

FREDERICK GRINNELL, CV January 2026

Curriculum Vitae

Contact Info: Department of Cell Biology
Ethics in Science and Medicine Program
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Education:

1966 AB, Chemistry, Clark University, Worcester, MA
1970 Ph.D., Biochem, Tufts Univ Sch Med, Boston, MA (with Jon Nishimura)
1970-1972 Research Fellow, Biochem Res Sect, VA Hosp, Dallas, TX (with Paul Srere)
1976-1980 Readings in Philosophy, Southern Methodist University (with Richard Zaner and David Hausman)

Professional Experience:

1972-1977 Assistant Professor of Cell Biology, UT Southwestern
1977-1981 Associate Professor of Cell Biology, UT Southwestern
1981 Visiting Fellow, Departments of Biology (with J.P. Trinkaus) and Philosophy (with Maurice Natanson), Yale Univ, New Haven, CT
since 1981 Professor of Cell Biology, UT Southwestern
1998-2004 Founding Director, Ethics in Science and Medicine Program, UT Southwestern
2011 Interim Chair, Department of Cell Biology, UT Southwestern
since 2013 Robert McLemore Professor of Medical Science, UT Southwestern

Honors:

1982-1984 President, UT Southwestern Sigma Xi Society
1984 Meyerhoff Visiting Professor, Weizmann Institute, Rehovot, Israel
1988 Forchheimer Visiting Professor, Hebrew University, Jerusalem, Israel
1990 Visiting Scholar, The Hastings Center, Briarcliff Manor, NY
1995-1997 School Board President, Solomon Schechter Academy of Dallas
1999 Chair, Gordon Research Conference on Wound Repair
1999-2008 MERIT Award, NIGMS, NIH
2006 Co-Chair, Gordon Research Conference on Science and Technology Policy
2006-2007 President, UT Southwestern Faculty Senate
2010 *Everyday Practice of Science* shortlisted for the (U.K.) Royal Society 2010 Science Book Prize
2012 UT System Regent's Outstanding Teaching Award

2012	Elected AAAS Fellow, Section on History and Philosophy of Science
2013	Elected member of Southwestern Academy of Teachers (SWAT)
2013	Appointed Robert McLemore Professor of Medical Science, UT Southwestern
2017	State of Texas Minnie Stevens Piper Professor Award
2019	UT Southwestern Academy of Teachers (SWAT) Distinguished Biomedical Science Educator Award
2020	UT System Shine Academy <i>Innovations in Health Science Education</i> Competition -- First Place award.

National Advisory Standing Committees:

1990-1994	NIH Cell Biol and Physiology (II) Study Section
1992-1997	ASCB Public Policy Committee
1992	NIH Strategic Plan Task Force (Code of Ethics Panel)
1993-1999	ASBMB Public Policy Committee (1997, drafted the society's <i>Code of Ethics</i>)
1994-1997	Board of Directors, Wound Healing Society (annual meeting chair 1995)
1995-1996	AAAS, Scientific Integrity Video Project
1996-1997	AAAS, Dialog Between Science and Religion Project
1998-2004	FASEB, Science Policy Committee, (1999-2001; Chair: Human Subjects and Bioethics Subcommittee)
2001-2002	Institute of Medicine, Committee on Assessing Integrity in Research Environments
2000-2004	NIH, Peer Review Oversight Group (Advisory committee to the NIH deputy director for extramural research)
2011-2013	Healthpoint/Smith&Nephew, Cellular Therapy Scientific Advisory Board
since 2011	Shriners Hospitals for Children Research Advisory Board
2013-2019	AAAS, National Conference of Lawyers and Scientists (co-chair 2016-2019)
2016-2018	AAAS, Council Delegate (Representing Section L -- History and Philosophy of Science)
Since 2019	PLoS ONE Academic Editor (science education, science careers)

North Texas Advisory Standing Committees:

since 2002	Faculty Advisory Committee, Cary M. Maguire Center for Ethics and Public Responsibility, Southern Methodist University
since 2004	Organizer, North Texas Bioethics Network

UT Southwestern Advisory Standing Committees:

1988-1999	Institutional Review Board for Human Research
1994-2018	Conflict of Interest Oversight committee (co-chair, 2013-2018)
2017-2019	Stem Cell Oversight committee
2018-2020	UT Southwestern Faculty Senate

