



Digitala tentor - OpenExam

- Utvecklat av Anders Lövgren (BMC-data) 2010
(Ylva Hedeland, Susanne Tingsborg)
- V2 sjösatt 2014
- Finansierat av vetenskapsområdet för medicin och farmaci

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Bakgrund till projektet

- Tidskrävande pappershantering
- Transporter
- Oläsliga svar
- Ökad säkerhet
- Ökade frågemöjligheter
- Digitala resurser

Befintliga resurser via studentportaler, integrationer?

Ny LMS

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Utveckling av salstentor

Medicin och farmaci

rena textsvar

kemiska formler, skriva eller rita

matematiska ekvationer, skriva eller rita

figurer, markera eller frihandsrita

utdelade frågematerial och hjälpmedel

Andra vetenskapsområden

OpenExam - systemet

Web-baserat system

- Multipla webbservrar och databaser (master/slave)

Lokala servrar har UPS, dock beroende av centralt nätverk

Åtkomst via inloggning (användarkontroll) och tilldelade roller

Informationssäkerhet

Digital arkivering av prov och svar

Anders.Lovgren@bmc.uu.se

OpenExam – fysiska resurser

- Studentdatorsalar med fasta datorer
- Tentamenssal med 150 bärbara datorer
- Distanstentor (övervakade)
- Hemtentor



Ritfunktion



Passiv penna (finger)

