
Publication: Research - peer-review › Book chapter – Annual report year: 2018

Publication: Research - peer-review › Journal article – Annual report year: 2018

Identification of the cognate peptide-MHC target of T cell receptors using molecular modeling and force field scoring. / Lanzarotti, Esteban; Marcatili, Paolo; Nielsen, Morten. In: Molecular Immunology, Vol. 94, 2018, p. 91-97.

Publication: Research - peer-review › Journal article – Annual report year: 2018

Improved methods for predicting peptide binding affinity to MHC class II molecules. / Jensen, Kamilla Kjærgaard; Andreatta, Massimo; Marcatili, Paolo; Buus, Sören; Greenbaum, Jason A; Yan, Zhen; Sette, Alessandro; Peters, Bjoern; Nielsen, Morten. In: Immunology, 2018.
Publication: Research - peer-review › Journal article – Annual report year: 2018

Publication: Research - peer-review › Journal article – Annual report year: 2018

Isolation and characterization of bacteriophages with therapeutic potential. / Villarroel, Julia; Nielsen, Morten (Main supervisor); Larsen, Mette Voldby (Supervisor); Kilstrup, Mogens (Supervisor). Technical University of Denmark (DTU), 2018. 98 p.
Publication: Research › Ph.D. thesis – Annual report year: 2018

NetH2pan: A Computational Tool to Guide MHC peptide prediction on Murine Tumors. / DeVette, Christa I; Andreatta, Massimo; Bardet, Wilfried; Cate, Steven J; Jurtz, Vanessa Isabell; Jackson, Kenneth W; Welm, Alana L; Nielsen, Morten; Hildebrand, William H. In: Cancer Immunology Research, 2018.
Publication: Research - peer-review › Journal article – Annual report year: 2018

Predicted MHC peptide binding promiscuity explains MHC class I ‘hotspots’ of antigen presentation defined by mass spectrometry eluted ligand data. / Jappe, Emma Christine; Kringelum, Jens Vindahl; Trolle, Thomas; Nielsen, Morten. In: Immunology, 2018.
Publication: Research - peer-review › Journal article – Annual report year: 2018

The SysteMHC Atlas project. / Shao, Wenguang; Pedrioli, Patrick G. A.; Wolski, Witold; Scurtescu, Cristian; Schmid, Emanuel; Vizcaino, Juan A.; Courcelles, Mathieu; Schuster, Heiko; Kowalewski, Daniel; Marino, Fabio; Arlehamn, Cecilia S. L.; Vaughan, Kerrie; Peters, Bjorn; Sette, Alessandro; Ottenhoff, Tom H. M.; Meijgaard, Krista E.; Nieuwenhuizen, Natalie; Kaufmann, Stefan H. E.; Schlaphach, Ralph; Castle, John C.; Nesvizhskii, Alexey I.; Nielsen, Morten; Deutsch, Eric W.; Campbell, David S.; Moritz, Robert L.; Zubarev, Roman A.; Ytterberg, Anders Jimmy; Purcell, Anthony W.; Marcilla, Miguel; Paradela, Alberto; Wang, Qi; Costello, Catherine E.; Ternette, Nicola; van Veelen, Peter A.; van Els, Cecile A. C. M.; Heck, Albert J. R.; de Souza, Gustavo A.; Solld, Ludvig M.; Admon, Arie; Stevanovic, Stefan; Rammensee, Hans-Georg; Thibault, Pierre; Perreault, Claude; Bassani-Sternberg, Michal; Aebersold, Ruedi; Caron, Etienne. In: Nucleic Acids Research, Vol. 46, No. D1, 2018, p. D1237-D1247.
Publication: Research - peer-review › Journal article – Annual report year: 2018

Use of a Regression Model to Study Host-Genomic Determinants of Phage Susceptibility in MRSA. / Zschach, Henrik; Larsen, Mette Voldby; Hasman, Henrik; Westh, Henrik; Nielsen, Morten; Międzybrodzki, Ryszard; Jóźwik-Matysiak, Ewa; Weber-Dąbrowska, Beata; Górski, Andrzej.
An Analysis of Natural T Cell Responses to Predicted Tumor Neoepitopes. / Bjerregaard, Anne-Mette; Nielsen, Morten; Jurtz, Vanessa Isabell; Barra, Carolina M.; Hadrup, Sine Reker; Szallasi, Zoltan Imre; Eklund, Aron Charles.
Publication: Research - peer-review › Journal article – Annual report year: 2017

ArrayPitope: Automated Analysis of Amino Acid Substitutions for Peptide Microarray-Based Antibody Epitope Mapping. / Hansen, Christian Skjødt; Østerbye, Thomas; Marcatili, Paolo; Lund, Ole; Buus, Søren; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2017

BepiPred-2.0: improving sequence-based B-cell epitope prediction using conformational epitopes. / Jespersen, Martin Closter; Peters, Bjoern; Nielsen, Morten; Marcatili, Paolo.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Breaking confinement: unconventional peptide presentation by major histocompatibility (MHC) class I allele HLA-A*02:01. / Remesh, Soumya G.; Andreatta, Massimo; Ying, Ge; Kaever, Thomas; Nielsen, Morten; McMurtrey, Curtis P.; Hildebrand, William; Peters, Bjoern; Zajonc, Dirk M.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Citrullination only infrequently impacts peptide binding to HLA class II MHC. / Sidney, John; Becart, Stephane; Zhou, Mimi; Duffy, Karen; Lindvall, Mikaela; Moore, Erin C; Moore, Eugene L; Rao, Tadimeti; Rao, Navin; Nielsen, Morten; Peters, Bjoern; Sette, Alessandro; Goldberg, Anna Carla (Editor).
Publication: Research - peer-review › Journal article – Annual report year: 2017