2019-2021 Institutional Conflict of Interest Oversight committee
since 2019 Medical Student Promotions Committee
since 2022 Volunteer Faculty Appointment and Promotions Committee
since 2025 Medical Student Interview Group

Current Teaching:

Introduction to Biomedical Ethics (12 hr. enrichment elective for MS1 students)
MS Colleges ethics facilitator

Research Integrity lectures for diverse groups of students – medical, graduate,
undergraduate high school

Human Research Ethics lecture for medical students

Microanatomy Laboratory

Memberships: American Association for the Advancement of Science; National
Association for Research in Science Teaching; National Science Teachers
Association

Research focus:

1970-2015 Experimental cell biology – cell adhesion, tissue organization and
wound repair
since 1978 Philosophy of science, Biomedical ethics
since 2015 Science education

Research funding history:

1973-1992 NIH R01 CA014629 Molecular Basis of Cellular Adhesiveness
1978-1985 NIH R01 HL024221 Blood Material Interactions: Adsorption of Fibronectin
1995-1999 NIH P50 GM021681 Altered Mechanisms of Wound Repair in Thermal
Burns (Charles Baxter, PI)
1999 NIH R13 AR046168 Gordon Conference on Wound Repair
2001-2004 NIH G13 LM007526 The Everyday Practice of Science (scholarly works)
2006 NSF 0551420 Gordon Research Conference on Science and Technology
Policy
1982-2013 NIH R01 GM031321 Development of an In Vitro Wound Healing Model

Patents:

1. Grinnell, F. (September 18, 1990) US Patent# 4,957,902, Peptide inhibitors of wound contraction.
2. Grinnell, F. (December 14, 1993), US Patent# 5,270,168, Method for diagnosing non-healing ulcers.
3. Grinnell, F. and Lin, Y-C. (April 21, 1998) US Patent# 5,741,777, Modulation of wound contraction by blocking protein tyrosine phosphatase.

Bibliography

(Google Scholar – 23933 total citations as of 01/2026)

Books:

1. Grinnell, F. (1987) *The Scientific Attitude*, 1st Edition, Westview Press, Boulder, Co., (1992) *2nd Edition*, Guilford Press, New York, NY.
2. Grinnell, F. (2009) *Everyday Practice of Science: Where Intuition and Passion Meet Objectivity and Logic*, Oxford University Press, New York, N.Y. In 2010, *Everyday Practice of Science* was shortlisted for the UK Royal Society Science Book Prize
3. Elliott, S.L., Fischer, B. A., Grinnell, F., and Zigmund, M. J., Eds. (2015) *Perspectives on Research Integrity*, ASM Press, Washington, D.C.

Science Education Research Program (2015-2025)

1. Grinnell, F., Dalley, S., Shepherd, K., and Reisch, J. (2017) High school science fair and research integrity. *PLOS ONE*. 12 (3), e0174252
2. Grinnell, F., Dalley, S., Shepherd, K., and Reisch, J. (2018) High school science fair: Student opinions regarding whether participation should be required or optional and why. *PLoS ONE*. 13 (8), e0202320
3. Grinnell, F., Dalley, S., and Reisch, J. (2020) High School Science Fair: Positive and Negative Outcomes - *PLoS ONE*. 15 (2), e0229237
4. Grinnell, F. and Dalley, S. (2020) How to Make Science Fairs More Effective. *NSTA Reports*. 31(5): 3.
5. Grinnell, F. (2020) Reinventing Science Fairs. *Issues in Science and Technology*. 36(3): 23-25.
6. Grinnell, F., Dalley, S., and Reisch, J. (2021) High School Science Fair: Experiences of two groups of undergraduate bioscience majors. *PLoS ONE* 16(6): e0252627.
7. Grinnell, F., Dalley, S., and Reisch, J. (2022) High School Science Fair: Ethnicity trends in student participation and experience. *PLoS ONE* 17(3): e0264861.
8. Grinnell, F. and Dalley, S. (2022) High school science and engineering fairs: Lessons learned. *Connected Science Learning*, <https://www.nsta.org/connected-science-learning/september-october-2022>.
9. Grinnell, F., Dalley, S., and Reisch, J. (2023) High School Science Fair: Location trends in student participation and experience. *PLoS ONE*, 18 (9), e0291049.
10. Grinnell, F., Dalley, S., and Reisch, J. (2025) High School Science Fair: What Students Say -- Mastery, Performance, and Self-Determination Theory. *PLoS ONE* 20 (6), e0325283.

