NANYANG TECHNOLOGICAL UNIVERSITY
SCHOOL OF BIOLOGICAL SCIENCES

BS-BOOK LIST UPDATING – *AY2016 SEMESTER-2*

Contents :

BS1006 PRINCIPLES OF GENETICS

Subject Coordinator: Assoc Prof Peter Droge

Prescribed Textbooks

D. Peter Snustad, *Genetics*, 6th Edition, International student version, Wiley, 2012
(Call No: QH430.S674 2012a)

Jocelyn E. Krebs, *Lewin's essential genes*, 3rd Edition, Jones and Bartlett Learning, 2013
(Call no: QH430.K92 2013)

William S. Klug, *Essentials of genetics*, 8th Edition, Pearson, 2013 (Call no: QH430.K66 2013)

NANYANG TECHNOLOGICAL UNIVERSITY
SCHOOL OF BIOLOGICAL SCIENCES

BS1007 MOLECULAR & CELL BIOLOGY I
Subject Coordinator: Assoc Prof Thirumaran Thanabalu

Prescribed Textbooks

Bruce Alberts, *Molecular biology of the cell*, 6th Edition, Garland Science, 2015
(Call No: QH581.2.M718 2015)

Harvey F. Lodish, *Molecular cell biology*, 7th Edition, W.H. Freeman and Co., 2013
(Call no: QH581.2.M718m 2013)

Other Reference

Gerald Karp, *Cell and molecular biology: concepts and experiments*, 7th Edition, Wiley, 2013
(Call no: QH581.2.K18 2013)

BS1008 BIOSTATISTICS
Subject Coordinator: Asst Prof Lu Lanyuan

Prescribed Textbooks

Geoffrey R. Norman, *Biostatistics: the bare essentials*, 3rd Edition, B.C. Decker, 2008
(Call no: QH323.5.N842 + 1 CD, E-Book)

BS1100 MOLECULAR & CELL BIOLOGY TECHNIQUES LEVEL 1
Subject Coordinator: Assoc Prof Tan Suet Mien

Prescribed Textbooks

Rob Reed, David Holmes, Jonathan Weyers, Allan Jones, *Practical Skills in Biomolecular Sciences*, 2nd Edition, Pearson, Prentice Hall (Call no: QH506.P895)

BS2004 MOLECULAR & CELL BIOLOGY II
Subject Coordinator: Assoc Prof Koh Cheng Gee

References

Alberts, Bruce. *Molecular biology of the cell*, 6th Edition, Garland Science

Lodish, Harvey F. *Molecular cell biology*, 7th Edition, W.H. Freeman, 2013
(QH581.2.M718m 2013)

Karp, Gerald. *Cell and molecular biology : concepts and experiments*, 7th Edition, Wiley, 2013
(QH581.2.K18 2013)

NANYANG TECHNOLOGICAL UNIVERSITY
SCHOOL OF BIOLOGICAL SCIENCES

BS2007 IMMUNOLOGY
Subject Coordinator: Assoc Prof Christiane Ruedl

Prescribed Textbook

Kenneth P. Murphy, *Janeway's immunobiology*, 9th Edition, Garland Science, 2016

Other Reference

Abul K. Abbas, *Cellular and molecular immunology*, 8th Edition, Saunders/Elsevier, 2015

BS2008 EXPERIMENTAL MOLECULAR & CELL BIOLOGY
Subject Coordinator: Dr Kenneth Yu

Pescribed Textbook

Bruce Alberts, *Molecular biology of the cell*, 5th Edition, Garland Science, 2008
(Call No: QH581.2.M718 2008 + 1 DVD)

Other Reference

Robert H. Reed, *Practical skills in biomolecular sciences*, 3rd Edition, Prentice Hall, 2007
(Call no: QH506.P895 2007)

BS2010 BIOIMAGING
Subject Coordinator: Asst Prof Lu Lei

Reference

Douglas B. Murphy, *Fundamentals of light microscopy and electronic imaging*, 2nd Edition, Wiley-Blackwell, 2013. (Call no: QH211.M978 2013)

BS211S EQUATIONS OF LIFE [Self-paced course]
Subject Coordinator: Asst Prof Lu Lanyuan

Reference

A standard mathematics textbook of A-level.

