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The CAFARAD Project: Food animal chemical residues research data portal and veterinarians' go-to website for extra-label drug questions

PROJECT OVERVIEW

Outsourced from UC Davis IT, a mission-critical project to support UC Davis' responsibilities in a five-university USDA-funded project which helps protect the safety of the US food supply.

TECHNICAL GOALS

Within available funding, convert most of the original classic ASP web applications to .NET technology. Re-imagine/redesign the web user interfaces. Provide responsive web design (RWD) design treatments to pages. Create new web applications as requested within budget.

HAND-OFF

The project was successfully handed back to UC Davis in November 2020. By then, the web hosting had moved to an AWS virtual server. Local UCD staff assumed the duties of any future development, maintenance and support.



- Food Animal Residue Avoidance Databank (FARAD) is a five-university research effort supported by the USDA.
- CAFARAD (California-FARAD) is the UC Davis-maintained area within FARAD, encompassing veterinarians' questions and pharmacokinetic research and document management which supports the answers and other universities' efforts.

Beginning in 2014, Cogni, Inc. assumed the IT portion of CAFARAD, including all aspects ranging from server hosting and support to new .NET / IIS web application development.

The first part of the project involved converting a MS Access data backend with 300 tables to SQL Server, and converting a classic ASP veterinarian's submission page to .NET. Various UI improvements were added, such as filtering as shown to the right, to help veterinarians find the drug at issue faster.





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Some neat web apps along the way...

Citation Search: a publicly facing web application allows veterinarians and other researchers to quickly find research related to a specific chemical and how long it takes for specific animals to clear the chemical from their system so that the food product is safe for consumption..

Check all | Un-check all | Find Best Matching Citations for These Chemicals

cefiofur Cefiofur (Sodium and Hydrochloride) cefiofur hydrochloride
 Cefiofur (desfuroylcefiofur metabolite) cefiofur (sodium) cefiofur sodium
 Cefiofur (Hydrochloride) cefiofur crystalline free acid Cefiofur Ketoprofen
 Cefiofur (Metabolite) Cefiofur Crystalline-free Acid

Species Filter

Check All | Un-check All | Search now using checked species:

unspecified or not coded Birds Cattle Dogs Goats Horses
 Cats Fish Sheep Rabbits Shellfish Swine
 Camels, etc. Zoo animals

Matrix Filter

Check all | Un-check all | Search now using checked matrices:

unspecified or not coded Blood Fat Fat, Skin Inj Site Kidney Liver Milk Muscle
 Plasma Serum Skin

Route Filter

Check all | Un-check all | Search now using checked routes:

unspecified or not coded Inhalation Intramuscular Intranasal Intravenous Oral
 Other Rectal Subcutaneous

485 records found

Export to csv file | Export to formatted .xls file

Species	Matrix	Route	Journal	Title	Date	Citation	Author	Link
Cattle	Milk	IMM	Abstr. Annu. Meet. Am. Soc. Microbiol.	Cefiofur concentrations in bovine milk and mammary tissue after intramuscular and intramuscular therapy	1990	90:24	Owens, W.E., Wang, Z.Y., Ray, C.H., Nicholson, S.C.	
			Abstr. Annu. Meet. Am. Soc. Microbiol.	Cefiofur concentrations in bovine milk and mammary tissue after intramuscular and intramuscular therapy	1990	90:24	Owens, W.E., Wang, Z.Y., Ray, C.H., Nicholson, S.C.	
			Abstracts of Papers American Chemical Society	ADME of 14C-cefiofur Na in sheep: Effect of daily IM injections at 2.5mg cefiofur/kg body weight	1995	206(1-2):AGRO 4	Brown-Barker, M.C., Gordon, R.L., Hamrah, R.E., Ansell, T.S., Craigmiles, A.L., Gifford, T.J., Smith, E.B., Vinson, T.J., Hoffman, G.A., Gatchell, C.L.	
Acta Chiro.			In vivo investigation of cefiofur-loaded gelatin and PLGA microspheres in beagle dogs	2013	1-8	Hao, Z., Wang, L., Xiao, K., Zhao, Y., Zou, M., Zhang, Q., Ding, Z., Yang, F., Gu, B.	DOI link	

Pharmacokinetic research data entry portal: used within UC Davis by kineticists to enter research data about withdrawal interval calculations for food animals.

KInEntry ←Main | 9017678 | Fetch | Scenarios | PK Data | Save | Cancel | Clone AnimAvg1 | More

Extraction status: FullyExtractedSIMPLE | Checked: by SB 5/22/2020 9:50:36 PM

9017678 | Indian Journal of Small Ruminants | 2017 | 23(2):208-212 | Kamal, Pant | Ahmad, A. H. | [Disha, Pant] | Pharmacokinetics of enrofloxacin in sheep following intravenous and intramuscular administration

Selected GenNum: 9017678-1: Sheep / Plasma / IV / 5 (#: 1) [Al: enrofloxacin][gennum1 testing]

Species*: Sheep | Find

Route*: Intravenous | Breed: | +

Matrix*: Plasma | + [A]NADA: | +

Drug*: enrofloxacin | Edit | <-Delete

Dose: | units: | 5 | mg/kg

Total Dose: |

of doses administered: 1 (integer required)

Dose Interval (frequency): | hrs

Co-Administered Drug (0): |

Combination Drug (0): |

Additional Animal / Dosing / Administration Information:

Sub-gennums for 9017678-1

Find Sub-gennum: AnimalAverage1 | Change label to: AnimalAverage1 | <-Delete | Change

Add Sub-gennum: Animal2 | View Sub-GenNums

or name here: | +

Current Sub-GenNum Record: AnimalAverage1

Males: 0 (integer)

Females: 5 (integer)

Both sexes: 0 (integer)

Age Category:

lamb (<45 d)

juvenile (45d to 5 mo)

market age (6-9 mo)

adult (>9 mo)

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OTHER CAFARAD WEB APPLICATIONS

EndNote citation XML importer

Responder's Portal

Bibliographic and Pharmacokinetic research data search portal.

Pharmacokinetic data entry portal

Portal for U Florida to upload new chemical and trade name data.

WYSIWYG editor for researchers to post links

PARTNER UNIVERSITIES

Kansas State University

University of Florida

University of North Carolina

University of Virginia