

Referenser: Dreborg S. Immunoterapins historia. *Allergi i Praxis* 2017; 1: 52–62

1. Jenner E. An inquiry into the cause and effects of the variolae vaccin. A disease discovered in some of the western counties of England, particularly Gloucestershire and known by the name of the cow pox. London: Low; 1798.
2. Curtis HH. The immunizing cure of hay fever. *Med News*. 1900;77:16-8.
3. Freeman J. Further observations on the treatment of hay fever by hypodermic inoculation of pollen vaccine. *Lancet*. 1911;ii:814-7.
4. Noon L. Prophylactic inoculation against hay fever. *Lancet*. 1911;i:1572-3.
5. Bruun E. Control studies on the specificity of specific desensitization. *Acta medica Scandinavica Supplementum*. 1950;239:332.
6. Bruun E. Control examination of the specificity of specific desensitization in asthma. *Acta allergologica*. 1949;2(2):122-8.
7. Frankland AW, Augustin R. Prophylaxis of summer hay-fever and asthma: a controlled trial comparing crude grass-pollen extracts with the isolated main protein component. *Lancet*. 1954;266(6821):1055-7.
8. Dreborg S, Lee T, Kay A, Durham S. Immunotherapy is allergen-specific: a double-blind trial of mite or timothy extract in mite and grass dual-allergic patients. *Int Arch Allergy Immunol*. 2012;158(1):63-70.
9. Dreborg S. Evaluation of allergen immunotherapy. *The journal of allergy and clinical immunology In practice*. 2015;3(2):267-8.
10. Foucard T, Johansson SG, Bennich H, Berg T. In vitro estimation of allergens by a radioimmune antiglobulin technique using human IgE antibodies. *International archives of allergy and applied immunology*. 1972;43(3):360-70.
11. Juhlin-Dannfelt C. About the occurrence of various forms of pollen allergy in Sweden. *Acta medica Scandinavica*. 1948;131(Suppl 206):563-77.
12. Loveless MH. Adjuvant treatment of hay fever with emulsions of pollen extract. *Acta allergologica*. 1948;1(2):226.
13. Dalbo S. Experience with Repository Therapy of Pollinosis in Northern Italy. *Annals of allergy*. 1964;22:670-7.
14. Frankland AW, Evans RG, Macaulay DB, Edwards JW. Hay Fever Treated by Repository Injections. *The Practitioner*. 1964;193:71.
15. Registration of Allergen Preparations. . Uppsala: Nordic Council on Medicines; 1980. p. 1-30.
16. Einarsson R, Dreborg S. Manufacturers' criteria for in-house references. *Arbeiten aus dem Paul-Ehrlich-Institut, dem Georg-Speyer-Haus und dem Ferdinand-Blum-Institut zu Frankfurt aM*. 1987(80):131-8.
17. Dreborg S, Frew A, Editors. Position Paper. Allergen standardisation and skin tests. *Allergy*. 1993;47(Suppl 14):48-82.
18. Larsen JN, Dreborg S. Standardization of allergen extracts. In: Walker A, editor. *Methods in molecular medicine*. 1382008. p. 133-45.
19. Nelson HS. The effect of preservatives and dilution on the deterioration of Russian thistle (*Salsola pestifer*), a pollen extract. *J Allergy Clin Immunol*. 1979;63(6):417-25.
20. Dreborg S, Grimmer O. Biological standardization of allergen extracts/preparations. *Arbeiten aus dem Paul-Ehrlich-Institut, dem Georg-Speyer-Haus und dem Ferdinand-Blum-Institut zu Frankfurt aM*. 1983(78):77-82.
21. Dreborg S, Basomba A, Belin L, Durham S, Einarsson R, Eriksson N, et al. Biological equilibration of allergen preparations: methodological aspects and reproducibility. *Clin Allergy*. 1987;17(6):537-50.
22. Guidelines for registration and standardization of allergenic extracts. . 2 ed. Uppsala: Nordic Council on Medicines; 1989. p. 1-48.
23. Bjorksten F, Haahtela T, Backman A, Suoniemi I. Assay of the biologic activity of allergen skin test preparations. *J Allergy Clin Immunol*. 1984;73(3):324-31.
