

## Bibliography Ewald R. Weibel

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- 1956.1 Töndury G, Weibel E R (1956) Ueber das Vorkommen von Blutgefässanastomosen in der menschlichen Lunge.  
Schweiz Med Wschr 86:265-269
- 1957.1 Weibel E R (1957) Zur Kenntnis der Differenzierungs-vorgänge im Epithel des Ductus cochlearis.  
Acta Anatom 29:53-90
- 1958.1 Töndury G, Weibel E R (1958) Anatomie der Lungengefäße. In: Ergebnisse der gesamten Tuberkulose- und Lungenforschung. Eds: St Engel, L Heilmeyer, J Hein, E Uehlinger, Thieme, Stuttgart, 61-100  
.2 Weibel E R (1958) Die Entstehung der Längsmuskulatur in den Aesten der A. bronchialis.  
Zschr Zellforsch 47:440-468
- 1959.1 Weibel E R (1959) Die Blutgefässanastomosen in der menschlichen Lunge.  
Zschr Zellforsch 50:653-692
- 1960.1 Weibel E R (1960) Angiogenetic processes involved in the development of collateral circulation to the lung following ligation of the pulmonary artery in rats.  
Anat Rec 136:300  
.2 Weibel E R (1960) Measurement of the alveolo-capillary diffusing surface and of the volume of the capillary bed in normal human lungs.  
Feder Proceed 20:425a  
.3 Weibel E R (1960) Early stages in the development of collateral circulation to the lung in the rat.  
Circul Res 8:353-37
- 1961.1 Weibel E R (1961) Quantitative morphologic studies of the dimensions of the alveolo-capillary membrane.  
Bull NY Acad Med 37:876  
.2 Weibel E R, Vidone A (1961) Fixation of the lung by formalin steam in a controlled state of air inflation.  
Am Rev Respir Dis 84:856-861
- 1962.1 Weibel E R (1962) A quantitative approach to the morpho-logic study of the peripheral pulmonary vasculature.  
Med Thorac 19:16-22  
.2 Weibel E R (1962) Morphometrische Analyse von Zahl, Volumen und Oberfläche der Alveolen und Kapillaren der menschlichen Lunge.  
Zschr Zellforsch 57:648-666  
1962.3 Weibel E R (1962) Structural dimensions of the alveolo-capillary region in their relation to

- physiology.  
In: Symposium on Gas Exchange in the Lung. Proceedings International Congress of Physiology, Leiden, 295-297
- .4 Weibel E R, Gomez D M (1962) A principle for counting tissue structures on random sections.  
*J Appl Physiol* 17:343-348
- .5 Weibel E R, Gomez D M (1962) Architecture of the human lung.  
*Science* 137:577-585
- 1963.1** Knight B W, Weibel E R, Gomez D M (1963) Effect of size distribution on a principle of counting on section structures contained in a volume.  
In: Proceedings First International Congress for Stereology, Vienna 18a, 1-2
- .2 Weibel E R (1963) Contributions of morphometry to the knowledge of gas exchange in the lung.  
In: Proceedings First International Congress for Stereology, Vienna 23, 1-7
- .3 Weibel E R (1963) Principles and methods for the morpho-metric study of the lung and other organs.  
*Lab Invest* 12:131-155
- .4 Weibel E R (1963) Morphometry of the Human Lung.  
Springer Verlag and Academic Press, Heidelberg-New York
- 1964.1** Weibel E R (1964) Morphometrics of the lung.  
In: The Handbook of Physiology. American Physiological Society, Respiration Section, Vol 1, 285-307
- .2 Weibel E R (1964) Modell und Wirklichkeit in der biologischen Forschung.  
*NZZ* Nr 3809, 13.9.1964
- .3 Weibel E R (1964) Probleme von Forschung und Hochschule in der Schweiz. Die Wechselbeziehungen zwischen den Forschern und die Organisation unserer Fachbibliotheken.  
*Schw Hochsch Ztg* 37:1-11
- .4 Weibel E R (1964) Stereologic studies of the mammalian pulmonary air-blood barrier.  
Third European Regional Conference on Electron Microscopy, Academy of Sciences, Prague
- .5 Weibel E R, Knight B W (1964) A morphometric study on the thickness of the pulmonary air-blood barrier.  
*J Cell Biol* 21:367-384
- .6 Weibel E R, Palade G E (1964) New cytoplasmic components in arterial endothelia.  
*J Cell Biol* 23:101-112
- 1965.1** Weibel E R (1965) Die Beziehungen der Zelle nach aussen. *Bull Schweiz Akad med Wiss* 21:432-445
- .2 Weibel E R (1965) Organisation und Feinbau der Zelle im Elektronenmikroskop.  
*Praxis* 54:73-78
- .3 Weibel E R, Kistler G S (1965) Morphometrische Bestimmung der Diffusionskapazität der Luft-Blut-Schranke der Lunge.

## Helv Physiol Acta 23:c52-c54

- 1966.1 Fuchs A, Weibel E R (1966) Morphometrische Untersuchung der Verteilung einer spezifischen cytoplasmatischen Organelle in Endothelzellen der Ratte.  
Zschr Zellforsch 73:1-9
- .2 Kistler G S, Caldwell P R B, Weibel E R (1966) Quantitative electron microscopic studies of murine lung damage after exposure to 98.5 % oxygen at ambient pressure: a preliminary report.  
In: Third International Conference on Hyperbaric Medicine, National Academy of Sciences, Washington D.C. 169-178
- .3 Kistler G S, Caldwell P R B, Weibel E R (1966) Electron microscopic and morphometric study of rat lungs exposed to 97 % oxygen at 258 torr (27'000 feet).  
Aerospace Med Res Lab AMRL-TR-66-103, 1-14
- .4 Kistler G S, Caldwell P R B, Weibel E R (1966) Electron microscopic and morphometric study of rats exposed to 98.5 % oxygen at atmospheric pressure.  
Aerospace Med March: 1-42
- .5 Weibel E R (1966) Practical stereological methods for morphometric cytology.  
In: Sixth International Congress for Electron Microscopy, Kyoto
- .6 Weibel E R (1966) Postnatal growth of the lung and pulmonary gas-exchange capacity.  
In: Ciba-Foundation Symposium on Development of the Lung. Eds: A de Reuck and R Porter, Churchill Ltd, London 131-148
- .7 Weibel E R (1966) Morphometrische Studien zum Wachstum der Gasaustauschkapazität der Rattenlunge.  
Helv Physiol Acta 24:c56-c59
- .8 Weibel E R, Kistler G S, Scherle W F (1966) Practical stereological methods for morphometric cytology.  
J Cell Biol 30:23-38
- .9 Weibel E R, Kistler G S, Töndury G (1966) A stereologic electron microscope study of "tubular myelin figures" in alveolar fluids of rat lungs.  
Z Zellforsch 69:418-427
- .10 Weibel E R, Schnyder U W (1966) Zur Ultrastruktur und Histochemie der granulösen Degeneration bei bullöser Erythrodermie congenitale ichthyosiforme.  
Archiv klin exper Dermatol 225:286-298
- 1967.1 Freere R H, Weibel E R (1967) Stereologic techniques in microscopy.  
J Royal Microsc Soc 87:25-34
- .2 Kistler G S, Caldwell P R B, Weibel E R (1967) Electron microscopic and morphometric study of rat lungs exposed to 97 % oxygen at 258 Torr (27'000 feet).  
Techn Report US Air Force TR 66-103
- .3 Kistler G S, Caldwell P R B, Weibel E R (1967) Development of fine structural damage to alveolar and capillary lining cells in oxygen-poisoned rat lungs.  
J Cell Biol 32:605-628
- .4 Schwinger G, Weibel E R, Kaplan H P (1967) Pulmonary pathology of oxygen toxicity. III. Electron micro-scopic and morphometric study of dog and monkey lungs exposed to 98% O<sub>2</sub> at 258 torr for 7 months and followed by 1 month recovery in room air.

- Aerospace Med Res Lab AMRL, Interim Scient Report, January
- .5 Weibel E R (1967) Airways and respiratory surface.  
In: The Lung. International Academy of Pathology, The Williams and Wilkins Comp., Baltimore 1-18
- .6 Weibel E R (1967) Introduction to counting principles.  
In: Quantitative Methods in Morphology. Eds: ER Weibel and H Elias, Springer Verlag, Berlin-Heidelberg-New York 55-57
- .7 Weibel E R (1967) Introduction to stereology and morphometry.  
In: Quantitative Methods in Morphology. Eds: ER Weibel and H Elias, Springer Verlag, Berlin-Heidelberg-New York 2-19
- .8 Weibel E R (1967) Ordnung und Leben. Zur Stellung der Morphologie in medizinischer Lehre und Forschung.  
Schweiz Med Wschr 97:629-639
- .9 Weibel E R (1967) Morphometry and lung models.  
In: Quantitative Methods in Morphology. Eds: ER Weibel and H Elias, Springer Verlag, Berlin-Heidelberg-New York 253-267
- .10 Weibel E R (1967) Structure in space and its appearance on sections.  
In: Stereology. Proceedings Second International Congress for Stereology. Ed: H Elias, Springer Verlag, New York 15-26
- .11 Weibel E R, Elias H (1967) Introduction to stereologic principles.  
In: Quantitative Methods in Morphology. Eds: ER Weibel and H Elias, Springer Verlag, Berlin-Heidelberg-New York 89-98
- .12 Weibel E R, Elias H (1967) Quantitative Methods in Morphology.  
Springer Verlag, Berlin-Heidelberg-New York
- 1968** 1 Burri P H, Giger H, Gnägi H R, Weibel E R (1968) Application of stereological methods to cytophysiologic experiments on polarized cells.  
In: Fourth European Regional Conference on Electron Microscopy, Rome
- .2 Burri P H, Weibel E R (1968) Beeinflussung einer spezifischen cytoplasmatischen Organelle von Endothelzellen durch Adrenalin.  
Zschr Zellforsch 88:426-440
- .3 Gil J, Weibel E R (1968) The influence of fixation technique and fixative on preservation of the pulmonary surfactant.  
In: Fourth European Regional Conference on Electron Microscopy, Rome
- .4 Gil J, Weibel E R (1968) The role of buffers in lung fixation with glutaraldehyde and osmium tetroxide.  
J Ultrastruct Res 25:331-348
- .5 Hess F A, Preisig R, Gnägi H R (1968) The reliability of needle biopsies as procedure for obtaining liver tissue for quantitative electron microscopic investigation.  
In: Fourth European Regional Conference on Electron Microscopy, Rome
- .6 Hess F A, Preisig R, Weibel E R (1968) Correlation of structure and function in drug-induced "endoplasmic hypertrophy".  
In: III Meeting European Association for the Study of the Liver, Modena
- .7 Weibel E R (1968) Etudes morphométriques du poumon. Leur méthodologie et leurs applications.