NANYANG TECHNOLOGICAL UNIVERSITY
SCHOOL OF BIOLOGICAL SCIENCES

BS2012 GENETICS & GENOMICS
Subject Coordinator: Asst Prof Amartya Sanyal

Prescribed Textbook/References

L. H. Hartwell, *Genetics, from genes to genomes*, 5th Edition, McGraw-Hill Education, 2015

Robert J Brooker, *Genetics, Analysis and Principles*, 5th Edition, McGraw-Hill Education, 2015

BS2014 MICROBIAL BIOTECHOLOGY
Subject Coordinator: Asst Prof Yang Liang

E. M. T. El-Mansi, C. F. A. Bryce, Arnold L. Demain, A.R. Allman, *Fermentation Microbiology and Biotechnology*, 3rd Edition, Published by CRC Press (E-Book)

BS2021 RNA STRUCTURES & RNA BASED DRUG DEVELOPMENT [New Course]
Subject Coordinator: Asst Prof Wu Bin, Asst Prof Luo Dahai

James Darnell, *RNA: Life's Indispensable Molecule*, Cold Spring Harbor Laboratory Press, 2011. ISBN-10: 1936113198

David Elliott and Michael Ladomery, *The Molecular Biology of RNA*, 1st Edition, OUP Oxford; 2011. ISBN-10: 0199288372

David S. Goodsell, *The Machinery of Life*, 2nd Edition, Harvard University Press, Cambridge, MA, USA, 2009. ISBN-10: 0387849246

BS3006 BIOENTREPRENEURSHIP [New Course]
Subject Coordinator: Prof Sten Albert Ohlson

References

C. Shimasaki, *Biotechnology Entrepreneurship Ed.*, Academic Press, 2014, ISBN: 978-0-12-404730-3

H.Patzelt and T. Brenner, *Handbook of Bioentrepreneurship Eds.*, Springer Science, 2008, ISBN: 978-0-387-48343-6

J. Kapeleris and D. Hine, *Innovation and Entrepreneurship in Biotechnology, an International Perspective*, Edward Edgar Publishing, 2006, ISBN-10: 1 84376 584 5

P. Dobers and S. Wikander, *BioNova: Building a Biotech Company*, Student literature, 2004, ISBN: 91-44-03776-7

BS3008 COMPUTATIONAL BIOLOGY AND MODELING
Subject Coordinator: Assoc Prof Mu Yuguang

Prescribed Textbooks

Schlick, Tamar, *Molecular modeling and simulation: an interdisciplinary guide*, 2nd Edition, Springer, 2010. (Call no: QD480.S344 2010, E-Book)

Hinchliffe, Alan., *Molecular modelling for beginners*, 2nd Edition, Wiley, 2008. (QD480.H659M 2008)

Höltje, Hans-Dieter, *Molecular modeling: basic principles and applications*, 3rd revised and expanded Edition, Wiley-VCH, 2008. (Call no: QH506.M718MMB 2008)

BS3010 CURRENT TOPICS IN STEM CELL AND DEVELOPMENTAL BIOLOGY
Subject Coordinator: Prof Klaus Karjalainen

Textbook: Nil

BS3011 PROTEIN FOLDING AND BIOMOLECULAR NMR
Subject Coordinator: Assoc Prof Surajit Bhattacharyya

Prescribed Textbooks

Roger H. Pain, *Mechanisms of protein folding*, 2nd Edition, Oxford University Press, 2000. (Call no: QP551.M486)

Jeremy N. S. Evans, *Biomolecular NMR spectroscopy*, Oxford University Press, 1995. (Call no: QP519.9.N83E92)

Other References

Thomas E. Creighton, *Protein folding*, W.H. Freeman and Co., 1992. (Call no: QP551.P967F)

Alan Fersht, *Structure and mechanism in protein science: a guide to enzyme catalysis and protein folding*, W.H. Freeman, 1999. (Call no: QD431.25.S85F399)

Kurt. Wüthrich, *NMR of proteins and nucleic acids*, Wiley, 1986. (Call no: QP519.9.N83W973)

Andrew E. Derome, *Modern NMR techniques for chemistry research*, 1st Edition, Pergamon Press, 1987. (Call no: QD96.N8D437)

BS3012 FUNCTIONAL GENOMICS AND PROTEOMICS
Subject Coordinator: Assoc Prof Sze Siu Kwan, Newman

References

Richard M. Twyman, Principles of proteomics, 2nd Edition, Garland Science, 2014 (Call No: QP551.T975 2014)

