chem. 261:8049). Since that time, the Hart laboratory has published over 200 papers on O-GlcNAcylation, identifying and cloning the enzymes controlling cycling, characterizing O-GlcNAcylation and its interplay with phosphorylation on hundreds of proteins, and they have developed many of the tools and methods in use today to study this modification.* Recent work is elucidating how nutrients regulate basal transcription by modification of TATA-binding protein.

In 1989, Hart founded the leading journal in the field, *Glycobiology*, serving as Editor-In-Chief until 2001. He is currently an Associate Editor for J. Biological Chemistry, an Associate Editor for Molecular and Cellular Proteomics and was on the board of ASBMB Today. Hart received the first International Glycoconjuate Organization (IGO) Award in 1997, the Karl Meyer Award from the Society for Glycobiology in 2006, and served as president of the IGO from 2009-2011. He received the Herbert Tabor Award and the Yamakawa award in 2018, and was elected President of the American Society of Biochemistry and Molecular Biology (ASBMB) in 2018. To date, Hart has published about ~306 papers all in the area of glycosciences.

***Current Google Scholar H-factor = 120; i10-index=315***

Honors & Major Lectures

* 2019 President’s Innovator Award, Society for Glycobiology.
* 2018 Yamakawa Award from the Japanese Glycobiology Society (JCCG)
* 2018 Herbert Tabor Award from the American Society for Biochemistry and Molecular Biology
* President American Society for Biochemistry and Molecular Biology (ASBMB) -2018-2020
* Named First Paul & Christine Englund Endowed Professor
* NIH Director’s Wednesday Afternoon Lecturer (WALS), Dec. 2011, Washington, DC
* Opening Lecture, 2011 Society for Glycobiology Meeting, Seattle, WA.
* Plenary Lecture 2011 IUBMB Cell Signaling Networks, Merida Mexico
* 2011 Irwin J. Goldstein Lectureship in Glycobiology, Univ. of Michigan.
* 2010 named, Honorary Professor of Shanghai Medical College, Fudan Univ., Shanghai, China
* 2009-2011 President, International Glycoconjugate Organization (IGO)
* 2009 - Hall of Fame, Topeka High School
* 2008 Alumni Fellow, School of Arts & Sciences Kansas State University
* 2007 Edwin G. Krebs Lectureship Award, UC Davis, CA.
* 11th Annual Lecture of Institutes Cell & Dev. Biol., Stonybrook, NY.
* 2006 Karl Meyer Award from Society for Glycobiology, Los Angeles, CA.
* Opening Lecturer, Glyco XVIII (2005), Florence, Italy;
* 2007 Adrouny Lecturer, Tulane
* Plenary Lecturer XXIII Intl. Carbohydrate Symp 2006, Whistler, Canada
* Inaugural B.Conner Johnson-John R. Sokatch Lecturer, Univ. Oklahoma Med. Sch.;
* Keynote Speaker American Heart Association Keystone Meeting, 2005.
* IUBMB Lecturer, 20th IUBMB Intl. Congress of Biochem. & Molec. Biol. and 11th FAOBMB Congress, June 2006, Kyoto, Japan
* 2003 Adam Nevelle Lecturer, Dundee Scotland
* Keynote Lecturer, Nov. 2001 Society for Glycobiology Meeting, Boston, MA.
* December 2000 – Sept. 30, 2014 – Visiting Professor, Division of Molecular Sciences, Imperial College of Science and Technology, London, U.K.
* 1998 –present, Elected USA Representative to Intl. Glycoconjugate Organization (IGO)
* 1999 – 2000 Chair, Pathobiochemistry Study Section, NIH
* 1998 – NIH Merit Award From Natl Inst. Child Health & Human Development.
* 1997 - First International Glycoconjuate Organization (IGO) Award Recipient - Zurich,Switzerland (most prestigious award in the field of Glycobiology;every other year at IGO meetings).
* 1997 - Reilly Lecturer, Univ. of Notre Dame.
* Elected to the Council of the American Society of Biochemistry and Molecular Biology (ASBMB) - 1995-1998
* 1995 President, Society for Glycobiology (formerly Society of Complex Carbohydrates)
* Elected to Co-Chair the 1995 and Chair the 1997 Gordon Conference on Glycobiology
* Member, Pathobiochemistry Study Section-July 1, 1995-June 30, 1999
* June 1, 1993: Named James C. and Elizabeth T. Lee Chair of Biochemistry at UAB
* December 1993: Appointed Associate Director for Basic Science Research, UAB Comprehensive