Genomics of phages with therapeutic potential. / Zschach, Henrik; Nielsen, Morten (Main supervisor); Hasman, Henrik (Supervisor); Larsen, Mette Voldby (Supervisor).
Technical University of Denmark (DTU), 2017. 131 p.
Publication: Research › Ph.D. thesis – Annual report year: 2018

GibbsCluster: unsupervised clustering and alignment of peptide sequences. / Andreatta, Massimo; Alvarez, Bruno; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Identification of immediate early gene products of bovine herpes virus 1 (BHV-1) as dominant antigens recognized by CD8 T cells in immune cattle. / Hart, Jane; MacHugh, Niall D.; Sheldrake, Tara; Nielsen, Morten; Morrison, W. Ivan.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Machine Learning Reveals a Non-Canonical Mode of Peptide Binding to MHC class II Molecules. / Andreatta, Massimo; Jurtz, Vanessa Isabell; Kaever, Thomas; Sette, Alessandro; Peters, Bjoern; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Metagenomic Analysis of Therapeutic PYO Phage Cocktails from 1997 to 2014. / Villarroel, Julia; Larsen, Mette Voldby; Kilstrup, Mogens; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Machine Learning Reveals a Non-Canonical Mode of Peptide Binding to MHC class II Molecules. / Andreatta, Massimo; Jurtz, Vanessa Isabell; Kaever, Thomas; Sette, Alessandro; Peters, Bjoern; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2017

Metagenomic Analysis of Therapeutic PYO Phage Cocktails from 1997 to 2014. / Villarroel, Julia; Larsen, Mette Voldby; Kilstrup, Mogens; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2017
MHC-I Ligand Discovery Using Targeted Database Searches of Mass Spectrometry Data: Implications for T-Cell Immunotherapies. / Murphy, J. Patrick; Konda, Prathyusha; Kowalewski, Daniel J.; Schuster, Heiko; Clements, Derek; Kim, Youra; Cohen, Alejandro M.; Sharif, Tanveer; Nielsen, Morten; Stevanovic, Stefan; Lee, Patrick W.; Gujar, Shashi. In: Journal of Proteome Research, Vol. 16, No. 4, 2017, p. 1806-1816.

Publication: Research - peer-review › Journal article – Annual report year: 2017


Publication: Research - peer-review › Journal article – Annual report year: 2016


Publication: Research - peer-review › Journal article – Annual report year: 2017

NetMHCPan-4.0: Improved Peptide-MHC Class I Interaction Predictions Integrating Eluted Ligand and Peptide Binding Affinity Data. / Jurtz, Vanessa Isabell; Paul, Sinu; Andreatta, Massimo; Marcatili, Paolo; Peters, Bjoern; Nielsen, Morten; Buscaglia, Carlos A.; Aguero, Feman. In: Journal of Immunology, Vol. 199, No. 8, 2017.

Publication: Research - peer-review › Journal article – Annual report year: 2017

Next-generation ELISA diagnostic assay for Chagas Disease based on the combination of short peptidic epitopes. / Mucci, Juan; Carmona, Santiago J.; Volcovich, Romina; Altcheh, Jaime; Bracamonte, Estefanisa; Marco, Jorge D.; Nielsen, Morten; Buscaglia, Carlos A.; Aguero, Feman. In: P L o S Neglected Tropical Diseases (Print), Vol. 11, No. 10, e0005972, 2017.

Publication: Research - peer-review › Journal article – Annual report year: 2017


Publication: Research - peer-review › Journal article – Annual report year: 2017


Publication: Research - peer-review › Journal article – Annual report year: 2017


Publication: Research - peer-review › Journal article – Annual report year: 2017

The Intergenic Recombinant HLA-B*46:01 Has a Distinctive Peptidome that Includes KIR2DL3 Ligands. / Hilton, Hugo G.; McMurtry, Curtis P.; Han, Alex S.; Djaooud, Zakia; Guethlein, Lisbeth A.; Blokhuis, Jeroen H.; Pugh, Jason L.; Goyos, Ana; Horowitz, Amir; Buchli, Rico; Jackson, Ken W.; Bardet, Wilfred; Bushnell, David A.; Robinson, Philip J.; Mendoza, Juan L.; Birnbaum, Michael E.; Nielsen, Morten; Garcia, K. Christopher; Hildebrand, William H.; Parham, Peter. In: Cell Reports, Vol. 19, No. 7, 2017, p. 1394-1405.

Publication: Research - peer-review › Journal article – Annual report year: 2017

A combined prediction strategy increases identification of peptides bound with high affinity and stability to porcine MHC class I molecules SLA-1*04:01, SLA-2*04:01, and SLA-3*04:01. / Pedersen, Lasse Eggers; Rasmussen, Michael; Harmdaal, Mikkel; Nielsen, Morten; Buus, Søren; Jungersen, Gregers. In: Immunogenetics, Vol. 68, No. 2, 2016, p. 157-165.