- enkel, låg precision

Aktiv penna

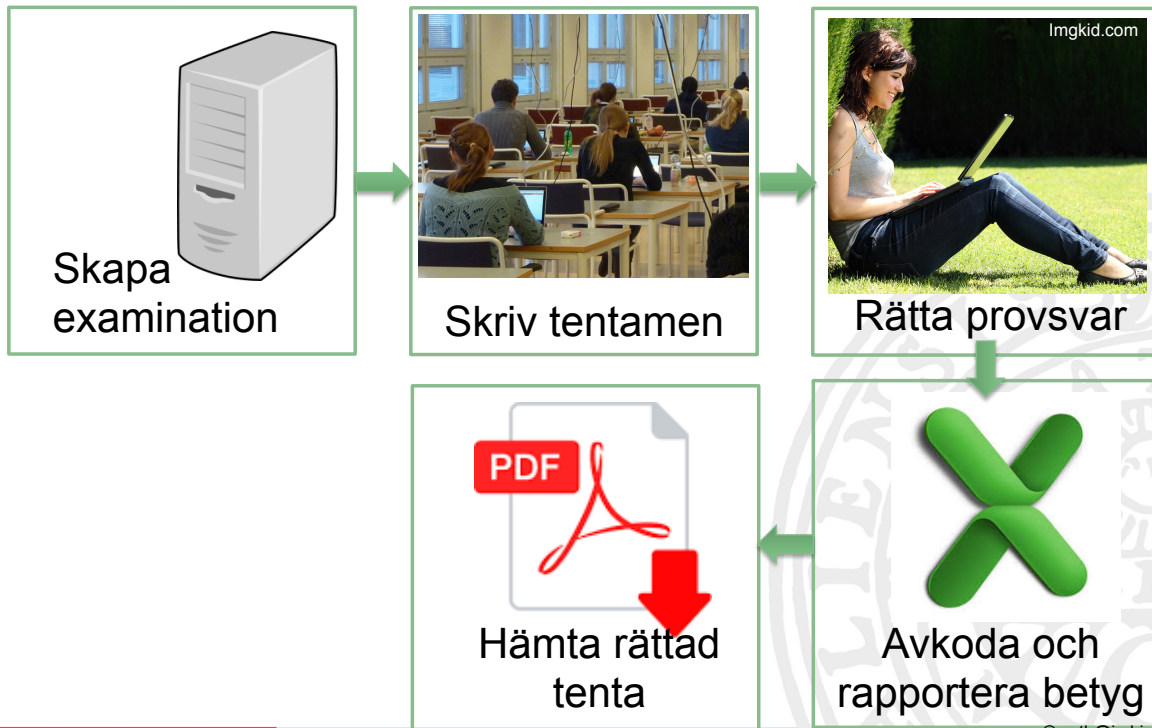
- dyr, batterikrävande, hög precision

Handscanner, scannermus

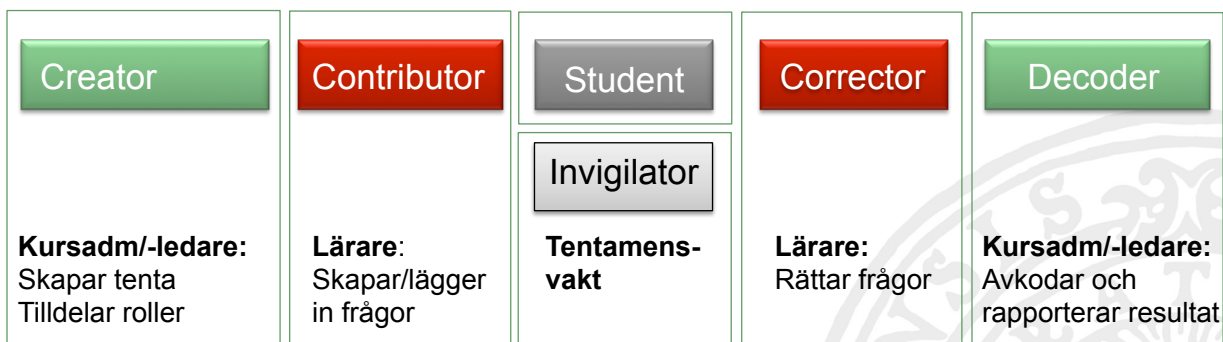
- dyr, hög upplösning



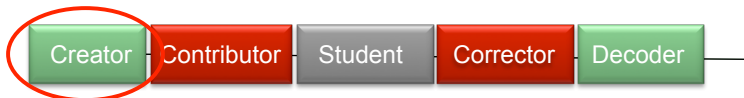
OpenExam – en papperslös process



OpenExam - roller



Arbetsflöde - Före tentamen



- Skapa tenta

Exam settings

Please note that you may return anytime and can complete the exam settings.
> Please fill up all required fields (marked with *).

Total number of students in exam: 0
Total exam points: 0

Exam title: *

Course code:

Uppdok test code:

Exam Start time: *

Exam End time:

Grades: *

Organization: *

Exam instructions for students:

Tilldela roller

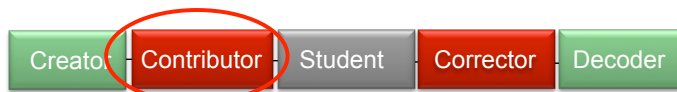
Lägga till studenter

Allmänna inställningar

* This field is required

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Arbetsflöde - Före tentamen



- Lägga upp och definiera frågor

Add new question.

Write question

Write your question here

Texter, bilder, filmer, formelsamlingar, verktyg, websidor...

Add supplementary materials

Answer options

Textsvar (längd), flerval, figur, kemisk formel, matematisk ekvation

Points

Question Correctors:

Anger rättare

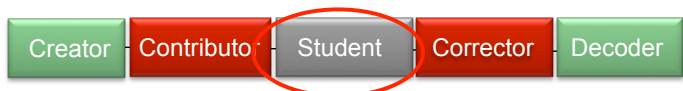
Catharina Svensson [cathsven]

Add new question part I am done, save this question Cancel

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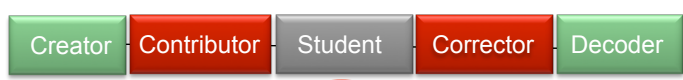
Arbetsflöde – Under tentamen



- Logga in med studentID
- Automatisk anonymisering
- Tid- och rumsstyrd tillgänglighet