- Rev Tubercule et de Pneumol 32:185-206
- .8 Weibel E R (1968) A note on lung fixation.  
Am Rev Respir Dis 97:463-465
- .9 Weibel E R, Gil J (1968) In situ demonstration of duplex extracellular surfactant layer of pulmonary alveoli by electron microscopy.  
In: Proceedings International Union of Physiological Sciences, Vol VII 462
- .10 Weibel E R, Gil J (1968) Electron microscopic demonstration of an extracellular duplex lining layer of alveoli.  
Respir Physiol 4:42-57
- .11 Weibel E R, Gnägi H R (1968) Improvements in efficiency of stereologic methods in electron microscopic cytology.  
In: Fourth European Regional Conference on Electron Microscopy, Rome
- .12 Weibel E R, Lewerenz M, Kaplan H P (1968) Electron microscopic and morphometric study of rat, monkey and dog lungs exposed to 68 % O<sub>2</sub> and 32 % N<sub>2</sub> at 258 torr for eight months.  
Aerospace Med Res Lab AMRL-TR-68-175, 189-212
- 1969**
- .1 Bettex-Galland M, Lüscher E F, Weibel E R (1969) Thrombosthenin-electron microscopical studies on its localization in human blood platelets and some properties of its subunits.  
Thrombosis et Diathesis Haemorrhag 22:431-449
- .2 Conradi C R, Kapanci Y, Weibel E R (1969) Electron microscopic and morphometric study of monkey and dog lungs exposed to beryllium-containing dust.  
Aerospace Med Res Lab AMRL-TR-69-45, 1-15
- .3 Gil J, Weibel E R (1969/70) Improvements in demonstration of lining layer of lung alveoli by electron microscopy.  
Respir Physiol 8:13-36
- .4 Kapanci Y, Weibel E R, Kaplan H P, Robinson F R (1969) Pathogenesis and reversibility of the pulmonary lesions of oxygen toxicity in monkeys. II. Ultra-structural and morphometric studies.  
Lab Invest 20:101-118
- .5 Kaplan H P, Robinson F R, Kapanci Y, Weibel E R (1969) Pathogenesis and reversibility of the pulmonary lesions of oxygen toxicity in monkeys. I. Clinical and light microscopic studies.  
Lab Invest 20:94-100
- .6 Lemeunier A, Burri P H, Weibel E R (1969) Absence of acid phosphatase activity in specific endothelial organelles.  
Histochemie 20:143-149
- .7 Stäubli W, Hess R, Weibel E R (1969) Correlated morpho-metric and biochemical studies on the liver cell. II. Effects of phenobarbital on rat liver hepatocytes.  
J Cell Biol 42:92-112
- .8 Weibel E R (1969) Lunge und Sauerstoff: Leben erhaltend - Leben gefährdend.  
Sandorama II:4-7
- .9 Weibel E R (1969) Vielfalt und Einheit in der biologischen Forschung.  
Schweiz Hochsch Ztg 42:5-8

- .10 Weibel E R (1969) Cytomorphometry: Stereological methods in light and electron microscopy of cells and tissues.  
In: Proceedings Royal Microscopical Society 4:l69
- .11 Weibel E R (1969) The ultrastructure of the alveolar-capillary membrane or barrier.  
In: The Pulmonary Circulation and Interstitial Space. Eds: AP Fishman, HH Hecht, The University of Chicago, Chicago 9-27
- .12 Weibel E R (1969) Stereological principles for morphometry in electron microscopic cytology.  
Int'l Rev Cytol 26:235-302
- .13 Weibel E R, Conradi C R (1969) Pulmonary pathology of oxygen toxicity  
Aerospace Med Res Lab AMRL-TR-69-130, 227-260
- .14 Weibel E R, Stäubli W, Gnägi H R, Hess F A (1969) Correlated morphometric and biochemical studies on the liver cell. I. Morphometric model, stereologic methods and normal morphometric data for rat liver.  
J Cell Biol 42:68-91
- 1970**
- .1 Bettex-Galland M, Lüscher E F, Weibel E R (1970) Structure and localization of thrombosthenin, the contractile protein of blood platelets.  
In: Septième Congrès International de Microscopie Electronique, Grenoble 539-540
- .2 Burri P H, Weibel E R (1970) Estimation de paramètres fonctionnels du poumon par morphométrie: Adaptation du poumon en croissance au taux d'oxygène dans l'air ambiant.  
Bull Physio-Pathol Resp 6:495-499
- .3 Geelhaar A, Weibel E R (1970) Morphometric study of adaptation of lung to increased oxygen consumption.  
In: Septième Congrès International de Microscopie Electronique, Grenoble 593-594
- .4 Gil J, Weibel E R (1970) Combined application of physio-logical, electron microscopic and morphometric techniques for studying fluid balance in the lung.  
In: Septième Congrès International de Microscopie Electronique, Grenoble 395-396
- .5 Gnägi H R, Burri P H, Weibel E R (1970) A multipurpose computer program for automatic analysis of stereological data obtained on electron micrographs. In: Septième Congrès International de Microscopie Electronique, Grenoble 443-444
- .6 Müller P, Weibel E R (1970) Ein neues zweites propädeutisches Examen: Einführung schriftlicher Prüfungen. Schweiz. Aerztezeitung 51:789-792
- .7 Steinsiepe K F, Weibel E R (1970) Elektronenmikroskopische Untersuchungen an spezifischen Organellen von Endothel-zellen des Frosches (*Rana temporaria*).  
Zschr Zellforsch 108:l05-l26
- .8 Weibel E R (1970) An automatic sampling stage microscope for stereology.  
J Microsc 91:1-18
- .9 Weibel E R (1970) Functional morphology of the growing lung.  
Resp 27:27-35
- .10 Weibel E R (1970/71) Morphometric estimation of pulmonary diffusion capacity. I. Model and method.  
Resp Physiol 11:54-75

- .11 Weibel E R (1970) Morphometry of pulmonary circulation.  
Progr Respir Res 5:2-12
- .12 Weibel E R (1970) Anatomical distribution of air channels, blood vessels, and tissue in the lung.  
In: Normal Values for Respiratory Function in Man. Panminerva Medica, Torino, 242-256
- .13 Weibel E R (1970) Prof. Erich Hintzsche zum 70. Geburtstag. Schweiz Med Wschr 100:1466-1467
- .14 Zahler P, Weibel E R (1970) Reconstitution of membranes by recombining proteins and lipids derived from erythrocyte stroma.  
Biochim Biophys Acta 219:320-338
- 1971.
- .1 Bolender R P, Weibel E R (1971) Recovery of rat hepatocytes after phenobarbital treatment: a morphometric study.  
In: The American Society for Cell Biology. Abstracts of papers Eleventh Annual Meeting New Orleans, 34
- .2 Burri P H, Weibel E R (1971) Morphometric estimation of pulmonary diffusion capacity. II. Effect of PO<sub>2</sub> on the growing lung. Adaptation of the growing rat lung to hypoxia and hyperoxia.  
Respir Physiol 11:247-264
- .3 Burri P H, Weibel E R (1971) Morphometric evaluation of changes in lung structure due to high altitude.  
In: Ciba Foundation Symposium on High Altitude Physiology. Eds: R Porter and J Knight, Churchill Livingstone, London 15-30
- .4 Burri P H, Weibel E R (1971) Influence of environmental PO<sub>2</sub> on the growth of the pulmonary gas exchange apparatus.  
Chest 59:25s-26s
- .5 Burri P H, Weibel E R (1971) Influence of changes in environmental oxygen tension on lung structure  
Maandschr Kindergeneesk 39:134-136
- .6 Conradi C, Burri P H, Kapanci Y, Robinson F R, Weibel E R (1971) Lung changes after beryllium inhalation. Ultrastructural and morphometric study.  
Arch Environment Health 23:348-358
- .7 Geelhaar A, Weibel E R (1971) Morphometric estimation of pulmonary diffusion capacity. III. The effect of increased oxygen consumption in Japanese waltzing mice. Respir Physiol 11:354-366
- .8 Gil J, Weibel E R (1971) Extracellular lining of bronchioles after perfusion-fixation of rat lungs for electron microscopy.  
Anat Rec 169:185-199
- .9 Gil J, Weibel E R (1971) An improved apparatus for perfusion fixation with automatic pressure control.  
J Microsc 94:241-244
- .10 Sauter L S, Weibel E R (1971) Morphometric evaluation of skin structures by stereologic methods. Dermatologica 143:174-183
- .11 Siegel A, Burri P H, Weibel E R, Bettex-Galland M, Lüscher E F (1971) Density gradient

- centrifugation and electron microscopic characterization of subcellular fractions from human blood platelets.  
Thrombos Diathes Haemorrhag 25:252-267
- .12 Siegwart B, Gehr P, Gil J, Weibel E R (1971) Morphometric estimation of pulmonary diffusion capacity. IV. The normal dog lung.  
Respir Physiol 13:141-159
- .13 Untersee, P, Gil J, Weibel E R (1971) Visualization of extracellular lining layer of lung alveoli by freeze-etching.  
Respir Physiol 13:171-185
- .14 Weibel E R (1971) Oxygen effect on lung cells.  
Arch Int Med 128:54-56
- .15 Weibel E R (1971) Möglichkeiten und Probleme der mikroskopischen Morphometrie.  
In: Wild-Festschrift 67-72
- .16 Weibel E R (1971) The mystery of "non-nucleated plates" in the alveolar epithelium of the lung explained.  
Acta Anat 78:425-443
- .17 Weibel E R, Burri P H, Geelhaar A (1971) Morphological adaptation of the lung to changes in oxygen consumption and supply.  
In: Pulmonary Diffusing Capacity on Exercise. Ed: M Scherrer, Hans Huber, Bern 97-105
- .18 Weibel E R, Gil J (1971) Morphologie der Alveolar-oberfläche.  
Pneumol 144:159-166
- 1972.** 1 Gil J, Weibel E R (1972) Morphological study of pressure-volume hysteresis in rat lungs fixed by vascular perfusion.  
Respir Physiol 15:190-213
- .2 Hughes G M, Weibel E R (1972) Similarity of supporting tissue in fish gills and the mammalian reticulo-endothelium.  
J Ultrastr Res 39:106-114
- .3 Pannese E, Bianchi R, Calligaris B, Ventura R, Weibel E R (1972) Quantitative relationships between nerve and satellite cells in spinal ganglia. An electron microscopical study. I. Mammals.  
Brain Res 46:215-234
- .4 Weibel E R (1972) A stereological method for estimating volume and surface of sarcoplasmic reticulum.  
J Microsc 95:229-242
- .5 Weibel E R (1972) Morphometric estimation of pulmonary diffusion capacity. V. Comparative morphometry of alveolar lungs.  
Respir Physiol 14:26-43
- .6 Weibel E R (1972) The value of stereology in analysing structure and function of cells and organs.  
J Microsc 95:3-13
- .7 Weibel E R, Burri P H, Gil J (1972) The ultrastructure and morphometry of the human lung.  
In: General Thoracic Surgery. Ed: ThW Shields, Lea and Febiger, Philadelphia 21-54