Publication: Research - peer-review › Journal article – Annual report year: 2015

A novel approach to probe host-pathogen interactions of bovine digital dermatitis, a model of a complex polymicrobial infection. / Marcatili, Paolo; Weiss Nielsen, Martin; Sichertz-Pontén, Thomas; Jensen, Tim Kåre; Schaefer-Nielsen, Claus; Boye, Mette; Nielsen, Morten; Schou, Kirstine Kiltgaard.
Defining the HLA class I-associated viral antigen repertoire from HIV-1-infected human cells. / Ternette, Nicola; Yang, Hongbing; Partridge, Thomas; Llano, Anuska; Cedeño, Samandhy; Fischer, Roman; Charles, Philip D.; Dudek, Nadine L.; Mothe, Beatriz; Crespo, Manuel; Fischer, William M.; Korber, Bette T. M.; Nielsen, Morten; Borrow, Persephone; Purcell, Anthony W.; Brander, Christian; Dorrell, Lucy; Kesseler, Benedikt M.; Hanke, Tomáš.
Publication: Research - peer-review › Journal article – Annual report year: 2016

Engineering a CTL-Tailored Replicon RNA Vaccine against PRRSV. / Welner, Simon; Werder, Simea; Nielsen, Morten; Lund, Ole; Gerber, Markus; Liniger, Matthias; Ruggli, Nicolas; Summerfield, Artur; Larsen, Lars Erik; Jungersen, Gregers. 2016. Abstract from 11th International Veterinary Immunology Symposium, Gold Coast, Australia.
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Expanding specificity of class I restricted CD8+ T cells for viral epitopes following multiple inoculations of swine with a human adenovirus vectored foot-and-mouth disease virus (FMDV) vaccine. / Pedersen, Lasse E.; Patch, Jared R; Kenney, Mary; Glaibbon, Raisa A; Nielsen, Morten; Jungersen, Gregers; Buus, Søren; Golde, William T.
Publication: Research - peer-review › Journal article – Annual report year: 2016

Gapped sequence alignment using artificial neural networks: application to the MHC class I system. / Andreatta, Massimo; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2015

HIV infection is associated with preservation of MAIT cells in the lungs but alteration of their phenotype and T cell receptor repertoire. / Wong, E. B.; Xulu, B.; Prakadan, S.; Shalek, A. K.; Laloo, U.; Bajnath, P.; Suleman, M.; Moodley, V.; Mitha, M.; Maharaj, P.; Costiniuk, C.; Nielsen, Morten; Mhlane, Z.; Karim, F.; Lewinsohn, David M.; Ndung’u, T.
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2017

HostPhinder: A Phage Host Prediction Tool. / Villarroel, Julia; Kleinheinz, Kortine Annina; Jurtz, Vanessa Isabell; Zschach, Henrik; Lund, Ole; Nielsen, Morten; Larsen, Mette Voldby.
Publication: Research - peer-review › Journal article – Annual report year: 2016

Immunogenicity of HLA Class I and II Double Restricted Influenza A-Derived Peptides. / Pedersen, Sara Ram; Christensen, Jan Pravsgaard; Buus, Søren; Rasmussen, Michael; Korsholm, Karen Smith; Nielsen, Morten; Claesson, Mogens Helweg.
Publication: Research - peer-review › Journal article – Annual report year: 2016

Improved pan-specific prediction of MHC class I peptide binding using a novel receptor clustering data partitioning strategy. / Mattsson, Andreas Holm; Kringelum, Jens Vindahl; Garde, C.; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2016

Toxoplasma gondii peptide ligands open the gate of the HLA class I binding groove. / McMurtrey, Curtis; Trolle, Thomas; Sansom, Tiffany; Remesh, Soumya G.; Kaever, Thomas; Bardet, Wilfried; Jackson, Kenneth; McLeod, Rima; Sette, Alessandro; Nielsen, Morten; Zajonc, Dirk M.; Blader, Ira J.; Peters, Bjoern; Hildebrand, William.
Publication: Research - peer-review › Journal article – Annual report year: 2016

MetaPhinder-Identifying Bacteriophage Sequences in Metagenomic Data Sets. / Jurtz, Vanessa Isabell; Villarroel, Julia; Lund, Ole; Larsen, Mette Voldby; Nielsen, Morten.
NetMHCpan-3.0; improved prediction of binding to MHC class I molecules integrating information from multiple receptor and peptide length datasets. / Nielsen, Morten; Andreatta, Massimo.
In: Genome Medicine, Vol. 8, No. 1, 33, 2016.

Pan-specific prediction of peptide-MHC Class I complex stability, a correlate of T cell immunogenicity. / Rasmussen, Michael; Fenoy, Emilio; Harndahl, Mikkel; Kristensen, Anne Bregnalle; Nielsen, Ida Kallehauge; Nielsen, Morten; Buus, Søren.
In: Journal of Immunology, Vol. 197, No. 4, 2016, p. 1517-1524.

Sequence diversity between class I MHC loci of African native and introduced Bos taurus cattle in Theileria parva endemic regions : in silico peptide binding prediction identifies distinct functional clusters. / Obara, Isaiah; Nielsen, Morten; Jeschek, Marie; Nijhof, Ard; Mazzoni, Camila J.; Svitek, Nicholas; Steinaa, Lucilla; Awino, Elias; Olds, Cassandra; Jabbar, Ahmed; Clausen, Peter Henning; Bishop, Richard P.

T-cell recognition is shaped by epitope sequence conservation in the host proteome and microbiome. / Bresciani, Anne Gather; Paul, Sinu; Schommer, Nina; Dillon, Myles B.; Bancroft, Tara; Greenbaum, Jason; Sette, Alessandro; Nielsen, Morten; Peters, Bjorn.

The Length Distribution of Class I-Restricted T Cell Epitopes Is Determined by Both Peptide Supply and MHC Allele-Specific Binding Preference. / Trolle, Thomas; McMurtrey, Curtis P.; Sidney, John; Bardet, Wilfried; Osborn, Sean C.; Kaever, Thomas; Sette, Alessandro; Hildebrand, William H.; Nielsen, Morten; Peters, Bjorn.
In: Journal of Immunology, Vol. 196, No. 4, 2016, p. 1480-1487.