Arbetsflöde –Under tentamen



- Kan lägga till student

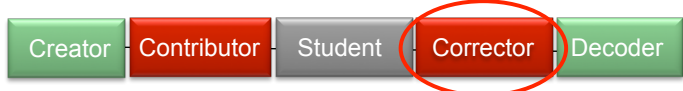
Kan ändra tid

Invigilator

Kontrollera identitet



Arbetsflöde - Efter tentamen



- Rätta direkt efter tentamentidens slut

Rätta per fråga

Dynamiskt rättningsprotokoll

Rätta per student

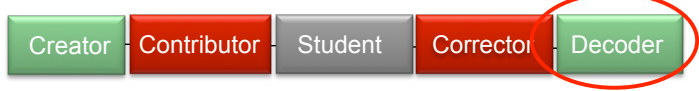
Ej rättade svar

Code	Grade	Q9	Q9	Q9	Q9	Q9	Q9	Q9	Q9	Q9	Q9	Q9	Q9	
														Max. 2
	34.5	62.7%	G	2.0	2.0	4.0	2.0							
	28.75	52.3%	G	2.0	2.0	4.0	2.0						2.0	
228F2891	37	67.3%	G	2.0	2.0	4.0	2.0						4.0	
538DBDC4	35.5	64.5%	G	2.0	2.0	4.0	2.0						4.0	
AB6481F5	29.5	53.6%	G	2.0	2.0	4.0	2.0						1.0	
AF5ED75B	30	54.5%	G	2.0	2.0	4.0	2.0						3.0	
BOABBB1A	29	52.7%	G	2.0	2.0	4.0	1.0						3.5	
B6B194B4	30.5	55.5%	G	2.0	2.0	4.0	2.0						2.0	
B63A43F6	22.75	41.4%	U	2.0	2.0	4.0	1.0						0.0	
C52E3D91	17.5	31.8%	U	0.0	0.0	0.0	0.0						2.0	
DD36917A	29.75	54.1%	G	2.0	2.0	4.0	1.0						1.0	
EC6E772D	30	54.5%	G	2.0	1.5	4.0	2.0						2.5	
EC521462	29.25	53.2%	G	2.0	2.0	4.0	2.0						1.0	
Average:	29.1/55	52.9%	VG: 0 G: 18 U: 4	1.9/2	1.9/2	3.8/4	1.6/2	0.0/2	0.0/3	0.0/3	0.0/3	0.0/3	0.0/4	1.9/4

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Arbetsflöde - Efter tentamen



- Rätta direkt efter tentamentidens slut
- Avkoda & ladda upp resultat till Ladok
- Automatmail till studenter

Namn och p-nr visas

Code	Grade	Q9	Q9	Q9	Q9	Q9	Q9	Q9	Q9	Q9	Q9	Q9	Q9
89A7D6A1	34.5	62.7%	G	2.0	2.0	4.0	2.0	2.0	2.0	4.0	2.0	4.0	2.0
171CBF14	28.75	52.3%	G	2.0	2.0	4.0	2.0	2.0	2.0	4.0	2.0	4.0	2.0
228F2891	37	67.3%	G	2.0	2.0	4.0	2.0	2.0	2.0	4.0	2.0	4.0	2.0
538DBDC4	35.5	64.5%	G	2.0	2.0	4.0	2.0	2.0	2.0	4.0	2.0	4.0	2.0
AB6481F5	29.5	53.6%	G	2.0	2.0	4.0	2.0	2.0	2.0	4.0	2.0	4.0	2.0
AF5ED75B	30	54.5%	G	2.0	2.0	4.0	2.0	2.0	2.0	4.0	2.0	4.0	2.0
BOABBB1A	29	52.7%	G	2.0	2.0	4.0	1.0	2.0	2.0	4.0	1.0	4.0	1.0
B6B194B4	30.5	55.5%	G	2.0	2.0	4.0	2.0	2.0	2.0	4.0	2.0	4.0	2.0
B63A43F6	22.75	41.4%	U	2.0	2.0	4.0	1.0	2.0	2.0	4.0	1.0	4.0	1.0
C52E3D91	17.5	31.8%	U	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DD36917A	29.75	54.1%	G	2.0	2.0	4.0	1.0	2.0	2.0	4.0	1.0	4.0	1.0
EC6E772D	30	54.5%	G	2.0	1.5	4.0	2.0	2.0	1.5	4.0	2.0	4.0	2.0
EC521462	29.25	53.2%	G	2.0	2.0	4.0	2.0	2.0	2.0	4.0	2.0	4.0	2.0
Average:	29.1/55			1.9/2	1.9/2	3.8/4	1.6/2	1.9/2	1.9/2	3.8/4	1.6/2	3.8/4	1.6/2

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Arbetsflöde - Efter tentamen



- Ladda ned pdf med rättningar, kommentarer och statistik

Examination result

Summary

You scored total **38.8** of maximum **67.0** points (**57.8%**) on this examination.