- .8 Weibel E R, Fisher C, Gahm J, Schaefer A (1972) Current capabilities and limitations of available stereological techniques.  
J Microsc 95:367-392
- .9 Weibel E R, Meek G, Ralph B, Echlin P Roos R (1972) Stereology 3. Proceedings of the Third International Congress for Stereology.  
Blackwell Scientific Publications, Oxford
- 1973.
- .1 Bolender R P, Weibel E R (1973) A morphometric study of the removal of phenobarbital-induced membranes from hepatocytes after cessation of treatment.  
J Cell Biol 56:746-761
- .2 Bolender R P, Weibel E R (1973) The removal of phenobarbital-induced membranes from hepatocytes.  
In: The Liver. Quantitative Aspects of Structure and Function. Eds: G Paumgartner, R Preisig, Karger, Basel 32-40
- .3 Burri P H, Weibel E R (1973) Funktionelle Aspekte der Lungenmorphologie.  
In: Röntgendiagnostik der Lunge. Eds: WA Fuchs, E Voegeli, Hans Huber, Bern 1-17
- .4 Hess F A, Gnägi H R, Weibel E R, Preisig R (1973) Morphometry of dog liver:  
Comparison of wedge and needle biopsies.  
Europ J Clin Invest 3:451-458
- .5 Hess F A, Preisig R, Weibel E R (1973) The validity of needle biopsies for liver  
cytomorphometry.  
In: The Liver. Quantitative Aspects of Structure and Function. Eds: G Paumgartner, R Preisig, Karger, Basel 58-61
- .6 Hess F A, Weibel E R, Preisig R (1973) Morphometry of dog liver: normal base-line data.  
Virchows Arch Abt B Zellpath 12:303-312
- .7 Hoppeler H, Lüthi P, Claassen H, Weibel E R, Howald H (1973) The ultrastructure of the normal human skeletal muscle. A morphometric analysis on untrained men, women, and well-trained orienteers.  
Pfluegers Arch 344:217-232
- .8 Weibel E R (1973) A simplified morphometric method for estimating diffusing capacity in normal and emphysematous human lungs.  
Am Rev Respir Dis 107:579-588
- .9 Weibel E R (1973) Morphological basis of alveolar-capillary gas exchange.  
Physiol Rev 53:419-495
- .10 Weibel E R (1973) Stereological methods for the quantification of hepatic structures.  
In: The Liver. Quantitative Aspects of Structure and Function. Eds: G Paumgartner, R Preisig, Karger, Basel 2-12
- .11 Weibel E R (1973) Toxische Auswirkungen erhöhter Sauerstoffspannung auf die Lunge.  
In: Lungeneränderungen bei Langzeitbeatmung. Eds:  
K Wiemers, KL Scholler, G Thieme Verlag, Stuttgart 214-223
- .12 Weibel E R, Bolender R P (1973) Stereological techniques for electron microscopic  
morphometry.  
In: Principles and Techniques of Electron Microscopy. Ed: MA Hayat, Van Nostrand Reinhold Company, New York Chapter 6, 237-296
- .13 Weibel E R, Untersee P, Gil J, Zulauf M (1973) Morphometric estimation of pulmonary

- diffusion capacity. VI. Effect of varying positive pressure inflation of air spaces.  
Respir Physiol 18:285-308
- .14 Weibel E R, Zahler P (1973) Molekulare Struktur von Zellmembranen.  
Helv med Acta 36:353-369
1974. 1 Bachofen M, Weibel E R (1974) Basic pattern of tissue repair in human lungs following unspecific injury.  
Chest 65:14S-19S
- .2 Burri P H, Dbaly J, Weibel E R (1974) The postnatal growth of the rat lung. I.  
Morphometry.  
Anat Rec 178:711-730
- .3 Gehr P, Weibel E R (1974) Morphometric estimation of regional differences in the dog lung.  
J Appl Physiol 37:648-653
- .4 Kauffman S L, Burri P H, Weibel E R (1974) The postnatal growth of the rat lung. II.  
Autoradiography.  
Anat Rec 180:63-76
- .5 Rätz H U, Gnägi H R, Weibel E R (1974) An on-line computer system for point counting stereology.  
J Microsc 101:267-282
- .6 Robinson F R, Casey H W, Weibel E R (1974) Animal model of human disease: oxygen toxicity in nonhuman primates.  
Am J Pathol 76:175-178
- .7 Weibel E R (1974) A note on differentiation and divisibility of alveolar epithelial cells.  
Chest 65:19S-21S
- .8 Weibel E R (1974) On pericytes, particularly their existence on lung capillaries.  
Microvasc Res 8:218-235
- .9 Weibel E R (1974) Selection of the best method in stereology.  
J Microsc 100:261-269
- .10 Weibel E R (1974) Stereological quantitation of cellular membrane systems.  
In: Eighth International Congress on Electron Microscopy, Canberra Vol II, 12-1
1975. 1 Bachofen M, Weibel E R, Roos B (1975) Postmortem fixation of human lungs for electron microscopy.  
Am Rev Respir Dis 111:247-256
- .2 Forrest J B, Weibel E R (1975) Morphometric estimation of pulmonary diffusion capacity.  
VII. The normal guinea pig lung.  
Respir Physiol 24:191-202
- .3 Gehr P, Bachofen M, Weibel E R (1975) Elektronenmikroskopie und Morphometrie der menschlichen Lunge.  
Acta anat 93:304-320
- .4 Keller Hj, Friedli H P, Gehr P, Bachofen M, Weibel E R (1975) The effects of optical resolution on the estimation of stereological parameters.  
In: Proceedings Fourth International Congress Stereology, Gaithersburg 1975.  
National Bureau of Standards, Spec. Publ. 431:409-410

- .5 Losa G A, Bolender R P, Weibel E R (1975) Quantitative Charakterisierung von Mikrosomen mittels Gefrierätzung. Prakt Metallographie 5:82-90
- .6 Weibel E R (1975) Quantitation in morphology: possibilities and limits. Beitr Pathol 155:1-17
- .7 Weibel E R, Bachofen M, Gehr P (1975) Estimation of pulmonary diffusing capacity in human lungs by morphometry. Prog Respir Res 8:130-140
- .8 Weibel E R, Losa G A, Bolender R P (1975) Stereological method for estimating relative membrane surfaces in freeze-fracture preparations. In: Proceedings Fourth International Congress Stereology, Gaithersburg 1975. National Bureau of Standards, Spec. Publ. 431:277-349
- 1976
- .1 Akert K, Sandri C, Weibel E R, Peper K, Moor H (1976) The fine structure of the perineural endothelium. Cell Tiss Res 165:281-295
- .2 Bolender R P, Paumgartner D, Losa G, Weibel E R (1976) Analysis by stereological methods of the recovery of membranes in subcellular fractions from liver. In: Proceedings Sixth European Congress Electron Microscopy, Jerusalem 149-150
- .3 Burri P H, Gehr P, Müller K, Weibel E R (1976) Adaptation of the growing lung to increased  $V_{O_2}$ . I. IDPN as inducer of hyperactivity. Respir Physiol 28:129-140
- .4 Gehr P, Keller Hj, Weibel E R (1976) Effects of optical resolution on the estimation of stereological parameters. In: Proceedings Sixth European Congress Electron Microscopy, Jerusalem 151-152
- .5 Hughes G M, Weibel E R (1976) Morphometry of fish lungs. In: Respiration of Amphibious Vertebrates. Ed: GM Hughes, Academic Press, London 213-232
- .6 Muralt A von, Weibel E R, Howarth J V (1976) The optical spike. Structure of the olfactory nerve of pike and rapid birefringence changes during excitation. Pfluegers Arch 367:67-76
- .7 Paumgartner D, Weibel E R (1976) Stereologische Methoden in der Elektronenmikroskopie. In: Verhandlungen der Deutschen Dermatologischen Gesellschaft, Dreissigste Tagung, Suppl I "Der Hautarzt". Springer, Berlin-Heidelberg 194-198
- .8 Weibel E R (1976) Progress, success and problems in applying stereology in biological research. In: Proceedings Fourth International Congress Stereology, Gaithersburg 1975, National Bureau of Standards. Spec Public 431:341-350
- .9 Weibel E R (1976) Lungenbau und Atmung als Probleme anatomischer Forschung. Universitas 31:1277-1284
- .10 Weibel E R (1976) Stereological approach to the study of cell surface morphometry. In: Proceedings Sixth European Congress Electron Microscopy, Jerusalem 6-9
- .11 Weibel E R, Gehr P, Haies D, Gil J, Bachofen M (1976) The cell population of the normal lung.

- In: Lung Cells in Disease. Ed: A Bouhuys, Elsevier/ North-Holland Biomedical Press, Amsterdam-New York 3-16
- .12 Weibel E R, Losa G, Bolender R P (1976) Stereological method for estimating relative membrane surface area in freeze-fracture preparations of subcellular fractions. *J Microsc* 107:255-26
1977. 1 Bachofen M, Weibel E R (1977) Alterations of the gas exchange apparatus in adult respiratory insufficiency associated with septicemia. *Am Rev Respir Dis* 116:589-615
- .2 Blouin A, Bolender R P, Weibel E R (1977) Distribution of organelles and membranes between hepatocytes and non-hepatocytes in the rat liver parenchyma. *J Cell Biol* 72:441-455
- .3 Burri P H, Weibel E R (1977) Ultrastructure and morphometry of the developing lung. In: Development of the Lung. Ed: WA Hodson, Dekker, New York-Basel 215-268
- .4 Hugonnaud C, Gehr P, Weibel E R, Burri P H (1977) Adaptation of the growing lung to increased oxygen consumption. II. Morphometric analysis. *Respir Physiol* 29:1-10
- .5 Keller Hj, Weibel E R (1977) Einfache Hardwarezusätze am QTM 720 zur Erweiterung des Anwendungsbereichs. *Microscopica Acta Suppl* 1:87-94
- .6 Staebli W, Schweizer W, Suter J, Weibel E R (1977) The proliferative response of hepatic peroxisomes of neonatal rats to treatment with SU-13 437 (Nafenopin). *J Cell Biol* 74:665-689
- .7 Weibel E R, Gehr P, Haies D, Gil J, Bachofen M (1977) Celica populacija v normalnih pljucih. *Zdrav vestn* 46:351-356
- .8 Weibel E R, Gil J (1977) Structure-function relationships at the alveolar level. In: Bioengineering Aspects of the Lung. Ed: JB West, Dekker, New York 1-81
1978. 1 Bolender R P, Paumgartner D, Losa G, Muellener D, Weibel E R (1978) Integrated stereological and bio-chemical studies on hepatocytic membranes. I. Membrane recoveries in subcellular fractions. *J Cell Biol* 77:565-583
- .2 Gehr P, Bachofen M, Weibel E R (1978) The normal human lung: ultrastructure and morphometric estimation of diffusion capacity. *Respir Physiol* 32:121-140
- .3 Gehr P, Hugonnaud C, Burri P H, Bachofen H, Weibel E R (1978) Adaptation of the growing lung to increased VO<sub>2</sub>. III. The effect of exposure to cold environment in rats. *Respir Physiol* 32:345-353
- .4 Hughes G M, Weibel E R (1978) Visualization of layers lining the lung of the south american lungfish (*Lepidosiren paradoxa*) and a comparison with the frog and rat. *Tissue Cell* 10:343-353
- .5 Krahenbuehl J P, Weibel E R, Papermaster D S (1978) Quantitative immunocytochemistry at the electron microscope. In: Immunofluorescence and Related Staining Techniques. Eds: W Knapp, K Holubar and G Wick, Elsevier/North Holland Biomedical Press 245-253