Accurate pan-specific prediction of peptide-MHC class II binding affinity with improved binding core identification. / Andreatta, Massimo; Karosiene, Edita; Rasmussen, Michael; Stryhn, Anette; Buus, Søren; Nielsen, Morten.

A modern approach for epitope prediction: identification of foot-and-mouth disease virus peptides binding bovine leukocyte antigen (BoLA) class I molecules. / Pandya, Mital; Rasmussen, Michael; Hansen, Andreas; Nielsen, Morten; Buus, Søren; Golde, William; Barlow, John.
In: Immunogenetics, Vol. 67, No. 11-12, 2015, p. 691-703.

Automated benchmarking of peptide-MHC class I binding predictions. / Trolle, Thomas; Metushi, Imir G.; Greenbaum, Jason; Kim, Yohan; Sidney, John; Lund, Ole; Sette, Alessandro; Peters, Bjorn; Nielsen, Morten.

Bioinformatics prediction of swine MHC class I epitopes from Porcine Reproductive and Respiratory Syndrome Virus. / Welner, Simon; Nielsen, Morten; Lund, Ole; Jungersen, Gregers; Larsen, Lars Erik.
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2015

Ebolavirus comparative genomics. / Jun, Se-Ran; Leuze, Michael R.; Nookaew, Intawat; Uberbacher, Edward C.; Land, Miriam; Zhang, Qian; Wanchai, Visanu; Chai, Juanjuan; Nielsen, Morten; Trolle, Thomas; Lund, Ole; Buzard, Gregory S.; Pedersen, Thomas Dybdal; Wassenaar, Trudy M.; Ussery, David W.
High-throughput sequencing enhanced phage display enables the identification of patient-specific epitope motifs in serum. / Christiansen, Anders; Kringelum, Jens Vindahl; Hansen, Christian Skjødt; Bagh, Katrine Lindholm; Sullivan, Eric; Patel, Jigar; Rigby, Neil M.; Eiwegger, Thomas; Szepfalusi, Zsolt; De Masí, Federico; Nielsen, Morten; Lund, Ole; Dufva, Martin. In: Scientific Reports, Vol. 5, 12913, 2015.

Publication: Research - peer-review › Journal article – Annual report year: 2015


Publication: Research - peer-review › Journal article – Annual report year: 2015


Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2015


Publication: Research - peer-review › Book chapter – Annual report year: 2015

Towards High-throughput Immunomics for Infectious Diseases: Use of Next-generation Peptide Microarrays for Rapid Discovery and Mapping of Antigenic Determinants. / J. Carmona, Santiago; Nielsen, Morten; Schafer-Nielsen, Claus; Mucci, Juan; Altcheh, Jaime; Balouz, Virginia; Tekiel, Valeria; C. Frasch, Alberto; Campetella, Oscar; A. Buscaglia, Carlos; Agüero, Fernán. In: Molecular & Cellular Proteomics, Vol. 14, No. 7, 2015, p. 1871-1884.

Publication: Research - peer-review › Journal article – Annual report year: 2015

Unmasking Determinants of Specificity in the Human Kinome. / Creixell, Pau; Palmeri, Antonio; Miller, Chad J.; Lou, Hua Jane; Santina, Cristina Costa; Nielsen, Morten; Turk, Benjamin E.; Linding, Rune. In: Cell, Vol. 163, No. 1, 2015, p. 187-201.

Publication: Research - peer-review › Journal article – Annual report year: 2015

Characterization of binding specificities of bovine leucocyte class I molecules: impacts for rational epitope discovery. / Hansen, Andreas M.; Rasmussen, Michael; Svitak, Nicholas; Harndahl, Mikkel; Golde, William T.; Barlow, John; Nene, Vishvanath; Buus, Søren; Nielsen, Morten. In: Immunogenetics, Vol. 66, No. 12, 2014, p. 705-718.

Publication: Research - peer-review › Journal article – Annual report year: 2014

Dataset size and composition impact the reliability of performance benchmarks for peptide-MHC binding predictions. / Kim, Yohan; Sidney, John; Buus, Søren; Sette, Alessandro; Nielsen, Morten; Peters, Bjorn. In: B M C Bioinformatics, Vol. 15, No. 1, 241, 2014.

Publication: Research - peer-review › Journal article – Annual report year: 2014

Different binding motifs of the celiac disease-associated HLA molecules DQ2.5, DQ2.2, and DQ7.5 revealed by relative quantitative proteomics of endogenous peptide repertoires. / Bergseng, Elin; Derum, Siri; Arntzen, Magnus Ø.; Nielsen, Morten; Nygård, Ståle; Buus, Søren; de Souza, Gustavo A.; Sollid, Ludvig M. In: Immunogenetics, Vol. 67, No. 2, 2014, p. 73-84.