Graduation

Your graduation on this examination is: **G**

Score Table

This table shows a summary of your score versus the maximum scores. Questions without answer are marked with an 'x' in the table.

Question	Score	Max score	Percent	Notice
Q1	2.0	3.0	66.7%	
Q2 , Part a	2.0	2.0	100.0%	
Part b	1.0	1.0	100.0%	
Q3	0.0	1.0	0.0%	
Q4 , Part a	0.5	1.0	50.0%	
Part b	1.0	1.0	100.0%	
Part c	0.0	1.0	0.0%	
Part d	1.5	2.0	75.0%	
Part e	0.0	2.0	0.0%	
Part f	1.0	1.0	100.0%	

Question 7

How are viroids transmitted between plants? Give four examples.

Your answer:

They are transmitted with genetic processes of change of gene material cause they haven't got proteins, and they act only with RNAs. Some of them have hammerhead like structures for cleaving of their own RNAs in pieces or they have miRNAs, which they use for transmission.

Teacher's comments:

mechanically (through wounds by contact or by plant sap), pollen, seeds, vegetative propagation (cuttings, potato tubers etc), insects

Your score: 0.0 (Max score: 2.0)



Praktiska fördelar

Ingen utdelning av fysiskt material

Formelsamling/Fysik/Fysikaliska konstanter

Åter till huvudsidan.

Inom naturvetenskapen är en **fysikalisk konstant** en fysisk kvantitet med oföränderligt numeriskt värde. (Samtliga länkar länkar till Wikipedia)

Kvantitet	Symbol	Värde	Ref.
Allmänna gaskonstanten	R	$8.314\ 472\ 15\ \text{J}\cdot\text{K}^{-1}\cdot\text{mol}^{-1}$	a
Akomiära maskonstanten (unified atomic mass unit)	$m_u = 1\ \text{u}$	$1.660\ 538\ 73(13) \times 10^{-27}\ \text{kg}$	a
Avogadros tal	L, N_A	$6.022\ 141\ 99(47) \times 10^{23}$	a
Bohrmagneton	μ_B	$9.274\ 008\ 99(37) \times 10^{-24}\ \text{J}\cdot\text{T}^{-1}$	a
Bohrradien	a_0	$5.291\ 772\ 083(19) \times 10^{-11}\ \text{m}$	a
Boltzmanns konstant	k	$1.380\ 650(24) \times 10^{-23}\ \text{J}\cdot\text{K}^{-1}$	a
Definitionen för noll på Celsiuskalan		273.15 K	?
Elementarladning	e	$1.602\ 176\ 462(63) \times 10^{-19}\ \text{C}$	a
elektromagnetiskt moment	μ_B	$-9.284\ 763\ 62(37) \times 10^{-24}\ \text{J}\cdot\text{T}^{-1}$	a
Elektronens vilomassa	m_e	$9.109\ 381\ 88(72) \times 10^{-31}\ \text{kg}$	a
Faradays konstant	F	$9.648\ 534\ 15(39) \times 10^4\ \text{C}\cdot\text{mol}^{-1}$	a
Finstrukturkonstanten	$\alpha = 1/137.035999074(24)$	$7.297\ 352\ 533(27) \times 10^{-3}$	a
Gravitationskonstanten	G	$6.672\ 59(85) \times 10^{-11}\ \text{m}^3\cdot\text{kg}^{-1}\cdot\text{s}^{-2}$?
Hartree-energi	E_h	$4.359\ 743\ 81(34) \times 10^{18}\ \text{J}$	a
Kapselviteten för fria rymden	$\epsilon_0 = 1/(4\pi\epsilon_0 c^2)$	$8.854\ 187\ 817\ \dots \times 10^{-12}\ \text{F}\cdot\text{m}^{-1}$	a
Karakteristiska impedansen för fria rymden	$Z_0 = \mu_0 c$	$376.730\ 313\ 461\ \dots\ \Omega$ (definierad)	a
Lande g-faktor för fri elektron	g_e	2.002 319 304 386(20)	?
Ljusets hastighet i vakuum	c	$299\ 792\ 458\ \text{m}\cdot\text{s}^{-1}$ (definierad)	a