- .6 Losa G A, Weibel E R, Bolender R P (1978) Integrated stereological and biochemical studies on hepatocytic membranes. III. Relative surface of endoplasmic reticulum membranes in microsomal fractions estimated on freeze-fracture preparations. *J Cell Biol* 78:289-308
- .7 Mathieu O, Claassen H, Weibel E R (1978) Differential effect of glutaraldehyde and buffer osmolarity on cell dimensions: a study on lung tissue. *J Ultrastruct Res* 63:20-34
- .8 Weibel E R (1978) The non-statistical nature of biological structure and its implications on sampling for stereology. In: Lecture Notes in Biomathematics Vol 23: Geometrical Probability and Biological Structures: Buffon's 200th Anniversary. Springer, Berlin 171-179
- .9 Weibel E R (1978) Ist Forschung nützlich? *Schweizer Jugend forscht* 11/2:4-6
- .10 Weibel E R, Paumgartner D (1978) Integrated stereological and biochemical studies on hepatocytic membranes. II. Correction of section thickness effect on volume and surface density estimates. *J Cell Biol* 77:584-597
- 1979.1** Bachofen M, Bachofen H, Weibel E R (1979) Lung edema in the adult respiratory distress syndrome. In: Pulmonary Edema. Eds: AP Fishman, EM Renkin, American Physiological Society, Bethesda 241-252
- .2 Bachofen H, Gehr P, Weibel E R (1979) Alterations of mechanical properties and morphology in excised rabbit lungs rinsed with a detergent. *J Appl Physiol* 47:1002-1010
- .3 Gil J, Bachofen H, Gehr P, Weibel E R (1979) Alveolar volume-surface area relation in air- and saline-filled lungs fixed by vascular perfusion. *J Appl Physiol* 47:990-1001
- .4 Mathieu O, Hoppeler H, Claassen H, Gehr P, Weibel E R (1979) A note on the morphometric analysis of skeletal muscles in various african mammals. *Bull Europ Physiopathol Resp* 15:219-225
- .5 Weibel E R (1979) Morphometry of the human lung: The state of the art after two decades. *Bull Europ Physiopathol Resp* 15:999-1013
- .6 Weibel E R (1979) Looking into the lung, what can it tell us? *Am J Radiol* 133:1021-1031
- .7 Weibel E R (1979) Oxygen demand and the size of respiratory structures in mammals. In: Evolution of Respiratory Processes. Eds: SC Wood, C Lenfant, Dekker, New York 289-346
- .8 Weibel E R (1979) Stereological Methods. Vol I: Practical Methods for Biological Morphometry. Academic Press, London-New York-Toronto
- .9 Weibel E R (1979) Stereology: A science and a tool for microscopic research. In: Proceedings Royal Microscopical Society 14:381-384
- .10 Weibel E R (1979) Strategies and limitations of liver cell morphometry.

- In: The Liver. Quantitative Aspects of Structure and Function. 3rd International Gstaad Symposium 1978. Eds: R Preisig, J Bircher, Editio Cantor, Aulendorf 21-24
- .11 Weibel E R (1979) Nationale und Internationale Forschungs-organisation. Forschung und Forschungsorganisation - ein Konflikt? Zschr Recht u Verwaltung der wiss Hochsch, Beiheft 7, März, 27-42 und 63-65
- .12 Weibel E R, Bachofen H (1979) Structural design of the alveolar septum and fluid exchange. In: Pulmonary Edema. Eds: AP Fishman, EM Renkin, American Physiological Society, Bethesda 1-20
- .13 Weibel E R, Paumgartner D (1979) Morphological changes associated with enzyme induction. In: The Induction of Drug Metabolism. Eds: RW Estabrook, E Lindenlaub, Schattauer Verlag, Stuttgart 147-159
- 1980.
- .1 Bolender R P, Paumgartner D, Muellener D, Losa G, Weibel E R (1980) Integrated stereological and bio-chemical studies on hepatocytic membranes. IV. Heterogeneous distribution of marker enzymes on endoplasmic reticulum in fractions. J Cell Biol 85:577-586
- .2 Caldwell P R B, Weibel E R (1980) Pulmonary oxygen toxicity. In: Pulmonary Diseases and Disorders. Ed: AP Fishman, McGraw-Hill, New York 800-805
- .3 Gehr P, Keller Hj, Müller A, Cruz-Orive L M, Weibel E R (1980) A combined light and electron microscopic method to estimate structural parameters of the lung. Mikroskopie 37:257-261
- .4 Gehr P, Sehovic S, Burri P H, Claassen H, Weibel E R (1980) The lung of shrews: morphometric estimation of diffusion capacity. Respir Physiol 40:33-47
- .5 Hoppeler H, Mathieu O, Bretz R, Krauer R, Weibel E R (1980) The use of small computer systems for stereology. Mikroskopie 37:408-412
- .6 Krauer R, Hoppeler H, Mathieu O, Claassen H, Weibel E R (1980) Regional inhomogeneity of skeletal muscle with regard to structural parameters. Mikroskopie 37:288-290
- .7 Mathieu O, Hoppeler H, Weibel E R (1980) Evaluation of tracing device as compared to standard point-counting. Mikroskopie 37:413-414
- .8 Weibel E R (1980) Design and structure of the human lung. In: Pulmonary Diseases and Disorders. Ed: AP Fishman, McGraw-Hill, New York 224-271
- .9 Weibel E R (1980) Stereological Methods. Vol 2: Theoretical Foundations. Academic Press, London
- .10 Weibel E R (1980) The contribution of stereology in analysing the dependence of lung function on structure. Mikroskopie 37:19-24
- .11 Weibel E R, Claassen H, Gehr P, Sehovic S, Burri P H (1980) The respiratory system of

- the smallest mammal.  
In: Comparative Physiology: Primitive Mammals. Eds: K Schmidt-Nielsen, L Bolis, CR Taylor, Cambridge University Press, Cambridge Mass 181-191
1981. 1 Cruz-Orive L M, Weibel E R (1981) Sampling designs for stereology.  
*J Microsc* 122:235-257
- .2 Gehr P, Mwangi D K, Ammann A, Maloyi G M O, Taylor C R, Weibel E R (1981) Design of the mammalian respiratory system. V. Scaling morphometric pulmonary diffusing capacity to body mass: wild and domestic mammals.  
*Respir Physiol* 44:61-86
- .3 Gehr P, O'Neil J J, Taylor C R, Weibel E R (1981) Discordant scaling between maximal oxygen consumption and pulmonary diffusing capacity in mammals.  
*J Physiol* 318:48-49
- .4 Gehr P, Siegwart B, Weibel E R (1981) Allometric analysis of the morphometric pulmonary diffusing capacity in dogs.  
*J Morphol* 168:5-15
- .5 Haies D M, Gil J, Weibel E R (1981) Morphometric study of rat lung cells: I. Numerical and dimensional characteristics of parenchymal cell population.  
*Am Rev Respir Dis* 123:533-541
- .6 Hoppeler H, Mathieu O, Krauer R, Claassen H, Armstrong R B, Weibel E R (1981) Design of the mammalian respiratory system. VI. Distribution of mitochondria and capillaries in various muscles.  
*Respir Physiol* 44:87-111
- .7 Hoppeler H, Mathieu O, Weibel E R, Krauer R, Lindstedt S L, Taylor C R (1981) Design of the mammalian respiratory system. VIII. Capillaries in skeletal muscles.  
*Respir Physiol* 44:129-150
- .8 Mathieu O, Cruz-Orive L M, Hoppeler H, Weibel E R (1981) Measuring error and sampling variation in stereology: comparison of the efficiency of various methods for planar image analysis.  
*J Microsc* 121:75-88
- .9 Mathieu O, Hoppeler H, Cruz-Orive L M, Weibel E R (1981) Stereological estimation of the length density of anisotropic structures: capillaries in skeletal muscle.  
*Stereol Jugosl* 3:643-647
- .10 Mathieu O, Krauer R, Hoppeler H, Gehr P, Lindstedt S L, Alexander R McN, Taylor C R, Weibel E R (1981) Design of the mammalian respiratory system. VII. Scaling mitochondrial volume in skeletal muscle to body mass.  
*Respir Physiol* 44:113-128
- .11 Müller A E, Cruz-Orive L M, Gehr P, Weibel E R (1981) Comparison of two subsampling methods for electron microscopic morphometry.  
*J Microsc* 123:35-49
- .12 Paumgartner D, Losa G, Weibel E R (1981) Resolution effect on the stereological estimation of surface and volume and its interpretation in terms of fractal dimensions.  
*J Microsc* 121:51-63
- .13 Taylor C R, Maloyi G M O, Weibel E R, Langman V A, Kamau J M Z, Seeherman H J, Heglund N C (1981) Design of the mammalian respiratory system. III. Scaling maximum aerobic capacity to body mass: wild and domestic mammals.

- Respir Physiol 44:25-37
- .14 Taylor C R, Weibel E R (1981) Design of the mammalian respiratory system. I. Problem and strategy.  
Respir Physiol 44:1-10
- .15 Wangensteen D, Bachofen H, Weibel E R (1981) Effects of glutaraldehyde or osmium tetroxide fixation on the osmotic properties of lung cells.  
J Microsc 124:189-196
- .16 Wangensteen D, Bachofen H, Weibel E R (1981) Lung tissue volume changes induced by hypertonic NaCl: morphometric evaluation.  
J Appl Physiol 51:1443-1450
- .17 Weibel E R (1981) Morphological basis for  $V_{\dot{V}}$ ,  $A/Q$ , distribution.  
In: Adv Physiol Sci Vol 10 Respiration. Eds: I Hutas, LA Debreczeni, 28th International Congress of Physiological Sciences, Budapest 179-189
- .18 Weibel E R (1981) Stereological methods in cell biology: Where are we - where are we going?  
J Histochem Cytochem 29:1043-1052
- .19 Weibel E R (1981) Topology and barrier function of membranes in the lung.  
Pediatric Res 15:1167-1172
- .20 Weibel E R, Gehr P, Cruz-Orive L M, Müller A E, Mwangi D K, Haussener V (1981)  
Design of the mammalian respiratory system. IV. Morphometric estimation of pulmonary diffusing capacity; critical evaluation of a new sampling method.  
Respir Physiol 44: 39-59
- .21 Weibel E R, Taylor C R, Gehr P, Hoppeler H, Mathieu O, Maloij G M O (1981) Design of the mammalian respiratory system. IX. Functional and structural limits for oxygen flow.  
Respir Physiol 44:151-164
- .22 Weibel E R, Taylor C R (1981) Design of the mammalian respiratory system.  
Respir Physiol 44:1-164
- 1982
- .1 Bachofen H, Ammann A, Wangensteen D, Weibel E R (1982) Perfusion fixation of lungs for structure-function analysis: credits and limitations.  
J Appl Physiol 53:528-533
- .2 Bachofen H, Wangensteen D, Weibel E R (1982) Surfaces and volumes of alveolar tissue under zone II and zone III conditions.  
J Appl Physiol 53:879-885
- .3 Bachofen M, Weibel E R (1982) Structural alterations of lung parenchyma in the adult respiratory distress syndrome.  
Clinics in Chest Med 3:35-56
- .4 Buser K S, Kopp B, Gehr P, Weibel E R, Hoppeler H (1982) Effect of cold environment on skeletal muscle mitochondria in growing rats.  
Cell Tissue Res 225:427-436
- .5 Crapo J, Barry B E, Gehr P, Bachofen M, Weibel E R (1982) Cell number and cell characteristics of the normal human lung.  
Am Rev Respir Dis 125:332-337

