

CURRICULUM VITAE

- 1 NAME** Magdalena Fossum
- 2 BIRTH DATA** May 12, 1966 in Uppsala, Sweden
- 3 ADDRESS**
Residence: Scheelegatan 40 C, 112 28 Stockholm, Sweden
Workplace: Section of Paediatric Urology, S2:04, Astrid Lindgren Children's hospital, Karolinska University hospital, 171 76 Stockholm
- 4 PHONE AND EMAIL**
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Email: [magdalena.fossum@ki.se](mailto:magdalenafossum@ki.se)
- 5 COURSES AND DEGREES**
2011 Fellow of European Board of Paediatric Surgery (EUMS)
2010 Fellow of European Academy of Paediatric Urology (JCPU)
2003 Qualification as a Specialist of Paediatric Surgery, Swedish National Board of Health and Welfare
 2001-2003 Resident in Paediatric Surgery
 1998-2001 Resident in General Surgery, Anaesthesia and Intensive care
 1996-1998 Resident in Paediatric Surgery
1996 License to practice, The Swedish National Board of Health and Welfare
1990- 1994 Medical student at Karolinska Institutet (KI)
1986- 1989 Medical student at Uppsala University
- 6 DOCTORAL DEGREE**
2004 Ph.D. Dissertation, December 17 in Paediatric Surgery at the Department of Women's and Children's Health, KI
Thesis: In vitro and in vivo studies on cultured urothelial cells
Supervisors: Prof. Agneta Nordenskjöld and Prof. Gunnar Kratz
1994 M.D. Karolinska Institutet, Stockholm, Sweden
- 7 POSTDOC APPOINTMENTS**
2006-2008 Postdoc research fellowship at Harvard Medical School (18 mo).
Laboratory of Tissue Repair and Gene Transfer, Div. of Plastic Surgery, Brigham and Women's Hospital, Boston, MA (PI prof. Elof Eriksson)
2005- 2012 Postdoc. Group for Malformation genetics. Dept. of Women's and Children's Health, Karolinska Institutet (PI prof. Agneta Nordenskjöld)
- 8 DOCENT-LEVEL COMPETENCE**
2014 Paediatric Surgery, Department of Women's and Children's Health, KI
2014 Group leader for Tissue engineering research studies at the Department of Women's and Children's Health, KI
- 9 CURRENT POSITION**
2019- Professor in Pediatric Surgery, Rigshospitalet and Copenhagen University
2019- Senior Consultant in Pediatric Surgery and Urology, Dept. of Pediatric Surgery, Center of Kræft and Organsygdomme, Rigshospitalet
- 10 PRIOR POSITIONS**
2018-2019 Head of Section of Paediatric Urology
2018-2019 Head of Residents in Paediatric Surgery
2011-2019 Senior consultant (överläkare) at the Section of Urology, Department of Paediatric Surgery, Astrid Lindgren Children's Hospital, Karolinska University Hospital
2014- 20% Research funded by Stockholm City Council (ALF)

2015 Feb-March, General surgeon, Doctors without Borders (MSF Paris), Hangu in Pakistan,
2008- 2014 50% research and education by ALF-postdoc or SSMF-employment
2010- 2011 Head of Section of Urology, Department of Paediatric Surgery
2008- 2011 Consultant in Paediatric Surgery (bitr. överläkare)
2004- 2008 Attending specialist in Paediatric Surgery
1996- 2003 Resident in Paediatric Surgery

11 SUPERVISOR

Main: Gisela Reinfeldt, ST barnkirurgi. Dissertation 10 nov 2016
Said Zeiai, ST barnkirurgi, Dissertation 2 juni 2017.
Doktorand Xi Liu, reg april 2016. Bortgången jan 2018
Post-doc Clara Chamorro, MSc, PhD 2012-2016
Guest researcher Jixue Zhao 2011-2012, Qiu-Ling universitetet i Qui-Ling, Kina
Co-supervisor: Åsa Ekblad, Civilinjengör, CLINTEC, KI, Disp. 20 april 2018
Doktorand Samara Arkani, MD, Reg 2017, Karolinska Institutet
Dokorand Lottie Phillips, AT-läk, CSTP, Reg 2018, Karolinska Institutet
Doktorand Simone Hildorf, MD, Reg 2019, Copenhagen University