Research Integrity and Philosophy of Science-Related Publications (1983-2021):

1. Grinnell, F. (1983) Studies on intersubjectivity: A comparison of Martin Buber and Alfred Schutz. *Human Studies* 6: 185-195.
2. Grinnell, F. (1984) Approaching religion positively: An existential Jewish perspective. *Religion and Intellectual Life* 1: 88-98.
3. Grinnell, F. (1986) Complementarity: An approach to understanding the relationship between science and religion. *Perspectives in Biology and Medicine* 29: 292-301.
4. Grinnell, F. (1987) Harry Redner's "Pathologies of science." *Social Epistemol.* 1: 269-271. (Comment)
5. Grinnell, F. (1990) The endings of clinical research protocols: Understanding the difference between therapy and research. *IRB*. 12: 1-4
6. Grinnell, F. (1993) Industrial sponsors and the scientist. *J. NIH Research*. 5: 50-51.
7. Grinnell, F. (1994) Radical intersubjectivity: Why naturalism is an assumption necessary for doing science. In *Darwinism: Science or Philosophy?* ed. J. Buell and V. Hearn, Foundation for Thought and Ethics, Richardson, pp 99-106
8. Grinnell, F. (1994) Response to Peter van Inwagen: The problem of knowledge. In *Darwinism: Science or Philosophy?* ed. J. Buell and V. Hearn, Foundation for Thought and Ethics, Richardson, pp 192-194 (Comment)
9. Grinnell, F. (1995) COSEPUP on responsible science. *Biology and Philosophy*, 10: 229-233. (Book Review)
10. Grinnell, F. (1996) Publishing science responsibly. (Book Review) *Biology and Philosophy*, 11: 121-125.
11. Grinnell, F. (1996) Ambiguity in the practice of science. *Science*, 272: 333. (Editorial)
12. Grinnell, F. (1996) UT Southwestern -- Impact of Nobel Prizes. Nobel Foundation Website: <https://www.nobelprize.org/prizes/uncategorized/ut-southwestern-impact-of-nobel-prizes/>
13. Grinnell, F. (1997) Truth, fairness, and the definition of scientific misconduct, *J. Lab. Clin. Med.* 129: 189-192.
14. Grinnell, F. (1999) Ambiguity, trust, and the responsible conduct of science. *Science and Engineering Ethics*. 5: 205-214.
15. Grinnell, F. (1999) Responsibility, conflict, and ambiguity in the management of biomedical research laboratories. In: *Management of Biomedical Research Laboratories*, ed. T.P. Davis, University of Arizona Board of Regents, Tuscon, Arizona. pp 29-38.
16. Grinnell, F. (1999) Are scientific papers examples of rhetoric? *Science and Engineering Ethics*. 5: 487-488. (Comment)
17. Grinnell, F. (2000) Philosophy of biology and the human genome project. (Book Review) *Biology and Philosophy*. 15: 595-601.
18. Grinnell, F. (2000) The practice of science at the edge of knowledge. *Chronicle of Higher Education*. 46(29): B11-12.
19. Grinnell, F., Bishop, J.P., and McCullough, L.B. (2002) Bioethical pluralism and complementarity. *Perspectives in Biology and Medicine*. 45: 338-349.
20. Grinnell, F. (2002) The impact of ethics on research. *Chronicle of Higher Education*. 49(6): B15.
21. Grinnell, F. (2002) Doing science. *Knowledge, Technology & Policy*, 15: 204-210.