Jonathan Pevsner, *Bioinformatics and Functional Genomics*, 2nd Edition, Wiley-Blackwell, 2009 (Call no: QH441.2.P514 2009)

Chhabil Dass, *Fundamentals of Contemporary Mass Spectrometry*, Wiley Interscience, 2007 (Call no: QC454.M3D231)

Timothy D. Veenstra, John R. Yates, *Proteomics for Biological Discovery,* Wiley-Liss, 2006 (Call no: QP551.P967T)

Nobuhiro Takahashi, Toshiaki Isobe, *Proteomic Biology Using LC-MS,* Wiley Interscience, 2008 (Call no: QP551.T136)

Franz Hillenkamp and Jasna Peter-Katalinic, *MALDI MS*, Wiley-VCH, 2007 (Call no: QC454.M3M244)

Richard J. Simpson, *Proteins and Proteomics,* Cold Spring Harbor Laboratory Press, 2003 (Call no: QP551.P967PAP)

Igor A. Kaltashov and Stephen J Eyles, *Mass Spectrometry in Biophysics,* Wiley Interscience, 2005 (Call no: QP519.9.M3K14)

BS3013 DRUG DISCOVERY & DEVELOPMENT, BIOTECHNOLOGY
Subject Coordinator: Assoc Prof Liu Chuan Fa

References

Silverman, Holladay, *The organic chemistry of drug design and drug action*, 3rd Edition, Elsevier Academic Press, 2014. (Print Book ISBN : 9780123820303, eBook ISBN : 9780123820310)

Wilson, Charles Owens, *Wilson and Gisvold's textbook of organic medicinal and pharmaceutical chemistry*, 12th Edition, Lippincott Williams & Wilkins, 2011. (Call no: RS403.W746 2011)

Patrick, Graham L., *An introduction to medicinal chemistry*, 5th Edition, Oxford University Press, 2013. (Call no: RS403.P314 2013)

Foye, William O., *Foye's principles of medicinal chemistry*, 7th Edition, Lippincott Williams & Wilkins, 2013. (Call no: RS403.W722 2013)

BS3014 BIOLOGICAL FOUNDATIONS OF BEHAVIOR
Subject Coordinator: Assoc Prof Ajai Vyas

Textbook: Nil

Relevant preparatory material will be provided. The bulk of it will in form of textbook chapters written by the instructor. Students are NOT expected to buy the textbook. Chapters will be delivered online.

Links to relevant primary literature will be provided. These resources will be available through creative commons licence or through NTU library. These will come with clear instruction if the material is "required", "suggested" or "may be interesting" for the class.

BS3015 The RNA World
Subject Coordinator: Asst Prof Francesc Xavier Roca Castella

Prescribed Textbooks

Bruce Alberts, *Molecular biology of the cell*, 6th Edition, Garland Science, 2015
(Call No: QH581.2.M718 2015); also 5th Edition, Garland Science, 2008
(Call no: QH581.2.M718 2008 + 1 DVD)

John F. Atkins, *RNA worlds: from life's origins to diversity in gene regulation*, Cold Spring Harbor Laboratory Press, 2011 (Call no: QH450.R627rw)

Other Reference

James E. Darnell, *RNA: life's indispensable molecule*, Cold Spring Harbor Laboratory Press, 2011. (Call no: QP623.D223)

BS3017 ADVANCED MICROBIAL PATHOGENESIS
Subject Coordinator: Asst Prof Kimberly Kline

Prescribed Textbook

Wilson B.A., *Bacterial pathogenesis: a molecular approach*, 3rd Edition, ASM Press, 2011.
(Call no: QR201.B34S186 2011)

Reference

Walsh C., *Antibiotics: actions, origins, resistance*, ASM Press, 2003. (Call no: RM267.W223)

BS3019 NEUROPSYCHOLOGY OF STRESS AND RESILIENCE
Subject Coordinator: Asst Prof Rupshi Mitra

Prescribed Textbook

Robert M. Sapolsky, *Why Zebras don't get ulcers*, 3rd Edition, Holt Paperbacks, 2004. (Call no: QP82.2.S8S241)

BS3022 PROTEIN TRAFFICKING

Subject Coordinator: Asst Prof Guillaume Thibault / Asst Prof Wang Xiaomeng (LKCSoM)

Prescribed Textbook

Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, *Molecular Biology of the Cell*, 6th Edition, Garland Science, 2014. (Call no: QH581.2.M718 2015)