Cancer Center

* Dean’s Lecturer: Johns Hopkins University Medical School, 1991 & 1998
* 1990: Elected to Board of Directors of Society for Complex Carbohydrates
* 1989: Winzler Memorial Lectureship at University of Florida
* Banquet Speaker at the 1988 UCLA Keystone Symposium on Glycobiology
* Established Investigator, American Heart Association, July 1, 1983 to June 30, 1988
* Fellow of the Jane Coffin Childs Memorial Fund for Medical Research
* 1975 Recipient of the H.H. Haymaker Award for Excellence in Graduate Student Research
* Company Honorman, Hospital Corps School, Balboa Naval Hospital, San Diego, CA

Memberships:

* Chair, NIH Common Fund Glycan Special Emphasis Panel entitled, “Tools for characterizing glycans” - 2018
* Member, Search Committee for JBC Editor In Chief
* Chair, NIH Common Fund Glycan Special Emphasis Panel entitled, “Tools for characterizing glycans” - 2016
* Ad Hoc Member of NIGMS Council
* Chair, NCI study section, Alliance of Glycobiologists For Detection of Cancer and Cancer Risk.
* Member, National Academy of Sciences Glycosciences Task Force
* Member, NIGMS Glue Grant Assessment Panel
* Complex Carbohydrates Res. CTR Advisory Panel, Chair, UGA
* Member, NIH College of CSR Reviewers -2010-2012.
* 2009, 2010 - Howard Hughes Medical Institute (HHMI) Scientific Review Panel
* Nominations Committee, Society for Glycobiology
* Ad Hoc Member 2008, Board of Scientific Counselors, NIH-NIGMS
* Ad Hoc Member 2005, Board of Scientific Counselors, NIH-NIDDK
* ASBMB Awards Committee – 2003 – 2005.
* NIH Cell Biology IRG Reorganization committee.
* Finance Committee, Amer. Soc. for Biochem. & Molec. Biol. (ASBMB), 2003-2008
* Scientific Advisory Board Sigma Chem. Comp., Biotechnology Division, 2003-2010
* Served on & chaired several special review panels or site Visits for NIH.
* U.S. Advisory Comm. for International Carbohydrate Symposia of Amer.Chem. Society
* Scientific Advisory Board of Oxford Glycosciences - ~1990 to Nov. 2000
* Scientific Advisory Board of Stolle Milk – 2000 to present.
* Board of Overseers for the CARBBANK Complex Carbohydrate Structure Database
* Advisory Committee of the Biomedical Carbohydrate Research Center, University of GA
* Society for Developmental Biology
* American Society of Biological Chemistry and Molecular Biology (ASBMB)
* Awards Committee of ASBMB - ~1989-1992
* Sigma Xi Research Society
* Society for Glycobiology
* Basic Sciences Council, American Heart Association - until ~1992
* American Society for Cell Biology
* American Chemical Society
* American Diabetes Association
* AAAS
* Awards Committee, Society for Glycobiology - ~1993-1997

Journal Affiliations:

* Co-Editor of Second Edition of Encyclopedia of Cell Biology
* Associate Editor of Journal of Biological Chemistry – June 2011 – present
* Editor, Biochemical and Biophysical Research Communications – 2015-2018
* Editorial Board of ASBMB Today, 2010- 2015.
* Associate Editor of Molecular and Cellular Proteomics – 2008 - present
* Founding Editor-in-Chief of the Journal, Glycobiology; 1989 to 2001 (now leading journal

in the field)

* Editorial Board, J. Biological Chemistry, 1988-1993; July 1995-2000; July 2001 – Jan.

2007

* Editorial Board, Molecular and Cellular Proteomics, July 2001 – present
* Executive Editor, J. Biochemistry (Tokyo)- May 2006-2010; Ed. Board – until 2011.
* Editorial Board, Archives of Biochemistry and Biophysics - until 1995.
* Glycoprotein Correspondent for Trends in Biochemical Sciences, 1987-1989