22. Grinnell, F. (2003) Defining embryo death would permit important research. Chronicle of Higher Education. 49(36): B13.
23. Grinnell, F. (2004) Human embryo research: From moral uncertainty to death. American Journal of Bioethics. 4: 12-13. (Comment)
24. Grinnell, F. (2004) Subject vulnerability: The precautionary principle of human research. American Journal of Bioethics. 4: 72-74 (Comment)
25. Grinnell, F. (2005) Misconduct: acceptable practices differ by field. Nature. 436: 776. (Letter)
26. Grinnell, F. (2006) Intelligent design: fallacy recapitulates ontogeny. FASEB J. 20: 410-1.
27. Grinnell, F. (2009) Intelligent design or intelligible design: It's a matter of faith. Chronicle of Higher Education. 55(18): B5
28. Grinnell, F. (2009) Discovery in the lab: Plato's paradox and Delbrück's principle of limited sloppiness. FASEB J. 23: 7-9.
29. Grinnell, F. (2011) Evolution of credibility. TheScientist 25: 76.
30. Grinnell, F. (2011) *The Age of Wonder* (Book Review). J. Interdisciplinary Studies. 23: 201-202.
31. Grinnell, F. (2013) Research integrity and everyday practice of science. Science and Engineering Ethics. 9: 685-701.
32. Grinnell, F. (2013) It is time to update US biomedical funding. (World View) Nature. 501: 137.
33. Grinnell, F. (2014) The interrelationship between research integrity, conflict of interest, and the research environment. J. Microbiol Biol Educ. 15: 162-164.
34. Fischer, B.A., Grinnell, F., and Zigmond MJ. (2014) Introductory comments for the scientific ethics theme. J Microbiol Biol Educ. 15: 82
35. Grinnell, F. (2015) Review of Harry Collins, *Are We All Scientific Experts Now?* Br. J. Hist. Sci. 48: 540-541.
36. Grinnell, F. (2015) Rethink our approach to assessing risk. (World View) Nature. 522: 257.
37. Grinnell, F. (2016) Objectivity. In *Vocabulary for the Study of Religion*. Ed. Robert Segal and Kocku von Stuckrad. Leiden: Brill Online Reference Works.
38. Grinnell, F., Sadler, J.Z., McNamara, V. Senetar, K., and Reisch, J. (2017) Confidence of IRB Members in their Assessments of Human Research Risk: A Study of IRB Decision-Making in Action. J Empres Human Res Ethics. 12: 140-149
39. Grinnell, F. (2018) Teaching research integrity – Using history and philosophy of science to introduce ideas about the ambiguity of research practice. HPS&ST Newsletter Opinion Page, November
40. Grinnell, F. (2019) Abduction in Everyday Practice of Science: The Logic of Unintended Experiments. Transactions of the Charles S. Peirce Society. 55(3): 215-227
41. Grinnell, F. (2020) Biomedical ethics 2.0: redefining the meaning of disease, patient and treatment. Nature Reviews Molecular Cell Biology. 21: 417-418
42. Scientific inquiry, pluralism and complementarity (2021) <https://edarxiv.org/gejwv/>

Experimental Science Papers – (1969-2017) -- **papers with more than 400 citations