24. Lessof MH, Sobotka AK, Lichtenstein LM. Protection against anaphylaxis in hymenoptera-sensitive patients by passive immunization. *Monographs in allergy*. 1977;12:253-6.

25. Hunt KJ, Valentine MD, Sobotka AK, Benton AW, Amodio FJ, Lichtenstein LM. A controlled trial of immunotherapy in insect hypersensitivity. *The New England journal of medicine*. 1978;299(4):157-61.
26. Muller U, Thurnheer U, Patrizzi R, Spiess J, Hoigne R. Immunotherapy in bee sting hypersensitivity. Bee venom versus wholebody extract. *Allergy*. 1979;34(6):369-78.
27. Mari A, Scala E. Allergome: a unifying platform. *Arbeiten aus dem Paul-Ehrlich-Institut*. 2006(95):29-39; discussion -40.
28. Bjorksten F, Halmepuro L, Hannuksela M, Lahti A. Extraction and properties of apple allergens. *Allergy*. 1980;35(8):671-7.
29. Dreborg S, Foucard T. Allergy to apple, carrot and potato in children with birch pollen allergy. *Allergy*. 1983;38(3):167-72.
30. Dreborg S. Skin prick/puncture testing in food allergy. In: Abdel Rahman AM, editor. *Food Allergy- Methods of detection and clinical studies* 2017. p. In press.
31. Rance F, Juchet A, Bremont F, Dutau G. Correlations between skin prick tests using commercial extracts and fresh foods, specific IgE, and food challenges. *Allergy*. 1997;52(10):1031-5.
32. Dreborg S. Standardization of mPEG-modified allergens. *Arbeiten aus dem Paul-Ehrlich-Institut*. 1992(85):147-57; discussion 57-9.
33. Patterson R. The Robert A. Cooke memorial lecture. Allergen immunotherapy with modified allergens. *J Allergy Clin Immunol*. 1981;68(2):85-90.
34. Marsh DG. Preparation and properties of allergoids, derived from native pollen allergens by mild formalin treatment. *International archives of allergy and applied immunology*. 1971;41(1):199-215.
35. Pfaar O, Biedermann T, Klimek L, Sager A, Robinson DS. Depigmented-polymerized mixed grass/birch pollen extract immunotherapy is effective in polysensitized patients. *Allergy*. 2013;68(10):1306-13.
36. Pfaar O, Robinson DS, Sager A, Emuzyte R. Immunotherapy with depigmented-polymerized mixed tree pollen extract: a clinical trial and responder analysis. *Allergy*. 2010;65(12):1614-21.
37. Dreborg S, Akerblom EB. Immunotherapy with monomethoxypolyethylene glycol modified allergens. *Critical reviews in therapeutic drug carrier systems*. 1990;6(4):315-65.
38. Puggioni F, Durham SR, Francis JN. Monophosphoryl lipid A (MPL) promotes allergen-induced immune deviation in favour of Th1 responses. *Allergy*. 2005;60(5):678-84.
39. Nelson H, Cartier S, Allen-Ramey F, Lawton S, Calderon MA. Network meta-analysis shows commercialized subcutaneous and sublingual grass products have comparable efficacy. *The journal of allergy and clinical immunology In practice*. 2015;3(2):256-66 e3.
40. Van Metre TE, Jr., Adkinson NF, Jr., Amodio FJ, Kagey-Sobotka A, Lichtenstein LM, Mardiney MR, Jr., et al. A comparison of immunotherapy schedules for injection treatment of ragweed pollen hay fever. *J Allergy Clin Immunol*. 1982;69(2):181-93.
41. Dreborg S, Foucard T. Clustered Regimen Using Spectralgen/Pharmalgen Timothy and Birch Allergen Preparations. In: Ståhl T, editor. *Dose Regimens - Reactions - Practical Consequences: What to do?* 1 ed. Uppsala: Pharmacia Diagnostics A.B.; 1983. p. 30-5.
42. Dreborg S. Anafylaktiska reaktioner vid behandling med Alutard  allergenextrakt, timotej och 5-gräs, rapporterade under åren 2002 – 2003. [Internal report]. In press 2004.
43. Bolle R, Berstad A, Florvaag E, Steinsvåg S. Praktisk veileder i allergivaksinasjon. Norsk kvalitetssikringsdokument for Hyposensibilisering – Allergenspesifikk immunterapi – Allergivaksinasjon
Norsk Forening for Allergologi og Immunpatologi. 2 ed. Oslo: Den Norske Legeforening; 2011.