- .6 Keller Hj, Favre A, Comazzi A, Weibel E R (1982) Fast video processing of electron micrographs: object recognition by local transforms using VAP - 80.  
In: 10th International Congress on Electron Microscopy, Hamburg 535-536
- .7 Wangensteen D, Weibel E R (1982) Morphometric evaluation of chorioallantoic oxygen transport in the chick embryo.  
Respir Physiol 47:1-20
- .8 Weibel E R (1982) Biomorphometry in physiological and pathological research.  
Acta Med Pol 23:115-125
- .9 Weibel E R (1982) Stereology - a bridge between morphology and physiology.  
Acta Stereol 1:23-33
- .10 Weibel E R (1982) The pathway for oxygen: lung to mitochondria.  
In: A Companion to Animal Physiology. Eds: CR Taylor,  
K Johansen, L Bolis, Cambridge University Press, Cambridge Mass 31-48
- .11 Weibel E R, Limacher W, Bachofen H (1982) Electron microscopy of rapidly frozen lungs: evaluation on the basis of standard criteria.  
J Appl Physiol 53:516-527
- 1983.
- .1 Bachofen H, Weber J, Wangensteen D, Weibel E R (1983) Morphometric estimates of diffusing capacity in lungs fixed under zone II and zone III conditions.  
Respir Physiol 52:41-52
- .2 Burri P H, Weibel E R, Gil J (1982) Ultrastructure and morphometry of the human lung.  
In: General Thoracic Surgery. Chapter 2, 2nd ed. Ed: TW Shields, Lea and Febiger,  
Philadelphia 18-42
- .3 Losa G, Weibel E R (1983) Freeze-fracture and enzymatic analysis of membrane vesicles in subcellular fractions of rat liver.  
Cell and Molecul Biol 29:129-137
- .4 Mathieu O, Cruz-Orive L M, Hoppeler H, Weibel E R (1983) Estimating length density and quantifying anisotropy in skeletal muscle capillaries.  
J Microsc 131:131-146
- .5 Weibel E R (1983) Come è influenzato lo scambio dei gas dalla struttura polmonare?  
La Radiol Med 69:16-20
- .6 Weibel E R (1983) How does lung structure affect gas exchange?  
Chest 83:657-665
- .7 Weibel E R (1983) Is the lung built reasonably?  
Am Rev Respir Dis 128:752-760
- .8 Weibel E R (1983) Sinnvolle morphometrische Deskriptoren am Beispiel des respiratorischen Systems.  
Verh Anat Ges 77:165-170
- .9 Weibel E R (1983) Stereology in biological morphometry: evolution of scope and sophistication over two decades.  
In: Acta Stereol 2/Suppl I. Proceedings 6th International Congress for Stereology, Gainesville. Ed: M Kalisnik, Mladinska Knjiga, Ljubljana 211-218
- .10 Weibel E R (1983) Das ethische Problem der Tierversuche.  
Schweiz Aerztezeitung 64/24:939-942

- .11 Weibel E R (1983) Die Frage der Verantwortung beim Tierversuch.  
In: Bedeutung und Notwendigkeit des Tierversuchs in der experimentellen Biologie.  
Symposium Fribourg, 15. Jahres-tagung USGEB, USGEB Basel 53-60
- .12 Weibel E R, Taylor C R, O'Neil J J, Leith D E, Gehr P, Hoppeler H, Langman V,  
Baudinette R V (1983) Maximal oxygen consumption and pulmonary diffusion  
capacity: a direct comparison of physiologic and morphometric measurements in  
canids.  
Respir Physiol 54:173-188
1984. 1 Hoppeler H, Lindstedt S L, Claassen H, Taylor C R, Mathieu O, Weibel E R (1984)  
Scaling mitochondrial volume in heart to body mass.  
Respir Physiol 55:131-137
- .2 Hoppeler H, Lindstedt S L, Uhlmann E, Niesel A, Cruz-Orive L M, Weibel E R (1984)  
Oxygen consumption and the composition of skeletal muscle tissue after training and  
inactivation in the European woodmouse (*Apodemus sylvaticus*).  
J Comp Physiol B 155:51-61
- .3 Weibel E R (1984) Morphometric and stereological methods in respiratory physiology  
including fixation techniques.  
In: Techniques in the Life Sciences. Respiratory Physiology. Part I. Ed: AB Otis,  
Elsevier Scientific Publishers Ireland Ltd, County Clare P401:1-35
- .4 Weibel E R (1984) Morphometry of the respiratory tract.  
In: Problems of Inhalatory Toxicity Studies. Eds: P Grosdanoff, R Bass, U  
Hackenberg, D Henschler, D Müller, Hj Klimisch, bga Schriften 5, MMV Medizin  
Verlag, München 543-554
- .5 Weibel E R (1984) The Pathway for Oxygen. Structure and Function in the Mammalian  
Respiratory System.  
Harvard Univ Press, Cambridge
- .6 Weibel E R (1984) Die Universität im Jahre Orwells. Erstarrung oder Beweglichkeit?  
NZZ Nr. 179/4.8.1984
- .7 Weibel E R (1984) Die Universität im Jahre Orwells. Erstarrung oder Beweglichkeit?  
In: Die Universität Bern — Geschichte und Entwicklung. Berner Universitätsschriften.  
Eds: H Ringeling, M Svilar, Paul Haupt, Bern 71-83
- .8 Weibel E R (1984) Vertrauen in die Wissenschaft? Von der Wissenschaft vom Leben —  
vom Leben der Wissenschaft.  
In: Berner Rektoratsreden, Paul Haupt, Bern 6-23
1985. 1 Bur S, Bachofen H, Gehr P, Weibel E R (1985) Lung fixation by airway instillation: effects  
on capillary hematocrit.  
Exp Lung Res 9:57-66
- .2 Conley K E, Weibel E R, Taylor C R, Hoppeler H (1985) Aerobic capacity estimated by  
exercise vs cold-exposure: endurance training effects in rats.  
Respir Physiol 62:273-280
- .3 Cruz-Orive L M, Hoppeler H, Mathieu O, Weibel E R (1985) Stereological analysis of  
anisotropic structures using directional statistics.  
J Appl Statist 34:14-32

- .4 Hoppeler H, Howald H, Conley K E, Lindstedt S L,  
Claassen H, Vock P, Weibel E R (1985) Endurance training in humans: Aerobic capacity and structure of skeletal muscle.  
*J Appl Physiol* 59:320-327
- .5 Schürch S, Bachofen H, Weibel E R (1985) Alveolar surface tensions in excised rabbit lungs: effect of temperature.  
*Respir Physiol* 62:31-45
- .6 Taylor C R, Weibel E R, Bolis L (1985) Design and Performance of Muscular Systems.  
The Company of Biologists Limited, Cambridge
- .7 Weibel E R (1985) Design and performance of muscular systems.  
*J exp Biol* 115:405-412
- .8 Weibel E R (1985) Lung cell biology.  
In: *Handbook of Physiology. Section 3: The Respiratory System.* Ed: AP Fishman, American Physiological Society, Bethesda 47-91
- .9 Weibel E R (1985) Der ethische Konflikt des Tierversuchs.  
*Zeitschr für Evang Ethik* 29:174-189
- .10 Weibel E R (1985) Medizin zwischen Mensch und Wissenschaft.  
*Schweiz Aerztezeitung* 66/16:705-708
- .11 Weibel E R (1984/85) Der Konflikt des Tierversuchs.  
In: *Mensch und Tier. Collegium generale der Universität Bern, Kulturhistorische Vorlesungen*, P. Lange, Bern 175-199
- 1986**
- .1 Kayar S R, Claassen H, Hoppeler H, Weibel E R (1986) Mitochondrial distribution in relation to changes in muscle metabolism in rat soleus.  
*Respir Physiol* 64:1-11
- .2 Munshi J S D, Weibel E R, Gehr P, Hughes G M (1986) Structure of the respiratory air sac of *Heteropneustes fossilis* (Bloch) (Heteropneustidae, Pisces). An electron microscope study.  
*Proc Indian Nat Sci Acad B* 52:703-713
- .3 Rodriguez M, Bur S, Favre A, Weibel E R (1986) Morphometry of the acinar air spaces.  
*Prog Respir Res* 21:75-78
- .4 Scherzmann K, Cruz-Orive L M, Eggmann R, Saenger A, Weibel E R (1986) Molecular architecture of the inner membrane of mitochondria from rat liver: A combined biochemical and stereological study.  
*J Cell Biol* 102:97-103
- .5 Weibel E R (1986) Integrity of lung structure: the role of cells and tissue.  
*Bull Eur Physiopathol Respir* 22:235s-239s
- .6 Weibel E R (1986) Functional morphology of lung parenchyma. In: *Handbook of Physiology. Section 3: The Respiratory System. Vol III, Part 1.* Eds: PT Macklem, J Mead, American Physiological Society, Bethesda 89-111
- .7 Weibel E R (1986) How much lung is good enough?  
*Eur J Respir Dis* 69:37-45
- .8 Weibel E R (1986) Wissenschaft und Gesellschaft — Verantwortung und Vertrauen.  
In: *Wissenschaft in der Verantwortung.* Ed: B Sitter, Paul Haupt, Bern 7-35

- .9 Weibel E R (1986) Universität und Medizin: Wissenschaft als Fundament der Praxis?  
Schweiz Aerztezeitung 67/21:994-999
- .10 Weibel E R (1986) Man's relation to experimental animals: modern times — the present situation in Switzerland.  
Acta Physiol Scand 128/Suppl 554:41-48
- .11 Weibel E R (1986) Wissenschaft und Wendezzeit.  
Civitas 12:349-353
- .12 Weibel E R, Taylor C R (1986) Morphometric modelling of pulmonary diffusing capacity.  
Prog Respir Res 21:52-55
- 1987.** 1 Bachofen H, Schürch S, Urbinelli M, Weibel E R (1987) Relations among alveolar surface tension, surface area, volume, and recoil pressure.  
J Appl Physiol 62:1878-1887
- .2 Bicudo J E, Weibel E R (1987) Respiratory exchanges in air breathers versus water breathers: design contrasts.  
In: Comparative Physiology: Life in Water and on Land. Eds: P Dejous, L Bolis, CR Taylor, ER Weibel, Liviana Press, Padova 15-26
- .3 Dejous P, Bolis L, Taylor C R, Weibel E R (1987) Comparative Physiology: Life in Water and on Land.  
Liviana Press, Padova
- .4 Rodriguez M, Bur S, Favre A, Weibel E R (1987) Pulmonary acinus: geometry and morphometry of the peripheral airway system in rat and rabbit.  
Am J Anat 180:143-155
- .5 Weibel E R (1987) Scaling of structural and functional variables in the respiratory system.  
Ann Rev Physiol 49:147-159
- .6 Weibel E R (1987) Ideas and tools: The invention and development of stereology.  
Acta Stereol 6/Suppl II:23-33
- .7 Weibel E R, Bachofen H (1987) How to stabilize the pulmonary alveoli: Surfactant or fibers?  
NIPS 2/April:72-75
- .8 Taylor C R, Karas R H, Weibel E R, Hoppeler H (1987) Adaptive variation in the mammalian respiratory system in relation to energetic demand.  
Respir Physiol 69:1-127
- .9 Weibel E R, Taylor C R, Hoppeler H, Karas R H (1987) Adaptive variation in the mammalian respiratory system in relation to energetic demand. I. Introduction to problem and strategy.  
Respir Physiol 69:1-6
- .10 Taylor C R, Karas R H, Weibel E R, Hoppeler H (1987) Adaptive variation in the mammalian respiratory system in relation to energetic demand. II. Reaching the limits to oxygen flow.  
Respir Physiol 69:7-26
- .11 Conley K E, Kayar S R, Rösler K, Hoppeler H, Weibel E R,  
Taylor C R (1987) Adaptive variation in the mammalian respiratory system in relation to energetic demand. IV. Capillaries and their relationship to oxidative capacity.  
Respir Physiol 69:47-64