1. Grinnell, F. L. and Nishimura, J. S. (1969) Succinic thiokinase of *Escherichia coli*. Purification of the enzyme and exchange reactions catalyzed by the enzyme. *Biochemistry* 8: 562-567.
2. Grinnell, F. L. and Nishimura, J. S. (1969) The mechanism of the succinic thiokinase reaction. Effector role of desulfo-CoA in succinyl phosphate formation. *Biochemistry* 8: 568-574.
3. Grinnell, F. L. and Nishimura, J. S. (1969) Studies on the catalytic mechanism of *Escherichia coli* succinic thiokinase. *Biochemistry* 8: 4126-4130.
4. Grinnell, F. L., Stollar, B. D., and Nishimura, J. S. (1969) Reversible disaggregation of *Escherichia coli* succinyl-CoA synthetase. *Biochim. Biophys. Acta* 185: 471-474.
5. Grinnell, F. and Nishimura, J. S. (1970) The inactivation and dissociation of *Escherichia coli* succinyl-CoA synthetase by sulfhydryl reagents. *Biochim. Biophys. Acta* 212: 150-157.
6. Grinnell, F. and Srere, P. A. (1971) Inhibition of cellular adhesiveness by sulfhydryl blocking reagents. *J. Cell. Physiol.* 78: 153-158.
7. Grinnell, F. and Lee, J. C. (1972) Alterations in hemoglobin synthesis during chick embryogenesis. *J. Cell. Physiol.* 79: 111-116.
8. Grinnell, F., Milam, M., and Srere, P. A. (1972) Studies on cell adhesion. II. Adhesion of cells to surfaces of diverse chemical composition and inhibition of adhesion of sulfhydryl binding reagents. *Arch. Biochem. Biophys.* 153: 193-198.
9. Nishimura, J. S., Mitchell, J. P., and Grinnell, F. (1973) Immunological studies of *Escherichia coli* succinic thiokinase. Effects of sulfhydryl reagents and other treatments of the enzyme. *J. Biol. Chem.* 248: 743-748.
10. Grinnell, F., Milam, M., and Srere, P. A. (1973) Attachment of normal and transformed hamster kidney cells to substrata varying in chemical composition. *Biochem. Med.* 7: 87-90.
11. Grinnell, F., Milam, M., and Srere, P. A. (1973) Cyclic AMP does not affect cell stickiness. *Nature New Biol.* 241: 82-83.
12. Grinnell, F., Milam, M., and Srere, P. A. (1973) Studies on cell adhesion. III. Adhesion of Baby hamster kidney cells. *J. Cell Biol.* 56: 659-665.
13. Milam, M., Grinnell, F., and Srere, P. A. (1973) The effect of centrifugation on cell adhesion. *Nature New Biol.* 244: 83-84.
14. Grinnell, F. (1973) Concanavalin A increases the strength of cell attachment to a substratum. *J. Cell Biol.* 58: 602-607.
15. Grinnell, F. (1974) Studies on the mechanism of cell attachment to a substratum: Evidence for three biochemically distant processes. *Arch. Biochem. Biophys.* 160: 304-310.
16. Grinnell, F. (1974) Studies on the mechanism of cell attachment to a substratum with serum in the medium: Further evidence supporting a requirement for two biochemically distinct processes. *Arch. Biochem. Biophys.* 165: 524-530.
17. Grinnell, F. (1975) Cell Adhesion and cell surface proteases. *Arch. Biochem. Biophys.* 169: 474-482.

18. Grinnell, F., Tobleman, M. Q., and Hackenbrock, C. R. (1975) The Distribution and mobility of anionic sites on the surfaces of baby hamster kidney cells. *J. Cell Biol.* 66: 470-479.
19. Grinnell, F. (1976) The serum dependence of baby hamster kidney cell attachment to a substratum. *Exp. Cell Res.* 97: 265-274.
20. Grinnell, F., Anderson, R. G. W., and Hackenbrock, C. R. (1976) Glutaraldehyde induced alterations of membrane anionic sites. *Biochim. Biophys. Acta.* 426: 772-775.
21. Grinnell, F. (1976) Cell spreading factor: Occurrence and specificity of action. *Exp. Cell Res.* 102: 51-62.
22. Grinnell, F., Tobleman, M. Q., and Hackenbrock, C. R. (1976) Initial attachment of baby hamster kidney cells to a non-living substratum: Ultrastructural analysis. *J. Cell Biol.* 70: 707-713.
23. Grinnell, F., Hays, D. G., and Minter, D. (1977) Cell adhesion and spreading factor: Partial purification and properties. *Exp. Cell Res.* 110: 175-190.
24. Grinnell, F. and Hays, D. G. (1978) Cell adhesion and spreading factor: Similarity to cold insoluble globulin in human serum. *Exp. Cell Res.* 115: 221-229.
25. Grinnell, F. and Hays, D. G. (1978) Induction of active cell spreading by substratum adsorbed ligands directed against the cell surface. *Exp. Cell Res.* 116: 275-284.
26. Grinnell, F. and Minter, D. (1978) Attachment and spreading of baby hamster kidney cells to collagen substrata. *Proc. Natl. Acad. Sci. USA* 75: 4408-4412.
27. Grinnell, F. and Minter, D. (1979) Cell adhesion and spreading factor: The effect of chemical modifications on factor activity. *Biochem. Biophys. Acta.* 550: 92-99.
28. Grinnell, F. and Feld, M. (1979) Initial adhesion of human fibroblasts in serum-free medium: Possible role of secreted fibronectin. *Cell* 17: 117-129.
29. Grinnell, F., Feld, M., and Snell, W. (1979) The influence of cold in-soluble globulin on platelet morphological response to substrata. *Cell Biol. Internat. Reports* 3: 585-592.
30. Grinnell, F. and Hays, D. (1979) Measurement of anionic sites on the surfaces of baby hamster kidney cells using radiolabeled polycationic ferritin. *Anal. Biochem.* 97: 400-402.
31. Hewitt, K., Beer, A. E., and Grinnell, F. (1979) Disappearance of anionic sites from the surface of the rat endometrial endothelium at the time of blastocyst implantation. *Biol. Reprod.* 21: 691-707.
32. Grinnell, F., Feld, M., and Minter, D. (1980) Cell adhesion to fibrinogen and fibrin substrata: Requirement for cold insoluble globulin. *Cell* 19: 517-525.
33. Grinnell, F. (1980) The fibroblast receptor for cell-substratum adhesion: Studies on the interaction of baby hamster kidney cells with latex beads coated by cold insoluble globulin (plasma fibronectin). *J. Cell Biol.* 86: 104-112.
34. Grinnell, F. and Feld, M. (1980) Spreading of human fibroblasts in serum free medium: Inhibition by dithiothreitol and the effect of cold insoluble globulin (plasma fibronectin). *J. Cell. Physiol.* 104: 321-334.
35. Grinnell, F. (1980) Visualization of cell-substratum adhesion plaques by antibody exclusion. *Cell Biol. Internat. Reports.* 4: 1031-1036.