Lukas K. Buehler, *Cell Membranes*, Garland Science, 2016. (Call no: QH601.B928)

BS3023 REGULATORY CONTROL OF HEALTHCARE PRODUCTS AND MEDICAL DEVICES

Subject Coordinator : Prof Yoon Ho Sup, Joe / Dr Nealda Yusof

References

Jonathan S. Kahan, Hogan Lovells US LLP, *Medical Device Development: Regulation and Law*, 3rd Edition, Parexel Intl Corp, 2014, ISBN No. 978-0988314436

Rosemary Hawkins, *Medical Device Approval and Regulation in 16 Countries: Brief Overviews*, Nova Science Publishers, ISBN No. 978-1-63484-242-6

Carl T. DeMarco, *Medical Device Design and Regulation*, ASQ Quality Press, 2011. (Call no. R856.D372M|z+ 1 CD) & E-book: XX(1159824.1)

Mindy J. Allport-Settle, *Current Good Manufacturing Practices: Pharmaceutical, Biologics, and Medical Device Regulations and Guidance Documents*, PharmaLogika, Inc., ISBN No. 9781449505233

Jean-Pierre Boutrand, *Biocompatibility and Performance of Medical Devices*, Woodhead Pub Limited, 2012. (Call no. R857.M3B615c)

Medical devices – Application of risk management to medical devices, ISO (the International Organization for Standardization) ISO14971:2007 (en), **Document published on:** 2007-03-01. (Call No. QC100.I85 ISO14971-2007 (E)

Medical devices - Quality management systems – Requirements for regulatory purposes, ISO (the International Organization for Standardization) ISO13485:2016 (en), **Document published on:** 2016-03-01. (Call No. QC100.I85 ISO13485-2016 (E)

C. C. W. Schoenmakers, *Ce Marking for Medical Devices: A Handbook to the Medical Devices Directives: Medical Devices Directive 93/42/Eec : The Active Implantable Medical Devices Directive 90/396/Eec*, **ISBN No.** 978 1559379465

BS3028 CHEMICAL BIOLOGY [New Course]
Subject Coordinator: Assoc Prof Liang Zhao-Xun

Textbook: Nil

BS3029 MACROMOLECULAR ASSEMBLIES [New Course]
Subject Coordinator: Asst Prof Sara Sandin

Textbook: Nil

ELECTIVES

BS8001 HUMAN BODY FUNCTION AND DISEASE
Course Coordinator: Dr Peter Cheung

Prescribed Text

Hartwell, Leland et. Al, *Genetics: from genes to genomes*, 4th Edition, McGraw-Hill, 2011
(Call no: QH430.G328G 2011)

Lauralee Sherwood, *Human Physiology,* 5th Edition, Thomson Brooks Cole, International Edition.

Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter, *Molecular Biology of the Cell*, 5th Edition, Garland Science.

References

Yashon, Ronnee K., *Human genetics and society*, 2nd Edition, Brooks/Cole, 2012 (QH438.7.Y29)

BS8101 EXPLORING THE SCIENCE OF GOOD EATING EXPERIENCE [New Course]
Subject Coordinator: Dr Sze Chun Chau

Prescribed Textbook

McWilliams, *Foods: Experimental Perspectives*, 8th Edition, Pearson, 2016. ISBN-13: 978-0134204581

Scheule Bennion, *Introductory Foods*, 13th Edition, Pearson, 2014. ISBN-13: 9780132339261

SP0056 INTRODUCTION TO THE WORKINGS OF THE HUMAN BODY
Subject Coordinator: Dr Peter Cheung

Prescribed Textbook

Lauralee Sherwood, *Introduction to human physiology,* 8th Edition, Thomson Brooks Cole, International Edition (Call No: QP34.5.S554 2013)

Bruce Alberts, *Molecular biology of the cell*, 5th Edition, Garland Science, 2008
(Call No: QH581.2.M718 2008)

SP0062 DISCERNING BIOLOGY IN POPULAR MEDIA

Subject Coordinator: Dr Sze Chun Chau

Textbook: Nil

CH9200 FOOD MICROBIOLOGY

Subject Coordinator: Dr Sze Chun Chau

Prescribed Textbook

Adams, M. R., Moss, M. O., McClure, P., *Food Microbiology*, 4th Edition, Royal Society of Chemistry, Cambridge, UK, 2016.