- .12 Weibel E R, Marques L B, Constantinopol M, Doffey F, Gehr P, Taylor C R (1987) Adaptive variation in the mammalian respiratory system in relation to energetic demand. VI. The pulmonary gas exchanger. *Respir Physiol* 69:81-100
- .13 Karas R H, Taylor C R, Jones J H, Lindstedt S L, Reeves R B, Weibel E R (1987) Adaptive variation in the mammalian respiratory system in relation to energetic demand. VII. Flow of oxygen across the pulmonary gas exchanger. *Respir Physiol* 69:101-115
- .14 Taylor C R, Weibel E R, Karas R H, Hoppeler H (1987) Adaptive variation in the mammalian respiratory system in relation to energetic demand. VIII. Structural and functional design principles determining the limits to oxidative metabolism. *Respir Physiol* 69:117-127
- 1988.1** Bachofen H, Bachofen M, Weibel E R (1988) Ultrastructural aspects of pulmonary edema. *J Thorac Imag* 3:1-7
- .2 Crapo J D, Crapo R O, Jensen R L, Mercer R R, Weibel E R (1988) Evaluation of lung diffusing capacity by physiological and morphometric techniques. *J Appl Physiol* 64:2083-2091
- .3 Haefeli-Bleuer B, Weibel E R (1988) Morphometry of the human pulmonary acinus. *Anat Rec* 220:401-414
- .4 Kayar S R, Hoppeler H, Mermod L, Weibel E R (1988) Mitochondrial size and shape in equine skeletal muscle: a three-dimensional reconstruction study. *Anat Rec* 222:333-339
- .5 Mermod L, Hoppeler H, Kayar S R, Straub R, Weibel E R (1988) Variability of fiber size, capillary density and capillary length related to horse muscle fixation procedures. *Acta Anat* 133:89-95
- .6 Weibel E R (1988) Structure and function of the lung. In: Proceedings of the First Congress of The Asian Pacific Society of Respirology, Oct 21-24, 1988, Tokyo 27-32
- .7 Weibel E R, Kayar S R (1988) Matching O<sub>2</sub> delivery to O<sub>2</sub> demand in muscle. I. Adaptive variation. In: Oxygen Transfer from Atmosphere to Tissues. Eds: NC Gonzalez, MR Fedde, Plenum Publishing Corp, New York 159-169
- .8 Weibel E R, Taylor C R (1988) Design and structure of the human lung. In: Pulmonary Diseases and Disorders, Vol 1. Ed: AP Fishman, McGraw-Hill Book Company, New York 11-60, second edition
- .9 Bachofen M, Weibel E R (1988) Sequential morphologic changes in the adult respiratory distress syndrome. In: Pulmonary Diseases and Disorders, Vol 3. Ed: AP Fishman, McGraw-Hill Book Company, New York 2215-2222, second edition
- 1989.1** Burri P H, Gil J, Weibel E R (1989) Ultrastructure and morphometry of the human lung. In: General Thoracic Surgery. Ed: TW Shields, Lea and Febiger, Philadelphia 16-38, third edition

- .2 Conley K E, Christian K A, Weibel E R (1989) Capillary and mitochondrial unit in muscles of a large lizard.  
Am J Physiol 256:R982-R988
- .3 Constantinopol M, Jones J H, Weibel E R, Taylor C R, Lindholm A, Karas R H (1989) Oxygen transport during exercise in large mammals. II. Oxygen uptake by the pulmonary gas exchanger.  
J Appl Physiol 67:871-878
- .4 Longworth K E, Jones J H, Bicudo J E P W, Taylor C R, Weibel E R (1989) High rate of O<sub>2</sub> consumption in exercising foxes: large PO<sub>2</sub> difference drives diffusion across the lung.  
Respir Physiol 77:263-276
- .5 Mathieu-Costello O, Hoppeler H, Weibel E R (1989) Capillary tortuosity in skeletal muscles of mammals depends on muscle contraction.  
J Appl Physiol 66:1436-1442
- .6 Munshi J S D, Hughes G M, Gehr P, Weibel E R (1989) Structure of the air-breathing organs of a swamp mud eel, *Monopterus cuchia*.  
Japan J Ichthyology 35:453-465
- .7 Schwerzmann K, Hoppeler H, Kayar S R, Weibel E R (1989) Oxidative capacity of muscle and mitochondria: correlation of physiological, biochemical, and morphometric characteristics.  
Proc Natl Acad Sci USA, 86:1583-1587
- .8 Taylor C R, Weibel E R, Hoppeler H, Karas R H (1989) Matching structures and functions in the respiratory system. Allometric and adaptive variations in energy demand.  
In: Comparative Pulmonary Physiology: Current Concepts. Ed: SC Wood, Dekker, New York 27-65
- .9 Weibel E R (1989) Design of microvasculature and gas exchange.  
In: Cells and Tissues: A Three-Dimensional Approach by Modern Techniques in Microscopy. Ed: PM Motta, Alan R Liss, New York 147-155
- .10 Weibel E R (1989) Lung morphometry and models in respiratory physiology.  
In: Respiratory Physiology. An Analytical Approach. Eds: HK Chang, M Paiva, Dekker, New York 1-56
- .11 Weibel E R (1989) Measuring through the microscope: development and evolution of stereological methods.  
J Microsc 155:393-403
- .12 Weibel E R (1989) Anwendung der Gentechnologie beim Menschen: Chancen, Probleme, Grenzen.  
In: Gentechnologie: Chance oder Bedrohung. Universität Bern, Kulturhistorische Vorlesungen, Peter Lang, Bern 159-182
- .13 Weibel E R (1989) Interdisziplinarität: Utopie oder Chance der Universität?  
In: "Medizin" für die Medizin. Arzt und Aerztin zwischen Wissenschaft und Praxis. Eds: P Saladin, HJ Schaufelberg, P Schläppi, Helbing und Lichtenhahn, Basel 399-414
- .14 Weibel E R (1989) Fried eggs on a flying saucer: exploring the pathway for oxygen and its environment.  
In: Physiological Function in Special Environments. Eds: ChV Paganelli, LE Farhi,

- Springer Verlag, New York 17-26.
- .15 Weibel E R, Bachofen M (1989) Alveolar tissue reaction to lung injury.  
In: Interstitial Pneumonia of Unknown Etiology. Eds: M Harasawa, Y Fukuchi, H Morinari, University of Tokyo Press, Tokyo 169-178
- 1990.1 Cruz-Orive L M, Weibel E R (1990) Recent stereological methods for cell biology: a brief survey.  
*Am J Physiol* 258:L148-L156
- .2 Humbert D, Cruz-Orive L M, Weibel E R, Gehr P, Burri P H, Hoppeler H (1990) *STEPone* — An interactive program for manual stereology.  
*Acta Stereol* 9/1:111-124
- .3 Weibel E R (1990) Morphometry of non-random structures related to oxygen flow in the mammalian respiratory system.  
In: Science on Form: Proceedings of the Second International Symposium for Science on Form. Ed: S Ishizaka, KTK Scientific Publishers, Tokyo 1-16
- .4 Weibel E R (1990) Struttura e funzione del polmone.  
In: Aggiornamenti di Radiologia Toracica. Vol. VIII. Eds: R Bergonzini, G M Favagrossa, D Malavasi, APC-Sirm, Brescia 65-71
- .5 Weibel E R (1990) Morphometry: Stereological theory and practical methods.  
In: Models of Lung Disease. Microscopy and Structural Methods. Ed: J Gil, Dekker, New York 199-252
- .6 Weibel E R (1990) The contributions of Switzerland to the development of morphometry and stereology.  
In: History of Electron Microscopy in Switzerland. Ed: JR Günter, Birkhäuser Verlag, Basel 197-202
- 1991.1 Crystal R G, West J B, Barnes P J, Cherniack N S, Weibel E R (1991) The Lung: Scientific Foundations.  
Raven Press, New York
- .2 Weibel E R, Crystal R G (1991) Structural organization of the pulmonary interstitium.  
In: The Lung: Scientific Foundations. Vol 1. Eds: RG Crystal, JB West, PJ Barnes, NS Cherniack, ER Weibel, Raven Press, New York 369-380
- .3 Weibel E R (1991) Design of airways and blood vessels considered as branching trees.  
In: The Lung: Scientific Foundations. Vol 1. Eds: RG Crystal, JB West, PJ Barnes, NS Cherniack, ER Weibel, Raven Press, New York 711-720
- .4 Weibel E R, Bachofen H (1991) The fiber scaffold of lung parenchyma.  
In: The Lung: Scientific Foundations. Vol 1. Eds: RG Crystal, JB West, PJ Barnes, NS Cherniack, ER Weibel, Raven Press, New York 787-794
- .5 Weibel E R (1991) Design and morphometry of the pulmonary gas exchanger.  
In: The Lung: Scientific Foundations. Vol 1. Eds: RG Crystal, JB West, PJ Barnes, NS Cherniack, ER Weibel, Raven Press, New York 795-805
- .6 Taylor C R, Weibel E R (1991) Learning from comparative physiology.  
In: The Lung: Scientific Foundations. Vol 2. Eds: RG Crystal, JB West, PJ Barnes, NS Cherniack, ER Weibel, Raven Press, New York 1595-1607
- .7 Velazquez M, Weibel E R, Kuhn III Ch, Schuster D P (1991) PET evaluation of pulmonary

- vascular permeability: a structure-function correlation.  
J Appl Physiol 70:2206-2216
- .8 Weibel E R (1991) Fractal geometry: a design principle for living organisms.  
Am J Physiol 261:L361-L369
- .9 Weibel E R, Hoppeler H (1991) Respiratory system adaptation to hypoxia: Lung to mitochondria.  
In: Response and Adaptation to Hypoxia. Organ to Organelle. Eds: S Lahiri, NS Cherniak, RS Fitzgerald, Oxford University Press, New York 3-13
- .10 Weibel E R, Taylor C R, Hoppeler H (1991) The concept of symmorphosis: A testable hypothesis of structure-function relationship.  
Proc Natl Acad Sci USA 88:10357-10361
- 1992.1** Armstrong R B, Essén-Gustavsson B, Hoppeler H, Jones J H, Kayar S R, Laughlin M H, Lindholm A, Longworth K E, Taylor C R, Weibel E R (1992) O<sub>2</sub> delivery at  $\dot{V}O_2\text{max}$  and oxidative capacity in muscles of Standardbred horses.  
J Appl Physiol 73(6):2274-2282
- .2 Weibel E R (1992) Stereology in perspective: A mature science evolves.  
Acta Stereol 11/Suppl I:1-13
- .3 Cruz-Orive L M, Larsen S E, König M, Weibel E R (1992) Stereology of membrane loss in vertical sections: I. Theory.  
Acta Stereol 11/Suppl I:117-122
- .4 König M, Larsen S E, Cruz-Orive L M, Weibel E R (1992) Stereology of membrane loss in vertical sections: II. Application to mitochondria.  
Acta Stereol 11/Suppl I:123-128
- .5 Weibel E R, Taylor C R, Hoppeler H (1992) Variations in function and design: Testing symmorphosis in the respiratory system.  
Resp Physiol 87:325-348
- .6 Weibel E R, Feller M (1992) Schweizerische Identität und Europäische Integration.  
Elemente schweizerischer Identität: Hemmnisse oder Grundlagen für eine Annäherung an Europa?  
Publ. der Akad. Komm. der Univ. Bern, Paul Haupt Bern
- .7 Weibel E R (1992) Elemente Schweizerischer Identität: Hemmnisse oder entwicklungsfähige Grundlagen für eine Annäherung an Europa? Einführung und Fragestellung.  
In: Schweizerische Identität und Europäische Integration. Eds: ER Weibel, M Feller, Paul Haupt Bern 9-14
- .8 Feller M, Güntert M, Kälin W, Weibel E R (1992) Schweizerische Identität und Europäische Integration. Zusammenfassung und Versuch einer Synthese der wissenschaftlichen Diskussion.  
In: Schweizerische Identität und Europäische Integration. Eds: ER Weibel, M Feller, Paul Haupt Bern 15-48
- 1993.1** Bachofen M, Bachofen H, Weibel E R (1993) Pathology of acute lung injury.  
In: Pulmonary Radiology. Eds: EJ Potchen, R Grainger, R Greene, Saunders, Philadelphia 159-168