FASS Vårdpersonal

Sök på läkemedel, substans, ATC eller vnr

Fakta för förskrivare

Läkemedelsuppdateringar

- Fakta för förskrivare
- Alkohol och läkemedel
- Antibiotikaresistens
- Apotekstillverkade läkemedel
- Avregistrerade läkemedel
- Beräkningsverktyg
- Biverkningar
- Blanketter
- Fass i andra länder
- Förfälskade läkemedel
- Förvarning av läkemedel
- Graviditet och amning
- Strikt och läkemedel
- Interaktion mellan läkemedel
- Kliniska provningar
- Licensförskrivning
- Läkemedels- & patientförsäkringen
- Läkemedelsförmånssystemet





Praktiska och pedagogiska fördelar

Bättre kvalitet på frågematerial

Möjlighet till svar i bild

OPEN ACCESS freely available online

PLUS one

Influenza Virus Non-Structural Protein 1 (NS1) Disrupts Interferon Signaling

Danlin Jia¹, Ramtin Rahbar¹, Renee W. Y. Chan^{2,3}, Suki M. Y. Lee⁴, Michael C. W. Chan⁵, Ben Xuhaio Wang¹, Darren P. Baker¹, Bing Sun¹, J. S. Malik Peiris¹, John M. Nicholls¹, Eleanor M. Fish^{1,6*}

¹ Department of Microbiology, University of Toronto, Toronto, Canada; ² Department of Pathology, University of Hong Kong, Hong Kong, People's Republic of China; ³ Department of Microbiology, University of Hong Kong, Hong Kong, People's Republic of China; ⁴ Biogen Inc., Cambridge, Massachusetts, United States of America; ⁵ Shanghai Institute for Biological Sciences, Chinese Academy of Sciences, Shanghai, People's Republic of China; ⁶ Division of Cell and Molecular Biology, Toronto General Research Institute, University Health Network, Toronto, Canada

Abstract

Abstract
Given the critical role of IFN- α/β as a first line of defense against infection, it is not surprising that many viruses have evolved strategies to block an IFN response as a means to increase their replication efficiency [2,3]. Virus-mediated inhibition of IFN can be generalized into three categories, including disruption of IFN induction, disruption of IFN-releasable signaling and disruption of IFN-mediated effector functions. The nonstructural protein 1 (NS1) of influenza A virus exerts its inhibitory effects on IFN predominantly by interfering with IFN production [4]. NS1 disrupts the induction of IFN by first inhibiting the intracellular sensor RIG-I, which plays a critical role in detecting vRNA during influenza A virus infection [5]. RIG-I activation leads to association with the downstream adaptor IPS-1, resulting in phosphorylation of IRF3 and subsequent transcriptional activation of IFN- β [4,6]. Experimental evidence suggests that NS1 can associate with RIG-I, as well as TRIM25, a ubiquitin ligase required for RIG-I activation, to prevent its