12 SELECTED ACADEMIC DISTINCTIONS AND OTHER MERITS

Commissions of trust

2019 June- Novo Nordisk professorship for studies in regenerative medicine
2017- Chair of research in the European Reference Network eUROGEN
2016- Chair of ESPU Research Committee, European Society of Paediatric Urology (ESPU)
2016- Karolinska representative in ERN board for eUROGEN
2016-2017 Responsible for National Specialized Medical Care application for Paediatric Urology (rikssjukvård), successfully attained Dec 2017
2013- Program director, JCPU accredited training centre
2011- 16 Member of Educational Committee, ESPU
2009- External reviewer for specialist degree in Paediatric Surgery for The Swedish National Board of Health and Welfare
2010- Fellow of Swedish Society of Medical Science (SSMF)
2009- External reviewer for medical information services at www.1177.se
2006-2009 Co-author of educational book in Paediatric Surgery for The Swedish Society of Paediatric Surgery
2005- 2006, 2007-2010, 2013-2014, 2016-2017 Local representative, Swedish doctors association (Läkarföreningen)
2004- 2009 Scientific Secretary, The Swedish Society of Paediatric Surgery
2004- 2008 Co-author of syllabus for national accreditation in Paediatric Surgery for The Swedish National Board of Health and Welfare
2004- 2008 Co-author of educational protocol for national accreditation in Paediatric Surgery for The Swedish Society of Paediatric Surgery

Awards

2012 Best translational research, The Swedish Society of Medicine
2009 Best scientific oral presentation, European Society of Paediatric Urology
2007 Best scientific poster presentation, European Society of Paediatric Urology
2005 Best thesis award, European Society of Paediatric Urology
2001 Best scientific presentation, Swedish Society of Paediatric Surgery

14 LANGUAGE SKILLS

Native language: Swedish. Fluent in English and Spanish

14 PUBLICATION LIST**Peer-review original articles**

1. **M. Fossum**, C-J. Gustafson, A. Nordenskjöld, G. Kratz. Isolation and in vitro cultivation of human urothelial cells from bladder washings of adult patients and children. *Scand J Plast Reconstr Surg Hand Surg.* 2003;37(1):41-5
2. **M. Fossum**, A. Nordenskjöld, G. Kratz. Engineering urinary tissue in vitro. *Tissue Eng.* 2004;10(1-2):175-80
3. **M. Fossum**, F. Lundberg, K. Holmberg, J. Schoumanns, G. Kratz, A. Nordenskjöld. Long-term culture of human urothelial cells--a qualitative analysis. *Cells Tissues Organs.* 2005;181(1):11-22
4. **M. Fossum**, J. Svensson, G. Kratz, A. Nordenskjöld. Autologous in vitro cultured urothelium in hypospadias repair. *J Pediatr Urol.* 2007;3(1):10-8
5. Hirsch T, Spielmann M, Zuhaili B, Koehler T, **Fossum M**, Steinau HU, Yao F, Steinstraesser L, Onderdonk AB, Eriksson E. Enhanced susceptibility to infections in a diabetic wound healing model. *BMC Surg.* 2008 Feb 29;8(1):5
6. Velander P, Theopold C, Hirsch T, Bleiziffer O, Zuhaili B, **Fossum M**, Hoeller D, Gheerardyn R, Chen M, Visovatti S, Svensson H, Yao F, Eriksson E. Impaired wound healing in an acute diabetic pig model and the effects of local hyperglycemia. *Wound Repair Regen.* 2008;16(2):288-93
7. T. Hirsch, M. Spielmann, P. Velander, B. Zuhaili, O. Bleiziffer, **M. Fossum**, L. Steinstraesser, F. Yao, E. Eriksson. Insulin-like growth factor-1 gene therapy and cell transplantation in diabetic wounds. *J Gene Med.* 2008;10(11):1247-52
8. T. Hirsch, M. Spielmann, B. Zuhaili, **M. Fossum**, M. Metzger, H-U. Steinau, F. Yao, A. B. Onderdonk, L. Steinstrasser, E. Eriksson. Human beta-defensin-3 promotes wound healing in infected diabetic wounds. *J Gene Med.* 2009;11(3):220-8
9. **M. Fossum**, B. Zuhaili, T. Hirsch, M. Spielmann, B. R. G. Reish, P. Mehta, E. Eriksson. Minced skin for tissue engineering of epithelialized subcutaneous tunnels. *Tissus Eng Part A.* 2009;15(8):2085-92
10. **M. Fossum**, A. Nordenskjöld. Tissue-engineered transplants for the treatment of severe hypospadias. *Horm Res Paediatr.* 2010;73(2):148-52
11. Zuhaili B, Aflaki P, Koyama T, **Fossum M**, Reish R, Schmidt B, Pomahac B, Eriksson E. Meshed skin grafts placed upside down can take if desiccation is prevented. *Plast Reconstr Surg.* 2010;125(3):855-65
12. **M. Fossum**, B. Zuhaili, R. Reish, P. Mehta, T. Hirsch, M. Spielmann, E. Eriksson. Minced urothelium for tissue engineering of subcutaneous conduits. *J Urol.* 2010;184(2):757-61