Publication: Research - peer-review › Journal article – Annual report year: 2015

Identification and HLA-Tetramer-Validation of Human CD4(+) and CD8(+) T Cell Responses against HCMV Proteins IE1 and IE2. / Braendstrup, Peter; Mortensen, Bo Kok; Justesen, Sune Frederik Lamdahl; Osterby, Thomas; Rasmussen, Michael; Hansen, Andreas Martin; Christiansen, Claus Bohn; Hansen, Morten Bagge; Nielsen, Morten; Vindelov, Lars; Buus, Søren; Stryhn, Anette.
From viral genome to specific peptide epitopes: methods for identifying porcine T cell epitopes based on in silico predictions, in vitro identification and ex vivo verification. / Pedersen, Lasse Eggers; Rasmussen, Michael; Harndahl, Mikkel; Patch, Jared; Nielsen, Morten; Buus, Søren; Golde, William; Jungersen, Gregers.
In: Journal of Immunology, Vol. 190, 2013.
Publication: Research - peer-review › Journal article – Annual report year: 2014

Identification of peptides from foot-and-mouth disease virus structural proteins bound by class I swine leukocyte antigen (SLA) alleles, SLA-1*0401 and SLA-2*0401. / Pedersen, Lasse Eggers; Harndahl, M.; Nielsen, Morten; Patch, J. R.; Jungersen, Gregers; Buus, S.; Golde, W. T.
Publication: Research - peer-review › Journal article – Annual report year: 2013

In silico peptide-binding predictions of passerine MHC class I reveal similarities across distantly related species, suggesting convergence on the level of protein function. / Follin, Elna; Karlsson, Maria; Lundegaard, Claus; Nielsen, Morten; Wallin, Stefan; Paulson, Kajsa Maria; Westerdahl, Helena.
Publication: Research - peer-review › Journal article – Annual report year: 2013

MHCcluster, a method for functional clustering of MHC molecules. / Thomsen, Martin Christen Frølund; Lundegaard, Claus; Buus, Søren; Lund, Ole; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2013

MISTIC: mutual information server to infer coevolution. / Simonetti, Franco L.; Teppa, Elin; Chernomoretz, Ariel; Nielsen, Morten; Marino Buslje, Cristina.
Publication: Research - peer-review › Journal article – Annual report year: 2013

Monitoring Expansion of T Cell Specificities Against Foot-and-Mouth-Disease Virus (FMDV) in Swine With MHC Class I Tetramers Following a Prime/Boost Vaccination. / Pedersen, Lasse Eggers; Patch, J.; Glabman, R.; Kenney, M.; Nielsen, Morten; Buus, S.; Jungersen, Gregers; Golde, W. T.
10th International Veterinary Immunology Symposium - IVIS 2013. 2013. p. 72 CS05.5.
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2013

NETMHCSTAB - predicting stability of peptide-MHC-I complexes; impacts for cytotoxic T lymphocyte epitope discovery. / Jørgensen, Kasper W.; Rasmussen, Michael; Buus, Søren; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2014

SigniSite: Identification of residue-level genotype-phenotype correlations in protein multiple sequence alignments. / Jessen, Leon Ivar; Hoof, Ilka; Lund, Ole; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2013

Simultaneous alignment and clustering of peptide data using a Gibbs sampling approach. / Andreatta, Massimo; Lund, Ole; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2013

Structural analysis of B-cell epitopes in antibody:protein complexes. / Kringelum, Jens Vindahl; Nielsen, Morten; Padkjær, Søren Berg; Lund, Ole.
In: Molecular Immunology, Vol. 53, No. 1-2, 2013, p. 24-34.
Publication: Research - peer-review › Journal article – Annual report year: 2012

Characterization of HIV-Specific CD4+ T Cell Responses against Peptides Selected with Broad Population and Pathogen Coverage. / Buggert, Marcus; Norstrom, Melissa M.; Czarnecki, Chris; Tupin, Emmanuel; Luo, Ma; Gyllensten, Katarina; Sonnerborg, Anders; Lundegaard, Claus; Lund, Ole; Nielsen, Morten; Karlsson, Annika C.
Characterizing the binding motifs of 11 common human HLA-DP and HLA-DQ molecules using NNAlign. / Andreatta, Massimo; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2012

Describing the Peptide Binding Specificity of HLA-C. / Rasmussen, Michael; Harndahl, Mikkel Nors; Nielsen, Morten; Buus, Soren; Stryhn, Anette.
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2012

Designing bovine T cell vaccines via reverse immunology. / Nene, Vishvanath; Svitek, Nicholas; Toye, Philip; Golde, William T.; Barlow, John; Harndahl, Mikkel Nors; Buus, Soren; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2012

Discovering sequence motifs in quantitative and qualitative peptide data. / Andreatta, Massimo; Nielsen, Morten (Supervisor); Lund, Ole (Main supervisor).
Publication: Research › Ph.D. thesis – Annual report year: 2012

Disentangling evolutionary signals: conservation, specificity determining positions and coevolution. Implication for catalytic residue prediction. / Teppa, Elin; Wilkins, Angela D.; Nielsen, Morten; Marino Buslje, Cristina.
In: B M C Bioinformatics, Vol. 13, 2012, p. -.
Publication: Research - peer-review › Journal article – Annual report year: 2012

From Viral genome to specific peptide epitopes - Methods for identifying porcine T cell epitopes based on in silico predictions, in vitro identification and ex vivo verification. / Pedersen, Lasse Eggers; Rasmussen, Michael; Harndahl, Mikkel; Nielsen, Morten; Buus, Soren; Jungersen, Gregers.
2012. Abstract from 4th European Veterinary Immunology Workshop (EVIW), Edinburgh, United Kingdom.
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2012

Immune epitope database analysis resource. / Kim, Yohan; Ponomarenko, Julia; Zhu, Zhan Yang; Tamang, Dorjee; Wang, Peng; Greenbaum, Jason; Lundegaard, Claus; Sette, Alessandro; Lund, Ole; Bourne, Philip E.; Nielsen, Morten; Peters, Bjoern.
Publication: Research - peer-review › Journal article – Annual report year: 2012

NetMHCcons: a consensus method for the major histocompatibility complex class I predictions. / Karosiene, Edita; Lundegaard, Claus; Lund, Ole; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2012