Previous Johns Hopkins University Committees: Chair, University Wide Faculty Budget Advisory Committee; JHU IT Investment Taskforce; School of Medicine Committee to Review Internal Controls; Proteomics Task Force; Diabetes Initiative Steering Committee; Leader, Biomarker Program Diabetes Initiative, Office of Faculty Development Advisory Committee, Co-Chair, Univ. Procurement Advisory Committee; Chair, Metabolomics Search Committee, Space Committee; Diabetes Initiative Task Force; IBBS Epigenetics Search Committee; IBBS Center for Metabolism & Obesity Steering & Search Committees; Hopkins One Advisory Committee; Chair, Faculty Discipline Committee; Basic Science/Clinical Science Integration Task Force; JHU University Faculty Budget Advisory Committee; Chair, Fund for Medical Discovery Awards Committee; IBBS Board of Directors Committee; Clinician Educators Committee; Chair, JHSOM Proteomics Facility Oversight Committee; Chair, Basic Science Network Consortium Oversight Committee; Co-Chair, Medical School Curriculum Reform Committee; Chair, Task Force on Obesity/Diabetes Research; Advisory Board of Medical Faculty; Agenda Committee for Advisory Board of Medical Faculty; JHU Med. Sch. Prof. Promotions Committee; Space Committee; Agenda Committee for Scientific Advisory Committee; Scientific Advisory Committee; Conflict of Interest Committee; Chairman of Pathology Chair Search Committee; Neurosurgery Chair Search Committee; JHU Educational Policy Committee; Medical School First-Year Curriculum Committee; Med. School LCME Subcommittee; JHU Educational Planning Subcommittee; JHU Advisory Committee for “Physician in Society Course”; JHU Medical Scientist Training Program Steering Committee (MSTP), Johns Hopkins Medical School Admissions Committees (1984-1987), Medical School Admissions Task Force; BCMB Graduate Program Steering Committee; Amer. Can. Soc. Inst. Grant Rev. Committee; BCMB Curriculum Review Committee; BCMB Graduate Program Examination Committee, JHU Protein/Peptide Analysis Facility Steering Committee; Chairman of Departmental Faculty Search Committee - 1989; Dept. Computer Network Administrator.

Previous University of Alabama at Birmingham Committees:

Chair, Structural Biology Strategic Planning Committee; Chair, Space Planning Committee; Economic Rules Subcommittee; Member, Search Committee for Dean of the School of Medicine; Chair, Search Committee for Chairman of Physiology & Biophysics Department; Committee on Outside Activities; Advisory Committee, Peptide Synthesis & Analysis Shared Facility; Advisory Committee, Mass Spectrometry Shared Facility; Basic Science Advisory Committee (BSAC); Medical Education Committee; Medical Education Executive Committee; Chair, Basic Science Subcommittee of Medical Education Committee; Basic Science Med. School Promotions & Tenure Committee; Cancer Center Review Committee; Clinical Genetics Advisory Group; Cell & Molec. Biology Grad. Program Steering Committee; Conflict of Interest Review Board (term ending 12/31/97); Faculty Senate & Promotions Committee; Fringe Benefits Committee; Genetics Center Committee; Joint Health Sciences Executive Committee; Joint Health Sciences Faculty Status Committee; Selection Committee, S. Richardson Hill Professorship in Endocrinology; Service Center Subcommittee, CAS Project Team; Strategic Planning Committee; Structural Biology Committee; Subcommittee on Graduate Education; UAB Internal Advisory Committee Biotec Center; Work Group for Undergraduate Majors; Graduate Students Committees: Denise Auger, Cell Biology; Jerome Drain, BMG; Min Fang, Cell Biology; Lianwu (Karl) Fu, Microbiology; Jayleen M. Grams, BMG; Kristin Hager, BMG; Barbara Mulach, BMG; Mark Roos, Cell Biology; Inna-Oc Han; Jianxin (Jenny) Zhou, Cell Biology; ; BMG Committees:; ; Graduate Student Administration, ex-officio; Faculty Promotions and Status; Grant Crisis Committee – Chair.

Professional Experience:

January 1, 2019 – Present – Adjunct Professor of Biological Chemistry, Johns Hopkins University, School of Medicine

***October 1, 2018*** *–* ***Present -***Georgia Research Alliance,  William Henry  Terry, Sr.Eminent  Scholar in Drug Discovery, and Professor  of Biochemistry  and Molecular Biology,  Complex Carbohydrate Research Center, University of Georgia

2016-2018 – Paul & Christine Englund Endowed Chair, Johns Hopkins Medical School

December 2000 – Sept. 30, 2015 – Visiting Professor, Division of Molecular Sciences, Imperial College of Science and Technology, London, U.K. (~1wk/yr)

October 1997 – October 2018 - Appointed Director and DeLamar Professor of the Department of Biological Chemistry, Johns Hopkins Medical School, Baltimore, MD

January 1994: Appointed Associate Director for Basic Science Research

UAB Comprehensive Cancer Center, Birmingham, AL

June 1993: Appointed Lee Chair & Chairman of the Department of Biochemistry and Molecular Genetics (formerly Department of Biochemistry) University of Alabama at Birmingham.