13. **M. Fossum**, J. Skikunieni, A. Orrego, A. Nordenskjöld. Prepubertal follow-up after hypospadias repair with in vitro cultured autologous cells. *Acta Paediatr. (Oslo, Norway)* : 1992) 2012;101(7):755-60
14. F. Ajallouelian, S. Zeiai, R. Rojas, **M. Fossum**, J. Hilborn. One-stage tissue engineering of bladder wall patches for an easy-to-use approach at the surgical table. *Tissue Eng Part C Methods*. 2013;19(9):688-96
15. G. Reinfeldt Engberg, J. Lundberg, C. I. Chamorro, A. Nordenskjöld, **M. Fossum**. Transplantation of autologous minced bladder mucosa for a one-step reconstruction of a tissue engineered bladder conduit. *BioMed Research International* 2013;2013():212734
16. F. Ajallouelian, S. Zeiai, R. **M. Fossum**, J. Hilborn. Constructs of electrospun PLGA, compressed collagen and minced urothelium for minimally manipulated autologous bladder tissue expansion. *Biomaterials*. 2014;35(22):5741-8
17. J. Zhao, S. Zeiai, Å. Ekblad, A. Nordenskjöld, C. Götherström, M. Fossum. Transdifferentiation of autologous bone marrow cells on a collagen-poly(ϵ -caprolactone) scaffold for tissue engineering in complete lack of native urothelium. *J R Soc Interface*. 2014;11(96):20140233
18. C. I. Chamorro, S. Zeiai, G. Reinfeldt Engberg, D. Brodin, A. Nordenskjöld, **M. Fossum**. A study on proliferation and gene expression in normal human urothelial cells in culture. *Tissue Eng Part A*. 2015;21(3-4):510-7
19. L. Örtqvist, **M. Fossum**, M. Andersson, A. Nordenström, L. Frisé, G. Holmdahl, A. Nordenskjöld. Long-term follow-up of adult men born with hypospadias: Urological and cosmetic results after surgery. *J Urol*. 2015;193(3):975-81
20. Å. Ekblad, H. Qian, M. Westgren, K. Le Blanc, **M. Fossum**, C. Götherström. Amniotic fluid- A source for clinical therapeutics in the newborn? [Stem Cells Dev](#). 2015;24(12):1405-14
21. T. Józsa, Z. Klárik, F. Kiss, E. Tóth, A. Mester, Z. Hargitay, Y.C. Changchien, **M. Fossum**, N. Németh. The effect of tunica albuginea incision with tunica vaginalis flap coverage on testicular microcirculation in a rat testicular torsion model. [Asian J Androl](#). 2016;18(3):462-6
22. C.I. Chamorro, S. Zeiai, G. Reinfeldt Engberg, **M. Fossum**. Minced Tissue in Compressed Collagen: A Cell-Containing Biotransplant for Single-Staged Reconstructive Repair. *JoVE* 2016(108), e53061
23. G. Reinfeldt Engberg, Å. Mantel, **M. Fossum**, A. Nordenskjöld. Maternal and Fetal Risk Factors for Bladder Exstrophy: A Nationwide Swedish Case-Control Study. *J Ped Urol* 2016;12(5):304.e1-304.e7
24. S. Zeiai, A. Nordenskjöld, **M. Fossum**. Advantages of Reduced Prophylaxis after Tubularized Incised Plate Repair of Hypospadias. *J Urol*. 2016;196(4):1244-9