Peptide-MHC class I stability is a better predictor than peptide affinity of CTL immunogenicity. / Harndahl, Mikkel Nors; Rasmussen, Michael; Roder, Gustav; Dalgaard Pedersen, Ida; Sarensen, Mikael; Nielsen, Morten; Buus, Soren.
Publication: Research - peer-review › Journal article – Annual report year: 2012

Peptide-MHC class I stability is a stronger predictor of CTL immunogenicity than peptide affinity. / Harndahl, Mikkel Nors; Rasmussen, Michael; Nielsen, Morten; Buus, Soren.
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2012
Predictions versus high-throughput experiments in T-cell epitope discovery: competition or synergy? / Lundegaard, Claus; Lund, Ole; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2012

Reliable B cell epitope predictions: impacts of method development and improved benchmarking. / Kringelum, Jens Vindahl; Lundegaard, Claus; Lund, Ole; Nielsen, Morten.
In: P L o S Computational Biology (Online), Vol. 8, No. 12, 2012, p. e1002829.
Publication: Research - peer-review › Journal article – Annual report year: 2012

Seq2Logo: a method for construction and visualization of amino acid binding motifs and sequence profiles including sequence weighting, pseudo counts and two-sided representation of amino acid enrichment and depletion. / Thomsen, Martin Christen Frølund; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2012

The Cancer Exome Generated by Alternative mRNA Splicing Dilutes Predicted HLA Class I Epitope Density. / Stranzl, Thomas; Larsen, Mette Voldby; Lund, Ole; Nielsen, Morten; Brunak, Søren.
Publication: Research - peer-review › Journal article – Annual report year: 2012

Publication: Research - peer-review › Journal article – Annual report year: 2011

Human Leukocyte Antigen (HLA) Class I Restricted Epitope Discovery in Yellow Fewer and Dengue Viruses: Importance of HLA Binding Strength. / Lund, Ole; Nascimento, Eduardo J. M.; Maciel, Milton, Jr; Nielsen, Morten; Larsen, Mette Voldby; Lundegaard, Claus; Harndahl, Mikkel; Lambeth, Kasper; Buus, Søren; Salmon, Jérôme; August, Thomas J.; Marques, Ernesto T A, Jr.
Publication: Research - peer-review › Journal article – Annual report year: 2011

Immunogenic CTL Epitopes Tend to be Stably Bound to MHC Class I Molecules: Implications for 'Holes in the Stably Bound MHC-I Repertoire'. / Harndahl, M.; Rasmussen, M.; Roder, G.; Pedersen, I. D.; Sørensen, Mikael; Nielsen, Morten; Buus, S.
In: Scandinavian Journal of Immunology, Vol. 73, No. 4, 2011, p. 353-353.
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2011

Induction of Foot-and-Mouth Disease Virus-Specific Cytotoxic T Cell Killing by Vaccination. / Patch, J.R.; Pedersen, Lasse Eggers; Toka, F.N.; Moreas, M.; Grubman, M.J.; Nielsen, Morten; Junghersen, Gregers; Buus, S.; Golde, W.T.
Publication: Research - peer-review › Journal article – Annual report year: 2010

Interdisciplinary Evaluation of Broadly- Reactive HLA Class II Restricted Epitopes Eliciting HIV-Specific CD4+ T Cell Responses : Abstract of poster presentation. / Buggert, M.; Norström, M.; Lundegaard, Claus; Lund, Ole; Nielsen, Morten; Karlsson, A. C.
Publication: Research - peer-review › Conference article – Annual report year: 2011

Machine learning competition in immunology – Prediction of HLA class I binding peptides, / Zhang, Guang Lan; Ansari, Hifzur Rahman; Bradley, Phil; Cawley, Gavin C.; Hertz, Tomer; Hu, Xihao; Joicic, Nebojsa; Kim, Yohan; Kohlbacher, Oliver ; Lund, Ole; Lundegaard, Claus; Magaret, Craig A.; Nielsen, Morten; Papadopoulos, Harris; Raghava, G.P.S.; Tal, Vider-Shalt; Xue, Li C.; Yanover, Chen; Zhu, Shanfeng; Rock, Michael T.; Crowe, James E.; Panayiotou, Christos; Polycarpou, Marios M.; Duch, Wlodzislaw; Brusic, Vladimir.
Publication: Research - peer-review › Journal article – Annual report year: 2012
NNAlign: A Web-Based Prediction Method Allowing Non-Expert End-User Discovery of Sequence Motifs in Quantitative Peptide Data. / Andreatta, Massimo; Schafer-Nielsen, Claus; Lund, Ole; Buus, Søren; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2011

Porcine major histocompatibility complex (MHC) class I molecules and analysis of their peptide-binding specificities. / Pedersen, Lasse Eggers; Harndahl, Mikkel; Rasmussen, Michael; Lambert, Kasper; Golde, William T.; Lund, Ole; Nielsen, Morten; Buus, Soren.
Publication: Research - peer-review › Journal article – Annual report year: 2011

Prediction of epitopes using neural network based methods. / Lundegaard, Claus; Lund, Ole; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2010

CPHmodels-3.0--remote homology modeling using structure-guided sequence profiles. / Nielsen, Morten; Lundegaard, Claus; Lund, Ole; Petersen, Thomas Nordahl.
Publication: Research - peer-review › Journal article – Annual report year: 2010

CTL epitopes of FMDV determined by NetMHCpan-driven predictions of SLA/peptide binding, confirmed by tetramer complex formation and staining. / Pedersen, Lasse Eggers; Nielsen, Morten; Patch, Jared R.; Jungersen, Gregers; Buus, Søren; Golde, William T.
2010. Poster session presented at 9th International Veterinary Immunology Symposium, Tokyo, Japan.
Publication: Research › Poster – Annual report year: 2010