36. ** Grinnell, F., Billingham, R. E., and Burgess, L. (1981) **Distribution of fibronectin during wound healing in vivo.** *J. Invest. Dermatol.* 76: 181-189.

37. Grinnell, F. and Bennett, M. H. (1981) Fibroblast adhesion on collagen substrata in the presence and absence of plasma fibronectin. *J. Cell Science.* 48: 19-34.

38. Oppenheimer-Marks, N. and Grinnell, F. (1981) Effect of plant lectins on the adhesive properties of baby hamster kidney cells. *European J. Cell Biol.* 23: 286-294.

39. ** Grinnell, F. and Feld, M. (1981) **Adsorption properties of fibronectin in relationship to biological activity.** *J. Biomed. Materials Res.* 15: 363-381.

40. Grinnell, F. and Feld, M., (1981) Distribution of fibronectin on peripheral blood cells in freshly clotted blood. *Thromb. Res.* 24: 397-404.

41. ** Grinnell, F. and Feld, M. (1982) **Fibronectin adsorption on hydrophilic and hydrophobic surfaces detected by antibody binding and analyzed during cell adhesion in serum-containing medium.** *J. Biol. Chem.* 257: 4888-4893.

42. Grinnell, F., Head, J. R., and Hoffpauir, J. (1982) Fibronectin and cell shape in vivo: Studies on the endometrium during pregnancy. *J. Cell Biol.* 94: 597-606.

43. Grinnell, F. (1982) Migration of human neutrophils in hydrated collagen lattices. *J. Cell Science.* 58: 95-108.

44. McAbee, D. D. and Grinnell, F. (1982) Sulfhydryl sensitive sites in cell adhesion: Decreased entry of -SH binding reagents into attached BHK cells. *Biochem. J.* 208: 473-478.

45. Oppenheimer-Marks, N. and Grinnell, F. (1982) Inhibition of fibronectin receptor function by antibodies against BHK cell wheat germ agglutinin receptors. *J. Cell Biol.* 95: 876-884.

46. Grinnell, F., Lang, B. R., and Phan, T. V. (1982) Detection of fibronectin receptors on the surfaces of BHK cells in suspension. *Exp. Cell Res.* 142: 499-504.

47. Grinnell, F. and Marshall, J. (1982) Coating bacteriological dishes with fibronectin permits spreading and growth of human diploid fibroblasts. *Cell Biol. Int. Reports* 6: 1013-1018.

48. Grinnell, F. and Phan, T. V. (1983) Deposition of Fibronectin onto artificial material surfaces from human plasma and blood under clotting and non-clotting conditions. *J. Cell. Physiol.* 116: 289-296.

49. McAbee, D. D. and Grinnell, F. (1983) Fibronectin-mediated binding and phagocytosis of polystyrene latex beads by baby hamster kidney cells. *J. Cell Biol.* 97: 1515-1523.