44. Moller C, Bjorksten B, Nilsson G, Dreborg S. The precision of the conjunctival provocation test. *Allergy*. 1984;39(1):37-41.
45. Dreborg S. Conjunctival provocation test (CPT) *Allergy*. 1985;40(Suppl 4): 66-7.
46. Bernstein IL, Li JT, Bernstein DI, Hamilton R, Spector SL, Tan R, et al. Allergy diagnostic testing: an updated practice parameter. *Annals of allergy, asthma & immunology : official publication of the American College of Allergy, Asthma, & Immunology*. 2008;100(3 Suppl 3):S1-148.

47. Dreborg S. Proficiency testing: Skin prick test. AAAAI Annual Meeting 2013,; 2013-02-22; San Antonio, USA. <https://aaaai.confex.com/aaaai/2013/webprogramhandouts/Session1315.html> AAAAI; 2013. p. 1-2.
48. Dreborg S, Holgersson M. Evaluation of methods for the estimation of threshold concentrations by the skin prick test. *Int Arch Allergy Immunol.* 2015;166(1):71-6.
49. Dreborg S, Basomba A, Löfkvist T, Holgersson M, Möller C. Evaluation of Skin Reactivity during (Immuno-) Therapy. Validation of Methods for Estimation of Changes in Skin Reactivity and Correlation to Shock Organ Sensitivity. *Immunotherapy Open access.* 2016;2:109.
50. Osterballe O, Lowenstein H, Prahl P, Skov P, Weeke B. Immunotherapy in hay fever with two major allergens 19, 25 and partially purified extract of timothy grass pollen. A controlled double blind study. In vitro variables, season i. *Allergy.* 1981;36(3):183-99.
51. Frostad AB, Grimmer O, Sandvik L, Aas K. Hyposensitization. Comparing a purified (refined) allergen preparation and a crude aqueous extract from timothy pollen. *Allergy.* 1980;35(2):81-95.
52. Kuhn W, Urbanek R, Forster J, Dreborg S, Burow G. Hyposensibilisierung bei Pollnosis: dreijährige prospektive Vergleichsuntersuchung bei Kindern *Allergologie* 1985;8:103-9.
53. Petersen BN, Janniche H, Munch EP, Wihl JA, Bowadt H, Ipsen H, et al. Immunotherapy with partially purified and standardized tree pollen extracts. I. Clinical results from a three-year double-blind study of patients treated with pollen extracts either of birch or combinations of alder, birch and hazel. *Allergy.* 1988;43(5):353-62.
54. Möller C, Dreborg S. Cross-reactivity between deciduous trees during immunotherapy. I. In vivo results. *Clin Allergy.* 1986;16(2):135-43.
55. Taylor WW, Ohman JL, Jr., Lowell FC. Immunotherapy in cat-induced asthma. Double-blind trial with evaluation of bronchial responses to cat allergen and histamine. *J Allergy Clin Immunol.* 1978;61(5):283-7.
56. Hedlin G, Graff-Lonnevig V, Heilborn H, Lilja G, Norrlind K, Pegelow KO, et al. Immunotherapy with cat- and dog-dander extracts. II. In vivo and in vitro immunologic effects observed in a 1-year double-blind placebo study. *J Allergy Clin Immunol.* 1986;77(3):488-96.
57. Valovirta E, Viander M, Koivikko A, Vanto T, Ingeman L. Immunotherapy in allergy to dog. Immunologic and clinical findings of a double-blind study. *Annals of allergy.* 1986;57(3):173-9.
58. Valovirta E, Koivikko A, Vanto T, Viander M, Ingeman L. Immunotherapy in allergy to dog: a double-blind clinical study. *Annals of allergy.* 1984;53(1):85-8.
59. Sundin B, Lilja G, Graff-Lonnevig V, Hedlin G, Heilborn H, Norrlind K, et al. Immunotherapy with partially purified and standardized animal dander extracts. I. Clinical results from a double-blind study on patients with animal dander asthma. *J Allergy Clin Immunol.* 1986;77(3):478-87.