May 1988: Professor of Biological Chemistry Johns Hopkins Medical School, Baltimore, MD

April 1985- Director of Medical School Biochemistry Course

June 1993: The Johns Hopkins University School of Medicine, Baltimore, MD

April 1984: Associate Professor, Biological Chemistry (formerly Physiological Chemistry)

The Johns Hopkins University School of Medicine, Baltimore, MD

July 1979: Appointed Assistant Professor of Physiological Chemistry

The Johns Hopkins University School of Medicine, Baltimore, MD

June 1977- Postdoctoral Fellow of Jane Coffin Childs Memorial Fund for Medical Research

July 1979: Department of Physiological Chemistry Johns Hopkins University School of Medicine

Laboratory of Dr. William J. Lennarz

Fall 1973- NIH Developmental Biology Trainee, Graduate Student

June 1977: Kansas State University, Manhattan, KS

Spring 1973- Graduate Research Assistant for

Fall 1973: Dr. Gary W. Conrad, Department of Biology

Kansas State University, Manhattan, KS

Spring 1972- Research Assistant for

Spring 1973: Dr. Gary W. Conrad, Department of Biology, Kansas State University, Manhattan, KS

1971-1972: Hospital Corpsman USNR-R - Balboa Naval Hospital

San Diego, CA, and Camp Pendelton, CA

1969-1972: Teaching Assistant for Drs. P. Kopper and R. Johnson Washburn University, Topeka, KS

Post Doctoral Students Trained: Predoctoral (Ph.D.) Students Thesis Mentor:

1. Judith S. Britz 1. Stuart J. Swiedler 46. Enriqueta Casal

2. David B. Williams 2. Carmen-Rosa Torres 47. Yi Zhu

3. Robert S. Haltiwanger 3. James D. Bangs (Co-Advisor)

4. Christopher C. Rider 4. Dale Hereld (Co-Advisor)

5. Antonino Passaniti 5. Jessica Krakow (Co-Advisor )

6. Jonathan S. Reichner 6. Nancy M. Dahms

7. Wayne J. Masterson (Co-Adv.) 7. Gordon D. Holt

8. David L. Huso 8. Lloyd Hiler

9. Kelly Kearse 9. Leland D. Powell

10. Rod Willoughby 10. Sidney W. Whiteheart

11. Makoto Takeuchi-Postdoc 11. Tamara L. Doering (Co-Advisor )

12. Kenneth Greis-Postdoc 12. William G. Kelly

13. Robert C. Cole - Post 13. Tacy Maxson

14. Brad Hayes - Post 14. Christl Zaccagnino

15. Yoshi Akimoto - Post 15. Elizabeth Roquemore

16. Drury Caine - Visiting Prof 16. L.Dennis Dong

17. C. Venkat – Postdoc 17. Lisa Kreppel

18. Gao Yuan – Postdoc 18. Lisa Blomberg

19. Lance Wells – Postdoc 19. Man-Shoiw Jiang

20. Glendon J. Parker 20. Tey Ying Chou

21. Keith Vosseller – Postdoc 21. Doris Snow

22. Kazuo Kamemura – Postdoc 22. Zhengyi Ye

23. Zhiyu Li – Postdoc 23. Xiaogang Cheng

24. Stephen Whelan, Postdoc 24. Debbie Della Manna

25. Natasha Zachara, Postdoc 25. Shane Arnold

26. T. Lakshamanan, Postdoc.; 26. Frank Comer

27. Chad Slawson, Postdoc 27. David Reynolds

28. Wagner Dias, postdoc 28. Sung-OH Kim

29. Ronald Copeland, Postdoc 29. Sai Iyr

30. Zengxia LI, Visiting Scientist 30. Jill Carroll

31. Stephan Hardiville, postdoc 31. Pui Butkinaree,

32. Guanghui Han, postdoc. 32. Megan Barber

33. Junfeng Ma, postdoc. 33. Kaoru Sakabe

34. Partha Banerjee-postdoc 34. Mike Housley

35. Yikang Shi-Visiting Assoc. Prof. 35. Win Cheung

36. Sherket Peterson 36. Kyoungsook Park

37. Sun Hui, visiting Prof. 37. Shino Shimoji

38. Ron Jenkins, postdoc 38. Zihao Wang

39. Jin Kyu Lee, Instructor 39. Quira Zeidan

40. Jie Tan, Postdoc 40. John Bullen

41. Chia-Wei Huang, Postdoc 41. Xin Liu

42. Huabei Guo, Instructor 42. Ping Hu

43. Michael Mannino, Postdoc. 43. Olof Lagerlof

44. Shai Jiang

45. Miguel Lucena

46. Yi Zhu

Research Support

**GERALD W. HART**

**Active Support:**

**5R01GM116891-04 08/10/16-07/31/20 1.92 cm**

**Agency: NIH/NIGMS**

“Nutrient Regulation of Cell Physiology by O-GlcNAcylation”

This application is to determine the roles of O-GlcNAcylation in the nutrient regulation of transcription by the basal transcription factor, TATA-binding protein, and is also focused on determining the molecular mechanisms as to how the O-GlcNAc Transferase is targeted so specifically to its thousands of substrates.

OVERLAP: None

**17CSA33610107 07/01/17-06/30/20 1.2 cm**

**American Heart Association**

“Defining a new metabolic pathway in myocardial disease”

Major goals of this project are to determine the molecular mechanisms by which CAMKII increases O-GlcNAcylation in the heart, if elevated O-GlcNAc’s roles in diabetic cardiomyopathy are caused by its activation by CAMKII and a major focus is whether the vicious cycle of OGT activation by CAMKII and CAMKII’s activation by increased O-GlcNAc occurs within the mitochondria to contribute to diabetic cardiomyopathy associated mitochondrial dysfunction. *These funds are supporting the project at Johns Hopkins.*

OVERLAP: None

**1K12HL141952-01 7/1/18-6/30/23 .6 Mos.**

**NIH/NHLBI**

Title: “Immersive Training in Glycosciences”

Role: Co - Investigator

Goals: To build a community of “Glycobiology Literate Researchers”, and thus to broaden the application of the glycosciences to diverse fields leading to a more comprehensive understanding of the roles that glycans play in disease. Specifically, didactic, practical, and professional development opportunities will be combined with cross-disciplinary laboratory projects to provide fellows (M.D., M.D./Ph.D., Ph.D.) with advanced training to in the glycosciences. **All of these funds go to support Scholar trainees in this program.**

Overlap: None

**Pending**

**NIDDK 04/01/2020-03/31/2025 2 Mos.**

Title: Regulation of Translation by O-GlcNAc

Role: Co – P.I.

Goals: To understand how nutrients regulate protein synthesis via O-GlcNAcylation.

**NOT-AG-18-052 04/01/20-03/31/25 1 Mo.**

Title: O-GlcNAc & Complex Glycans in Neuronal Differentiation & Alzheimer’s Disease (AD)

Role: Co-P.I.

Goals: Use iPSC derived human neurons to study the mechanistic roles of O-GlcNAc and complex glycans in the development of neurons and in the etiology of Alzheimer’s disease.

**5R01GM116891-04 08/1/20-07/31/25 1.92 cm**

**Agency: NIH/NIGMS (Competitive Renewal)**

“Nutrient Regulation of Cell Physiology by O-GlcNAcylation”

Propose to develop an optogenetic method to target OGT to specific substrates and first apply to beta-catenin. Determine the roles of O-GlcNAcylation of the C-terminal domain of RNA polymerase II.