25. G. Reinfeldt Engberg, C.I. Chamorro, A. Nordenskjöld, **M. Fossum**. Expansion of submucosal bladder wall tissue in vitro and in vivo. *Biomed Res Int*. 2016;2016():5415012-, 9 pages
26. L. Örtqvist, **M. Fossum**, M. Andersson, A. Nordenström, L. Frisé, G. Holmdahl, A. Nordenskjöld. Sexuality and fertility in men with hypospadias; improved outcome. *Andrology*. 2017;5(2):286-293
27. C.I. Chamorro, S. Zeiai, G. Reinfeldt Engberg, D. Brodin, J. Lundin, J. Fernandez Martinez, A. Nordenskjöld, **M. Fossum**. Study on genetic stability in human urothelial cells in vitro. *J Tissue Eng Regen Med*. 2018;12(2):e720-e726
28. Å. Ekblad, **M. Fossum**, C. Götherström. Soft tissue repair with easy-accessible autologous newborn placenta or umbilical cord blood in severe malformations: A primary evaluation. *Stem Cells Int*. 2017;2017():1626741, 10 pages
29. A. Al-Mashhadi, A. Checa, N. Wåhlin, T. Nevéus, **M. Fossum**, C. E. Wheelock, B. Karanikas, A. Stenberg, E. G. Persson, M. Carlström. Changes in arterial pressure and markers of nitric oxide homeostasis and oxidative stress following surgical correction of hydronephrosis in children. *Pediatric nephrology (Berlin, Germany)* 2018;33(4):639-649
30. Å. Ekblad, **M. Fossum**, M. Westgren, C. Götherström. Fetal subcutaneous cells have potential for autologous tissue engineering. *J Tissue Eng Reg Med*. 2018;12(5):1177-1185
31. F. Ajallouelian, N. Nikogeorgos, **M. Fossum**, S. Lee, I.S. Chronakis. Compressed collagen constructs with optimized mechanical properties and cell interactions for tissue engineering applications. *Int J Biol Macromol*. 2018;108():158-166
32. C. I. Chamorro, M. Asghar, X. Liu, Å. Ekblad, A. Färnert, C. Götherström, **M. Fossum**. Urothelial cell senescence is not linked with telomere shortening. *J Tissue Eng Regen Med*. 2019 May 22 [Epub ahead of print]
33. G. Reinfeldt Engberg, **M. Fossum**, A. Nordenskjöld. Long-term outcome of living with bladder exstrophy in Sweden: A nationwide matched cohort study. *Submitted*
34. S. Zeiai, C.I. Chamorro, J. Huo, J. Hilborn, **M. Fossum**. *In vivo* tissue engineering as a single surgical procedure in a rodent model. *Submitted*
35. J. Winberg, P. Gustavsson, E. Sahlin, M. Larsson, H. Ehrén, **M. Fossum**, T. Wester, A. Nordgren, A. Nordenskjöld. Pathogenic Copy Number Variants are Detected in a Subset of Patients with Gastrointestinal Malformations. *Accepted*
36. S. Hildorf, E. Clasen-Linde, D. Cortes, **M. Fossum**, J. Thorup. The fertility potential is compromised in about 25% of non-syndromic cryptorchid boys despite orchidopexy within the first year of life. *Accepted*
37. C.I. Chamorro, X. Liu, G. Reinfeldt Engberg, **M. Fossum**. Molecular and histological studies of bladder wound healing in a rodent model. *Accepted*

Peer-reviewed review articles

38. P. Larsson, C.I. Chamorro, **M. Fossum**. A review on bladder wound healing after mechanical injury. *Tissue Sci Eng* 7:170 doi:10.4172/2157-7552.1000170 <http://www.omicsonline.org/open-access/a-review-on-bladder-wound-healing-after-mechanical-injury-2157-7552-1000170.php?aid=74637>

39. B. Kutasy, D. Koyle, **M. Fossum**. Urinary Tract Infection In Children: Management In The Era Of Antibiotic Resistance – A Pediatric Urologist’s View. *Eur Urol Focus*. 2017;3(2-3):207-211

40. F. Ajallouelian, G. Lemon, I.S. Chronakis, J. Hilborn, **M. Fossum**. Urinary bladder biomechanics and scaffolds for regenerative medicine. *Nature reviews. Urology* 2018;15(3):155-174

Peer-review editorials and educational articles

41. G. Beckers, M. Kaefer, **M. Fossum**. Construction of a scientific abstract. Editorial, ESPU Research Committee. *J Pediatr Urol*. 2017;13(6):639-640

42. G. Beckers, **M. Fossum**, M. Kaefer, How to review a meeting abstract. *J Pediatr Urol*. 2018;14(1):71-72

43. L. Harper, K. Herbst, N. Kalfa and **M. Fossum** as part of ESPU Research Committee. Ethical Issues in Research. *J Pediatr Urol*. 2018 Jun;14(3):287-288

44. L. Harper, K. Herbst, N. Kalfa and **M. Fossum** as part of ESPU Research Committee. Ethical Issues in Research: Human and Animal Experimentation? *J Pediatr Urol*. 2018 Jun;14(3):286