- .2 Bachofen H, Schürch S, Michel R P, Weibel E R (1993) Experimental hydrostatic pulmonary edema in rabbit lungs. Morphology. *Am Rev Respir Dis* 147:989-996
- .3 Bachofen H, Schürch S, Weibel E R (1993) Experimental hydrostatic pulmonary edema in rabbit lungs. Barrier Lesions. *Am Rev Respir Dis* 147:997-1004
- .4 Hsia C C W, Fryder-Doffey F, Stalder-Navarro V, Johnson R L, Jr, Reynolds R C, Weibel E R (1993) Structural changes underlying compensatory increase of diffusing capacity after left pneumonectomy in adult dogs. *J Clin Invest* 92:758-764
- .5 König M F, Lucocq J M, Weibel E R (1993) Demonstration of pulmonary vascular perfusion by electron and light microscopy. *J Appl Physiol* 75:1877-1883
- .6 Verbanck S, Weibel E R, Paiva M (1993) Simulations of washout experiments in postmortem rat lungs. *J Appl Physiol* 75(1):441-451
- .7 Vock R, Weibel E R (1993) Massive hemorrhage causes changes in morphometric parameters of lung capillaries and concentration of leukocytes in microvasculature. *Exp Lung Res* 19:559-577
- .8 Weibel E R (1993) Wissenschaftliche Medizin im Kreuzfeuer der Kritik? Festvortrag zum 50 Jahre Jubiläum der SAMW. In: Jahresbericht der Schweiz. Akademie der Medizinischen Wissenschaften 81-88
- .9 Weibel E R, Federspiel W J, Fryder-Doffey F, Hsia C C W, König M, Stalder-Navarro V, Vock R (1993) Morphometric model for pulmonary diffusing capacity. I. Membrane diffusing capacity. *Respir Physiol* 93:125-149
1994. 1 Burri P H, Gil J, Weibel E R (1994) Ultrastructure and morphometry of the human lung. In: General Thoracic Surgery. Ed: T W Shields, Williams & Wilkins, Philadelphia, fourth edition, 57-79
- .2 Hsia C C W, Herazo L F, Fryder-Doffey F, Weibel E R (1994) Compensatory lung growth occurs in adult dogs after right pneumonectomy. *J Clin Invest* 94:405-412
- .3 Kayar S R, Hoppeler H, Jones J H, Longworth K, Armstrong R B, Laughlin M H, Lindstedt S L, Bicudo J E P W, Groebe K, Taylor C R, Weibel E R (1994) Capillary blood transit time in muscles in relation to body size and aerobic capacity. *J Exp Biol* 194:69-81
- .4 Nonnenmacher T F, Losa G A, Weibel E R (1994) Fractals in Biology and Medicine. Birkhäuser, Basel
- .5 Weibel E R (1994) The Significance of Fractals for Biology and Medicine. An Introduction Summary. In: Fractals in Biology and Medicine. Eds: T Nonnenmacher, GA Losa, ER Weibel, Birkhäuser Verlag, Basel 2-6
- .6 Weibel E R (1994) Design of biological organisms and fractal geometry. In: Fractals in Biology and Medicine. Eds: T Nonnenmacher, GA Losa, ER Weibel,

- Birkhäuser Verlag, Basel 68-85
- .7 Weibel E R (1994) Der Fliesspfad für Sauerstoff: Wie gut ist das Atmungssystem gebaut? Schw Med Wochenschr 124:282-292
- .8 Weibel E R (1994) Exploring the structural basis for pulmonary gas exchange.  
In: The Pulmonary Circulation and Gas Exchange. Eds: WW Wagner Jr, EK Weir, Futura Publishing, Armonk 19-45
1995. 1 Pfister Ch, Kaufmann-Hayoz R, Messerli P, Stephan G, Lanzrein B, Weibel ER, Gehr P (1995) "Das 1950er Syndrom": Zusammenfassung und Synthese.  
In: Das 1950er Syndrom. Der Weg in die Konsumgesellschaft. Publ. der Akad. Komm. der Univ. Bern. Ed: Ch Pfister, Paul Haupt Bern 21-47
- .2 Conley K E, Christian K A, Hoppeler H, Weibel E R (1995) Heart mitochondrial properties and aerobic capacity are similarly related in a mammal and a reptile.  
J Exp Biol 198:739-746
- .3 Turner D L, Hoppeler H, Hokanson J, Weibel E R (1995) Cold acclimation and endurance training in guinea pigs: Changes in daily and maximal metabolism.  
Resp Physiol 101:183-188
- .4 Hoppeler H, Altpeter E, Wagner M, Turner D L, Hokanson J, König M, Stalder-Navarro V P, Weibel E R (1995) Cold acclimation and endurance training in guinea pigs:  
Changes in lung, muscle and brown fat tissue.  
Resp Physiol 101:189-198
- .5 Weibel E R (1995) André Frédéric Cournand, September 24, 1895 - February 19, 1988.  
In: Biographical Memoirs, Vol. 67, National Academy of Sciences, Washington D.C. 3-37
- .6 Wu D X Y, Weibel E R, Bachofen H, Schürch S (1995) Lung lesions in experimental hydrostatic pulmonary edema: An electron microscopic and morphometric study.  
Exp Lung Res 21:711-730
1996. 1 Bachofen H, Weibel E R (1996) Pulmonary edema.  
In: Spencer's Pathology of the Lung. Ed: P S Hasleton, Mc Graw-Hill, 707-722, fifth edition
- .2 Kitaoka H, Burri P H, Weibel E R (1996) Development of the human fetal airway tree:  
Analysis of the numerical density of airway endtips.  
Anat Rec 244:207-213
- .3 König M F, Weibel E R, Batra S (1996) Comparison of *in vivo* microvascular perfusion pattern between skeletal muscle and heart. Colloidal gold particles as *in vivo* plasma marker.  
In: Oxygen Transport to Tissue XVII. Eds: C Ince, J Kesecioglu, L Telci, K Akpir, Plenum Press, New York, 197-204
- .4 Linder W, Lanfranchi P, Weibel E R (1996) Schweizer Eigenart - eigenartige Schweiz.  
Der Kleinstaat im Kräftefeld der europäischen Integration. Publ. der Akad. Komm. der Univ. Bern, Paul Haupt Bern
- .5 Weibel E R (1996) Einführung und Fragestellung.  
In: Schweizer Eigenart - eigenartige Schweiz. Der Kleinstaat im Kräftefeld der europäischen Integration. Publ. der Akad. Komm. der Univ. Bern. Eds.: W Linder, P Lanfranchi, ER Weibel, Paul Haupt Bern 11-16

- .6 Weibel E R (1966) A tribute to Charles Richard Taylor  
J Exp Biol 199(8):i.iv
- .7 Taylor C R, Weibel E R, Weber J-M, Vock R, Hoppeler H, Roberts T J, Brichon G (1996)  
Design of the oxygen and substrate pathways. I. Model and strategy to test  
symmorphosis in a network structure.  
J Exp Biol 199:1643-1649
- .8 Roberts T J, Weber J-M, Hoppeler H, Weibel E R, Taylor C R (1996) Design of the  
oxygen and substrate pathways. II. Defining the upper limits of carbohydrate and fat  
oxidation.  
J Exp Biol 199:1651-1658
- .9 Weber J-M, Roberts T J, Vock R, Weibel E R, Taylor C R (1996) Design of the oxygen  
and substrate pathways. III. Partitioning energy provision from carbohydrates.  
J Exp Biol 1659-1666
- .10 Weber J-M, Brichon G, Zwingelstein G, McClelland G, Saucedo C, Weibel E R, Taylor C  
R (1996) Design of the oxygen and substrate pathways. IV. Partitioning energy  
provision from fatty acids.  
J Exp Biol 199:1667-1674
- .11 Vock R, Weibel E R, Hoppeler H, Ordway G, Weber J-M, Taylor C R (1996) Design of the  
oxygen and substrate pathways. V. Structural basis of vascular substrate supply to  
muscle cells.  
J Exp Biol 1675-1688
- .12 Vock R, Hoppeler H, Claassen H, Wu D X Y, Billeter R, Weber J-M, Taylor C R, Weibel E  
R (1996) Design of the oxygen and substrate pathways. VI. Structural basis of  
intracellular substrate supply to mitochondria in muscle cells.  
J Exp Biol 199:1689-1697
- .13 Weibel E R, Taylor C R, Weber J-M, Vock R, Roberts T J, Hoppeler H (1996) Design of  
the oxygen and substrate pathways. VII. Different structural limits for oxygen and  
substrate supply to muscle mitochondria.  
J Exp Biol 199:1699-1709
- .14 Weibel E R (1996) The structural basis of lung function.  
In: Respiratory Physiology - People and Ideas. Ed: J.B. West, Oxford University  
Press, New York 3-46
- .15 Weibel E R, Taylor C R (1996) Functional anatomy of the human lung.  
In: Oxford Textbook of Medicine, Vol. 2. Eds: DJ Weatherall, JGG Ledingham, DA  
Warrell, Oxford University Press, Oxford 2593-2609, third edition
- 1997
- .1 Crystal R G, West J B, Weibel E R, Barnes P J (1997) The Lung: Scientific Foundations,  
2nd edition.  
Lippincott-Raven Publishers, Philadelphia
- .2 Weibel E R, Cruz-Orive L M (1997) Morphometric methods.  
In: The Lung: Scientific Foundations, Vol. 1. Eds: RG Crystal, JB West, ER Weibel,  
PJ Barnes, Lippincott-Raven Publishers, Philadelphia 333-344, 2nd edition
- .3 Weibel E R, Crystal R G (1997) Structural organization of the pulmonary interstitium.  
In: The Lung: Scientific Foundations, Vol. 1. Eds: RG Crystal, JB West, ER Weibel,  
PJ Barnes, Lippincott-Raven Publishers, Philadelphia 685-695, 2nd edition