50. Grinnell, F. (1984) Manganese-dependent cell-substratum adhesion. *J. Cell Sci.* 65: 61-72.

51. Grinnell, F. and Lamke, Cheryl R. (1984) Reorganization of hydrated collagen lattices by human skin fibroblasts. *J. Cell Science.* 66: 51-63.

52. Grinnell, F. (1984) Fibroblast spreading and phagocytosis: Similar cell responses to different sized substrata. *J. Cell Physiol.* 119: 58-64.

53. Oppenheimer-Marks, N., Border, B., and Grinnell, F. (1984) BHK cell variants with defective fibronectin receptor function. *Cell Biol. Int. Reports* 8: 171-178.

54. Oppenheimer-Marks, N. and Grinnell, F. (1984) Calcium ions protect cell substratum adhesion receptors against proteolysis: Evidence from immunoabsorption and electoblotting studies. *Exp. Cell Res.* 152: 467-475.

55. Takashima, A. and Grinnell, F. (1984) Human keratinocyte adhesion and phagocytosis promoted by fibronectin. *J. Invest. Dermatol.* 83: 352-358.

56. Takashima, A. and Grinnell, F. (1985) Fibronectin-mediated keratinocyte migration and onset of fibronectin receptor function in vitro. *J. Invest. Dermatol.* 85: 304-308.

57. McAbee, D. D. and Grinnell, F. (1985) Binding and phagocytosis of fibronectin-coated beads by BHK cells: Receptor specificity and dynamics. *J. Cell Phys.*, 124: 240-246.

58. Grinnell, F. and Phan, T. V. (1985) Platelet attachment and spreading on polystyrene surfaces: Dependence of fibronectin and plasma concentration. *Thrombosis Research* 39: 165-171.

59. Guidry, C. and Grinnell, F. (1985) Studies on the mechanism of hydrated collagen gel reorganization by human skin fibroblasts. *J. Cell Sci.* 79: 67-81.

60. Shiba, Y. and Grinnell, F. (1985) Characteristics of a BHK cell variant defective in the cell-substratum contact process. *J. Cell. Phys.* 125: 449-455.

61. Grinnell, F. and Geiger, B. (1986) Interaction of fibronectin-coated beads with attached and spread fibroblasts. Binding, phagocytosis, and cytoskeletal reorganization. *Exp. Cell Res.* 162: 449-461.

62. Takashima, A., Billingham, R. E., and Grinnell, F. (1986) Activation of rabbit keratinocyte fibronectin receptor function in vivo during wound healing. *J. Invest. Dermatol.* 86: 585-590.

63. Grinnell, F., Takashima, A., and Lamke-Seymour, C. (1986) Morphological appearance of epidermal cells cultured on fibroblast reorganized collagen gels. *Cell and Tissue Research* 246: 13-21.

64. Grinnell, F. (1986) Focal adhesion sites and the removal of substratum-bound fibronectin. *J. Cell Biol.* 103: 2697-2706.

65. Guidry, C. and Grinnell, F. (1986) Contraction of hydrated collagen gels by fibroblasts: Evidence for two mechanisms by which collagen fibrils are stabilized. *Collagen and Related Research.* 6: 515-529.

66. Toda, K.-I. and Grinnell, F. (1987) Activation of human keratinocyte adhesion during cell culture. *J. Invest. Dermatol.* 88: 412-417.

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72. Grinnell, F., Ho, C-H., and Tuan, T-L. (1988) Cell adhesion and phagocytosis promoted by monoclonal antibodies not directed against fibronectin receptors. *J. Cell Sci.* 90: 201-214.
73. Grinnell, F., Fukazmizu, H., Pawelek, P., and Nakagawa, S. (1989) Collagen production, crosslinking, and fibril bundle assembly in matrix produced by fibroblasts in long term cultures supplemented with ascorbic acid. *Exp. Cell Res.* 181: 483-491.
74. Shiba, Y., Sasaki, Y., Kanno, Y., and Grinnell, F. (1989) Enhanced binding of fibronectin-coated latex beads to quiescent 3T3-L1 cells correlated with escape from growth arrest. *Exp. Cell Res.* 182: 144-151.
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76. Grinnell, F., Nakagawa, S., and Ho, C-H. (1989) The collagen recognition sequence for fibroblasts depends on collagen topography. *Exp. Cell Res.* 182: 668-672.
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