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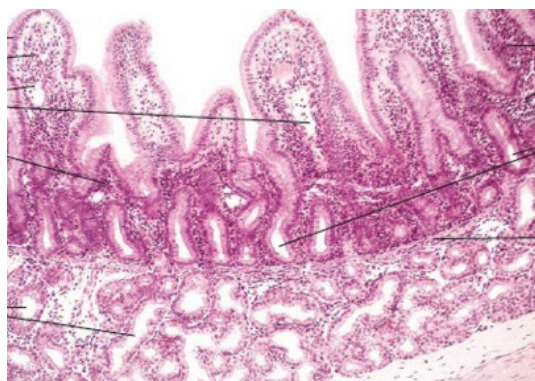
Competing Interests: Darren P. Baker is employed by Biogen Inc. Biogen Inc. did not provide funds for these studies, nor was Biogen Inc. involved in the study design, data analysis or decision to publish. Biogen Inc. provided infrastructure for these studies as a site. Accordingly, the relationship with Biogen Inc. may affect adherence to all of the PLOS ONE policies on sharing data and materials.
* E-mail: emfish@utoronto.ca

Introduction

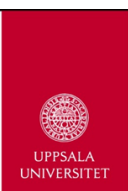
Transcriptional activation of IFN- α/β is rapidly initiated in response to detection of viral-derived factors by cellular pattern recognition receptors [1]. IFN- α/β subsequently bind their cognate cell surface receptors, leading to the activation of the receptor associated kinase, Jak1 and Tyk2 [2]. Signal transduction and activation of transcription (STAT) proteins are recruited to the receptor, phosphorylated on tyrosine residues by these Jaks, then released from the receptor to form transcription factor complexes that translocate into the nucleus and upregulate the expression of IFN-stimulated genes (ISG). IFN signaling can be negatively regulated by members of the suppressors of cytokine signaling (SOCS) family. SOCS1 has been shown to block IFN signaling through direct physical binding with Jak1, whereas SOCS3 and LIS1 can interact with the phosphorylated receptor to prevent the recruitment and phosphorylation of downstream mediators like the STAT proteins [2].

Given the critical role of IFN- α/β as a first line of defense against infection, it is not surprising that many viruses have evolved strategies to block an IFN response as a means to increase their replication efficiency [2,3]. Virus-mediated inhibition of IFN can be generalized into three categories, including disruption of IFN induction, disruption of IFN-releasable signaling and disruption of IFN-mediated effector functions.

The nonstructural protein 1 (NS1) of influenza A virus exerts its inhibitory effects on IFN predominantly by interfering with IFN production [4]. NS1 disrupts the induction of IFN by first inhibiting the intracellular sensor RIG-I, which plays a critical role in detecting vRNA during influenza A virus infection [5]. RIG-I activation leads to association with the downstream adaptor IPS-1, resulting in phosphorylation of IRF3 and subsequent transcriptional activation of IFN- β [4,6]. Experimental evidence suggests that NS1 can associate with RIG-I, as well as TRIM25, a ubiquitin ligase required for RIG-I activation, to prevent its



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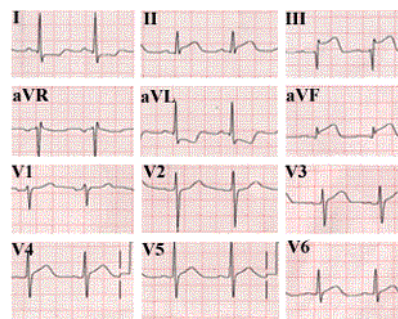


Praktiska och pedagogiska fördelar

Testa färdigheter och förmågor



Medfarm Play



<http://www.heartsite.com>



Lyssna till hjärtljud

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Fler möjligheter

- Bläddertentor (MEQ, Modified Essay Questions)
- Automaträttade tentor
- Studenträttade tentor
- Nivåuppdelade tentor
- Stöd till studenter med särskilda behov



Vidareutveckling

- Inte bara tentor...del av lärandet
- Learning analytics
- BYOD:
 - Alternativ till “clickers” (mobilapplikation av systemet)
 - Lock-down browser/exam monitor
 - Programbaserad lösning?
- UU: Tentamensutredning och e-lärandestrategi

Kommentarer från användare

- Tid
 - Minskad administrativ hantering
 - Snabbare/enklare rättning
 - Digitalt utlämnande av rättade prov
- Säkerhet
 - Läsbarhet
 - Inte möjligt att ändra svårläst text i efterhand
 - Digitalt arkiv
- Miljö
 - Inga papper
 - Ingen transport