OVERLAP: None

**PUBLICATIONS (ABSTRACTS NOT INCLUDED) – *Current Google Scholar H-factor = 120; i10-index=315***

<https://scholar.google.com/citations?user=PgQ_b2IAAAAJ&hl=en>

1. **Gary W. Conrad and Gerald W. Hart** (1975) Heparan Sulfate Biosynthesis by Embryonic Tissues and Primary Fibroblast Populations. **Developmental Biology** 44:253-269.
2. **Gerald W. Hart.** (1976) Biosynthesis of Glycosaminoglycans During Corneal Development. **Journal of Biological Chemistry** 251(21):6513-6521.
3. **Gary W. Conrad, Gerald W. Hart and Yeh-Chen.** (1977) Differences In Vitro Between Fibroblast-Like Cells from Cornea, Heart, Skin of Embryonic Chicks.  ***J. Cell Sci.*** 26:119-137.
4. **Gerald W. Hart**. (1978) Biosynthesis of Glycosaminoglycans by the Separated Tissues of the Embryonic Chick Cornea. **Developmental Biology** 62:78-97.
5. **Gerald W. Hart.** (1978) Glycosaminoglycan Sulfotransferases of the Developing Chick Cornea. **Journal of Biological Chemistry**  253(2):347-353.
6. **Gerald W. Hart and William J. Lennarz** (1978) Effects of Tunicamycin on the Biosynthesis of Glycosaminoglycans by Embryonic Chick Cornea. **Journal of Biological Chemistry** 253:5795-5801.
7. **Gerald W. Hart**, **Keith Brew, Greg A. Grant, Ralph A. Bradshaw and William J. Lennarz.** (1979) Primary Structural Requirements for the Enzymatic Formation of the N-Glycosidic Bond in Glycoproteins. Studies with Natural and Synthetic Peptides. ***Journal of Biological Chemistry*** 254:9747-9753.
8. **Gerald W. Hart.** (1982) Proteoglycans of the Cornea. In: D. McDevitt (Ed.) ***"Cell Biology of the Eye,”*** Academic Press, New York, pp. 1-52.
9. **Gerald W. Hart. (1982)** The Role of Asparagine-Linked Oligosaccharides in Cellular Recognition by Thymic Lymphocytes. Effects of Tunicamycin on the Mixed Lymphocyte Reaction. ***J. Biol. Chem.*** 257:151-158
10. **Gerald W. Hart.** (1982) Biosynthesis of Glycosaminoglycans by Thymic Lymphocytes. Effects of Mitogenic Activation.  ***Biochemistry*** 24:6088-6096.
11. **Judith S. Britz and Gerald W. Hart.** (1982) Biosynthesis of Glycosaminoglycans by Epithelial and Lymphocytic Components of Murine Thymus. ***J. Immunol.*** 130:1848-1855.
12. **John H. Freed, Stuart J. Swiedler, John M. Kupinski, Marion L. Plunkett and** **Gerald W. Hart**. (1982) Structures of the Oligosaccharides of I-A Antigen and Localization of Antigenic Sites to the Aa and Aß Chains, In: Pierce et al. (Eds.) ***"Ir Genes: Past, Present and Future,"*** St.Louis, MO.
13. **Stuart J. Swiedler, Gerald W. Hart and John H. Freed**. (1983) Characterization of the Oligosaccharides from the Invariant Chain Associated with the H-2K Membrane Glycoprotein. ***J. Immunol.*** 31(1):352-358.
14. **Stuart J. Swiedler, Gerald W. Hart, Anthony L. Tarentino, Thomas H. Plummer and John H. Freed.** (1983) Stable Oligosaccharide Microheterogeneity at Individual Glycosylation Sites of the H-2K Membrane Glycoprotein.  ***J. Biol. Chem****.* 258:11515-11523.
15. **Carmen-Rosa Torres and Gerald W. Hart**. (1984) Topography and Polypeptide Distribution of Terminal N-Acetylglucosamine Residues on the Surfaces of Intact Lymphocytes. Evidence for O-linked GlcNAc. ***J. Biol. Chem.*** 259:3308-3317.
16. **Stuart J. Swiedler, Anthony L. Tarentino, Thomas H. Plummer, John H. Freed and Gerald W. Hart**. (1985) Oligosaccharide Microheterogeneity of the Murine Major Histocompatibility Antigens. Reproducible, Site-Specific Patterns of Sialylation and Branching in Asparagine-Linked Oligosaccharides. ***J. Biol. Chem.*** 260(7):4046-4054.
17. **James D. Bangs, Dale Hereld, Jessica L. Krakow, Gerald W. Hart and Paul T. Englund**. (1985) Rapid Processing of the Carboxy-terminus of a Trypanosome Variant Surface Glycoprotein. ***PNAS* U.S.A.** 82:3207-3211.