Degree of Predicted Minor Histocompatibility Antigen Mismatch Correlates with Poorer Clinical Outcomes of Nonmyeloablative Allogeneic Hematopoietic Cell Transplantation. / Larsen, Malene Erup; Kornblit, B; Larsen, Mette Voldby; Masmas, TN; Nielsen, Morten; Thim, Martin Hansen; Garred, P; Stryhn, A; Lund, Ole; Buus, S; Vindelov, L.
Publication: Research › Poster – Annual report year: 2010

HLA Class I Binding 9mer Peptides from Influenza A Virus Induce CD4(+) T Cell Responses. / Wang, M. J.; Larsen, Mette Voldby; Nielsen, Morten; Harndahl, M.; Justesen, S.; Dziegiel, M.H.; Buus, S.; Tang, Sheila Tuyet; Lund, Ole; Claesson, M.H.
Publication: Research - peer-review › Journal article – Annual report year: 2010

Publication: Research - peer-review › Journal article – Annual report year: 2010

In Silico Prediction of Human Pathogenicity in the gamma-Proteobacteria. / Andreatta, Massimo; Nielsen, Morten; Aarestrup, Frank Møller; Lund, Ole.
Publication: Research - peer-review › Journal article – Annual report year: 2010

Interdisciplinary Analysis of HIV-Specific CD8(+) T Cell Responses against Variant Epitopes Reveals Restricted TCR Promiscuity. / Hoof, Ilka; Perez, C.L.; Buggert, M.; Gustafsson, R.K.L.; Nielsen, Morten; Lund, Ole; Karlsson, A.C.
In: Journal of Immunology, Vol. 184, No. 9, 2010, p. 5383-5391.
Publication: Research - peer-review › Journal article – Annual report year: 2010
Correction for phylogeny, small number of observations and data redundancy improves the identification of coevolving amino acid pairs using mutual information. / Buslje, C.M.; Santos, J.; Delfino, J.M.; Nielsen, Morten.
In: Bioinformatics, Vol. 25, No. 9, 2009, p. 1125-1131.
Publication: Research - peer-review › Journal article – Annual report year: 2009

Full genome sequence of a Danish isolate of Mycobacterium avium subspecies paratuberculosis, strain Ejlskov2007. / Afzal, Mamuna; Abidi, Soad; Mikkelsen, Heidi; Tang, Sheila Tuyet; Lund, Ole; Nielsen, Morten; Lundegaard, Claus; Jungersen, Gregers; Ussery, David.
2009. Poster session presented at 10th International Colloquium on Paratuberculosis, Minneapolis, MN, United States.
Publication: Research › Poster – Annual report year: 2009

In-Silico identification of peptides for the diagnostics of paratuberculosis. / Tang, Sheila Tuyet; Lund, Ole; Jungersen, Gregers; Nielsen, Morten; Mikkelsen, Heidi; Lundegaard, Claus.
2009. Poster session presented at 10th International Colloquium on Paratuberculosis, Minneapolis, MN, United States.
Publication: Research › Poster – Annual report year: 2009

NetMHCpan, a method for MHC class I binding prediction beyond humans. / Hoof, Ilka; Peters, B; Sidney, J; Pedersen, Lasse Eggert; Sette, A; Lund, Ole; Buus, Søren; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2009

NN-align. An artificial neural network-based alignment algorithm for MHC class II peptide binding prediction. / Nielsen, Morten; Lund, Ole.
Publication: Research - peer-review › Journal article – Annual report year: 2009

Pan-specific MHC class I predictors: A benchmark of HLA class I pan-specific prediction methods. / Zhang, Hao; Lundegaard, Claus; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2009

Peptide Binding to HLA Class I Molecules: Homogenous, High-Throughput Screening, and Affinity Assays. / Harndahl, Mikkel; Justesen, Sune Frederik Lamdal; Lambeth, Kasper; Røder, Gustav; Nielsen, Morten; Buus, Søren.
Publication: Research - peer-review › Journal article – Annual report year: 2009

Systematic Characterisation of Cellular Localisation and Expression Profiles of Proteins Containing MHC Ligands. / Juncker, Agnieszka; Larsen, Mette Voldby; Weinhold, Nils; Nielsen, Morten; Brunak, Søren; Lund, Ole.
Publication: Research - peer-review › Journal article – Annual report year: 2009

Accurate approximation method for prediction of class I MHC affinities for peptides of length 8, 10 and 11 using prediction tools trained on 9mers. / Lundegaard, Claus; Lund, Ole; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2008

Amino acid similarity accounts for T cell cross-reactivity and for "holes" in the T cell repertoire. / Pletscher-Frankild, Sune; de Boer, Rob J.; Lund, Ole; Nielsen, Morten; Kesmir, Can.
Publication: Research - peer-review › Journal article – Annual report year: 2008

Broadly Immunogenic HLA Class I Supertype-Restricted Elite CTL Epitopes Recognized in a Diverse Population Infected with Different HIV-1 Subtypes. / Pérez, Carina L; Larsen, Mette Voldby; Gustafsson, Rasmus; Norström, Melissa M; Atlas, Ann; Nixon, Douglas F; Nielsen, Morten; Lund, Ole; Karlsson, Annika C.
Prediction of MHC class II binding affinity using SMM-align, a novel stabilization matrix alignment method. / Nielsen, Morten; Lundegaard, Claus; Lund, Ole.
Publication: Research - peer-review › Journal article – Annual report year: 2007