- .4 Weibel E R (1997) Design of airways and blood vessels considered as branching trees.  
In: The Lung: Scientific Foundations, Vol. 1. Eds: RG Crystal, JB West, ER Weibel,  
PJ Barnes, Lippincott-Raven Publishers, Philadelphia 1061-1071, 2nd edition
- .5 Weibel E R, Bachofen H (1997) The fiber scaffold of lung parenchyma.  
In: The Lung: Scientific Foundations, Vol. 1. Eds: RG Crystal, JB West, ER Weibel,  
PJ Barnes, Lippincott-Raven Publishers, Philadelphia 1139-1146, 2nd edition
- .6 Weibel E R (1997) Design and morphometry of the pulmonary gas exchanger.  
In: The Lung: Scientific Foundations, Vol. 1. Eds: RG Crystal, JB West, ER Weibel,  
PJ Barnes, Lippincott-Raven Publishers, Philadelphia 1147-1157, 2nd edition
- .7 Taylor C R, Weibel E R (1997) Learning from comparative physiology.  
In: The Lung: Scientific Foundations, Vol. 2. Eds: RG Crystal, JB West, ER Weibel,  
PJ Barnes, Lippincott-Raven Publishers, Philadelphia 2043-2054, 2nd edition
- .8 Frey M, von Känel-Christen R, Stalder-Navarro V, Duke P J, Weibel E R, Hoppeler H  
(1997) Effects of long-term hypergravity on muscle, heart and lung structure of mice  
*J Comp Physiol B* 167:494-501
- .9 Weibel E R (1997) The future of physiology. Opening Ceremony Address, 33rd Int Congr  
of Physiol Sciences, St. Petersburg, 30 June - 5 July 1997.  
*News Physiol Sci* 12:294-295
- .10 Weibel E R, Taylor C R (1997) Functional design of the human lung for gas exchange.  
In: Pulmonary Diseases and Disorders, Vol 1. Ed: AP Fishman, McGraw-Hill, New  
York 21-61, 3rd edition
- .11 Widmer H R, Hoppeler H, Nevo E, Taylor C R, Weibel E R (1997) Working underground:  
Respiratory adaptations in the blind mole rat.  
*Proc Natl Acad Sci USA* 94:2062-2067
- 1998.1 Bachofen H, Weibel E R (1998) Structure-function relationships in the pathogenesis of  
pulmonary edema.  
In: Pulmonary Edema. Eds: EK Weir, JT Reeves, Future Publishing, Armonk 17-33
- .2 Losa G A, Merlini D, Nonnenmacher T F, Weibel E R (1998) Fractals in Biology and  
Medicine, Vol 2. Birkhäuser, Basel
- .3 Weibel E R, Taylor C R, Bolis L (1998) Principles of Animal Design - The Optimization  
and Symmorphosis Debate. Cambridge University Press, New York
- .4 Weibel E R, Bolis L (1998) In memory of Charles Richard Taylor (1939-1995).  
In: Principles of Animal Design - The Optimization and Symmorphosis Debate. Eds:  
ER Weibel, CR Taylor, L Bolis, Cambridge University Press, New York xv-xvii
- .5 Weibel E R (1998) Symmorphosis and optimization of biological design: introduction and  
questions.  
In: Principles of Animal Design - The Optimization and Symmorphosis Debate. Eds:  
ER Weibel, CR Taylor, L Bolis, Cambridge University Press, New York 1-10
- .6 Weibel E R (1998) How good is best? Some afterthoughts on symmorphosis and  
optimization.  
In: Principles of Animal Design - The Optimization and Symmorphosis Debate. Eds:  
ER Weibel, CR Taylor, L Bolis, Cambridge University Press, New York 299-306
- .7 Weibel E R (1998) Medizinische Forschung ohne Gentechnologie?  
*Schweiz Med Wochenschr* 128:561-2

- .8 Hoppeler H, Weibel E R (1998) Limits for oxygen and substrate transport in mammals.  
J Exp Biol 201:1051-1064
- 1999.1 : Takeda S, Hsia C C W, Wagner E, Ramanathan M, Estrera A S, Weibel E R (1999)  
Compensatory alveolar growth normalizes gas exchange function in immature dogs  
after pneumonectomy.  
J Appl Physiol 86(4):1301-1310
- .2 Weibel E R (1999) Gas Exchange: Large surface and thin barrier determine pulmonary  
diffusing capacity.  
Minerva Anestesiologica 65(6):377-382
- .3 Weibel E R (1999) Von der Zellularpathologie zur Molekularpathologie: ein  
Paradigmawechsel.  
Schweiz Med Wochenschr 129:1731-1732
- .4 Weibel E R (1999) Understanding the limitation of O<sub>2</sub> supply through comparative  
physiology.  
Resp Physiol 118:85-93
- .5 Hoppeler H, Weibel E R (1999) : Respiration and circulation in vertebrates: Overview.  
In: Embryonic Encyclopedia of Life Sciences, <http://www.els.net>  
(doi:10.1038/npg.els0001827), originally published: June 1999
- 2000.1 Weibel E R (2000) Symmorphosis: On Form and Function in Shaping Life. The John M.  
Prather Lectures.  
Harvard Univ Press, Cambridge MA
- .2 Burri P H, Gil J, Weibel E R (2000) Ultrastructure and morphometry of the human lung.  
In: General Thoracic Surgery, Vol 1. Eds: T W Shields, J LoCicero III, R B Ponn,  
Lippincott Williams & Wilkins, Philadelphia, fifth edition, 31-49
- .3 Hoppeler H, Weibel E R (2000) Structural and functional limits for oxygen supply to  
muscle.  
Acta Physiol Scand 168:445-456
- .4 Hoppeler H, Weibel E R (2000) The pathways for oxygen and substrates  
In: Biomechanics and Biology of Movement. Eds: Benno M. Nigg, Brian R.  
MacIntosh, Joachim Mester, Human Kinetics, Champaign 79-101
- 2001.1 Weibel E R (2001) Why measure lung structure? "How it really happened" series  
Am J Respir Crit Care Med Vol. 163:314-315
- .2 Weibel E R (2001) Sterbehilfe: Hilfe zum oder beim Sterben?  
Schweiz Aerztezeitung 82:Nr 21, 1045
- .3 Weibel E R (2001) Who did what? The human side of the science enterprise  
Swiss Medical Weekly 131:289-290
- .4 Hsia C C W, Wu E Y, Wagner E, Weibel E R (2001) Preventing mediastinal shift after  
pneumonectomy impairs regenerative alveolar tissue growth  
Am J Physiol Lung Cell Mol Physiol 281:L1279-L1287
- 2002.1 Weibel E R (2002) The Physiologist's Ethical Dilemmas

- News In Physiological
- .2 Weibel E R (2002) The pitfalls of power laws  
Nature 417:131-132
- .3 Sapoval B, Filoche M, Weibel E R (2002) Smaller is better – but not too small: A physical scale for the design of the mammalian pulmonary acinus  
Proc Natl Acad Sci USA 99:10411-10416
- .4 Leuthold M, Leuenberger H, Weibel E R (2002) Megatrends – Rise and Fall of Megatrends in Science  
Proceedings of CASS-Symposium 2000
- 2003.** 1 Xiao Y, Carbayo J J P, Weibel E R, Hsia C C W (2003) Variation of lung volume after fixation when measured by immersion or Cavalieri method  
Am J Physiol Lung Cell Mol Physiol 284:L242-L245
- .2 Hoppeler H, Vogt M, Weibel E R, Flück M (2003) Response of skeletal muscle mitochondria to hypoxia  
Experimental Physiology 88.1:109-119
- 2004.** 1 Weibel E R, Bacigalupe L D, Schmitt B, Hoppeler H (2004) Allometric scaling of maximal metabolic rate in mammals: muscle aerobic capacity as determinant factor  
Resp Physiol and Neurobiol 140: 115-132
- .2 Mauroy B, Filoche M, Weibel E R, Sapoval B (2004) An optimal bronchial tree may be dangerous  
Nature, Vol. 427:633-636
- .3 Weibel E R, Hoppeler H (2004) Modeling Design and Functional Integration in the Oxygen and Fuel Pathways to Working Muscle  
Cardiovascular Engineering, Vol.4, No.1:5-18
- .4 Hsia C C W, Johnson R L, Weibel E R (2004) Compensatory lung growth:relationship to postnatal growth and adaptation in destructive lung disease  
In: The Lung: Development, Aging and the Environment. Eds. R Harding, K E Pinkerton, C C Plopper. Elsevier/Academic Press. Pp.187-199
- .5 Weibel E R (2004) Beau poumon — bon poumon?  
Rev Mal Respir 21: 665-671
- 2005.** 1 Weibel E R, Hoppeler H (2005) Exercise-induced maximal metabolic rate scales with muscle aerobic capacity.  
J Exp Biol 208: 1635-1644.
- .2 Weibel E R, Sapoval B, Filoche M (2005) Design of peripheral airways for efficient gas exchange.  
Respir Physiol and Neurobiol 148: 3-21.
- .3 Weibel E R (2005) Mandelbrot's fractals and the geometry of Life: a tribute to Benoit Mandelbrot on his 80<sup>th</sup> birthday.  
In: Fractals in Biology and Medicine. Vol. 4. G L Losa, D Merlini, T F Nonnenmacher, E R Weibel (editors), Birkhäuser, Basel, pp. 3-16

- 2007.1 Weibel E R, Hsia C C W, Ochs M (2007) How much is there really? Why stereology is essential in lung morphometry. *J Appl Physiol* 102: 459-467.
- .2 Weibel E R (2007) In memoriam Knut Schmidt-Nielsen. *J Exp Biol* 210:1299-1301.
- 2008.1 Weibel E R (2008) Modeling structure-function interdependence of pulmonary gas exchange. *Adv Exp Med Biol* 605:195-200.
- .2 Weibel E R (2008) How to make an alveolus (Editorial) *Eur Respir J* 31:483-5.
- .3 Hsia C C, Hyde D M, Ochs M, Weibel E R (2008) Commentary on viewpoint: use of mean airspace chord length to assess emphysema: To be or not to be—accurate. *J Appl Physiol* 105:1982-3.
- .4 Ochs M, Weibel ER (2008) Functional design of the human lung for gas exchange. In: Fishman's Pulmonary Diseases and Disorders 4<sup>th</sup> Edition. A P Fishman, J A Elias, J A Fishman, M A Grippi, R M Senior, A I Pack (Editors), McGrawHill, New York, pp. 23-69.
- 2009.1 Weibel E R (2009) What makes a good lung?The morphometric basis of lung function. Invited Review. *Swiss Med Wkly* 139:375-386.
- .2 Ochs M, Burri P H, Gil J, Weibel E R (2009) Ultratsructure and morphometry of the human lung. In: General Thoracic Surgery 7<sup>th</sup> Edition. T W Shields, J LoCicero, C E Reed, R H Feins (Editors). Lippincott Williams & Wilkins, Philadelphia PA, pp. 39-59.
- .3 Hsia C C W, Hyde D M, Ochs M, Weibel E R (2009) Standards for quantitative assessment of lung structure. An official research policy statement of ATS/ERS. *Am J Respir Crit Care Med* Vol 181. pp 1-25.
- 2010.1 Knudsen L, Weibel ER, Gundersen HJ, Weinstein FV, Ochs M. (2010) Assessment of airspace size characteristics by intercept (chord) measurement: an accurate and efficient stereological approach. *J Appl Physiol* 108:412-421.