18. **Leland D. Powell, Ernst Bause, Russell J. Molyneux and Gerald W. Hart**. (1985) Influence of Asparagine-Linked Oligosaccharides on Tumor Cell Recognition in the Mixed Lymphocyte Reaction. ***J. Immunol.*** 135(1):714-724.
19. **Nancy M. Dahms and Gerald W. Hart.**  (1985) Lymphocyte Function-Associated Antigen (LFA-1) Contains Sulfated N-Linked Oligosaccharides.  ***J. Immunol.*** 134(6):3978-3986.
20. **Gordon Holt, Stuart Swiedler, John Freed and Gerald W. Hart**. (1985) Murine I-A Associated Invariant Chain's Processing to Complex Oligosaccharide Forms and its Dissociation from the I-A Complex.  ***J. Immunol.*** 135(1):399-407.
21. **David B. Williams, Stuart J. Swiedler and Gerald W. Hart**. (1985) Intracellular Transport of Membrane Glycoproteins: Two Closely Related Histocompatibility Antigens Differ in Their Rates of Transit to the Cell Surface. ***J. Cell Biol.*** 101:725-734.
22. **Gordon Holt and Gerald W. Hart**. (1986) Subcellular Distribution of Terminal N-Acetylglucosamine Residues on Oligosaccharides. Distribution of the Novel Protein-Saccharide Structure - O-Linked GlcNAc. ***J. Biol. Chem.*** 261:8049-8057.
23. **James D. Bangs, Norma W. Andrews, Gerald W. Hart and Paul T. Englund.** (1986) Post-Translational Modification and Intracellular Transport of a Trypanosome Variant Surface Glycoprotein. ***J. Cell Biol.*** 103:255-263.
24. **Nancy Dahms and Gerald W. Hart**. (1986) Influence of Quaternary Structure on Glycosylation. Differential Subunit Association Affects The Site-Specific Glycosylation of the Common ß-Chain From Mac-1 and LFA-1. ***J. Biol. Chem.*** 261:13186-13196.
25. **Leland D. Powell and Gerald W. Hart**. (1986) Quantitation of Picomole levels of N-Acetyl- and N-glycolylneuraminic Acids by a HPLC-Adaptation of the Thiobarbituric Acid Assay. ***Analyt. Biochem.*** 157:179-185.
26. **Jessica L. Krakow, Dale Hereld, James D. Bangs,** **Gerald W. Hart** **and Paul T.** **Englund**. (1986) Identification of a Glycolipid Precursor of the Trypanosome brucei Variant Surface Glycoprotein. ***J. Biol. Chem.*** 261:12147-12153.
27. **Gerald W. Hart**. (1986) Ubiquitination of Cell-Surface Glycoproteins. **Trends in Biochem. Sci.** 11(7):272.
28. **Dale Hereld, Jessica L. Krakow, James D. Bangs, Gerald W. Hart and Paul T. Englund**. (1986) A Phospholipase C from Trypanosoma brucei which Selectively Cleaves the Glycolipid on the Variant Surface Glycoprotein ***J. Biol. Chem.*** 261:13813-13819.
29. **Sidney W. Whiteheart and** **Gerald W. Hart**. (1987) Sialyltransferases as Specific Probes of Terminal and Penultimate Saccharide Structures on Living Cells. **Analytical Biochemistry** 163:123-135.
30. **Leland D. Powell and** **Gerald W. Hart**. (1987) Cell-Surface Sialic Acid Influences Tumor Cell Recognition in the Mixed Lymphocyte Reaction. **J. Immunology** 139:262-270.
31. **Gordon D. Holt, Claudette M. Snow, Alayne Senior, Robert S. Haltiwanger, Larry Gerace and** **Gerald W. Hart**. (1987) Nuclear Pore Complex Glycoproteins Contain Cytoplasmically Disposed O-Linked N-Acetylglucosamine. **J. Cell Biology** 104:1157-1164.
32. **Leland D. Powell, Katia Smith and** **Gerald W. Hart**. (1987) Site Specific Glycosylation Patterns of H-2K: Effects of Allelic Polymorphism and Mitogenic Stimulation. **J. Immunology** 139:1206-1213.
33. **Christopher C. Rider and** **Gerald W. Hart**. (1987) Differential Sulphation of Chondroitin Sulphate in Murine T and B Lymphocytes. **Molec. Immunol.** 24:963-967.
34. **Antonino Passaniti and Gerald W. Hart**. (1988) Cell Surface Sialylation and Tumor Metastasis. Metastatic Potential of B16 Melanoma Variants Correlates With Their Relative Numbers of Specific Penultimate Oligosaccharide Structures. **J. Biological Chemistry** 26:7591-7603.
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