A community resource benchmarking predictions of peptide binding to MHC-I molecules. / Peters, B; Bui, HH; Pletscher-Frankild, Sune; Nielsen, Morten; Lundegaard, Claus; Kosterm, E; Basch, D; Lambeth, K; Harndahl, M; Fieri, W; Wilson, SS; Sidney, J; Lund, Ole; Buus, S; Sette, Alessandro.
Publication: Research - peer-review › Journal article – Annual report year: 2006

Improved method for predicting linear B-cell epitopes. / Larsen, Jens Erik Pontoppidan; Lund, Ole; Nielsen, Morten.
Publication: Research › Journal article – Annual report year: 2006

Modelling the human immune system by combining bioinformatics and systems biology approaches. / Rapin, Nicolas Philippe Jean-Pierre; Kesmir, Can; Frankild, Sune; Nielsen, Morten; Lundegaard, Claus; Brunak, Søren; Lund, Ole.
Publication: Research - peer-review › Journal article – Annual report year: 2006

No evidence for the use of DIR, D-D fusions, chromosome 15 open reading frames or V(H)replacement in the peripheral repertoire was found on application of an improved algorithm, JointML, to 6329 human immunoglobulin H rearrangements. / Ohm-Laursen, L; Nielsen, Morten; Larsen, Thomas Schou; Barington, T.
Publication: Research - peer-review › Journal article – Annual report year: 2006

Prediction of residues in discontinuous B-cell epitopes using protein 3D structures. / Andersen, P.H.; Nielsen, Morten; Lund, Ole.
Publication: Research - peer-review › Journal article – Annual report year: 2006

TAP-independent MHC class I presentation. / Larsen, Mette Voldby; Nielsen, Morten; Weinzierl, A; Lund, Ole.
Publication: Research - peer-review › Journal article – Annual report year: 2006

The validity of predicted T-cell epitopes. / Lundegaard, Claus; Nielsen, Morten; Lund, Ole.
Publication: Research - peer-review › Journal article – Annual report year: 2006

An integrative approach to CTL epitope prediction: A combined algorithm integrating MHC class I binding, TAP transport efficiency, and proteasomal cleavage predictions. / Larsen, Mette Voldby; Lundegaard, Claus; Lambeth, K; Buus, S; Brunak, Søren; Lund, Ole; Nielsen, Morten.
Publication: Research - peer-review › Journal article – Annual report year: 2005

The role of the proteasome in generating cytotoxic T-cell epitopes: insights obtained from improved predictions of proteasomal cleavage. / Nielsen, Morten; Lundegaard, Claus; Lund, Ole; Kesmir, Can.
Publication: Research - peer-review › Journal article – Annual report year: 2005

Definition of supertypes for HLA molecules using clustering of specificity matrices. / Lund, Ole; Nielsen, Morten; Kesmir, Can; Pedersen, Anders Gorm; Lundegaard, Claus; Worning, Peder; Sylvester-Hvid, C.; Lambeth, K.; Roder, G.; Justesen, S.; Buus, S.; Brunak, Søren.
Publication: Research - peer-review › Journal article – Annual report year: 2004
Improved prediction of MHC class I and class II epitopes using a novel Gibbs sampling approach. / Nielsen, Morten; Lundegaard, Claus; Worning, Peder; Hvid, C.S.; Lamberth, K.; Buus, S.; Brunak, Søren; Lund, Ole.
Publication: Research - peer-review › Journal article – Annual report year: 2004

MHC class I epitope binding prediction trained on small data sets. / Lundegaard, Claus; Nielsen, Morten; Lamberth, K.; Worning, Peder; Sylvester-Hvid, C.; Buus, S.; Brunak, Søren; Lund, Ole.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

Publication: Research - peer-review › Journal article – Annual report year: 2004

Reliable prediction of T-cell epitopes using neural networks with novel sequence representations. / Nielsen, Morten; Lundegaard, Claus; Worning, Peder; Lauemoller, S.L.; Lamberth, K.; Buus, S.; Brunak, Søren; Lund, Ole.
Publication: Research - peer-review › Journal article – Annual report year: 2003

Selecting informative data for developing peptide-MHC binding predictors using a query by committee approach. / Christensen, J.K.; Lamberth, K.; Nielsen, Morten; Lundegaard, Claus; Worning, Peder; Lauemoller, S.L.; Buus, S.; Brunak, Søren; Lund, Ole.
Publication: Research - peer-review › Journal article – Annual report year: 2003

From lanosterol to cholesterol: Structural evolution and differential effects on lipid bilayers. / Miao, Ling; Nielsen, Morten; Thewalt, J.; Ipsen, John Hjorth; Bloom, M.; Zuckermann, Martin; Mouritsen, Ole G.
Publication: Research - peer-review › Journal article – Annual report year: 2002

Sterol evolution and the physics of membranes. / Nielsen, Morten; Thewalt, J.; Miao, Ling; Ipsen, John Hjorth; Bloom, M.; Zuckermann, Martin; Mouritsen, Ole G.
Publication: Research - peer-review › Journal article – Annual report year: 2000

Off-lattice model for the phase behavior of lipid-cholesterol bilayers. / Nielsen, Morten; Miao, Ling; Ipsen, John Hjorth; Zuckermann, Martin; Mouritsen, Ole G.
Publication: Research - peer-review › Journal article – Annual report year: 1999

The effect of cholesterol on the rupture of lipid membrane. / Nielsen, Morten; Ipsen, John Hjorth; Miao, Ling; Mouritsen, Ole G.; Zuckermann, M. J.
Publication: Research - peer-review › Journal article – Annual report year: 1999