60. Haugaard L, Dahl R, Jacobsen L. A controlled dose-response study of immunotherapy with standardized, partially purified extract of house dust mite: clinical efficacy and side effects. *J Allergy Clin Immunol.* 1993;91(3):709-22.
61. Dreborg S, Agrell B, Foucard T, Kjellman NI, Koivikko A, Nilsson S. A double-blind, multicenter immunotherapy trial in children, using a purified and standardized *Cladosporium herbarum* preparation. I. Clinical results. *Allergy.* 1986;41(2):131-40.
62. Malling HJ, Dreborg S, Weeke B. Diagnosis and immunotherapy of mould allergy. V. Clinical efficacy and side effects of immunotherapy with *Cladosporium herbarum*. *Allergy.* 1986;41(7):507-19.
63. Osterballe O. Immunotherapy with grass pollen major allergens. *Allergy.* 1982;37(6):379-88.
64. Frostad AB, Grimmer O, Sandvik L, Moxnes A, Aas K. Clinical effects of hyposensitization using a purified allergen preparation from Timothy pollen as compared to crude aqueous extracts from Timothy pollen and a four-grass pollen mixture respectively. *Clin Allergy.* 1983;13(4):337-57.
65. Mosbech H, Osterballe O. Does the effect of immunotherapy last after termination of treatment? Follow-up study in patients with grass pollen rhinitis. *Allergy.* 1988;43(7):523-9.
66. Jacobsen L, Nuchel Petersen B, Wihl JA, Lowenstein H, Ipsen H. Immunotherapy with partially purified and standardized tree pollen extracts. IV. Results from long-term (6-year) follow-up. *Allergy.* 1997;52(9):914-20.

67. Hedlin G, Heilborn H, Lilja G, Norrlind K, Pegelow KO, Schou C, et al. Long-term follow-up of patients treated with a three-year course of cat or dog immunotherapy. *J Allergy Clin Immunol.* 1995;96(6 Pt 1):879-85.
68. Haugaard L, Dahl R, Sparholt S, Jacobsen L. A dose-Response Study of Immunotherapy in Asthmatics: 6-Year Follow up. *Allergy.* 1997;52(Suppl. 37):162 Abstract.
69. FDA approves insect venom products. *FDA Drug Bull.* 1979;9(3):15-6.
70. Mosbech H, Malling HJ, Biering I, Bowadt H, Soborg M, Weeke B, et al. Immunotherapy with yellow jacket venom. A comparative study including three different extracts, one adsorbed to aluminium hydroxide and two unmodified. *Allergy.* 1986;41(2):95-103.
71. Calderon MA, Larenas D, Kleine-Tebbe J, Jacobsen L, Passalacqua G, Eng PA, et al. European Academy of Allergy and Clinical Immunology task force report on 'dose-response relationship in allergen-specific immunotherapy'. *Allergy.* 2011;66(10):1345-59.
72. Linneberg A, Madsen F, Skaaby T. Allergen-specific immunotherapy and risk of autoimmune disease. *Current opinion in allergy and clinical immunology.* 2012;12(6):635-9.
73. Lockey RF, Benedict LM, Turkeltaub PC, Bukantz SC. Fatalities from immunotherapy (IT) and skin testing (ST). *J Allergy Clin Immunol.* 1987;79(4):660-77.
74. Bernstein DI, Epstein T. Systemic reactions to subcutaneous allergen immunotherapy. *Immunology and allergy clinics of North America.* 2011;31(2):241-9, viii-ix.
75. Medicines CoSo. Desensitizing vaccines. *British medical journal.* 1986;293:948.
76. Calderon MA, Rodriguez Del Rio P, Vidal C, Just J, Pfaar O, Linneberg A, et al. An EAACI "European Survey on Adverse Systemic Reactions in Allergen Immunotherapy (EASSI)": the methodology. *Clinical and translational allergy.* 2014;4:22.
77. Malling HJ, Abreu-Nogueira J, Alvarez-Cuesta E, Bjorksten B, Bousquet J, Caillot D, et al. Local immunotherapy. *Allergy.* 1998;53(10):933-44.
78. Moller C, Dreborg S, Lanner A, Bjorksten B. Oral immunotherapy of children with rhinoconjunctivitis due to birch pollen allergy. A double blind study. *Allergy.* 1986;41(4):271-9.