45. M. Castagnetti, D. Bagli, **M. Fossum**. Reviewing scientific manuscripts. *J Pediatr Urol*. 2018;14(2):133-134

46. K. Herbst, L. Harper, N. Kalfa and **M. Fossum** as part of ESPU research committee. A brief description on Study Design. *J Pediatr Urol*. 2018 Apr;14(2):135-136

47. Kaefer M, Beckers G, Gobet R, El-Ghoneimi A, **Fossum M**; ESPU Research Committee. How ESPU grades clinical abstracts. *J Pediatr Urol*. 2018 Oct;14(5):451-452. doi: 10.1016/j.jpuro.2018.07.009. Epub 2018 Jul 21.

48. Harper L, Castagnetti M, Herbst K, Bagli D, Kaefer M, Beckers G, **Fossum M**, Kalfa N. How to apply for a research grant: 10 tips and tricks. *J Pediatr Urol*. 2018 Oct;14(5):453-454. doi: 10.1016/j.jpuro.2018.08.016. Epub 2018 Sep 11.

49. **Fossum M**, Herbst K, Harper L, Castagnetti M, Beckers G, Bagli D, Kalfa N, Kaefer M; ESPU research committee. Evidence-based medicine I, background. *J Pediatr Urol*. 2018 Nov 22.

50. Castagnetti M, Herbst K, Harper L, Beckers G, Bagli D, Kalfa N, Kaefer M, **Fossum M**; ESPU research committee. Evidence-based medicine II: How to perform a literature search. *J Pediatr Urol*. 2019, March 6

- 51.** Kaefer M, Castagnetti M, Herbst K, Harper L, Beckers G, Bagli D, Kalfa N, **Fossum M**; ESPU research committee. Evidence-based medicine III: Level of evidence. *J Pediatr Urol.* 2019 Apr 24 [Epub ahead of print]
- 52.** Beckers G, Harper L, Castagnetti M, Herbst K, Kaefer M, Bagli D, Kalfa N, **Fossum M**; ESPU research committee. Evidence-based medicine IV: How to find an evidence-based answer to a clinical question? Make a CAT! *J Pediatr Urol.* *J Pediatr Urol.* 2019 May 14 [Epub ahead of print]
- 53.** **Fossum M**, Bagli D, Beckers G, Harper L, Castagnetti M, Herbst K, Kaefer M, Kalfa N; ESPU research committee. Evidence-based medicine V; How to use it in clinical practise. *In print*
- 54.** Bagli D, Beckers G, Harper L, Castagnetti M, Herbst K, Kaefer M, Kalfa N, **Fossum M**; ESPU research committee. Evidence-based medicine V; Evidence BAsed medicine versus experience based medicine. *In print*

Peer-review published scientific communications

- 50.** Basement membrane formation after transplantation of skin to full thickness wounds. Zuhaili B, **Fossum M**, Mehta P, Reish R, Pomahac B, Yao F, *et al* *WOUND REPAIR AND REGENERATION* 2008;16(2):A11-A11
- 51.** Effect of human beta-defensin-3 expression in a novel infected diabetic porcine wound model. Hirsch T, Spielmann M, Zuhaili B, **Fossum M**, Steinau Hu, Yao F, *et al* *JOURNAL OF THE AMERICAN COLLEGE OF SURGEONS* 2007;205(3):S54-S55
- 52.** Gene transfer of insulin-like growth factor (IGF-1) improves wound healing in diabetic full-thickness porcine wounds
- 53.** Zuhaili B, Hirsch T, Spielmann M, Bleiziffer O, Velander P, **Fossum M**, *et al* *JOURNAL OF THE AMERICAN COLLEGE OF SURGEONS* 2007;205(3):S55-S55
- 54.** Increased susceptibility to wound infection in diabetic pigs
Spielmann M, Hirsch T, Zuhaili B, Fossum M, Steinau Hu, Yao F, *et al* *WOUND REPAIR AND REGENERATION* 2007;15(2):A35-A35
- 55.** Tissue engineering of subcutaneous tunnels with autologous minced epithelium
Fossum M, Zuhaili B, Spielmann M, Hirsch T, Eriksson E
JOURNAL OF THE AMERICAN COLLEGE OF SURGEONS 2007;205(3):S105-S105
- 56.** Tissue engineering of subcutaneous tunnels with minced skin
Fossum M, Zuhaffl B, Spielmann M, Hirsch T, Eriksson E
JOURNAL OF UROLOGY 2007;177(4):239-239