79. Bjorksten B, Moller G, Broberger U, Ahlstedt S, Dreborg S, Johansson SGO, et al. Clinical and Immunological Effects of Oral Immunotherapy with a Standardized Birch Pollen Extract. *Allergy.* 1986;41:290-5.
80. Mosbech H, Dreborg S, Madsen F, Ohlsson H, Stahl Skov P, Taudorf E, et al. High dose grass pollen tablets used for hyposensitization in hay fever patients. A one-year double blind placebo-controlled study. *Allergy.* 1987;42(6):451-5.
81. Vickery BP, Berglund JP, Burk CM, Fine JP, Kim EH, Kim JI, et al. Early oral immunotherapy in peanut-allergic preschool children is safe and highly effective. *J Allergy Clin Immunol.* 2017;139(1):173-81 e8.
82. Jones SM, Burks AW, Keet C, Vickery BP, Scurlock AM, Wood RA, et al. Long-term treatment with egg oral immunotherapy enhances sustained unresponsiveness that persists after cessation of therapy. *J Allergy Clin Immunol.* 2016;137(4):1117-27 e1-10.
83. Dahl R, Stender A, Rak S. Specific immunotherapy with SQ standardized grass allergen tablets in asthmatics with rhinoconjunctivitis. *Allergy.* 2006;61(2):185-90.
84. Frolund L, Durham SR, Calderon M, Emminger W, Andersen JS, Rask P, et al. Sustained effect of SQ-standardized grass allergy immunotherapy tablet on rhinoconjunctivitis quality of life. *Allergy.* 2010;65(6):753-7.
85. Bousquet J, Lockey R, Malling HJ. Allergen immunotherapy: therapeutic vaccines for allergic diseases. A WHO position paper. *J Allergy Clin Immunol.* 1998;102(4 Pt 1):558-62.
86. Portnoy J, Cox LS. Is the Benefit From Prescribing Epinephrine Autoinjectors for Sublingual Immunotherapy Worth the Cost? Lessons Learned From Clinical Trials. *The journal of allergy and clinical immunology In practice.* 2017;5(1):90-1.
87. Epstein TG, Calabria C, Cox LS, Dreborg S. Current Evidence on Safety and Practical Considerations for Administration of Sublingual Allergen Immunotherapy (SLIT) in the United States. *The journal of allergy and clinical immunology In practice.* 2017;5(1):34-40 e2.
88. Devillier P, Dreyfus JF, Demoly P, Calderon MA. A meta-analysis of sublingual allergen immunotherapy and pharmacotherapy in pollen-induced seasonal allergic rhinoconjunctivitis. *BMC medicine.* 2014;12:71.

89. Anderson HM, Wood RA, Busse WW. Dust Mite-Induced Perennial Allergic Rhinitis in Pediatric Patients and Sublingual Immunotherapy. *The journal of allergy and clinical immunology In practice*. 2017;5(1):46-51.
90. Moingeon P, Lombardi V, Baron-Bodo V, Mascarell L. Enhancing Allergen-Presentation Platforms for Sublingual Immunotherapy. *The journal of allergy and clinical immunology In practice*. 2017;5(1):23-31.
91. Nolte H, Casale TB, Lockey RF, Fogh BS, Kaur A, Lu S, et al. Epinephrine Use in Clinical Trials of Sublingual Immunotherapy Tablets. *The journal of allergy and clinical immunology In practice*. 2017;5(1):84-9 e3.
92. Passalacqua G, Nowak-Wegrzyn A, Canonica GW. Local Side Effects of Sublingual and Oral Immunotherapy. *The journal of allergy and clinical immunology In practice*. 2017;5(1):13-21.
93. Pepper AN, Calderon MA, Casale TB. Sublingual Immunotherapy for the Polyallergic Patient. *The journal of allergy and clinical immunology In practice*. 2017;5(1):41-5.
94. Bahceciler NN, Galip N. Comparing subcutaneous and sublingual immunotherapy: what do we know? *Current opinion in allergy and clinical immunology*. 2012;12(6):640-7.
95. Senti G, Kundig TM. Intralymphatic immunotherapy. *The World Allergy Organization journal*. 2015;8(1):9.
96. Hylander T, Larsson O, Petersson-Westin U, Eriksson M, Kumlien Georen S, Winqvist O, et al. Intralymphatic immunotherapy of pollen-induced rhinoconjunctivitis: a double-blind placebo-controlled trial. *Respiratory research*. 2016;17:10.
97. Purohit A, Niederberger V, Kronqvist M, Horak F, Gronneberg R, Suck R, et al. Clinical effects of immunotherapy with genetically modified recombinant birch pollen Bet v 1 derivatives. *Clinical and experimental allergy : journal of the British Society for Allergy and Clinical Immunology*. 2008;38(9):1514-25.
98. Vrtala S, Hirtenlehner K, Susani M, Hufnagl P, Binder BR, Vangelista L, et al. Genetic engineering of recombinant hypoallergenic oligomers of the major birch pollen allergen, Bet v 1: candidates for specific immunotherapy. *Int Arch Allergy Immunol*. 1999;118(2-4):218-9.
99. Klimek L, Bachert C, Lukat KF, Pfaar O, Meyer H, Narkus A. Allergy immunotherapy with a hypoallergenic recombinant birch pollen allergen rBet v 1-FV in a randomized controlled trial. *Clinical and translational allergy*. 2015;5:28.
100. Muller U, Akdis CA, Fricker M, Akdis M, Blesken T, Bettens F, et al. Successful immunotherapy with T-cell epitope peptides of bee venom phospholipase A2 induces specific T-cell anergy in patients allergic to bee venom. *J Allergy Clin Immunol*. 1998;101(6 Pt 1):747-54.
101. Norman PS, Ohman JL, Jr., Long AA, Creticos PS, Geftter MA, Shaked Z, et al. Treatment of cat allergy with T-cell reactive peptides. *American journal of respiratory and critical care medicine*. 1996;154(6 Pt 1):1623-8.
102. Nilsson OB, Neimert-Andersson T, Bronge M, Grundstrom J, Sarma R, Uchtenhagen H, et al. Designing a multimer allergen for diagnosis and immunotherapy of dog allergic patients. *PloS one*. 2014;9(10):e111041.
103. deVore NC, Huynh S, Dobrovolskaia EN, Slater JE. Multiplex microbead measurements for the characterization of cat and ragweed allergen extracts. *Annals of allergy, asthma & immunology : official publication of the American College of Allergy, Asthma, & Immunology*. 2010;105(5):351-8.
104. Kuehr J, Brauburger J, Zielen S, Schauer U, Kamin W, Von Berg A, et al. Efficacy of combination treatment with anti-IgE plus specific immunotherapy in polysensitized children and adolescents with seasonal allergic rhinitis. *J Allergy Clin Immunol*. 2002;109(2):274-80.
105. Valenta R, Ferreira F, Focke-Tejkl M, Linhart B, Niederberger V, Swoboda I, et al. From allergen genes to allergy vaccines. *Annual review of immunology*. 2010;28:211-41.
106. Baranyi U, Gattringer M, Valenta R, Wekerle T. Cell-based therapy in allergy. *Current topics in microbiology and immunology*. 2011;352:161-79.
107. Dreborg S. Evaluation of skin reactivity. The concept of histamine equivalent allergen threshold concentration. submitted. 2017.
108. Arvidsson M, Odebäck P, Eriksson EM, Hammarlund A, Nilsson A, Sundler L, et al. *Allergenspecifik immunterapi*. . Stockholm: Svensk Förening för Allergologi; 2009. Available from: http://www.sffa.nu/wp-content/uploads/2015/11/2010_ASIT.pdf.

109. Lofkvist T, Agrell B, Dreborg S, Svensson G. Effects of immunotherapy with a purified standardized allergen preparation of *Dermatophagoides farinae* in adults with perennial allergic rhinoconjunctivitis. *Allergy*. 1994;49(2):100-7.
110. Formgren H, Dreborg S, Kober A, Lanner Å, Olofsson E. A Controlled Study of Immunotherapy With Pharmalgen *D.farinae* Mite Extract. *Annals Allergy* 1985;55:312.
111. Spangfort MD, Gajhede M, Osmark P, Poulsen FM, Ipsen H, Larsen JN, et al. Three-dimensional structure and epitopes of Bet v 1. *Int Arch Allergy Immunol*. 1997; 113(1-3): 243-5.